13

Transportation

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Acronyms/Abbreviations

AASHTO ..... Association of State Highway and Transportation Officials
ADA ..... Americans with Disabilities Act
APS ..... accessible pedestrian signals
FTA ..... Federal Transit Administration
GBNRTC ..... Greater Buffalo-Niagara Regional Transportation Council
LOS ..... level of service
LRT ..... light-rail transit
Metro ..... Niagara Frontier Transit Metro System, Inc.
MUTCD ..... Manual on Uniform Traffic Control Devices for Streets and Highways
NFTA ..... Niagara Frontier Transportation Authority
NYSDOT ..... New York State Department of Transportation
PAL ..... Paratransit Access Line
SUNY ..... State University of New York
UB ..... University at Buffalo

13 Transportation

This chapter documents existing and planned transit and roadway improvements as well as pedestrian and bicycle facilities located along the Proposed Action alignment and presents potential benefits and impacts during operations and construction of the Proposed Action (compared with the No Action condition). Where adverse impacts are identified, the ability to mitigate those impacts is addressed. A separate analysis of transportation during construction of the Proposed Action is provided in Chapter 19, "Construction Effects."

13.1 REGULATORY CONTEXT

The design, operations, safety, and security of the Proposed Action corridor and adjacent roadways are regulated by a variety of agencies, including the New York State Department of Transportation (NYSDOT), Erie County, and the Town of Amherst. Other national organizations are involved in establishing design and operational guidelines and standards widely used for transportation projects, including the American Association of State Highway and Transportation Officials (AASHTO) and the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD).

The Proposed Action is a part of the transportation planning process in the Western New York area. The Metropolitan Planning Organization (MPO), the Greater Buffalo Niagara Region Transportation Council (GBNRTC) in this case, manages the transportation planning process, including the adoption of the Proposed Action into its regional transportation model.

13.2 METHODOLOGY

This section provides the basic methodologies followed in each of the technical areas. It establishes the approach for the traffic analysis and the definition of level of service (LOS) criteria, along with the assessment of transit, parking, and pedestrian and bicycle facilities. The study area for the traffic analysis includes critical intersections where traffic conflicts could occur (Figure 13-1). The study area for the assessment of impacts to transit, parking, and pedestrian and bicycle facilities is the Proposed Action alignment.

13.2.1 Traffic Analysis

A traffic analysis was conducted that focused on twenty important intersections along the Proposed Action alignment. VISSIM traffic simulation computer models were developed to analyze traffic operations and identify the Level of Service (LOS) at the intersections under existing conditions as well as future conditions with and without the Proposed Action. The intersections analyzed are shown on Figure 13-1.

Figure 13-1. Traffic Analysis Intersections

The roadway network was modeled over a scaled aerial photograph. A field review of the entire Proposed Action study area was conducted to inventory signal equipment, pedestrian facilities, and review operations (to assist in identifying deficiencies and calibration of the simulation models). The traffic signal controllers were modeled in VISSIM[1] to match the signal operations provided by the New York State Department of Transportation (NYSDOT), Erie County, and the Town of Amherst.

Existing traffic conditions were established using a combination of previously collected traffic-volume data and intersection turning-movement counts at Proposed Action alignment intersections. The AM peak period data was collected on April 24, 2018 (Tuesday), the Midday peak period data was collected on April 28, 2018 (Saturday), and the PM peak period data was collected on April 26, 2018 (Thursday). Future traffic conditions were established using GBNRTC's regional travel demand model. Appendix F, "Transportation Technical Report" provides more details on the methodology for the traffic analysis and VISSIM model.

The potential for traffic diversions due to the Proposed Action was considered during the development of the analysis methodology; however, this aspect of traffic is difficult to predict and model in the future. Therefore, traffic diversion was not considered in the analysis. A review of the GBNRTC's regional travel demand model indicates that potential diversions would not be significant and that traffic would most likely divert to major roadways outside the study area.

13.2.2 Level of Service Criteria

The average delay per vehicle is the basis for determining the LOS for individual lane groups (grouping of movements in one or more travel lanes), the overall approaches to each intersection, and the overall intersection itself. Table 13-1 and Table 13-2 display the LOS criteria for signalized and unsignalized intersections, respectively.

Table 13-1. Level of Service Definitions for Signalized Intersections

Level of Service	Description	Average Control Delay Per Vehicle (seconds)
A	Operations with very low control delay occurring with favorable progression and/or short cycle lengths.	≤ 10.0
B	Operations with low control delay occurring with good progression and/or short cycle lengths.	> 10.0 and ≤ 20.0
C	Operations with average control delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	> 20.0 and ≤ 35.0
D	Operations with longer control delays due to a combination of unfavorable progression, long cycle lengths, or high volume to capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	> 35.0 and ≤ 55.0
E	Operations with high control delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered the limit of acceptable delay.	> 55.0 and ≤ 80.0
F	Operation with control delays unacceptable to most drivers occurring due to oversaturation, poor progression, or very long cycle lengths.	> 80.0

Source: 2016 Highway Capacity Manual 6th Edition, Transportation Research Board National Research Council

[1] Vissum is a traffic flow simulation software package that simulates vehicle interactions and models demand, supply, and behavior.

Table 13-2. Level of Service Definitions for Unsignalized Intersections

Level of Service	Description	Average Control Delay Per Vehicle (seconds)
A	Operations with very low control delay occurring with favorable progression and/or short cycle lengths.	≤ 10.0
B	Operations with low control delay occurring with good progression and/or short cycle lengths.	> 10.0 and ≤ 15.0
C	Operations with average control delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	> 15.0 and ≤ 25.0
D	Operations with longer control delays due to a combination of unfavorable progression, long cycle lengths, or high volume to capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	> 25.0 and ≤ 35.0
E	Operations with high control delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered the limit of acceptable delay.	> 35.0 and ≤ 50.0
F	Operation with control delays unacceptable to most drivers occurring due to oversaturation, poor progression, or very long cycle lengths.	> 50.0

Source: 2016 Highway Capacity Manual 6th Edition, Transportation Research Board National Research Council

13.2.3 Transit

The assessment of transit service provides an overview of the existing Metro Rail, as well as public bus routes operated by the Niagara Frontier Transit Metro System, Inc. (Metro) and the University at Buffalo's (UB) Stampede bus service that intersect or provide service to the Proposed Action alignment. Potential impacts to these services resulting from the Proposed Action are identified.

The Federal Transit Administration (FTA) STOPS model was used to forecast ridership for the Proposed Action. Population, employment, and educational enrollment forecasts at the UB were used to determine potential ridership demand at various stops. Projected highway travel times and transit supply were used as additional inputs to the model. Appendix G, "Ridership Forecasting" provides a detailed summary of the ridership forecasting effort.

13.2.4 Parking

This chapter identifies existing parking facilities along the Proposed Action alignment, existing Metro Rail park & ride facilities, and the potential impacts to on-street parking. Data sources include field reconnaissance, available mapping, and data from parking facility owners, including Erie County, the Niagara Frontier Transportation Authority (NFTA), UB, and private entities.

13.2.5 Pedestrian and Bicycle

Pedestrian and bicycle facilities along the Proposed Acton alignment were identified to assess any potential impacts related to the implementation of the Proposed Action.

The NYSDOT Pedestrian Safety Corridor Evaluation (2019) for Niagara Falls Boulevard was referenced for pedestrian conditions. The evaluation includes a comprehensive pedestrian safety

plan for the Niagara Falls Boulevard corridor that extends from Kenmore Avenue in the south to the Erie County/Niagara County Line.

In this chapter's assessment of bicycle facilities, the Buffalo Bicycle Facility Master Plan Update (2016), and the GBNRTC Bicycle and Pedestrian Master Plan (2008) are referenced. The Buffalo Bicycle Facility Master Plan is a collaborative project with the City of Buffalo and GObike Buffalo to make the city more bicycle friendly. The effort documents the community's comprehensive vision and provides a detailed work plan for increasing the attractiveness of bicycling as a key strategy for enhancing overall livability in Buffalo. The GBNRTC Bicycle and Pedestrian Master Plan is a regional vision of creating a safer and more effective bicycle and pedestrian network. Amherst and Tonawanda address pedestrian and bicycle enhancements within the study area in their respective comprehensive plans.

13.3 EXISTING CONDITIONS

The physical and operational characteristics of the major roadways in the local street network are described below:

- **Kenmore Avenue** is an east-west arterial road that connects Main Street to Military Road. The roadway is owned by the City of Buffalo and Erie County. The stretch of Kenmore Avenue along the Proposed Action alignment is a two-lane (one lane in each direction) road with a center left-turn lane and bike lanes running along both shoulders. At the signalized intersection at the corner of Niagara Falls Boulevard, Kenmore Avenue has one lane going in each direction and an eastbound left- and right-turn lane bisected by the eastbound lane and the bike lane.
- **Niagara Falls Boulevard** is a north-south running roadway that divides Amherst (to the east) and Tonawanda (to the west) and is owned by NYSDOT. Niagara Falls Boulevard starts in Buffalo and terminates in Niagara Falls. It is a major thoroughfare surrounded by mainly residential neighborhoods south of Eggert Road and commercial and retail north of Sheridan Drive. Niagara Falls Boulevard has two lanes running in each direction with portions including a center left-turn lane, containing signalized and non-signalized intersections from Kenmore Avenue to Eggert Road. At the intersection of Eggert Road, the road widens to three northbound lanes and one left-turn lane, and two southbound lanes and one left- turn lane. North of Eggert Road, the roadway widens to a median-divided boulevard with three lanes going in each direction. Left-turn lanes are at the intersections of major roads and commercial parking lots. At the intersection of Maple Road, the northbound approach widens to three lanes with a left and right-turn lane and the southbound approach widens to three lanes with two left-turn lanes.
- **Maple Road** is an east-west running arterial road in Amherst owned by Erie County. The roadway begins in Tonawanda as Brighton Road, becomes Maple Road through Amherst, and ends in Clarence as Greiner Road. The road contains entrances to the Boulevard Mall, Sweet Home Middle School, and several commercial establishments. Between Niagara Falls Boulevard and North Bailey Avenue, the road has three westbound lanes and two eastbound lanes with a center left-turn lane. East of North Bailey Avenue, the roadway consists of two eastbound lanes, two westbound lanes, and a center left-turn lane.

- **Sweet Home Road** is generally a north-south road in Amherst that extends from Eggert Road to Tonawanda Creek Road. NYSDOT owns the portion of the road north of Maple Road, and Erie County owns the portion south of Maple Road. The portion of Sweet Home Road between Maple Road and Rensch Road would carry the Metro Rail Extension. That section of roadway consists of two lanes in both directions with a center left-turn lane and shoulders that act as bike lanes in each direction. At the intersection of Rensch Road, the road widens to two northbound lanes with a left-turn lane and a right-hand turn lane, and two southbound lanes.
- **Rensch Road** is an entrance to the west side of the UB North Campus. The road is a short, east-west running road, owned by UB, that terminates in a loop at the eastern end. The loop contains parking and acts as a pick-up and drop-off location for UB buses. Rensch Road contains two lanes in each direction with a grassy median and left- turn lanes at signalized intersections. At the intersection of Sweet Home Road, Rensch Road contains two westbound lanes, one right-turn lane, one left- turn lane, and two eastbound lanes.
- **Putnam Way** is a one-way road that loops around the center of the UB North Campus. The roadway is owned by UB. Putnam Way consists of a lane dedicated to curbside parking throughout the loop and one travel lane.
- **Lee Road** is a north-south road in the northeastern section of the UB North Campus. Lee Road is a short road, owned by UB, with one car and bike lane heading in each direction. The road's south end is a loop that serves multiple bus pick-ups and drop-offs, and the road's north end terminates in a traffic circle at Audubon Parkway. The road serves as access to multiple parking lots including the UB Book Store lot.
- **John James Audubon Parkway** Audubon Parkway runs the western ring around the UB North Campus before turning to a north-south parkway terminating at the I-990 interchange. Audubon Parkway is a two-lane parkway, owned by the town of Amherst, with a wide grassy median and left-turn lanes at major intersections. The road serves the UB North Campus, as well as multiple office parks and residential neighborhoods in the northern portion of the road.

13.3.1 Traffic Operations

Table 13-3 through Table 13-5 illustrate the weekday AM, weekday PM, and Saturday Midday peak-hour operational results from the existing VISSIM models, respectively. The intersection of Niagara Falls Boulevard and Brighton/Maple Road operates at LOS E during the Midday peak hour and the intersection of Maple Road and Sweet Home Road operates at LOS E during the PM peak hour.

Table 13-3. Existing Conditions: Weekday AM Peak-Hour Levels of Service

Intersection	Overall LOS	Delay	Traffic Movements at LOS E or F
Niagara Falls Boulevard at Longmeadow Road	A	5.6	None
Niagara Falls Boulevard at Highland Avenue/Ruth Drive	N/A	N/A	None
Eggert Road at Alberta Drive	C	34.7	None
Niagara Falls Boulevard at Eggert Road	C	20.2	North- and westbound left turns
Eggert Road at Sheridan Drive	C	25.2	None
Niagara Falls Boulevard at Sheridan Drive	C	31.1	Southbound left turn
Niagara Falls Boulevard at Franklin Ave/Rochelle Place	N/A	N/A	None
Niagara Falls Boulevard at Treadwell Road	B	10.3	Westbound left turn
Niagara Falls Boulevard at Boulevard Mall	A	6.8	Westbound left turn
Niagara Falls Boulevard at Brighton Road/Maple Road	C	31.2	Northbound left turn
Maple Road at Alberta Drive	A	6.3	None
Maple Road at North Bailey Avenue	B	17.7	None
Maple Road at Bowmart Parkway	A	4.0	None
Maple Road at Hillcrest Drive	A	5.9	None
Maple Road at Sweet Home Road	C	28.8	None
Sweet Home Road at Rensch Road	C	22.2	None
John James Audubon Parkway at Rensch Road	B	17.4	None
John James Audubon Parkway at Core Road/Lee Road	A	5.2	None
John James Audubon Parkway at Forest Road	B	12.6	None
John James Audubon Parkway at Gordon R Yaeger Drive	A	1.0	None

Note: Overall level of service is not reported, per the Highway Capacity Manual, for two-way stopped controlled intersections.

Table 13-4. Existing Conditions: Weekday PM Peak-Hour Levels of Service

Intersection	Overall LOS	Delay	Traffic Movements at LOS E or F
Niagara Falls Boulevard at Longmeadow Road	A	8.3	None
Niagara Falls Boulevard at Highland Ave/Ruth Drive	N/A	N/A	None
Eggert Road at Alberta Drive	C	28.6	None
Niagara Falls Boulevard at Eggert Road	C	25.8	North- and westbound left turns
Eggert Road at Sheridan Drive	C	33.8	None
Niagara Falls Boulevard at Sheridan Drive	D	35.4	South- and eastbound left turns
Niagara Falls Boulevard at Franklin Ave/Rochelle Place	N/A	N/A	None
Niagara Falls Boulevard at Treadwell Road	B	19.3	North- and eastbound left turns Westbound through
Niagara Falls Boulevard at Boulevard Mall	B	15.8	North-, east-, and westbound left turns Eastbound through
Niagara Falls Boulevard at Brighton Road/Maple Road	D	45.1	North- and southbound left turns East- and westbound through Eastbound approach
Maple Road at Alberta Drive	B	15.4	None
Maple Road at North Bailey Avenue	D	42.1	Southbound left turn and approach
Maple Road at Bowmart Parkway	A	1.1	None
Maple Road at Hillcrest Drive	A	4.6	None
Maple Road at Sweet Home Road	E	56.7	North-, east-, and southbound left turns North- and southbound through and approaches
Sweet Home Road at Rensch Road	C	32.2	Northbound left turn
John James Audubon Parkway at Rensch Road	C	24.9	None
John James Audubon Parkway at Core Road/Lee Road	B	11.8	None
John James Audubon Parkway at Forest Road	B	17.8	None
John James Audubon Parkway at Gordon R Yaeger Drive	A	5.2	None

Note: Overall level of service is not reported, per the Highway Capacity Manual, for two-way stopped controlled intersections.

Table 13-5. Existing Conditions: Saturday Midday Peak-Hour Levels of Service

Intersection	Overall LOS	Delay	Traffic Movements at LOS E or F
Niagara Falls Boulevard at Longmeadow Road	A	6.5	None
Niagara Falls Boulevard at Highland Ave/Ruth Drive	N/A	N/A	None
Eggert Road at Alberta Drive	C	29.1	None
Niagara Falls Boulevard at Eggert Road	C	22.9	North- and Westbound left turn
Eggert Road at Sheridan Drive	C	30.8	None
Niagara Falls Boulevard at Sheridan Drive	D	39.7	South- and eastbound left turn Eastbound approach
Niagara Falls Boulevard at Franklin Ave/Rochelle Place	N/A	N/A	None
Niagara Falls Boulevard at Treadwell Road	C	21.1	Northbound left turn Westbound through
Niagara Falls Boulevard at Boulevard Mall	B	19.2	Northbound left turn
Niagara Falls Boulevard at Brighton Road/Maple Road	E	56.8	All left turns East- and westbound through, right turn and approaches
Maple Road at Alberta Drive	B	19.4	None
Maple Road at North Bailey Avenue	C	34.0	Southbound left turn
Maple Road at Bowmart Parkway	A	3.6	None
Maple Road at Hillcrest Drive	A	1.9	None
Maple Road at Sweet Home Road	C	30.0	None
Sweet Home Road at Rensch Road	B	18.9	None
John James Audubon Parkway at Rensch Road	B	13.2	None
John James Audubon Parkway at Core Road/Lee Road	A	3.2	None
John James Audubon Parkway at Forest Road	A	8.5	None
John James Audubon Parkway at Gordon R Yaeger Drive	A	2.3	None

Note: Overall level of service is not reported, per the Highway Capacity Manual, for two-way stopped controlled intersections.

13.3.2 Transit

Metro is the public transportation operator in the Buffalo-Niagara metropolitan region and the Proposed Action corridor, operating the Metro Rail light-rail transit (LRT) system and a network of bus lines.

13.3.2.1 Metro Rail

Metro Rail runs along Main Street between the Erie Canal Harbor Station in downtown Buffalo and University Station on the UB South Campus. The first 1.2-mile segment of the 6.4-mile service operates along the surface in the downtown area, while the remaining portion of the line is underground. The line has 13 stations. An Events Only Station is across from KeyBank Center, which operates only during events at the arena and Canalside. Park & ride facilities are available at University Station (450 spaces) and LaSalle Station (732 spaces). The Metro Rail Maintenance Yard & Shop is at the former Delaware, Lackawanna and Western (DL&W) Terminal. The NFTA is progressing plans to extend Metro Rail service to the terminal with a new full-time station on the ground floor to provide enhanced access to Canalside and the Cobblestone District.

Weekday service runs from 5:10 a.m. to 12:30 a.m. and includes 90 daily trips in each direction. Trains run as often as once every ten minutes during peak hours with late night headways at 20 minutes. Saturday service runs from 7:05 a.m. to 12:49 a.m. and includes 62 trips in each direction, and Sunday / holiday service runs from 8:00 a.m. to 11:49 p.m. and includes 46 trips in each direction. For hockey games and selected events at the KeyBank Center and Canalside, a later train departs the Events Only Station 30 minutes after the end of the event, if necessary.

Metro Rail along Main Street

Metro Rail passengers

University Station[2]

Church Street Station

[2] Located near the intersection of Main Street and Niagara Falls Boulevard on the University at Buffalo South Campus, University Station is a major transfer point between Metro Rail and many city and suburban bus routes.

Metro reports that during fiscal year 2018, 4.5 million riders used the LRT system. Table 13-6 and Table 13-7 show the annual and daily boardings and alightings at each station for the north- and southbound directions. The data shows that the busiest stations are University, Church Street, Lafayette Square, Fountain Plaza, and Utica.

Table 13-6. Annual Metro Rail Ridership by Station (2017)

Station	Boardings	Alightings
University	790,307	832,928
LaSalle	232,017	251,274
Amherst	332,316	339,686
Humboldt Hospital	163,741	164,026
Delavan-Canisius College	188,514	176,241
Utica	439,865	454,853
Summer-Best	234,434	207,069
Allen-Medical Campus	343,796	342,594
Fountain Plaza	448,928	425,770
Lafayette Square	470,680	410,647
Church Street	503,307	450,782
Seneca	117,217	187,292
Erie Canal Harbor	253,164	275,122
TOTALS	**4,518,286**	**4,518,284**

Source: Niagara Frontier Transportation Authority

Table 13-7. Daily Metro Rail Ridership by Station (2017)

Station	Boardings	Alightings
University	2,656	2,799
LaSalle	780	845
Amherst	1,117	1,142
Humboldt Hospital	550	551
Delavan-Canisius	634	592
Utica	1,478	1,529
Summer-Best	788	696
Allen-Medical Campus	1,156	1,151
Fountain Plaza	1,509	1,431
Lafayette Square	1,582	1,380
Church Street	1,692	1,515
Seneca	394	629
Erie Canal Harbor	851	925
TOTALS	**15,187**	**15,185**

Source: Niagara Frontier Transportation Authority

13.3.2.2 Metro Bus

Metro Bus service in the region includes 14 express bus routes and 37 regular bus routes. Many of these routes intersect with or serve a portion of the study area, including the following:

- **Metro Bus Route 34-Niagara Falls Boulevard** provides service between University Station and the Town of Amherst. Service is provided on three branches: one runs to the Audubon Industrial Park, one runs to Hazelwood/Woodbridge, and one runs to Creekside and Pineview. Route 34 serves 366,190 riders annually.
- **Metro Bus Route 35-Sheridan** provides east-west service from the Black Rock Riverside Transit Hub along Sheridan Drive in Tonawanda and into Amherst. The bus route serves Boulevard Mall and Northtown Plaza as well as UB North Campus. Route 35 serves 181,696 riders annually.
- **Metro Bus Route 44-Lockport** runs primarily via Millersport Highway between Lockport and University Station. The bus route serves UB North Campus and Crosspoint Business Park, and provides limited service to Weinberg Campus. Route 44 serves 168,082 riders annually.
- **Metro Bus Route 47-Youngs Road** provides service between University Station and the State University of New York Erie Community College (SUNY Erie) North Campus, the Amherst International Industrial Park, and the Buffalo Niagara International Airport. Route 47 serves 95,094 riders annually.
- **Metro Bus Route 48-Williamsville** runs primarily along Main Street and provides service between University Station and SUNY Erie North Campus and the Eastern Hills Mall. Route 48 serves 243,075 riders annually.
- **Metro Bus Route 49-Millard Suburban** runs via Sheridan Drive and other roads between University Station and Millard Fillmore Suburban Hospital. Route 49 serves 57,796 riders annually.
- **Metro Bus Route 64-Lockport** is an express bus route running between Lockport and stops at CrossPoint Business Park, Allen-Medical Campus, and downtown Buffalo. Route 64 serves 9,879 riders annually.
- **Metro Bus Route 66** is an express route operating between downtown Buffalo and Eastern Hills Mall via Main Street. The route serves the Main and Union park & ride facilities, as well as the Allen-Medical Campus. Route 66 serves 19,168 riders annually.

13.3.2.3 Paratransit

In accordance with Section 37.129(a) of Title 49, Part 37 of the Code of Federal Regulations (49 CFR 37.129(a)), Metro's complementary Paratransit Access Line (PAL) service is a shared ride service that provides origin-to-destination transportation for paratransit eligible individuals under the Americans with Disabilities Act. Eligibility for PAL is limited to individuals with disabilities with the following limitations:

- Cannot independently board, ride or exit from any vehicle on the fixed route bus or rail system which is accessible and usable by individuals with disabilities

- Cannot use an accessible fixed route vehicle, but the route or the accessible vehicle on the route that would be used is not accessible or usable, or the stop that would be used is not accessible or usable due to the physical characteristics of the stop
- Cannot independently travel to or from the fixed route bus stop or rail station.

Metro provides a level of complementary PAL service that is comparable to the level of service offered on its fixed route bus and rail systems. The complementary PAL service is provided within 3/4 of a mile of an Metro bus route or rail station during the same hours and on the same days as the Metro fixed route service.

13.3.2.4 University at Buffalo Bus Service

The University at Buffalo provides the following extensive bus and shuttle service for its students, faculty and staff, and visitors:

- **Stampede Service** (the main service) runs between the UB North and UB South Campuses along Millersport Highway and Grover Cleveland Highway. Stampede buses run approximately every 5 to 10 minutes, Monday through Friday, during the academic year and every 30 to 60 minutes on weekends and during the summer. Average daily ridership for September and October 2018 was approximately 7,800.
- **University at Buffalo-North Campus Shuttles:**
  - **Express Service** runs between the Ellicott Complex and the Spine. During the fall and spring semesters, buses depart the Ellicott Tunnel for Lee Loop every 5–7 minutes. Average daily ridership for September and October was approximately 810.
  - **North Campus Shuttle** service connects the entire UB North Campus, stopping at 18 different key locations. The service also provides a valuable park & ride option from the Alumni and Stadium parking lots. The shuttle operates every 10 minutes during the semester between 8:00 a.m. and 7:00 p.m. After 7:00 p.m., the shuttle operates every 10 to 20 minutes.
  - **Green Line Shuttle** service provides a park & ride option from the Center for Tomorrow lot to Flint Loop in the heart of the UB North Campus. The Green Line operates Monday through Friday from 7:00 a.m. to 7:00 p.m. with departures every 10 minutes.
- **University at Buffalo-South/Downtown Campus Shuttles:**
  - **Orange Line Shuttle** service operates Monday through Friday from 8:00 a.m. to 3:30 p.m. with departures every 20 minutes. The Orange Line is a rotator shuttle connecting all areas of the UB South Campus to the UB Blue Line downtown shuttle and the intercampus Stampede bus stops. The Orange Line provides park & ride service from the Main-Bailey and Parker lots.
  - **Blue Line Shuttle** service connects the Downtown and South Campuses during the weekdays. The Blue Line operates daily every 30 minutes between 7:30 a.m. and 5:30 p.m.
  - **Mall/Market Shuttle** service runs Wednesday and Saturdays during the fall and spring semester when classes are in session. Shuttles provide transportation to Walmart, Wegmans, Tops (on Maple Road), and the Boulevard Mall from both UB North and UB South Campuses. Average daily ridership in September and October was approximately 197.

13.3.3 Parking

The Proposed Action alignment contains no on-street parking. Most on-street parking is on side streets that intersect Kenmore Avenue and Niagara Falls Boulevard. Several parking lots are associated with the Boulevard Mall and adjacent big-box commercial stores along Niagara Falls Boulevard and Maple Road. Other parking facilities are on the UB South and UB North Campuses and are used by students, facility and staff, visitors, and those attending events at university stadiums and facilities. Existing Metro Rail park & ride lots are located at the LaSalle and University Stations.

13.3.4 Pedestrian and Bicycle

Pedestrian infrastructure along the Proposed Action alignment consists of sidewalks along both sides of the street from the existing University Station to the UB North Campus. Sidewalks are absent along portions of the west side of Niagara Falls Boulevard between Sheridan Drive and Maple Road. There are sidewalks within UB's North and South Campuses; sidewalks do not exist along Audubon Parkway both within the UB North Campus and north to I-990. There are several trails that meander through the Audubon community. Crosswalks are located at major intersections.

Sidewalk: Niagara Falls Boulevard

Crosswalk: Niagara Falls Boulevard and Sheridan Drive

The NYSDOT's Pedestrian Safety Corridor Evaluation reports the following conditions along Niagara Falls Boulevard:

- The presence of stop bars, marked crosswalks, ramps, and detectible warning at unsignalized intersections varies, and marked crosswalks are often missing on the side street approaches.
- The long cycle lengths at signalized intersections in the corridor create long wait times for pedestrians crossing the street.
- Pedestrian equipment in the corridor is inconsistent at signalized intersections.
- The conditions of the pedestrian accommodations in the corridor vary with some in good condition and some in poor condition
- Very few intersection signs and no vehicle turning restrictions are present at the signalized intersections, increasing the potential for vehicle/pedestrian conflicts

According to the NYSDOT Pedestrian Safety Corridor Evaluation Report, a lighting study was completed by the Town of Amherst for the section of Niagara Falls Boulevard from the I-290 ramps north to the Erie/Niagara County Line. As a result of the study, a lighting project was constructed in the summer of 2019 to improve lighting conditions and potentially decrease pedestrian crash rates at night.

Designated bicycle lanes run in both directions along Kenmore Avenue between the Tonawanda Rails to Trails and Main Street. These lanes are not protected and are designated with lane markings. No designated bicycle lanes exist along the Proposed Action alignment from the start of Niagara Falls Boulevard at Kenmore Avenue to the intersection of Maple Road and Sweet Home Road. Sweet Home Road is designated as part of the Intercampus Bikeway and consists of striped bike lanes between Maple Road and Rensch Road. Bicycle lane markings exist on some roadways within the campus. UB has a bike-share program (UB Bikeshare) for students, faculty, and staff. UB Bikeshare is powered by Social Bicycles and offers a GPS-enabled bike. North of the campus along John James Audubon Parkway, there is a separated and protected pedestrian and bicycling path on the eastern side of the parkway. The path starts at Frontier Road and terminates at North Forest Road and is a branch of the Amherst Bike Path, which travels underneath John James Audubon Parkway. After North Forest Road, there is no pedestrian or bicycle infrastructure for the remainder of the Proposed Action alignment, however there are several trails throughout the Audubon community.

Bicyclists: Sweet Home Road

Pedestrian and Bicycle Path: Audubon Parkway

13.3.5 Safety and Security

NFTA provides law enforcement on transit vehicles, at transit stations, and at park-and-ride lots. NFTA security officers provide roving patrols at NFTA facilities and on NFTA vehicles. Surveillance of the transit stations is conducted through monitoring of Closed Circuit Televisions (CCTV) placed on each station platform and in park &-ride facilities. Blue light emergency phones are located on station platforms and throughout the park & ride facilities. Passenger assistance phones for non-emergency use are located on each of the ticket vending machines that are also located on the station platforms.

13.4 FUTURE WITHOUT THE PROPOSED ACTION

The No Action condition would consist of a future scenario with no changes to the Proposed Action corridor, beyond the projects that are already committed and planned by others. The GBNRTC Transportation Improvement Program (TIP) includes a roadway improvement project within the study area along North Forest Road in Amherst between Route 263 (Millersport Highway) and Dodge Road. The project entails pavement resurfacing for a 1.67 mile stretch. In addition, a bridge reconstruction effort is planned for the bridge carrying John James Audubon Parkway over Ellicott Creek to the northeast of UB North Campus. The project will replace deteriorated concrete, fascia, bridge joints, curbs, and concrete approach slabs. Finally, Amherst plans to convert Audubon Parkway to a 2-lane roadway utilizing the southbound lanes and abandoning the northbound lanes between the traffic circle at Lee Road and just south of North Forest Road.

13.4.1 Traffic Operations

As described in Section 13.1, VISSIM models were developed to analyze traffic operations without the Proposed Action. The network used in the No Action condition model was identical to the existing conditions previously modeled, but included an adjustment for growth rates anticipated with little or no capacity improvements. The growth rates were derived from GBNRTC's regional travel demand model. This No Action condition scenario would likely increase traffic along Niagara Falls Boulevard because more traffic demand would be generated by population, development, and employment growth, while no capacity improvements or public transit alternatives would be offered.

13.4.1.1 Level of Service

Based on the projected changes in future traffic volumes described above, the No Action condition traffic LOS's were determined for each of the traffic analysis locations. Table 13-8 through Table 13-10 present the resulting overall level of service at each intersection in the study area as well as the specific traffic movements that operate at unacceptable LOS E or F during the weekday and Saturday peak hours, respectively. Appendix F, "Transportation Technical Report" provides detailed traffic LOS tables showing all intersection movements.

A comparison of the overall intersection LOS and individual traffic movement LOS shows that there would be additional locations operating at mid LOS D or worse under the No Action condition as compared to existing conditions due to the additional volumes generated by the background growth rate. The key overall findings of the traffic LOS analyses follow:

- During the weekday AM peak hour, the number of locations that would operate at LOS D or worse would remain the same as those under existing conditions. A total of 7 individual traffic movements would operate at LOS E or LOS F, compared to 6 movements under existing conditions.
- During the weekday PM peak hour, the number of locations that would operate at LOS D or worse would remain the same as the existing conditions. Although delays at The Niagara Falls Boulevard at Sheridan Drive, Niagara Falls Boulevard at Brighton Road/Maple and Maple Road at North Bailey Avenue would decline in the No Action, they would continue to operate at a LOS D as they did in the existing. The Maple Road at Sweet Home Road would remain at a LOS E under the No Action condition (as compared to existing) but increase in delay by 15 seconds. A total of 21 individual traffic movements would operate at LOS E or LOS F, compared to 26 movements under existing conditions.
- During the Saturday Midday peak hour, the number of locations would operate at LOS D would increase from one under the existing conditions to three with the No Action condition. The number of locations that would operate at LOS E and LOS F would remain the same with the No Action condition. The Maple Road at North Bailey Avenue and Eggert Road at Sheridan Drive LOSs would degrade from LOS C in the existing conditions to LOS D under the No Action condition. The Maple Road at Alberta Drive LOS would degrade from LOS B in the existing to LOS C under the No Action condition. Niagara Falls Boulevard at Sheridan Avenue would remain at LOS D in both the existing conditions and No Action condition. A total of 23 individual traffic movements would operate at LOS E or F, compared to 19 individual traffic movements under the existing conditions.

Table 13-8. No Action Condition: Weekday AM Peak-Hour Levels of Service

Intersection	Overall LOS	Delay	Traffic Movements at LOS E or LOS F
Niagara Falls Boulevard at Longmeadow Road	A	5.7	None
Niagara Falls Boulevard at Highland Ave/Ruth Drive	N/A	N/A	None
Eggert Road at Alberta Drive	C	34.5	None.
Niagara Falls Boulevard at Eggert Road	C	20.4	North- and westbound left turns
Eggert Road at Sheridan Drive	C	26.4	None
Niagara Falls Boulevard at Sheridan Drive	C	30.6	Southbound left turn
Niagara Falls Boulevard at Franklin Ave/Rochelle Pl	N/A	N/A	None.
Niagara Falls Boulevard at Treadwell Road	B	9.8	East- and westbound left turns Westbound through
Niagara Falls Boulevard at Boulevard Mall	A	6.7	Westbound left turn
Niagara Falls Boulevard at Brighton Road/Maple Road	D	31.4	None
Maple Road at Alberta Drive	A	6.9	None
Maple Road at North Bailey Ave	B	19.1	None
Maple Road at Bowmart Pkwy	A	3.9	None
Maple Road at Hillcrest Drive	A	6.6	None
Maple Road at Sweet Home Road	C	28.3	None
Sweet Home Road at Rensch Road	C	23.3	None
John James Audubon Pkwy at Rensch Road	B	17.2	None
John James Audubon Pkwy at Core Road/Lee Road	A	5.2	None
John James Audubon Pkwy at Forest Road	B	12.2	None
John James Audubon Pkwy at Gordon R Yaeger Drive	A	1.0	None

Note: Overall level of service is not reported, per the Highway Capacity Manual, for two-way stopped controlled intersections.

Table 13-9. No Action Condition: Weekday PM Peak-Hour Levels of Service

Intersection	Overall LOS	Delay	Traffic Movements at LOS E or LOS F
Niagara Falls Boulevard at Longmeadow Road	A	8.5	None
Niagara Falls Boulevard at Highland Ave/Ruth Drive	N/A	N/A	None
Eggert Road at Alberta Drive	C	28.2	None
Niagara Falls Boulevard at Eggert Road	C	26.0	North- and westbound left turns
Eggert Road at Sheridan Drive	C	33.4	None
Niagara Falls Boulevard at Sheridan Drive	D	35.9	Southbound left turn
Niagara Falls Boulevard at Franklin Ave/Rochelle Pl	N/A	N/A	None
Niagara Falls Boulevard at Treadwell Road	C	20.4	North-, east- and westbound left turns
Niagara Falls Boulevard at Boulevard Mall	B	13.6	North- and westbound left turns Eastbound through
Niagara Falls Boulevard at Brighton Road/Maple Road	D	37.4	Northbound left turn
Maple Road at Alberta Drive	B	16.1	None
Maple Road at Bowmart Pkwy	A	1.4	None
Maple Road at North Bailey Ave	D	37.0	None
Maple Road at Hillcrest Drive	A	4.6	None
Maple Road at Sweet Home Road	E	72.6	All left turns South- and westbound through North-, south-, and westbound approaches
Sweet Home Road at Rensch Road	C	31.6	Northbound left turn
John James Audubon Pkwy at Rensch Road	C	23.5	None
John James Audubon Pkwy at Core Road/Lee Road	B	11.9	None
John James Audubon Pkwy at Forest Road	B	18.0	None
John James Audubon Pkwy at Gordon R Yaeger Drive	A	5.3	None

Note: Overall level of service is not reported, per the Highway Capacity Manual, for two-way stopped controlled intersections.

Table 13-10. No Action Condition: Saturday Midday Peak-Hour Levels of Service

Intersection	Overall LOS	Delay	Traffic Movements at LOS E or F
Niagara Falls Boulevard at Longmeadow Road	A	6.4	None
Niagara Falls Boulevard at Highland Ave/Ruth Drive	N/A	N/A	None
Eggert Road at Alberta Drive	C	28.3	None
Niagara Falls Boulevard at Eggert Road	C	24.1	North- and Westbound left turns
Eggert Road at Sheridan Drive	D	35.0	Southbound left turn
Niagara Falls Boulevard at Sheridan Drive	D	41.1	South- and eastbound left turns Eastbound approach
Niagara Falls Boulevard at Franklin Ave/Rochelle Pl	N/A	N/A	None
Niagara Falls Boulevard at Treadwell Road	C	21.4	North- and westbound left turns
Niagara Falls Boulevard at Boulevard Mall	B	17.7	Northbound left turn
Niagara Falls Boulevard at Brighton Road/Maple Road	E	57.6	North-, south-, and westbound left turns North- and eastbound through South- and westbound approaches Westbound right turn
Maple Road at Alberta Drive	C	22.1	None
Maple Road at North Bailey Ave	D	48.6	North- and westbound left turn, through, and approaches
Maple Road at Bowmart Pkwy	A	5.0	None
Maple Road at Hillcrest Drive	A	2.0	None
Maple Road at Sweet Home Road	C	33.8	None
Sweet Home Road at Rensch Road	B	19.6	None
John James Audubon Pkwy at Rensch Road	B	13.6	None
John James Audubon Pkwy at Core Road/Lee Road	A	3.3	None
John James Audubon Pkwy at Forest Road	A	8.5	None
John James Audubon Pkwy at Gordon R Yaeger Drive	A	2.3	None

Note: Overall level of service is not reported, per the Highway Capacity Manual, for two-way stopped controlled intersections.

13.4.2 Transit

Under the No Action condition, the existing Metro Rail, Metro Bus and PAL service, as well as the UB bus service, would operate as it currently does. Table 13-11 presents the change in ridership without the Proposed Action. Ridership at existing stations would increase, due to population and employment growth, as well as future UB enrollment.

Table 13-11. Weekday Total Boardings for Existing (2018) and No Action Condition (2040)

Station	Existing (2018)	No Action Condition (2040)
Special Events	117	140
Erie Canal Harbor	851	1,011
Seneca	504	655
Church Street	1,548	1,915
Lafayette	1,474	1,803
Fountain Plaza	1,490	1,872
Allen-Medical Campus	1,136	1,591
Summer-Best	777	971
Utica	1,500	1,745
Delavan-Canisius College	685	810
Humboldt	558	621
Amherst	1,121	1,258
LaSalle	897	1,005
University Station	2,699	3,062
Decatur	—	—
Eggert	—	—
Boulevard Mall	—	—
Maple	—	—
Sweet Home	—	—
Flint	—	—
Lee	—	—
Ellicott Complex	—	—
Audubon	—	—
I-990	—	—
Subtotal Project Stations	—	—
TOTAL	**15,357**	**18,459**

13.4.3 Parking

Parking facilities under the No Action condition would continue to consist of existing nearby on-street parking or off-street residential and commercial establishment parking lots.

13.4.4 Bicycle and Pedestrian

The NYSDOT Pedestrian Safety Corridor Evaluation reports the following projects are being progressed along Niagara Falls Boulevard within the Proposed Action corridor by NYSDOT:

- Niagara Falls Boulevard/Almeda Drive/Rochelle Place: Add Americans with Disabilities Act (ADA)-compliant detectable warning fields on the Almeda Drive crossing and transverse crosswalks (parallel lines) on Almeda Drive and Rochelle Place approaches.
- Niagara Falls Boulevard/Boulevard Mall Driveway: Add accessible pedestrian signals (APS), update ADA ramps, and install high visibility crosswalks at the southbound and westbound crossings.
- Traffic Signal Coordination: The Niagara Falls Boulevard corridor, from Sheridan Drive to Tonawanda Creek Road, will be undergoing analysis for detailed signal connections, with consideration for leading pedestrian intervals.

Also according to the NYSDOT Pedestrian Safety Corridor Evaluation Report, plans for increasing lighting along the Niagara Falls Boulevard corridor are underway. A lighting study was completed by the Town of Amherst for the section of Niagara Falls Boulevard from the I-290 ramps north to the Erie/Niagara County Line. This study focused on areas where there had been insufficient lighting and pedestrian crashes. A lighting project is currently under construction, which would result in improved lighting conditions and could potentially decrease crash rates at night.

In the Town of Amherst Bicentennial Comprehensive Plan, there are proposed on-street bicycle/pedestrian networks on roads within the study area, including Eggert Road, Niagara Falls Boulevard, Maple Road, North Forest Road, and Audubon Parkway. These networks would contain frequent safe, clearly demarcated crossings. The Town of Tonawanda Comprehensive Plan demarcates one proposed bike lane on Kenmore Avenue and an off-road trail that runs along the waterway behind Evergreen Drive within the study area. The plan also outlines improved pedestrian crossings at Niagara Falls Boulevard and Sheridan Drive, Treadwell Road, and Maple Road. Both plans emphasize the desire to restripe and redesign streets as complete streets that are conducive to multimodal transportation.

13.4.5 Safety and Security

The No Action condition would have no impact on safety and security within the Proposed Action corridor.

13.5 PROPOSED ACTION

The following sections describe the potential impacts to the transportation system (streets and highways, transit, and non-motorized forms) of the Proposed Action. Any impacts are the result of comparison to the No Action condition.

13.5.1 Traffic Operations

The inclusion of the Proposed Action within the constraints of the existing right-of-way would require lane reductions along Niagara Falls Boulevard and Maple Road. A northbound through lane would need to be removed on Niagara Falls Boulevard from Kenmore Avenue to Maple Road as would a southbound through lane between the same two facilities. Second, a westbound lane on Maple Road would need to be removed from Bowmart Parkway to Niagara Falls Boulevard. These lane reductions would directly affect traffic because the same number of cars that travel along Niagara Falls Boulevard would have fewer lanes to use. However, in the long term, traffic would improve because more people would shift from vehicles to the light-rail, which would create less traffic. Additional capacity changes that were integrated into the conceptual design of the Proposed Action are presented in Table 13-12 and shown in Appendix A, "Conceptual Plan". Typical sections are provided as Figure 13-2 through Figure 13-9.

Table 13-12. Proposed Action: Traffic Capacity Change

Corridor Location	Direction	Capacity Change
Niagara Falls Boulevard	Northbound and Southbound	Eliminate one travel lane in each direction along Niagara Falls Boulevard from Kenilworth Boulevard to Maple Road, and along Maple Road from Niagara Falls Boulevard to Sweet Home Road
Niagara Falls Boulevard	Southbound	Add additional southbound left-turn lane on Niagara Falls Boulevard at Eggert Road
Niagara Falls Boulevard	Southbound	Add a 200-foot southbound receiving lane on Niagara Falls Boulevard south of the Eggert Road intersection
Boulevard Mall	Northbound	Metro Rail alignment would be shifted from median running to side running at northern Boulevard Mall entrance (to east side), through mall property and transition into median of Maple Road at Alberta Drive
Maple Road	Westbound	Add additional westbound left-turn lane on Maple Road at Niagara Falls Boulevard
Brighton Road	Eastbound	Add additional eastbound through-lane on Brighton Road at Niagara Falls Boulevard (eastbound Brighton approach (through and through/right lanes would be extended west for more storage)
Bailey Avenue	Southbound	Add southbound dual left-turn lanes on Bailey Avenue at Maple Road
Maple Road	Eastbound	Add eastbound dedicated left-turn lane on Maple Road at furthest eastern Sweet Home Middle School Driveway
Maple Road/Sweet Home Road intersection	All Directions	LRT alignment will traverse under the Maple Road and Sweet Home Road intersection and avoid interaction between LRT and general vehicles.
Sweet Home Road	Northbound	Convert the dedicated right-turn lane to a shared through/right turn lane at intersection with Maple Road at Sweet Home Road
Sweet Home Road	Southbound	Continue to provide two northbound and southbound through lanes along Sweet Home Road from Rensch Road to Maple Road. Add additional receiving lane southbound on Sweet Home Road south of Maple Road
Sweet Home Road	Eastbound	Shift Metro Rail alignment to east side, running along Sweet Home Road from Maple Road to Rensch Road
Rensch Road		Create a separate Metro Rail track bridge over Bizer Creek to avoid affecting operations of Rensch Road at Sweet Home Road intersection
Audubon Parkway	Both	Convert Audubon Parkway from a 4-lane divided facility to a two-lane facility utilizing the existing 2-lane southbound facility; the LRT would then operate on the 2-lane northbound travel lanes from Lee Road to I-990

The Metro Rail vehicles would have separate tracks for northbound and southbound trains, which would run concurrently with peak 10-minute headways and 30-second station dwells during operating hours. The median-running Metro Rail alignment would act similar to a median in that movements across the tracks would only be permitted at signalized intersections. This prevents an unsafe left-turn or through movement in conflict with the Metro Rail. At signalized intersection locations, left turn phases would be protected-only. This operational adjustment serves the same purpose; to inhibit motorists from interacting with the Metro Rail in an unsafe manner.

A traffic signal preemption scheme was included in the analysis for all signalized locations along the Proposed Action alignment to ensure that the Proposed Action would run as efficiently as possible. The preemption scheme ensures that any traffic on the Metro Rail track is given time to clear that area with the signal dwelling in a non-conflicting phase when the train arrives. This preemption scheme ensures that the Metro Rail would never stop at intersections, while satisfying the vehicular demand in at least one direction while the light-rail passes.

After reviewing initial results of the Proposed Action model, additional operational improvements were developed and included in the analysis to further optimize traffic operations. Table 13-13 presents these changes by location on the Proposed Action corridor.

Table 13-13. Proposed Action: Traffic Operational Improvements

Corridor Location	Direction	Improvement
Niagara Falls Boulevard	Northbound	Bus pull out zones from Ford Avenue to Betina Avenue
	Southbound	Bus pull out zones from Betina Avenue to Ford Avenue
Niagara Falls Boulevard	Northbound	Dedicated right turn lane at Longmeadow Road
Niagara Falls Boulevard and Eggert Road	Southbound	Additional left turn bay and dual left turn, two through travel lanes
Sheridan Drive and Niagara Falls Boulevard	Eastbound	Restrict right turns (right turns can be completed at the upstream intersection of Eggert Road and Sheridan Drive)
Niagara Falls Boulevard and Brighton Road /Maple Road	Westbound	Additional left turn bay and dual left turn
	Eastbound	Additional through lane beginning at Blackstone Boulevard
Maple Road and North Bailey Ave	Northbound	Additional through lane from Argosy Drive
	Southbound	Additional left turn bay and dual left turn
Maple Road and Sweet Home Middle School eastern driveway	Eastbound	Add left turn lane
Maple Road and Sweet Home Road	Northbound	Change right turn only lane to shared through/right turn lane
	Northbound Southbound	Restrict left turns at driveways south of I-290 Bridge (access becomes right-in/right-out
	Southbound	Additional right turn bay and dual SB through lanes
John James Audubon Parkway and Sylvan Parkway		Signalize intersection

Figure 13-2. Existing Typical Section, Niagara Falls Boulevard at Boulevard Mall Station

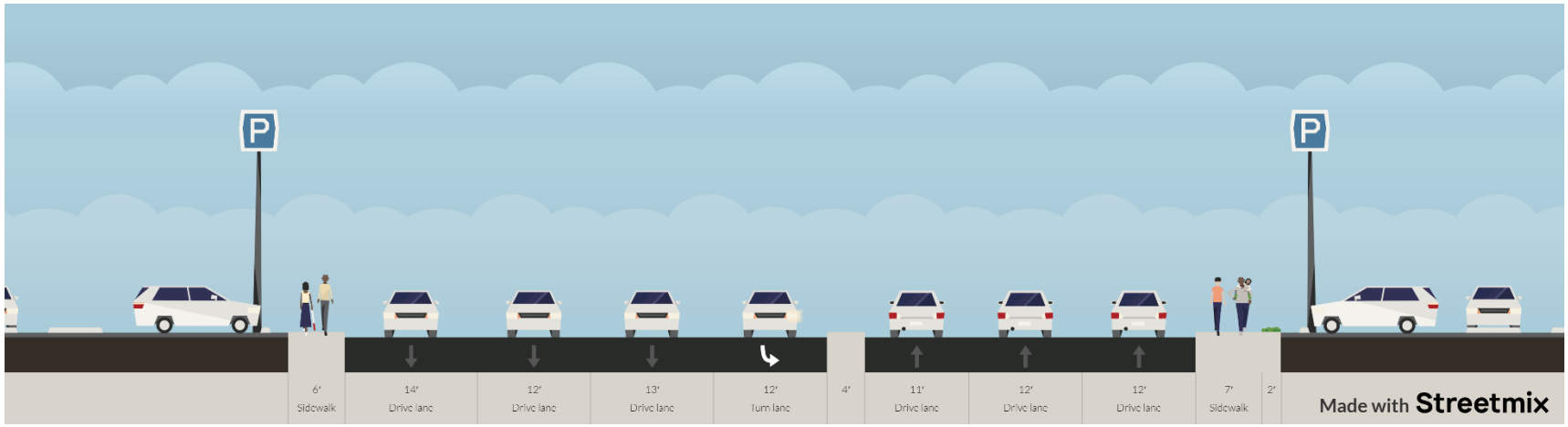


Figure 13-3. Proposed Action Typical Section, Niagara Falls Boulevard at Boulevard Mall Station

Figure 13-4. Existing Typical Section, Maple Road

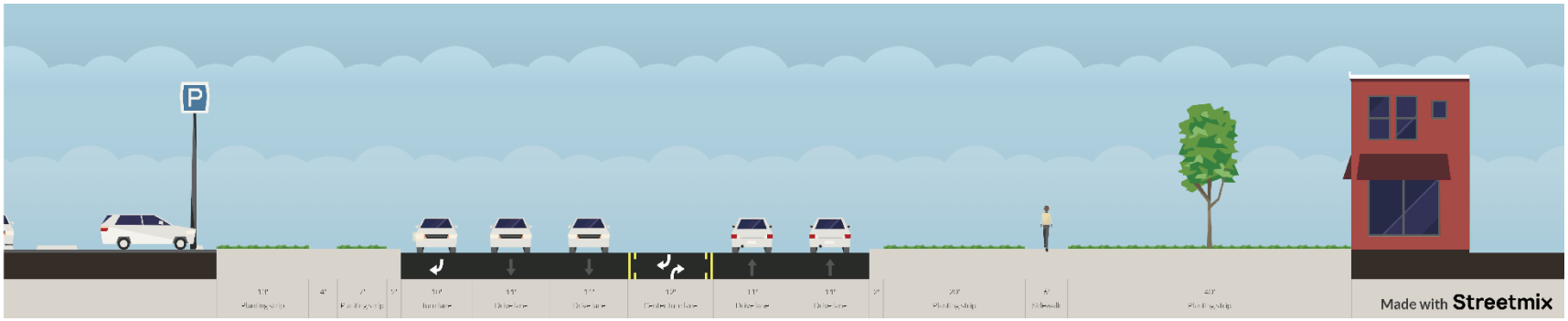


Figure 13-5. Proposed Action Typical Section, Maple Road

Figure 13-6. Existing Typical Section, Sweet Home Road North of I-290 Overpass

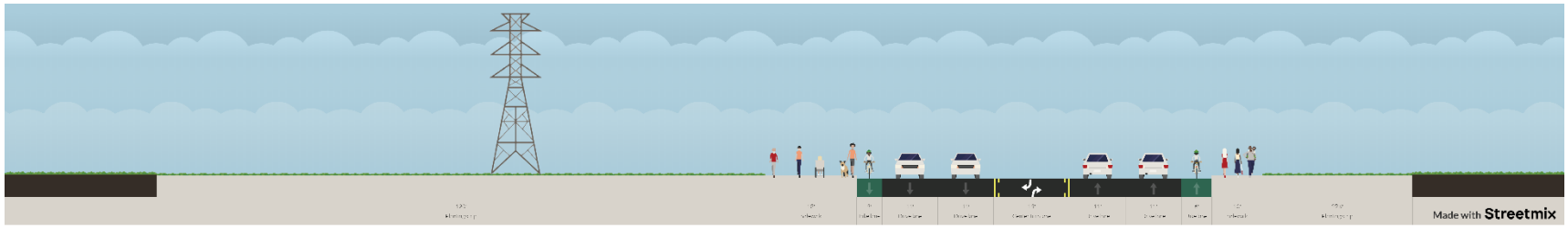


Figure 13-7. Proposed Action Typical Section, Sweet Home Road North of I-290 Overpass

Figure 13-8. Existing Typical Section, John James Audubon Parkway Near Bryant Woods

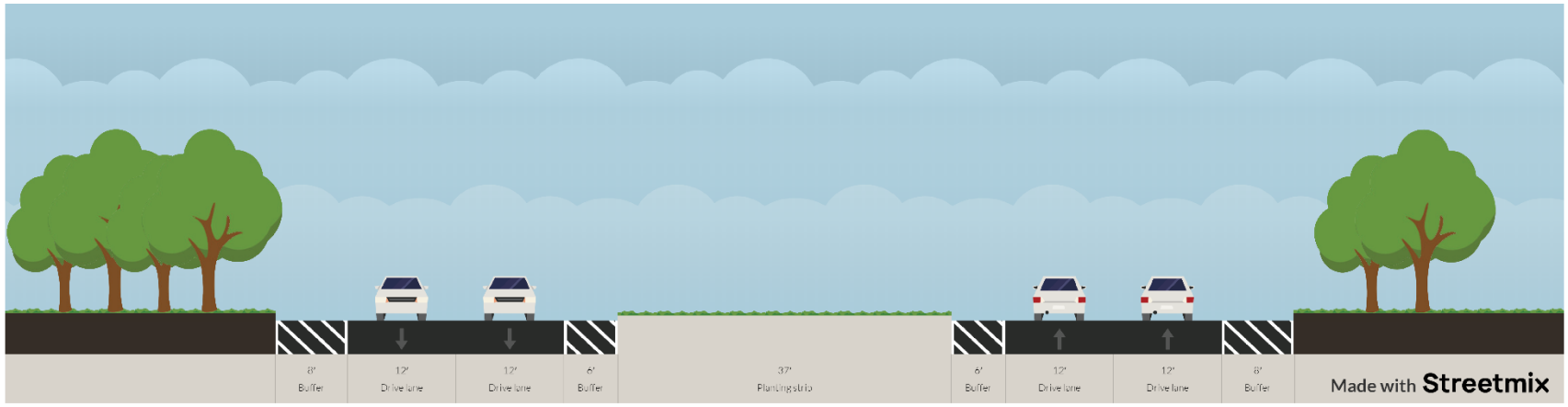


Figure 13-9. Proposed Action Typical Section, John James Audubon Parkway Near Bryant Woods

13.5.1.1 Level of Service

Using the VISSIM model, the Proposed Action traffic LOSs were determined for the 20 traffic analysis locations. Table 13-16 and Table 13-15 present the resulting overall LOS at each intersection in the study area as well as the specific traffic movements that operate at unacceptable LOS E or LOS F during the weekday and Saturday peak hours, respectively. Figure 13-10 presents the change in LOS during the weekday PM peak hour. Appendix F, "Transportation Technical Report" provides detailed traffic LOS tables showing all intersection movements. The key overall findings of the traffic LOS analyses follow:

- During the weekday AM peak hour, the number of locations that would operate at LOS D under the Proposed Action condition as compared to the No Action would increase by one, understanding that the intersections would be different. Niagara Falls Boulevard at Sheridan Drive would operate at LOS D with the Proposed Action, compared to LOS C under the No Action condition. Niagara Falls Boulevard at Treadwell Road would degrade, operating at LOS C with the Proposed Action, compared to LOS A under the No Action condition. Maple Road at North Baily Avenue and John James Audubon Parkway at Core/Lee Road would both operate at a LOS C with the Proposed Action as compared to LOS B under the No Action Condition. Niagara Falls Boulevard at Boulevard Mall, Maple Road at Alberta Drive, and Maple Road at Hillcrest Drive would both operate at a LOS B with the Proposed Action as compared to LOS A under the No Action Condition. Eggert Road at Alberta Drive would improve from a LOS C in the No Action to a LOS A with the Proposed Action. A total of 13 individual traffic movements would operate at LOS E or LOS F, compared to 7 individual traffic movements under the No Action condition.
- During the weekday PM peak hour, the number of locations that would operate at LOS E or F would remain the same as the No Action condition. Niagara Falls Boulevard at Sheridan Drive, and Niagara Falls Boulevard at Brighton Road/Maple Road would continue to operate at LOS D with the Proposed Action as compared to the No Action. Maple Road at North Bailey Avenue would degrade from LOS D in the No Action, to LOS E with the Proposed Action. One new intersection—John James Audubon Parkway at Forest Road—would operate at LOS D with the Proposed Action. The intersection of Maple Road at Sweet Home Road would improve to a LOS D with the Proposed Action, compared to a LOS E under the No Action condition. A total of 45 individual traffic movements would operate at LOS E or F, compared to 21 individual traffic movements under the No Action condition.
- During the Saturday Midday peak hour, the number of locations that would operate at LOS E and LOS F would remain the same as the No Action condition. Niagara Falls Boulevard at Brighton Road/Maple Road would improve from LOS E under the No Action, to LOS D with the Proposed Action. One of the three intersections operating at overall LOS D under the No Action condition (Niagara Falls Boulevard at Sheridan Drive) would continue to operate at LOS D with the Proposed Action. The second, Maple Road at North Bailey Avenue would degrade to LOS E with the Proposed Action, while the intersection of Eggert Road and Sheridan Drive would improve to a LOS C. Eggert Road at Alberta Drive would improve from a LOS C under the No Action to a LOS A with the Proposed Action. One new intersection—Maple Road at Alberta Drive—would operate at LOS D with the Proposed Action. A total of 38 individual traffic movements would operate at LOS E or F, compared to 23 individual traffic movements under the No Action condition.

In summary, the Proposed Action would not result in adverse traffic impacts at any intersection during the weekday AM peak hour, weekday PM peak hour, or Saturday Midday peak hour.

Table 13-14. Proposed Action: Weekday AM Peak-Hour Levels of Service

Intersection	Overall LOS	Delay	Traffic Movements at LOS E or LOS F
Niagara Falls Boulevard at Longmeadow Road	B	16.9	Southbound left turn
Niagara Falls Boulevard at Highland Avenue/Ruth Drive	N/A	N/A	None
Eggert Road at Alberta Drive	A	5.8	None
Niagara Falls Boulevard at Eggert Road	C	22.8	South- and westbound left turns
Eggert Road at Sheridan Drive	C	27.3	None
Niagara Falls Boulevard at Sheridan Drive	D	37.0	South-, east-, and westbound left turns
Niagara Falls Boulevard at Franklin Ave/Rochelle Pl	N/A	N/A	None
Niagara Falls Boulevard at Treadwell Road	C	22.3	Southbound left turn Eastbound through
Niagara Falls Boulevard at Boulevard Mall	B	14.7	None
Niagara Falls Boulevard at Brighton Road/Maple Road	C	28.7	None
Maple Road at Alberta Drive	B	19.8	Eastbound left turn
Maple Road at North Bailey Ave	C	29.5	South-, east-, and westbound left turns
Maple Road at Bowmart Pkwy	A	5.4	None
Maple Road at Hillcrest Drive	B	13.6	Southbound left turn and approach
Maple Road at Sweet Home Road	C	29.4	None
Sweet Home Road at Rensch Road	C	21.3	Eastbound through
John James Audubon Pkwy at Rensch Road	C	25.8	None
John James Audubon Pkwy at Core Road/Lee Road	A	5.8	None
John James Audubon Pkwy at Forest Road	C	24.3	None
John James Audubon Pkwy at Gordon R Yaeger Drive	A	5.4	None

Note: Overall level of service is not reported, per the Highway Capacity Manual, for two-way stopped controlled intersections.

Table 13-15. Proposed Action: Weekday PM Peak-Hour Levels of Service

Intersection	Overall LOS	Delay	Traffic Movements at LOS E or LOS F
Niagara Falls Boulevard at Longmeadow Road	C	31.9	South- and westbound left turns Westbound approach
Niagara Falls Boulevard at Highland Ave/Ruth Drive	NA	NA	None
Eggert Road at Alberta Drive	A	6.8	None
Niagara Falls Boulevard at Eggert Road	C	30.1	North-, south-, and westbound left turns Westbound approach
Eggert Road at Sheridan Drive	C	34.2	Northbound left turn
Niagara Falls Boulevard at Sheridan Drive	D	52.4	South-, east-, and westbound left turns South- and westbound approaches Westbound through
Niagara Falls Boulevard at Franklin Ave/Rochelle Pl	NA	NA	None
Niagara Falls Boulevard at Treadwell Road	B	16.4	None
Niagara Falls Boulevard at Boulevard Mall	C	22.3	Northbound left turn
Niagara Falls Boulevard at Brighton Road/Maple Road	D	43.2	Northbound left turn and approach North- and westbound through
Maple Road at Alberta Drive	C	34.3	East- and westbound left turns
Maple Road at North Bailey Ave	E	69.9	All turns All approaches North-, east-, and westbound throughs East- and westbound right turns
Maple Road at Bowmart Pkwy	B	10.3	None
Maple Road at Hillcrest Drive	C	20.2	None
Maple Road at Sweet Home Road	D	35.8	North- and southbound left turns
Sweet Home Road at Rensch Road	C	31.6	Northbound left turn Eastbound through
John James Audubon Pkwy at Rensch Road	C	31.1	None
John James Audubon Pkwy at Core Road/Lee Road	B	13.8	None
John James Audubon Pkwy at Forest Road	D	50.4	North-, south-, and westbound left turns South- and westbound approaches Westbound through and right turn
John James Audubon Pkwy at Gordon R Yaeger Drive	B	13.8	None

Note: Overall level of service is not reported, per the Highway Capacity Manual, for two-way stopped controlled intersections.

Figure 13-10. Existing, No Action Condition, and Proposed Action: Weekday PM Peak-Hour Levels of Service

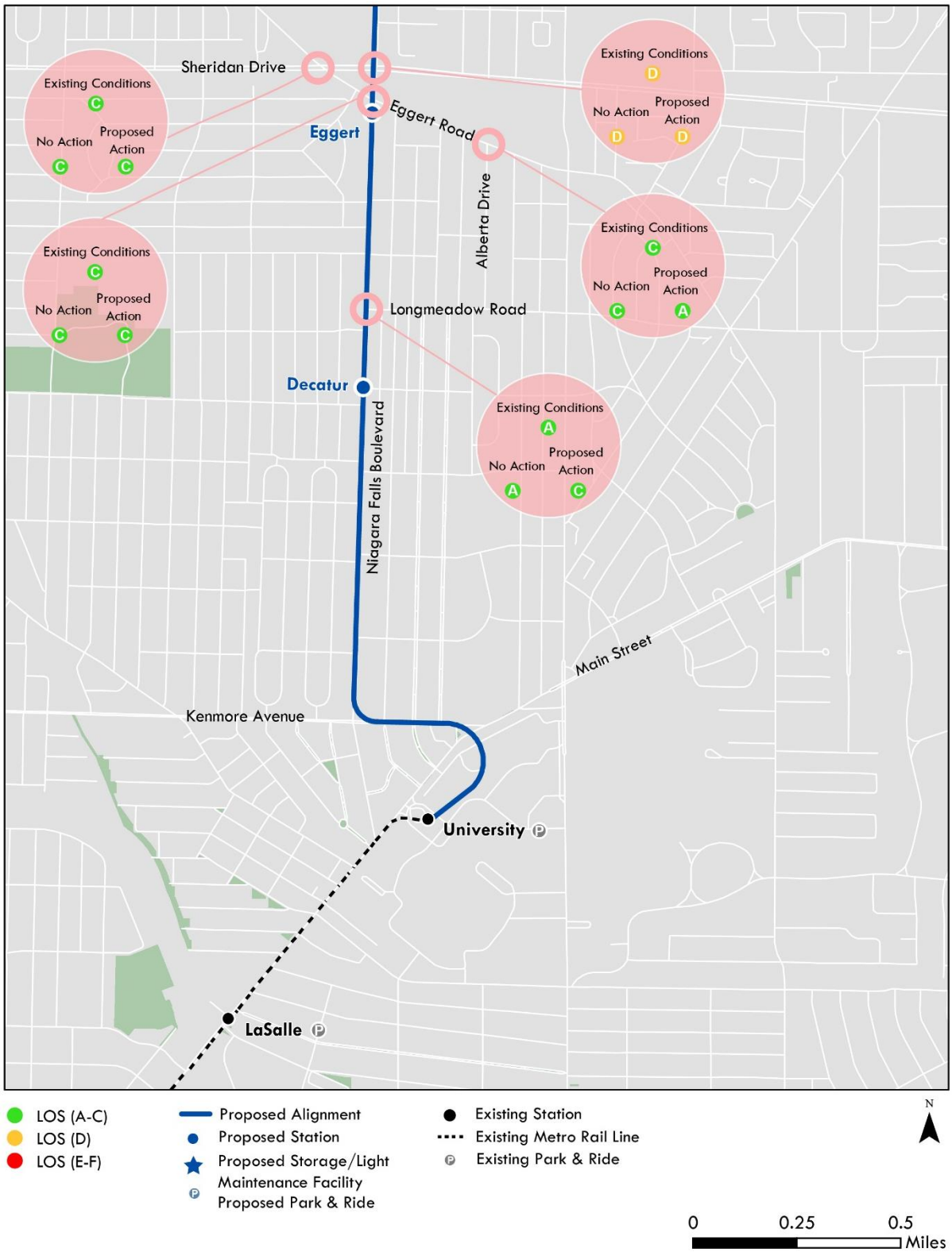


Figure 13-10. Existing, No Action Condition, and Proposed Action: Weekday PM Peak-Hour Levels of Service (Continued)

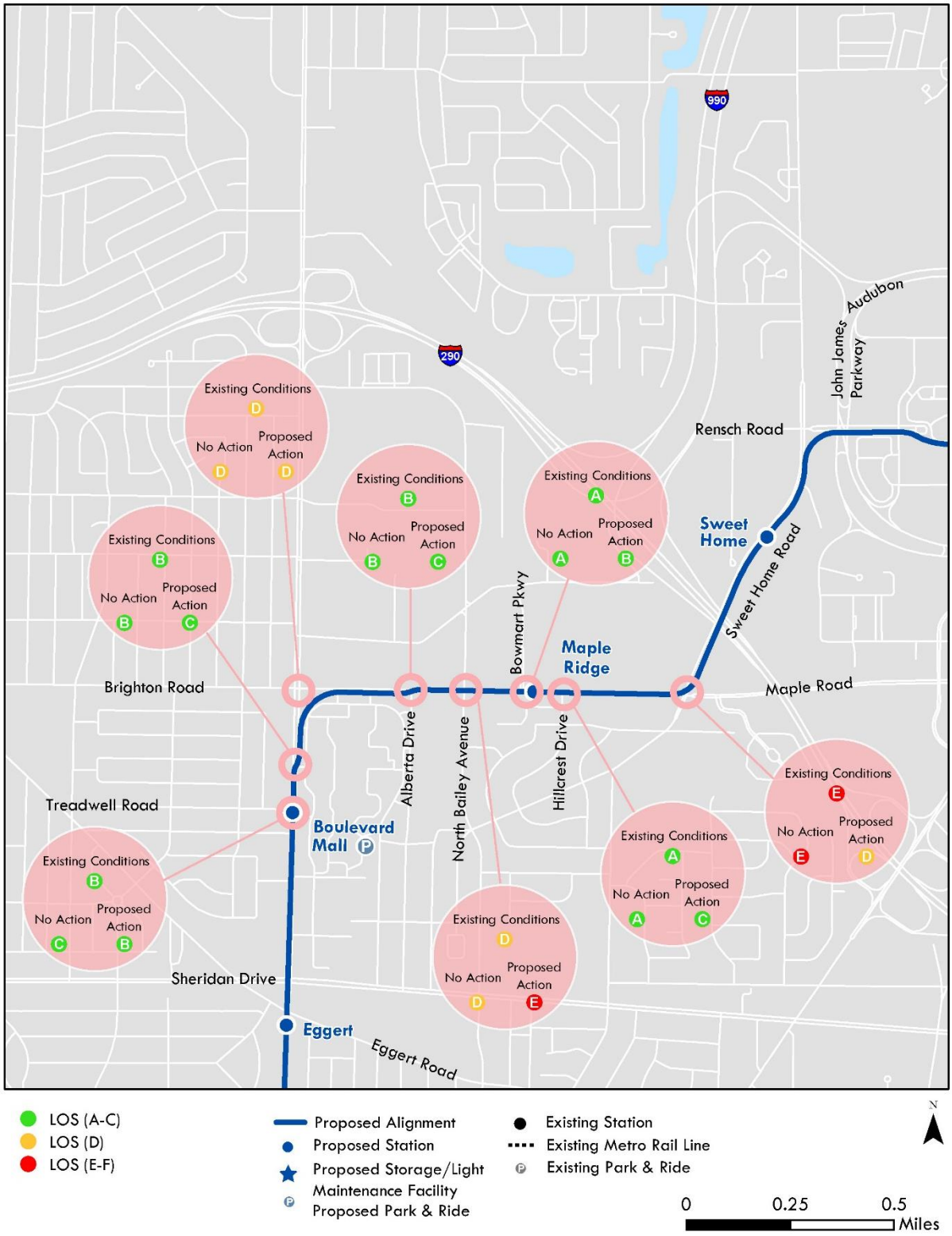


Figure 13-10. Existing, No Action Condition, and Proposed Action: Weekday PM Peak-Hour Levels of Service (Continued)

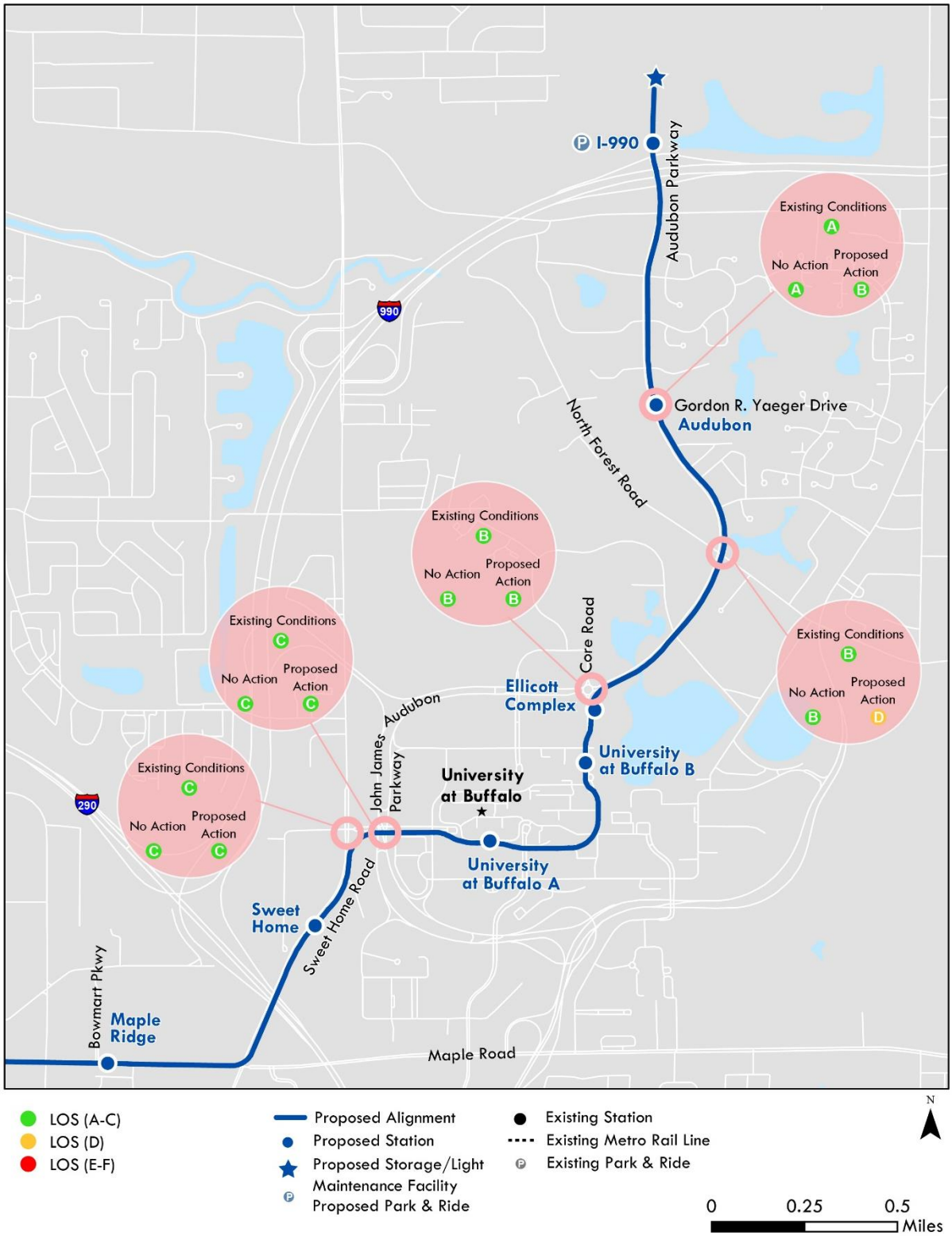


Table 13-16. Proposed Action: Weekend Midday Peak-Hour Levels of Service

Intersection	Overall LOS	Delay	Traffic Movements at LOS E or F
Niagara Falls Boulevard at Longmeadow Road	B	16.7	None
Niagara Falls Boulevard at Highland Ave/Ruth Drive	N/A	NA	None
Eggert Road at Alberta Drive	A	8.2	None
Niagara Falls Boulevard at Eggert Road	C	24.9	South- and westbound left turns
Eggert Road at Sheridan Drive	C	32.0	None
Niagara Falls Boulevard at Sheridan Drive	D	51.5	South-, east-, and westbound- left turns East- and westbound approach Westbound through
Niagara Falls Boulevard at Franklin Ave/Rochelle Pl	N/A	NA	None
Niagara Falls Boulevard at Treadwell Road	C	20.1	North- and westbound left turns
Niagara Falls Boulevard at Boulevard Mall	B	19.0	All left turns East- and westbound through
Niagara Falls Boulevard at Brighton Road/Maple Road	D	50.9	North-, south-, and westbound left turns East- and westbound through and approaches
Maple Road at Alberta Drive	D	40.8	North-, east-, and westbound left turns North- and southbound through Northbound approach
Maple Road at North Bailey Ave	E	61.3	All left turns South- and westbound approaches Southbound through and right turn
Maple Road at Bowmart Pkwy	A	7.1	None
Maple Road at Hillcrest Drive	A	4.9	None
Maple Road at Sweet Home Road	C	29.3	Southbound left turn
Sweet Home Road at Rensch Road	B	14.9	None
John James Audubon Pkwy at Rensch Road	B	15.8	None
John James Audubon Pkwy at Core Road/Lee Road	A	3.7	None
John James Audubon Pkwy at Forest Road	B	14.1	None
John James Audubon Pkwy at Gordon R Yaeger Drive	A	8.4	None

Note: Overall level of service is not reported, per the Highway Capacity Manual, for two-way stopped controlled intersections.

13.5.2 Transit

The Proposed Action would expand the existing Metro Rail from the terminus at University Station, along Kenmore Avenue, Niagara Falls Boulevard, Maple Road, and Sweet Home Road, through the UB North Campus to Audubon Parkway and I-990. Ten stations are proposed—two with a park & ride facility—and a light maintenance/storage facility is proposed near the end of the line. The Proposed Action would expand the area that would have access to rail transit service.

13.5.2.1 Metro Rail

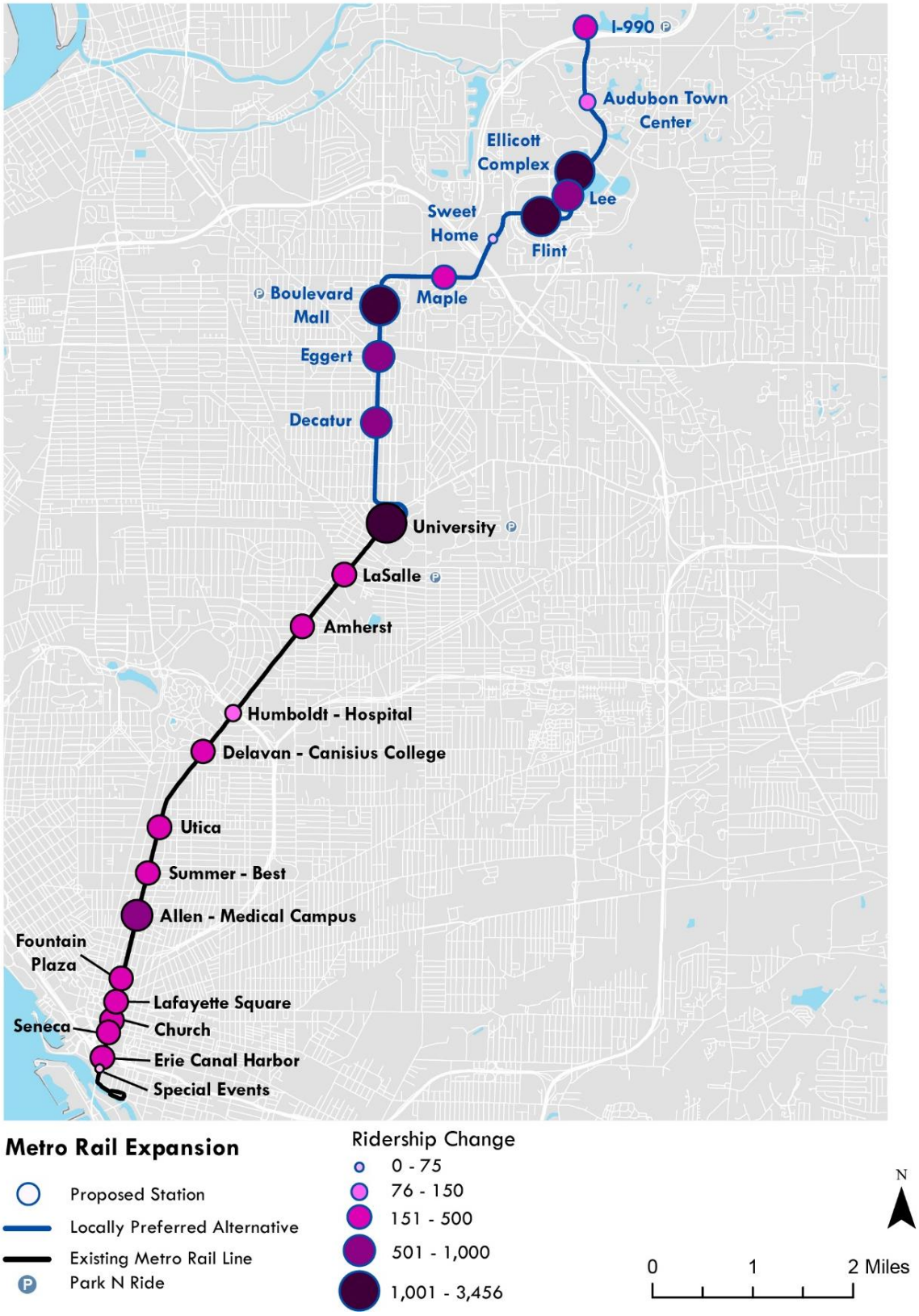
Table 13-17 presents the ridership forecasts for the Proposed Action compared to the No Action condition. As shown in Table 13-17, University Station has the highest increase in ridership, followed by Amherst, LaSalle, Delavan-Canisius College, and Utica. The proposed stations with the highest projected ridership include Flint Station and Ellicott Complex Station.

Table 13-17. Weekday Total Boardings for No Action Condition and Proposed Action (2040)

Station	No Action Condition (2040)	Proposed Action (2040)	Ridership % Change
Special Events	140	144	3%
Erie Canal Harbor	1,011	1,049	4%
Seneca	655	678	4%
Church Street	1,915	1,984	4%
Lafayette	1,803	1,903	6%
Fountain Plaza	1,872	1,946	4%
Allen-Medical Campus	1,591	1,677	5%
Summer-Best	971	1,018	5%
Utica	1,745	1,844	6%
Delavan-Canisius College	810	896	11%
Humboldt	621	689	11%
Amherst	1,258	1,453	16%
LaSalle	1,005	1,123	12%
University Station	3,062	4,804	57%
Decatur	—	546	—
Eggert	—	553	—
Boulevard Mall	—	1,040	—
Maple	—	160	—
Sweet Home	—	68	—
Flint	—	3,456	—
Lee	—	914	—
Ellicott Complex	—	2,162	—
Audubon	—	142	—
I-990	—	189	—
Subtotal Project Stations	—	9,230	—
TOTAL	**18,459**	**30,438**	**65%**

Figure 13-1 illustrates the change anticipated between the existing and proposed ridership. The stations anticipated to see the most change are the Boulevard Mall Station—due to its proposed expanding development—and Flint Station, Lee Station, and University Station—due to increased enrollment and employment.

Figure 13-11. Forecasted Ridership Change



13.5.2.2 Metro Bus

Three of the eight regular Metro Bus routes that intersect the study area would be modified due to the Proposed Action. Those routes and their planned changes are as follows:

- **Metro Bus Route 34-Niagara Falls Boulevard** would provide service to the Niagara Falls and East Robinson Road area with potential to expand coverage north of the current service area.
- **Metro Bus Route 35-Sheridan** would continue to provide east-west service between the Blackrock Riverside Transit Hub and Niagara Falls Boulevard along Sheridan Drive. The modified service would continue east-west service along Sheridan Drive to provide access to East Amherst. The route would no longer serve UB North Campus.
- **Metro Bus Route 49-Millard Suburban** would provide east-west service between the Boulevard Mall on Niagara Falls Boulevard in Amherst to East Amherst. The route would also continue to provide a connection to the Millard Fillmore Hospital along Maple Road in Amherst.

13.5.2.3 Paratransit

The PAL service area would be adjusted to reflect the expanded service provided by the Proposed Action. This would result in increased access to transit and improved mobility for those within a 3/4-mile of the Proposed Action corridor.

13.5.2.4 University at Buffalo

With the Proposed Action, some UB shuttle bus services would be terminated and users of these services would, for the most part, shift over to the new Metro Rail service. Terminated services, which are incorporated into the ridership forecasts provided in Section 13.5.2.1, include:

- UB Stampede (Blue Line, Main Circle to/from Flint Circle and Ellicott)
- UB Stampede North-South Express (Yellow Line, Main Circle to/from Flint Circle with stops at Maynard, Service Center Road, and Goodyear Residence Hall[3])

Other UB shuttle services would remain in operation including the Lee-Ellicott Express (Red Line), and the North Campus Shuttle.

13.5.3 Parking

Under the Proposed Action, park & ride facilities would be constructed at two station locations: Boulevard Mall Station and I-990 Station. These two park & ride facilities would provide approximately 650 additional parking spaces and increase capacity for the Metro Rail passengers.

The Proposed Action alignment would traverse the median of Niagara Falls Boulevard and Maple Road, and roadway widening would be required. As a result, potential impacts would occur to existing private parking facilities along these roadways. Based on the conceptual design (Appendix A, "Conceptual Plan"), 27 parcels could have their existing parking reduced to some degree. Approximately 875 parking spaces could be affected. Many of these parcels have additional space

[3] Stop at Goodyear is made in the southbound direction only.

that could be used for relocating the affected parking spaces. Overall, most of the existing properties' parking supply along the Proposed Action corridor would not be affected.

13.5.4 Pedestrian and Bicycle

With the Proposed Action, existing pedestrian and bicycle facilities would be enhanced. The Proposed Action proposes multi-use paths, bicycle lanes, and median refuge areas for pedestrians. On-street bike lanes would be provided along the Proposed Action alignment, adding bike lanes to Niagara Falls Boulevard and Maple Road. The Proposed Action would provide continuous sidewalks along both sides of the alignment, filling in gaps where currently there are not consistent sidewalks or they are in poor condition. A new multi-use bike and pedestrian trail along Audubon Parkway would be constructed with the Proposed Action. These connections would improve bicycle and pedestrian access to the proposed stations and promote connectivity between stations. Multi-use paths for pedestrian and wheelchair accessibility would be constructed leading up to all station areas. In addition, intersections along the corridor would be upgraded with ADA-compliant ramps, and push buttons would be added to the cross walks, thus facilitating the walkability within the study area.

13.5.5 Safety and Security

Vehicle, bicycle and pedestrian safety provisions would be made to minimize conflicts between automobiles, bicyclists and pedestrians. Crossings would be clearly marked with signage and would be limited to dedicated locations. Rail crossing gates would be used to stop vehicles at the railroad tracks. The gates would include an active warning system that would alert the control center of any interference with the gates. Bicycle and pedestrian crossings would be provided at all street and rail crossings. Fencing would be placed along the edge of all retaining walls in areas where evacuation paths are adjacent to the tracks.

The Proposed Action would result in a change to the existing right-of-way as described in Section 13.5.1. The added light rail facilities would result in restricted turning movements and the redesign of crosswalks at each station location. These modifications would improve conditions for vehicles over the No Action condition at signalized intersections where protected only phasing would be provided. The Proposed Action would require pedestrians to be alert to both automobile traffic and light-rail traffic while crossing the corridor. Pedestrian signals and railroad gates and signals would be provided to help inform pedestrians when they should cross the street and Metro Rail tracks. A pedestrian refuge area would also be provided between the Metro Rail tracks and adjacent traffic lanes at signalized intersections. Stations that have center platforms would add an additional stopping point where pedestrians can stand. The Proposed Action has the potential to result in a short-term increase in vehicular conflicts while drivers, bicyclists, and pedestrians are getting accustomed to the alteration of the Proposed Action alignment and the need to look for both automobiles and Metro Rail vehicles. No long-term negative impact on safety and security would be anticipated.

Design elements will be included in the project design to provide for safe and secure operations of the Proposed Action. Through their participation in the engineering plan design review process, the New York State Department of Transportation and towns of Amherst and Tonawanda will ensure that the design elements specifically related to walkways and crosswalk signal boxes for pedestrians

traveling to and from the light-rail station in the immediate vicinity of the station platforms and park-and-ride lots are included in the project design.

13.6 MITIGATION

The transit capacity provided by the Proposed Action would enhance the region by both increasing the overall person-carrying capacity of the corridor and by providing a transit option for north/south trips in the corridor. Long-term goals for the corridor coupled with the Proposed Action would provide additional street connectivity (to lessen the dependence on the existing major thoroughfares) and transit-oriented development opportunities. The improvement of pedestrian and bicycle facilities would also play a critical role in the long-term goals for the corridor by promoting walking and cycling, in addition to vehicular travel. As a way to support these other travel modes, the Proposed Action proposes a safe and comfortable environment that would include pedestrian crosswalks and signals, pedestrian refuge within medians, and minimized intersection crossing distances (particularly where transit stations would be located within the median).

Capacity and operational improvements (e.g., additional turning lanes or through lanes) were incorporated as part of the Proposed Action where impacts were initially identified during the conceptual design and traffic analysis. These corridor-level design changes (Table 13-12 and Table 13-13) were analyzed in the traffic analysis to avoid and mitigate traffic impacts associated with the Proposed Action.

Access management would be facilitated at the two park & ride facilities through the addition of new driveways to provide access to the stations. In some situations, these access points would be either right-in/right-outs or full-movement signalized intersections. Pedestrian and bicycle access to the stations would be facilitated by improvements in the station vicinity.