

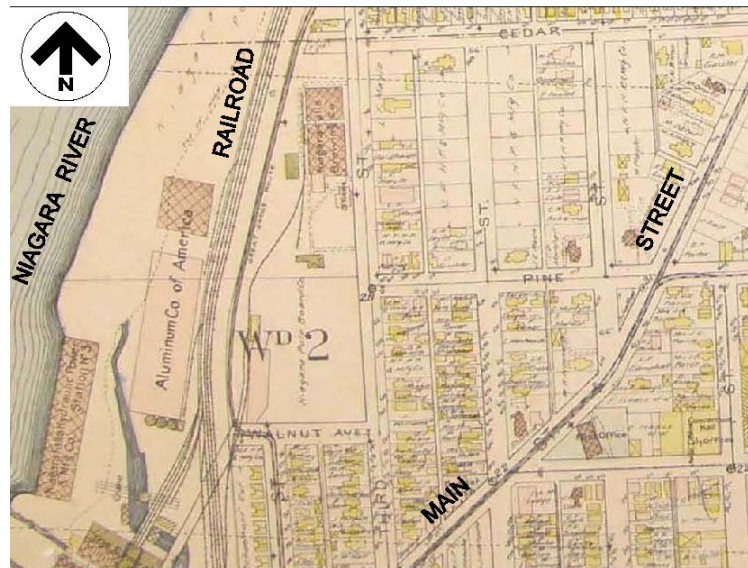
CHAPTER 2 – PROJECT CONTEXT: HISTORY, TRANSPORTATION PLANS, CONDITIONS AND NEEDS

This chapter addresses the history of the Project Study Area, its existing and anticipated future transportation conditions and deficiencies, and the needs and objectives identified for the Project.

2.1. Project History

People have been coming to the Lower Niagara River Gorge area for centuries. The first visitors reached the area on foot and later by horseback or horse-and-wagons. When the area became populated, roads were needed for efficient travel within the corridor. As the population and industry grew, so did the associated transportation network. During the 1800's and early 1900's, railroads grew to service local companies. For many years, a multi-track railroad was located along the west side of Whirlpool Street from Niagara Street to the Whirlpool Bridge where the railroad followed a more interior alignment. The alignment of the existing RMP, specifically the roadway that previously comprised the northbound lanes, follows much of the old railroad alignment. A portion of a Historical Map depicting the railroad along this corridor is included below.

With the introduction of the automobile and increased industrialization, more roads were built in the Niagara Falls area. During the 1950's, as more and more people traveled by car, more visitors came to Niagara Falls and other nearby towns. During the 1950's and 1960's, creating roads that provided efficient travel along with a scenic view for the drivers' and passengers' enjoyment was considered desirable by many transportation and community planners. This philosophy was followed extensively by Robert Moses throughout the State of New York and was used to plan and develop the RMP between the North Grand Island Bridge in the City of Niagara Falls and NYS Route 18 in the Town of Porter.



The first portions of the RMP, including the proposed Project Area portion between Main Street and Findlay Drive, were completed and opened to traffic in 1962 and became part of the New York State Parkway System. The RMP was originally constructed as a four-lane limited-access expressway for non-commercial traffic. Included as betterment in the original New York Power Project licensing agreement,

much of the RMP was constructed as part of NYPA's construction of components of the Power Project. For example, the rock excavated to build the generating plant and hydraulic tunnels was used as fill to create land on the Upper Niagara River shoreline, upon which the RMP was built. Similarly, the aforementioned rail corridor was used for construction road access during Power Plant development and then later used to accommodate the RMP.

The need and functionality of the RMP, however, has been debated since it first opened. For a long time, the City of Niagara Falls has been concerned that the RMP inordinately separates the City from the Niagara River waterfront and encourages visitors to bypass Niagara Falls' business districts. Several studies / evaluations examining removal / changes to the RMP were conducted by the City over the 1980's and 1990s' and fueled an ongoing debate among municipalities along its route to decide if the RMP should remain or should be removed completely.

In 1999 - 2000, State Parks and NYSDOT coordinated on a conversion of a segment of the RMP between Main Street (NYS Rte 104) in downtown Niagara Falls and Lewiston. This involved replacing the two RMP northbound lanes for use by two-way, 40-MPH traffic and the closure of the two southbound lanes to vehicular traffic and conversion to a wide "multi-purpose trail" for use by pedestrians, joggers and bicyclists. The "Pilot Project," as it was called, operated for two years to examine potential diversion of traffic to local streets and whether this would result in adverse impacts. However, the large majority of physical expressway features (grade separation, fencing, concrete barriers, etc.) was left in place except in limited locations, such as where an interchange would have been rendered inaccessible. Upon determination that there was almost no change in traffic levels before or after the Pilot Project and that the Pilot Project resulted in absolutely no capacity impacts on the RMP itself, State Parks elected in 2000 to leave this alignment in place. The RMP is still configured this way today.

After making the Pilot Project permanent, the residents and leaders from the City of Niagara Falls continued to criticize the RMP in that it continued to be a barrier between the City and the Niagara River. For example, during the Niagara Power Project relicensing process in 2004 - 2007, the issue of the RMP was again and again brought up, along with discussions of the fact that it conflicted with the Governor's vision for a "Niagara River Greenway" between Lake Ontario and Lake Erie, which was similar in scope and intent to the Hudson River Greenway.

The continuation of the City-State agency discussions on the RMP led to USAN drafting and coordinating on the aforementioned MOU in May 2006 between the City, State Parks, NYSDOT, and USAN. In addition, while not a signatory to the MOU, NYPA has also acted as a Project partner given their land interests in the Project Area. The MOU set the basis among these agencies for moving various RMP proposals through public scoping and preliminary engineering (e.g., this DR/EA process) in anticipation of subsequent construction funding decisions. The MOU also clearly indicated the agencies' intent to consider alternatives that had independent utility from other segments of the RMP, as well as the potential for a phased approach, for which ultimately the first phase was defined as the Main Street to Findlay Drive segment of the RMP (i.e., the proposed Project under this DR/EA).

A scoping process was initiated in 2010 to address the future of a six-mile Robert Moses Parkway – North Segment (a.k.a., Niagara Gorge Corridor Project). Following a series of separate stakeholder meetings and public scoping meetings conducted over the next 2½ years, the *Niagara Gorge Corridor Project: Draft Scoping Report* was released in February 2013, followed by a public open house (see **Section 1.7.2** for further detail on the scoping meetings). The justification and benefits of using a phased approach for the NGC Project were highlighted during the open house; this approach, which would advance the Main Street-to-Findlay Drive portion of the overall project, was well-received by the public. *The Niagara Gorge Corridor Project: Final Scoping Report* was released in October 2013. This report further reinforced the intent to advance the portion of the proposed Project between Main Street and Findlay Drive. It also identified the three alternatives that would be advanced for further study during the preliminary engineering / environmental review process.

As a result of the scoping process conducted for the overall Niagara Gorge Corridor, and as agreed to by the MOU Partner agencies for the Project, it was determined that a project between Main Street and Findlay Drive should be advanced as a separate action through the environmental documentation process pursuant to NEPA and associated State of New York requirements. In this regard, a White Paper (see **Appendix D**) on the appropriateness of this approach was prepared for review and approval by the FHWA, the NEPA lead agency. This paper demonstrated, and FHWA concurred that advancing the project between Main Street and Findlay Drive would achieve the three criteria for evaluation in a NEPA document as stated in 23 CFR 777.111(f):

- Connect logical termini and be of sufficient length to address environmental matters on a broad scope;
- Have independent utility or independent significance, i.e., be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made; and
- Shall not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

Details of public involvement efforts that have been implemented for the proposed Project between Main Street and Findlay Drive are provided in **Section 1.7.3**.

2.2. Transportation Plans and Land Use

2.2.1. Regional and Local Plans for the Project Area

Transportation plans for the region and local area include those prepared by the Greater Buffalo-Niagara Regional Transportation Council (GBNRTC), i.e., the Metropolitan Planning Organization (MPO) for Erie and Niagara Counties, and a downtown Niagara Falls program of proposed transportation improvements prepared by USAN (i.e., which was intended to feed into GBNRTC's long-term planning).

In addition, a number of other regional and local plans, including efforts by NYPA, State Parks, and the City of Niagara Falls, have been adopted that will continue to influence transportation. These are all presented below.

Greater Buffalo-Niagara Regional Transportation Council, 2040 Metropolitan Transportation Plan Update

The GBNRTC is focused on establishing a comprehensive, coordinated, and continuing transportation planning process for the metropolitan area, including development of the *2040 Metropolitan Transportation Plan Update* (2040 MTP Update). This 2040 MTP Update serves as the long-range transportation plan (LRTP) which is required by federal regulations to be updated at least every four years to retain consistency with current trends and conditions and to maintain no less than a 20-year planning horizon.

The 2040 MTP Update also serves as a guide to meeting the area's multimodal transportation system needs, including development of the Transportation Improvement Program (TIP). The TIP is the complementary capital-programming component of the long-range Metropolitan Transportation Plan consisting of all federally funded roadways, transit and major transportation projects being considered within the region over the next five (5) years. The completed metropolitan planning process allows for the allocation of millions of dollars in federal funding annually to improve all modes of travel as identified in the TIP or LRTP. This includes public transit, bicycling and walking, as well as automobile use in the two-county region.

The 2040 MTP Update, which was officially endorsed by the GBNRTC on May 12, 2014, is primarily based on the *2035 Long-Range Transportation Plan Update* (2035 LRTP Update) adopted in May 2010 and thereby reaffirms key elements of that plan. While much of the 2035 Plan is unchanged, the 2040 MTP Update extends the planning horizon to the year 2040 and allows for the incorporation of work accomplished to date on a multi-year and more extensive metropolitan plan for 2050 which is currently underway. The 2040 MTP Update also reflects the most current data related to demographics and traffic conditions, as well as updates of financial resources available to the region to implement MTP projects based on new federal transportation legislation (Moving Ahead for Progress in the 21st Century Act [MAP-21]) and current NYSDOT forecasted apportionments. In addition, the 2040 MTP Update includes current status of significant planning studies and projects that could impact future transportation investments in the region, updates on resource agency consultation, and feedback from public involvement activities, among other revisions.

As the state designated MPO, GBNRTC's planning process must be consistent with federal transportation law. As originally put forth in the Safe Accountable Flexible Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) and incorporated into FHWA's Statewide and Metropolitan Planning regulations at 23 CFR Part 450, eight (8) planning factors must be considered for all metropolitan planning activities, including consideration and implementation of projects, strategies and services. These factors include:

- Support economic vitality of the area;

- Increase safety of the transportation system;
- Increase security of the transportation system;
- Increase accessibility and mobility of people and freight;
- Protect and enhance the environment, promote energy conservation, improve the quality of life and promote consistency between transportation improvements and growth and economic development;
- Enhance integration and connectivity of the transportation system;
- Promote efficient system management and operation; and
- Emphasize preservation of the existing transportation system.

The current LRTP was developed with the input from many stakeholder groups including representatives from public agencies such as NYSDOT and the Niagara Frontier Transportation Authority (NFTA), community based organizations, environmental agencies, business groups, local municipalities, and private citizens. The stakeholder input combined with other planning activities by regional, state, and bi-national agencies has helped to create a LRTP with a greater focus on projects and investment plans to achieve the mutually supported plan objectives.

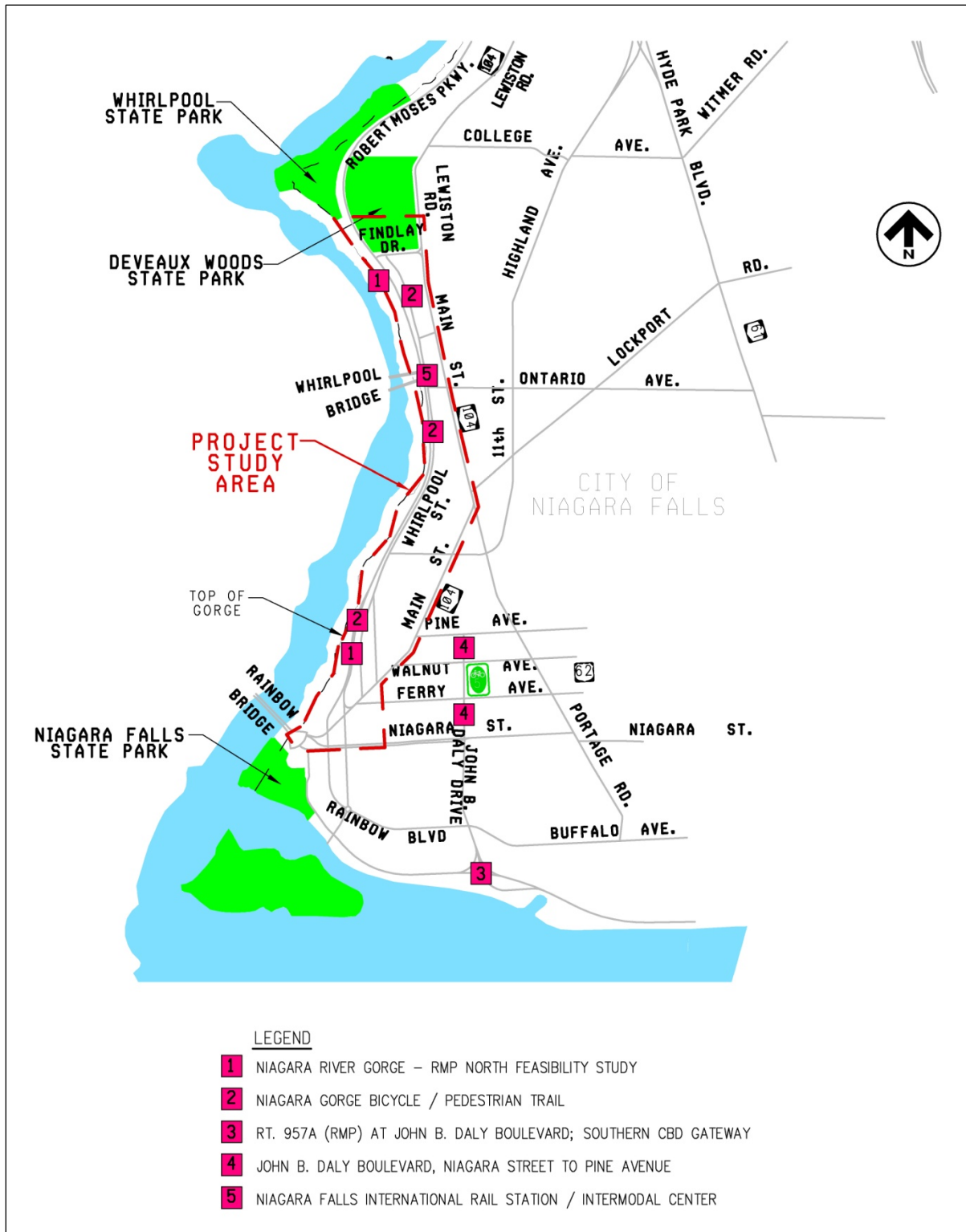
The current 2014-2018 TIP was released in May 2013 and officially went into effect on July 21, 2013, which is a year earlier than the current LRTP (2040 MTP Update) was released. However, since the 2040 MTP Update essentially extends the previous plan to the year 2040, the TIP would also be consistent with the existing plan. The TIP represents a regional consensus on which priority transportation projects are essential to the Buffalo-Niagara region during the next five years. Projects included in the program help to: move the region towards implementing the Long Range Transportation Plan; meet short-range needs; and provide for the maintenance of the existing transportation system.

As shown in **Figure 2-1**, these projects located within or adjacent to the Project corridor are recognized on the 2014-2018 TIP:

- Niagara River Gorge – RMP North Feasibility Study (Feasibility study)¹
- Niagara Gorge Bicycle/Ped Trail (ROW acquisition and new/improved shared use paths)

¹ Although this study included on the 2014-2018 TIP was originally intended to comprise a feasibility study for a project between Main Street in the City of Niagara Falls and Center Street in the Village of Lewiston, only the portion between Main Street and Findlay Drive is being considered further at this time. This Design Report / Environmental Assessment for the Main Street-to-Findlay Drive corridor is a major element of this TIP-approved project. It should also be noted that the RMP was specifically mentioned in the 2040 MTP Update as a study in progress, stating that “Study progress on the Northern section of Robert Moses Parkway led to an agreement on the scope from Rainbow Bridge to Findlay Drive. Finally, study of the remaining portion of the facility to Lewiston resulted in three alternatives that are currently under public consideration. The results of the studies can help replace conceptual projects in the current 2035 MTP.”

Figure 2-1 – GBNRTC TIP Projects Within or Adjacent to Project Corridor



- RT 957A (RMP) @ John B Daly Boulevard; Southern CBD Gateway (Interchange reconstruction)²
- John B Daly Boulevard, Niagara Street to Pine Avenue (New highway construction)
- Niagara Falls International Rail Station / Intermodal Center (Bus and passenger rail station)³.

Greater Buffalo-Niagara Regional Transportation Council, One Region Forward Final Plan

GBNRTC administered and managed the preparation of *One Region Forward Final Plan: A New Way to Plan for Buffalo Niagara* (February 2015), with technical assistance from the University at Buffalo Regional Institute and Urban Design Project (UBRI/UDP) and cross-section guidance from a steering committee comprised of multiple agencies and stakeholder groups. The plan was developed with the region's economic and ecological sustainability and dependence on fresh water in mind, and is intended to be a resource to guide the coordination of land use and transportation across the region in a way that supports these factors. Many of the ten broad values mentioned in the plan are directly or indirectly consistent with the goals of the proposed Project, including the following:

- "Manage infrastructure strategically, investing in existing areas and maintaining, removing, or extending urban systems to lower costs, improve efficiency and enhance quality of place."
- "Protect and develop cultural, heritage, and architectural resources to preserve community identity, enrich daily life, create great places, attract visitors, and build our economy."
- "Maintain, improve, expand and connect our parks, trails and greenways, waterfronts, recreation areas, and open spaces for a wide range of users, to protect the environment, attract visitors, and grow the economy."

The One Region Forward Plan does not propose or recommend any specific projects that should be implemented. Instead, it identifies "5 Big Ideas" to help achieve agreed-upon community values, overall standards that can be used to weigh future proposals, and a variety of potential strategies aimed at reaching those "big idea" goals for the future. Two of the identified "big idea" goals and some associated potential strategies and actions that are also related to the goals of the proposed Project are presented below:

- "Create great places and a thriving economy through efficient land use" including strategies for redeveloping existing sites in urban centers to higher and better uses and connecting land use to transportation by making walking and biking more attractive, among others.
- "Connect our places by expanding and diversifying our transportation options" including strategies for promoting complete streets, providing corridor makeovers and providing appropriate infrastructure to make bicycle travel safe and convenient.

² This is the Robert Moses Parkway South Segment – Riverway Project, which is currently under construction.

³ This is the City's new passenger rail station, which is currently under construction.

Despite being more of a strategic policy document, part of the plan includes a scenario assessment for the area along Main and Whirlpool Streets between Pierce Street and Findlay Drive, which is encompassed within the RMP Removal Project Study Area. As presented in a separate report entitled *Imagining the Future of a Niagara Falls Neighborhood: Niagara Falls, NY*, this effort was designed to allow the community to imagine potential alternative futures and test their impacts in order to make smarter decisions about the future they create. Specifically, the scenario modeling performed in Niagara Falls was intended as a means to envision how the planned removal of the RMP from Main Street to Findlay Drive, along with the construction of the Niagara Falls Intermodal Railway Station, could help to revitalize the surrounding neighborhood and significantly advance sustainability goals.

The vision of the Niagara Falls stakeholders' scenario focused on creating a mixed-use district by revitalizing buildings along Main Street, infilling lots along Whirlpool Street and increasing pedestrian activity and foot traffic between the Intermodal Station, Main Street, the Niagara Gorge Rim Trail and green space. The scenario ultimately included a total of 30 individual projects which would transform nearly 24 acres of land in total, although the proposed removal of the RMP in combination with the Niagara Falls Intermodal Station already under construction are considered to be the catalysts that would allow such change to occur.

Multi-Modal Access Program, Downtown Niagara Falls, New York

This report prepared for USAN was completed in December 2005. The report summarizes a series of inventory, analysis and planning tasks to identify potential components of a Multi-Modal Access Program in downtown Niagara Falls. USAN identified the enhancement of multi-modal access as a key strategic component to fostering economic development downtown and to creating a more walkable and “bike-able” urban setting for new development and redevelopment activities. The program recommended a series of projects including:

- Re-introduce street elements/characteristics in downtown areas to facilitate more user-friendly pedestrian, bicycle, and transit access.
- Identify and advance opportunities to better connect Niagara Falls State Park / waterfront areas to downtown Niagara Falls.
- Introduce urban design elements to the downtown streetscape designed to enhance the pedestrian experience and visually relate to features in the State Park.
- Simplify and calm traffic flows on routes serving downtown.
- Identify components of an overall program to manage parking in downtown.

This report specifically called for a reconfiguration of a 1.2-mile segment of the RMP between John B. Daly Boulevard and Old Falls Street to reconnect downtown to the upper Niagara River, emulating Frederick Law Olmsted's original “Riverway”; this ~\$18.8 million project is currently under construction and scheduled to be completed in June 2016. It did not, however, specifically address long-term improvements to the RMP – North Segment, focusing in the short-term on proposed trail improvements

near the Main Street interface of the RMP, with a call to begin the actual required federal NEPA process for a long-term solution for the corridor (which led to the 2006 MOU to advance the Public Scoping process).

Niagara Power Project Relicensing Recreation Plan and Land Management Plan

On March 15, 2007, the Federal Energy Regulatory Commission (FERC) issued a new license (effective September 1, 2007) to NYPA for the continued operation and maintenance of the 2,755.5-megawatt Niagara Power Project, which is one of the largest non-federal hydroelectric facilities in North America. As required by Articles 404 and 405 of NYPA's new license, respectively, NYPA has prepared both a *Recreation Plan* and a *Land Management Plan* related to the facility. Both plans are dated August 2008. The Niagara Power Project boundary includes, among other areas, the portion of the RMP between Main Street and the Whirlpool Rapids Bridge, while the portion of the RMP between the Whirlpool Rapids Bridge and Findlay Drive are considered to be outside of that boundary. More specifically, the Robert Moses Parkway Trail (i.e., the former RMP southbound expressway lanes) is listed among the nine publicly-accessible recreational facilities on NYPA-owned land that is part of the Niagara Power Project.

The Recreation Plan indicates that recreation facilities on NYPA lands within the overall Niagara Power Project boundary may be in need of upgrading, modernization and revitalization in the near future to accommodate future recreation demand. Recreation enhancements are proposed at five of the nine recreation facilities open to the public within the Niagara Power Project boundary, including: the Robert Moses Fishing Pier; the Upper Niagara River Observation Area; Reservoir State Park; the Niagara Gorge Discovery Center; and the Great Gorge Railway Trail. Of these five sites, only the Niagara Gorge Discovery Center and the Great Gorge Railway Trail are in proximity to the proposed RMP Removal Project between Main Street and Findlay Drive.

The Land Management Plan was prepared in close coordination with the Recreation Plan, given that recreation is the second-most common land use within the Niagara Power Project boundary. Specific topics addressed in the Land Management Plan, each having its own set of objectives and management actions, include: road maintenance practices; vegetation management; non-native vegetative species control; nuisance wildlife control; future use of project lands; and aesthetic enhancements. Within the entire Niagara Power Project boundary, State Parks solely manages approximately 200 acres of project lands, including the Niagara Gorge Discovery Center and the Great Gorge Railway Trail, while State Parks and NYSDOT co-manage approximately 79 acres of project lands, including segments of the RMP. In general, NYPA is responsible for employing such land management practices as road maintenance, vegetation management and nuisance wildlife control, and also governs practices by other entities managing lands within the Niagara Power Project boundary.

In restoring the Gorge rim to allow for an expansion of future recreational use along and within the Niagara Gorge, including the incorporation of a new trail network (i.e., a system that is more appropriate than the current Robert Moses Parkway Trail), as well as taking steps to reduce the amount of pavement and other impervious surfaces that in part affect the long-term sustainability of the Gorge and Niagara

River ecology, the Project objectives are consistent with those of both NYPA's Recreation Plan and Land Management Plan.

Niagara River Greenway Plan

The Niagara River Greenway Commission (NRGC) was formed by State legislation signed in September 2004 to develop a plan to enhance waterfront access, complement economic revitalization, and ensure the long-term maintenance of a "greenway" along the Niagara River from Lake Ontario to Lake Erie. As part of the relicensing process for the Niagara Power Project, NYPA executed various settlement agreements with government units and a number of non-governmental organizations, including the NRGC. Provisions set forth in the settlement agreements established funds to support the creation and maintenance of a Niagara River Greenway. In addition, the development of policies related to the establishment of the Greenway was undertaken in close coordination with State Parks; State Parks also provides administrative and technical support functions for the NRGC.

The *Niagara River Greenway Plan and Final Environmental Impact Statement*, which was prepared by NRGC and officially approved by State Parks in May 2007, established a unified vision and set of principles for the Niagara Greenway. The area defined in the plan as the Niagara Greenway is located along the eastern edge of the Niagara River between Lake Erie and Lake Ontario, following the municipal boundaries of the 13 municipalities located between Buffalo to the south and Youngstown to the north. The Greenway Plan outlines 11 principles listed below that will guide planning in the Greenway and promote high-quality, ecologically sensitive and sustainable development:

- *Excellence:* Greenway projects will meet world class standards.
- *Sustainability:* The Greenway will be designed to promote ecological, economic and physical sustainability.
- *Accessibility:* The Greenway will be designed to provide and increase physical and visual access to and from the waterfront for all users (youth, seniors, and persons with disabilities).
- *Ecological Integrity:* Emphasis shall be placed on restoring and retaining ecologically significant areas and natural landscapes, both in and over the water and upland.
- *Public Well-Being:* The Greenway will be designed to achieve and promote physical and emotional wellness of the public through active and passive recreational opportunities.
- *Connectivity:* The Greenway will increase connectivity and access, promote the continuity of open space and habitats, and provide for connections to related corridors and resources across the region.
- *Restoration:* The Greenway will be designed to encourage restoration of ecological resources, the appropriate use of brownfields and the revitalization of existing urban centers along the corridor.

- *Authenticity:* The Greenway will establish a clear sense of “place” and identity that reflects the traditional spirit and heritage of the area; projects and activities should have a connection to the character, culture and/or history of their location.
- *Celebration:* A Greenway project should celebrate local history, diversity, cultural resources, and the natural and built environments.
- *Partnerships:* The focus of the Greenway will revolve around cooperation and reciprocal compromise. Relationships and partnerships must be formed and strengthened to achieve coordination and integration of efforts throughout the Greenway.
- *Community Based:* Greenway planning will reflect preferences and plans of the local communities while respecting other stated goals and the communal vision of the Niagara River Greenway.

The Project corridor between Main Street and Findlay Drive is located completely within the Greenway and all of the Greenway Plan principles must be considered as development of this Project continues. The Greenway Plan also builds on the principles by identifying a set of goals to guide projects toward meeting the vision for the Greenway. The goals include:

- Improved access
- Making connections
- Protect and restore the environment
- Celebrate history and heritage
- Spark revitalization and renewal
- Promote long-term sustainability
- Extend Olmsted’s Legacy

Several of the Greenway Plan goals closely resemble the goals developed for this Project.

City of Niagara Falls Niagara River Greenway Vision and Project Proposals

Prepared and released in 2006, the *City of Niagara Falls Greenway Vision and Project Proposals* was drafted by City planning staff to complement development of the Niagara River Greenway Plan (see above). The City’s plan provides recommendations for 54 projects citywide that would better connect the city with the waterfront, provide information centers and interpretive opportunities for exploration of the area’s heritage, expand the pedestrian/bicycle trail system and help to repair and improve both the urban and natural environments.

Several of the city-wide recommended projects are directly related to the proposed improvements associated with the proposed RMP Removal Project, or would be benefitted as a result of constructing the proposed Project. These include, but are not necessarily limited to the following:

- Implement a bike and pedestrian trail system along the Niagara Falls waterfront, including the top of the Gorge, and improve overlook facilities.
- Naturalize the Niagara River shoreline, including the rim of the Gorge, via removal of paved surfaces and new plantings.
- Reconfigure the Robert Moses Parkway to reduce the negative impact of the Parkway on the waterfront environment and as a barrier between city neighborhoods and the Gorge.
- Plan the Niagara Falls “Green Structure” to expand and link the city’s open space system and better connect neighborhoods to the waterfront.

Niagara Falls National Heritage Area – Management Plan

The Niagara Falls National Heritage Area was designated by Congress in 2008 to recognize the national significance of the region’s natural and cultural legacies. The National Heritage Area program seeks to strengthen community awareness of its history; support the stewardship of historic, cultural and natural resources; and use heritage resources as a means through which to contribute to the regional economy. In that context, a management plan was prepared for the Niagara Falls National Heritage Area Commission and the U.S. National Park Service in July 2012. The plan outlines the National Heritage Area’s vision and goals, identifies potential actions that support the vision and goals, and provides guidelines and processes for undertaking desired actions.

Of the many goals and associated actions identified in the plan, several are directly or indirectly related to, or would benefit from the proposed RMP Removal Project between Main Street and Findlay Drive. These include the following:

- Coordinate with and support the Niagara River Greenway by working with partners to implement its trail system and interpretive vision within the boundaries of the National Heritage Area.
- Actively support and promote top-priority projects that implement the vision and program outlined in the Niagara River Greenway Plan.
- Work with attractions and communities to provide a seamless and coordinated system of way-finding throughout the National Heritage Area.
- Encourage completion of a comprehensive hiking and biking trail system and amenities along the Niagara River Gorge.
- Work with facilities and services throughout the area to help make them hiker and biker ready.
- Support the development of recreational access that affords wide access to the natural resources of the heritage area.
- The National Heritage Area shall promote the sustainable use of trails along the Niagara Gorge.

- The National Heritage Area shall promote, encourage, support and facilitate the conservation of land for environmental protection and the designation of environmentally sensitive / resource management areas by environmental agencies and organizations.
- Assist and support municipalities located within the heritage area in designing and developing projects that will improve public access to the community's waterfronts, preserve and enhance significant resources, and provide interpretation about the natural and cultural history of the Niagara River.
- The National Heritage Area and its partners should provide regional leadership by setting the standard for quality in tourism product development that encourages community revitalization and enhancing the region's attraction.

Erie-Niagara Framework for Regional Growth

An early precursor to the "One Region Forward" plan recently adopted by GBNRTC, the *Framework for Regional Growth* (dated October 2006) was a document prepared and supported by Erie and Niagara Counties. It was prepared to be utilized as a blueprint to support the actions of county and regional agencies relating to the area's physical development. It was also used to inform state and local governments, private developers, and non-profit organizations about the process and actions County government could undertake when making decisions affecting the region's development. The Regional Framework helped the Erie and Niagara Counties region make decisions about its growth and development on a coordinated and consistent basis. It established a framework for development within the region, and described policies, programs, and projects that encouraged and facilitated development consistent with such framework. The Plan was designed to help local officials coordinate their decisions so they could anticipate how one decision may affect another. Several principles referred to in the framework that directly related to this Project include:

- A vital economy
- Improved access and mobility
- Efficient systems and services
- Conserved natural and cultural assets.

2.2.1.1. Local Master Plans

Local master plans developed for the Project Study Area include the adopted comprehensive plan and zoning ordinance prepared by the City of Niagara Falls. A number of prior plans and studies⁴ that included the removal of the RMP have been prepared by the City of Niagara Falls or consultants engaged

⁴ There are at least eight prior studies and plans produced by the City between 1992 and 2004 that involve some mention of a proposal to remove the RMP, including the *draft Local Waterfront Revitalization Program, Main Street Revitalization Plan*, and the *Achieving Niagara Falls' Future* plan.

by the City; still-relevant proposals / policies from these prior studies have been incorporated in the City's formally adopted Comprehensive Plan and development regulations.

City of Niagara Falls Comprehensive Plan

The current *Comprehensive Plan for the City of Niagara Falls* ("Comprehensive Plan") was adopted by the City Council in 2009 to set a comprehensive foundation for revitalizing the City and the long-term renewal of the regional economy. A major goal of the Comprehensive Plan is to guide development and growth in the City, as well as overcoming the past four decades of economic, industrial, and population decline.

Also addressed in the plan is the recovery from a number of misguided renewal initiatives that led to the removal of many buildings and fragmentation of the downtown core. The comprehensive plan places a strong emphasis on the quality of the urban experience for both visitors and residents. The plan supports improvements to the whole community – streets, parks, heritage and commercial areas – to improve quality of life and hopefully entice visitors to stay for longer periods and visit more often.

The 2009 Comprehensive Plan is an evolution of the 2004 City of Niagara Falls Strategic Plan with many of the same initiatives, goals and strategies. The main difference is the Section 7 "General Citywide Strategies". This section was broadened and expanded to ensure a continuity of the strategic vision throughout each planning area of the city. The following are Core City Strategies identified in the Comprehensive Plan that could potentially benefit from the proposed Project:

- Reconnect the City to its Waterfront (i.e., due to presence of the RMP)
- Create the Cultural District (encompassing the area bounded by Cedar Street, Third Street, Main Street and the Niagara River, and including a portion of the RMP, the Aquarium of Niagara, the Niagara Gorge Discovery Center and underutilized properties along Main and Third Streets such as former DiFranco Park)
- Initiate Public Realm and Catalyst Projects in the Falls Precinct (encompassing the area bounded by Main Street, Prospect Street, Buffalo Avenue, Daly Boulevard, Rainbow Boulevard and Third Street)
- Transform the Niagara Street Precinct (extending east from Third Street to John B. Daly Boulevard)
- Preserve the Heritage of the Core City (especially the [Wright Park] Park Place District encompassing the area bounded by Main Street, Third Street and Pine Avenue)
- Customs House and North-Main Loft Precinct (encompassing the area extending north along Main Street from Lockport Road to Findlay Drive, and from the western side of the RMP to the eastern side of Main Street)
- Middle Main Street Precinct (extending from Pine Avenue to Lockport Road)

- Portage Precinct (encompassing the area bounded by Portage Road, Niagara Street and Main Street)
- Third Street Precinct (extending from Niagara Street to Pine Avenue)

Each of these strategies is a major goal for the City and the relationship of these goals to the proposed Project is discussed in further detail in **Section 4.3** of this document.

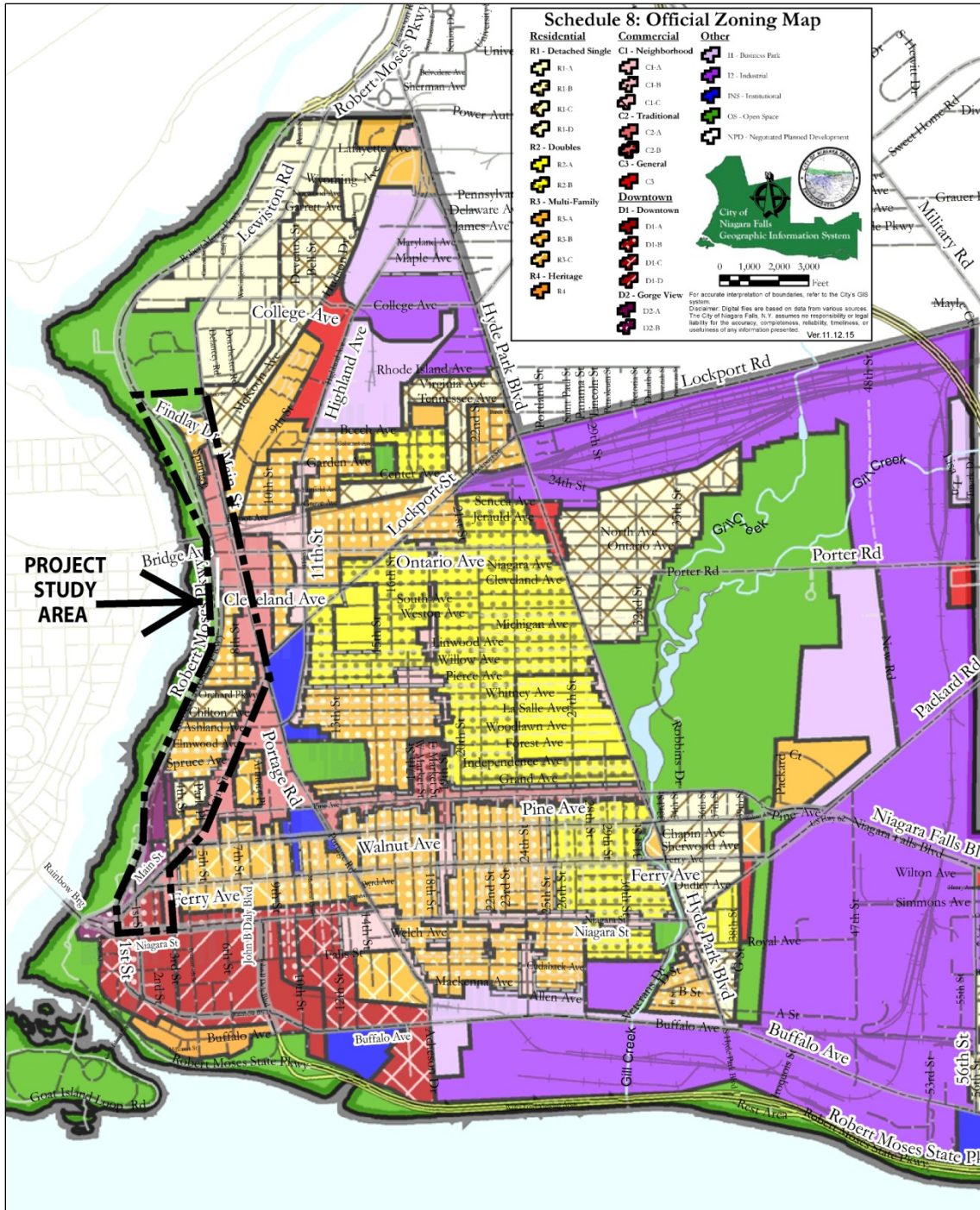
City of Niagara Falls Zoning Ordinance

All land uses within the Niagara Falls city limits are regulated in accordance with the *Zoning Ordinance of the City of Niagara Falls* as adopted on July 24, 2009 and amended most recently on February 4, 2013. Zoning classifications for the areas adjacent to the RMP are described below:

- The lands along the west side of the Robert Moses Parkway between Main Street and the North City Line are zoned as *Other, OS – Open Space*
- The lands east of the RMP have been divided into several classifications as follows:
 - Main Street and Spruce Avenue zoned as *Downtown, D-2 - Gorge View*
 - Spruce Avenue to Chilton Avenue zoned as *Residential, R-3 – Multifamily*
 - Chilton Avenue to Orchard Place zoned as *Residential, R1 - Detached Single*
 - Orchard Place to Cleveland Avenue zoned as *Residential, R-3 – Multifamily*
 - Cleveland Avenue to Spring Street zoned as *Commercial, C1 – Neighborhood*
 - Spring Street to Findlay Drive zoned as *Residential, R-3 – Multifamily*
 - Findlay Drive to College Avenue zoned as *Other, OS – Open Space*
 - College Avenue to North City Line zoned as *Residential, R1 - Detached Single*
- For Whirlpool Street, the zoning is the same as the RMP due to the limited distance separating the roadways.
- The lands along Lewiston Road within the city limits are zoned as *Residential, R1 - Detached Single*, except for the area within DeVeaux Woods State Park which is zoned as *Other, OS – Open Space*.
- Lands located along Main Street outside of the downtown core are generally zoned as *Commercial, C1 – Neighborhood*, with small areas near Findlay Drive zoned as *R1 - Detached Single* or *R-3 – Multifamily*. Adjacent to the downtown core, zone changes to *Downtown, D-1 – Downtown* or *D-2 - Gorge View*.

The Niagara Falls Zoning Map is included as **Figure 2-2**.

Figure 2-2 – Niagara Falls Zoning Map



2.2.1.2. Local Development Plans

There are several approved developments planned or on-going within or in proximity to the Project Study Area that may be impacted by modifications to the RMP. These are primarily publicly-funded projects, and include the following:

- **Niagara Falls International Railway Station**– The third and final phase of the new Niagara Falls International Railway Station is currently being built as part of a \$25 million project that includes construction of a new train station and multimodal center, being built as an extension to the historic Old Customs House⁵, which is also being restored and adaptively reused as part of the facility. The center, which will be located off Whirlpool Street near the Whirlpool Bridge (replacing a station located on the far eastern edge of the City), will be served by both U.S. (Amtrak) and Canadian (VIA Rail) passenger service. It will serve as a transportation hub that will enhance accessibility to bus routes, pedestrian and bicycle facilities, taxis, shuttles and park-and-ride lots. The station will also provide an important transportation link to the U.S.- Canada border and someday may serve as part of the proposed New York State high-speed rail line on the existing Empire Corridor. The Old Customs House building will house U.S. Department of Homeland Security inspection facilities and an Underground Railroad Interpretive Center.



- **Robert Moses Parkway South Segment (Riverway)** – The *Robert Moses Parkway South Segment – Riverway* project involves a complete removal / reconstruction of the RMP South Segment from the John B. Daly Boulevard interchange to Old Falls Street, a distance of 1.2 miles. Similar to the RMP Removal Project between Main Street and Findlay Drive, this \$18.8 million effort also arose out of the 2006 partnership between State Parks, the City of Niagara Falls, NYSDOT, USAN, and NYPA. The project includes removal of the interchange, earthen embankment, and all expressway features in this segment to fully reconnect downtown Niagara Falls to



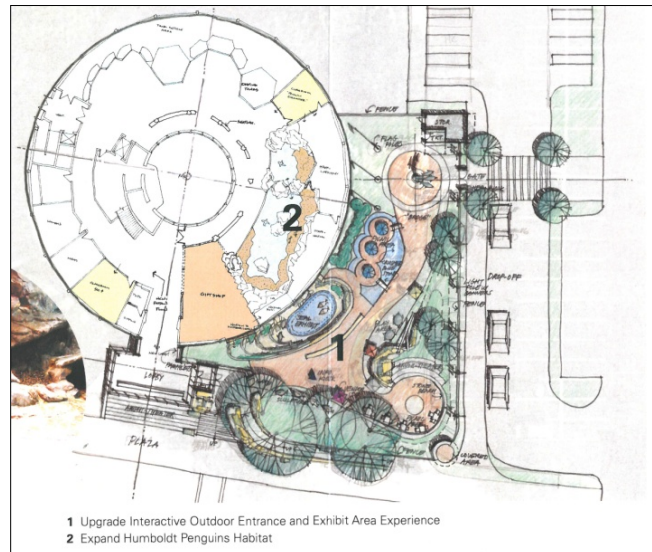
⁵ Please note that this refers to the former United States Customs House built in 1863 at 2245 Whirlpool Street, which at points in its history served inspectors for the Niagara Falls Suspension Bridge, Niagara Cantilever Bridge, Whirlpool Rapids Bridge, and Michigan Central Railway Bridge. Certain documents also refer to this facility as the “Customhouse”; hereinafter in this DR/EA, it is referenced as the “Customs House” or the “Old Customs House”

the Upper Niagara River. The expressway segment is being replaced with the “Riverway”, a two-lane, at-grade, 25-MPH park road extending from a new modern roundabout and evoking the characteristics of Frederick Law Olmsted’s original roadway in this area when the park was established in 1885. Reclaimed land from the interchange and expressway removal is being restored using Olmsted park design principles. Construction began in November 2014 and is scheduled to be completed by end of June 2016.

- New York State Parks Police Station** – The existing State Parks Police Station on Goat Island in Niagara Falls State Park is being relocated to a property near the Niagara Gorge Discovery Center between the RMP and Whirlpool Street, immediately north of DiFranco Park. The site, which is located on NYPA property, would be accessed both from Whirlpool Street and from the RMP (i.e., until changes are made as part of the RMP Removal Project). The new station will comprise 7,000 SF of space, which is approximately three times the size of the existing station. Construction began in Summer 2015 and is anticipated to be completed for the 2016 summer tourist season.



- Aquarium of Niagara** – In 2015, the Aquarium of Niagara marked its 50th anniversary since the facility’s ribbon-cutting, originally founded as a private commercial venue and now run as a private not-for-profit educational institution. Since its opening, more than 10 million guests have come through its doors; the Aquarium has recently seen more than 275,000 visitors during its 2015 fiscal year. The organization is in the midst of fundraising for a capital expansion to renovate its penguin habitat and undertake exterior and main entrance improvements. The project includes adding interactive classroom space and will give the facility’s Humboldt penguin colony a refurbished space. The improvements to the penguin exhibit are considered to be the first phase in a \$10 million overall capital plan. Aquarium officials have consistently participated and advocated for the RMP Removal Project, given that it would remove the barrier between it





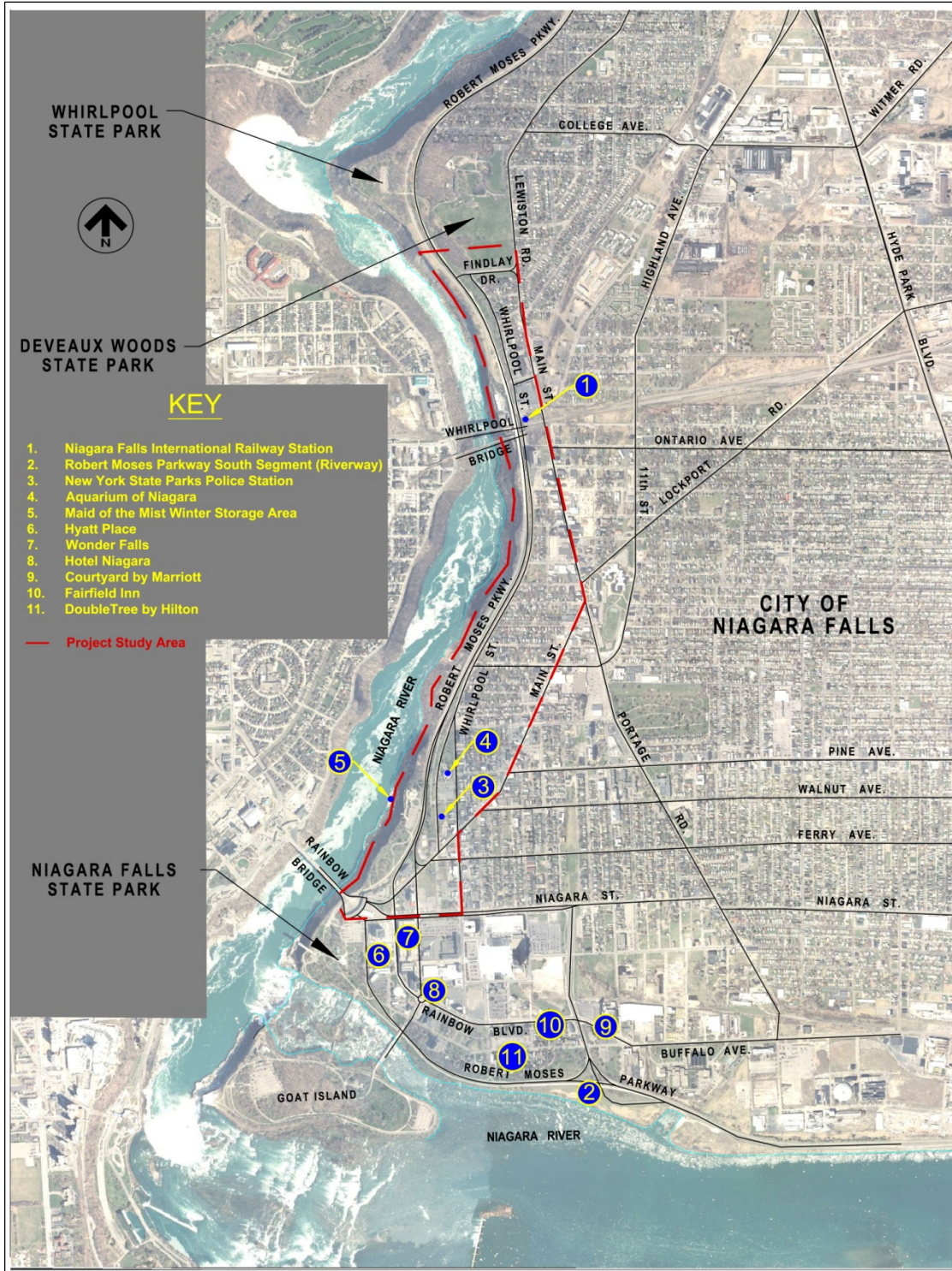
and the Gorge rim. Moreover, Aquarium officials have indicated that such a removal would allow for a synergy to be better developed between the Aquarium and the Gorge Discovery Center, two facilities that are now connected only by a concrete pedestrian bridge over the RMP.

- ***Maid of the Mist Winter Storage Area*** – As a result of a 2012 MOU between State Parks, NYPA, and the private Maid of the Mist Corp. (MOTM), MOTM recently completed a \$35 million investment to create a new winter storage facility at the base of the Niagara Gorge at the former location of the Schoellkopf Power Station, below the Gorge Discovery Center. The new site replaces the MOTM former storage location on the Ontario side of the falls, which was lost in conjunction with Canadian Niagara Parks officials awarding tour boat concession there to a new company. The new storage area includes: winter dry docking of MOTM vessels and an upper maintenance area; a vertical marine lift for removing boats from the water; a new ADA-compliant, publicly-accessible elevator to the base of the Gorge within a former Power Station elevator shaft, which provides enhanced access to existing hiking trails; and summer season use (i.e., when the MOTM is in service) of the platform for fishing and other activities. The new public access provides exciting future potential for this area, which could only be enhanced through the removal of the RMP and reconnection of this area visually with downtown Niagara Falls. Already, interpretive programs are being developed to explain the history of the Schoellkopf Power Station. There is future potential for establishing a rock-climbing and rappelling feature on the massive masonry foundation that once supported the power station.

- ***Downtown Niagara Falls Urban Mixed-Use Developments*** – In anticipation of the Riverway project and other downtown improvements such as the opening of the Niagara Falls Culinary Institute, there are several private mixed-use infill or upgrade/expansion projects either under construction or slated for construction in downtown Niagara Falls through 2018. These projects would yield over 1,000 new and/or upgraded hotel rooms, almost 60,000 SF in new restaurant and retail space, and almost 100,000 SF in new entertainment venues. Notable projects include (USAN, 2015):
 - The Hyatt Place® project at 310 Rainbow Boulevard at Old Falls Street, which will feature a major new infill project near the Culinary Institute;
 - The proposed Wonder Falls project at the former Rainbow Centre Mall, which will be built in the balance of the former shopping mall not now occupied by the Culinary Institute, and will include a new hotel tower, indoor waterpark, and a mix of retail and entertainment uses;
 - Restoration of the long-vacant Hotel Niagara, a historic landmark built in 1929; and
 - Introduction of several new hotel brands, such as the Courtyard by Marriott®, Fairfield Inn & Suites®, and DoubleTree by Hilton®, all being built or being developed on or near the Riverway new park access.

The locations of all of the above-listed projects are depicted on **Figure 2-3**.

Figure 2-3 – Approved Development Projects in or near the Project Study Area



2.2.2. Transportation Corridor

2.2.2.1. Importance of the Project Route Segment

Within the Project Study Area, there are several roadways in the Main Street-to-Findlay Drive corridor that connect the Niagara Falls downtown core to the attractions, businesses, and residences that are located to the north. Along some sections of the RMP, the local streets are only a few feet away from the eastern edge of the RMP (e.g., Whirlpool Street). At other locations, the local streets may be one or two blocks east of the RMP (e.g., Third Street and Main Street). At this time, the RMP within the Project Study Area provides direct access between downtown Niagara Falls and several recreational facilities and local state parks, including the Niagara Gorge Discovery Center and DeVeaux Woods and Whirlpool State Parks, as well as Devil’s Hole State Park further to the north. It also provides direct connectivity with the portion of the RMP north of Findlay Drive, thereby allowing easy access to Lewiston.

The aforementioned section of the RMP in the City of Niagara Falls that was downgraded as part of the 2000 Pilot Project, although suitable from a traffic capacity standpoint, is not in compliance with current expressway design standards. The two 12-foot wide lanes are curbed and offer little or no space for a vehicle to pull off the roadway, if necessary. Also, as part of the Pilot Project, the southbound lanes were converted to the Robert Moses Parkway Trail, a 24-foot wide multi-use trail. While fully usable for walking or biking, it provides little in the way of a desirable path due in part to the utilitarian alignment and expressway features.



Existing Robert Moses Parkway at Findlay Drive

Main Street and Third Street / Whirlpool Street run parallel to the RMP and provide access to the many homes and businesses located between those roadways along most of the project length to Findlay Drive at the north end. These streets and the RMP help to connect the local community and attractions and



Existing Robert Moses Parkway Trail

provide important access for tourists visiting the Niagara Falls area. The RMP, as currently configured, functions as a limited access arterial roadway providing a quick and convenient way for drivers to get from Niagara Falls State Park and downtown Niagara Falls to destinations north of the city. Access to places in the City of Niagara Falls from the RMP is very limited and the presence of the parkway creates a barrier between the city and the Gorge and functions as a bypass to the commercial districts.

Whirlpool Street, designated as NYS Route 182 between Cleveland Avenue and the Whirlpool Bridge, is parallel and in close proximity to the RMP and extends from Third Street opposite the Discovery Center area to Findlay Drive. Whirlpool Street provides access to local side streets, the international Whirlpool Bridge, the Old Customs House and several homes and businesses. Whirlpool Street terminates at Findlay Drive, which connects the RMP to the southern end of Lewiston Road, a part of NYS Route 104.



Whirlpool Street

Another important route in the corridor is Main Street.

Located just two city blocks to the east of Whirlpool Street in the City of Niagara Falls, Main Street, which



Main Street

also comprises a portion of NYS Route 104, is generally parallel to Whirlpool Street, extending from Niagara Street to Findlay Drive where it becomes known as Lewiston Road. Main Street is an important commercial and retail area that the City is determined to improve and revitalize. The City has invested much of its resources in upgrading and enhancing the area to increase its economic potential.

There are several existing trails and pathways within the Project corridor. They include rustic trails near the bottom of the Gorge, walking paths along the top of the Gorge wall and the Robert Moses Parkway Trail between the Niagara Gorge Discovery Center and Devil's Hole State Park.

2.2.2.2. Alternate Routes

As mentioned in **Section 2.2.2.1** above, there are two primary alternative routes that are parallel to the RMP between Main Street and Findlay Drive. These routes are Whirlpool Street (in conjunction with Third Street) and Main Street, while Lewiston Road parallels the RMP north of the immediate Project Study Area as a continuation of Main Street.

Other parallel or alternate routes to the RMP to the east of the Project Study Area include the combination of Portage Road, 11th Street and Highland Avenue to the east of Main Street / Lewiston Road and further to the east is Hyde Park Blvd. (Route 61).

2.2.2.3. Corridor Deficiencies and Needs

The Project Study Area, particularly in areas along the Niagara Gorge, exhibits several deficiencies / needs as listed and described below:



- *The total number of travel lanes that parallel the Niagara Gorge far exceeds the traffic demand in the existing condition as well as in the future.* Most transportation projects are undertaken due to a deficiency of adequate capacity to handle the existing and projected traffic volumes. The configuration of the RMP and adjacent roadways within the corridor, however, currently provides an over-abundance of travel lanes for vehicles that traverse the area. In some locations, there are eight travel lanes available (including the former southbound RMP lanes currently used as the Robert Moses Parkway Trail), which is more than what is needed. For instance, in either peak hour (i.e., AM or PM), it is projected that no more than 1,200 vehicles in both directions would use the three major north-south roadways combined within the Project Study Area (i.e., RMP, Third Street / Whirlpool Street and Main Street) in the 2040 No-Build condition (see **Section 2.3**). As a result, there is more roadway pavement in place than is necessary, thereby resulting in unnecessary additional cost to maintain, and land currently occupied by roadway that could be put to other, more efficient and beneficial uses. In turn, the impervious coverage created by this pavement serves to continue to impair the ecology of the Niagara Gorge and the Niagara River through contaminated stormwater runoff, fragmentation of habitat areas, and absorption of heat. Therefore, the purpose of the proposed Project in this regard would be to reduce the number of vehicular lanes in the Project limits to only that needed to support projected traffic by removing the RMP and shifting traffic to local roadways, thereby reducing overall maintenance costs, providing the ability to create additional land for more productive recreational use, and lessening adverse environmental effects to the Gorge and River ecology.
- *There are limited points of access between the adjacent neighborhoods and the Niagara Gorge rim, thereby restricting the amount of local usage of this great natural resource.* In the Project Study Area, there are only three locations where local, regional and nationwide populations can directly access the Gorge rim and areas to the west of the RMP (i.e., via the Robert Moses Parkway Trail at Main Street and Rainbow Boulevard, via a pedestrian bridge at the Aquarium of Niagara and via the converted RMP off-ramp below the RMP viaduct near the Whirlpool Bridge). An additional point of access, however, is located north of the Project Study Area at the at-grade pedestrian crosswalk between Whirlpool and DeVeaux Woods State Parks. As a result, despite the proximity of the Gorge rim, people's ability to actually enjoy the recreational and scenic opportunities of the Gorge and the Lower Niagara River is limited. The need to reconnect the City and the Region to its waterfront, via the removal of the RMP is an important element of the *Niagara Falls Comprehensive Plan* and the City of Niagara Falls Greenway Vision. Therefore, the purpose of the Project in this regard would be to provide continuous access between the adjacent residential and commercial area and the Niagara Gorge rim by removing all physical barriers along the entire length of the Project Study Area.
- *The Project Area lacks a continuous trail network that links together existing and proposed attractions, parks, trails, cultural/historic sites and adjacent neighborhoods in a more natural park-like setting.* Although the Robert Moses Parkway Trail provides for the exclusive use of bicyclists and pedestrians and is separated from the vehicular portion of the RMP by a grassed median, it

still has the appearance of half of an expressway. In addition, as noted above, there are only limited points of access between adjoining City neighborhoods and the Robert Moses Parkway Trail and Niagara Gorge rim. The need for a continuous bicycle and pedestrian trail system along the Niagara Falls waterfront, including the Project Study Area, was also identified in the City of Niagara Falls Greenway Vision, the *Niagara River Greenway Plan* and the *Niagara Falls National Heritage Area Management Plan*. Therefore, the purpose of the Project in this regard would be to provide an attractive trail network for bicyclists and pedestrians along the entire length of the Niagara Gorge from Main Street to Findlay Drive, which would also connect to other existing trail networks into the Gorge and with all streets in adjoining City of Niagara Falls neighborhoods.

- *Although not technically a transportation deficiency, there is a need to promote economic development and tourism within the corridor. The Niagara Falls Comprehensive Plan, the Erie-Niagara Framework for Regional Growth, the One Region Forward Regional Plan for Sustainable Development, and other policy documents promulgated by the State's Niagara Falls-based economic development agency (USAN) all identify this as an important need, especially in light of the City's ongoing economic struggles. The existing configuration of the RMP in the Project Study Area actually impedes addressing this need. This is because it minimizes opportunities to realize appropriately-scaled, sustainable development in the City that capitalizes on proximity to the Gorge and the Niagara River in a manner that could extend visitor stays and create associated economic benefits. Therefore, the purpose of the Project in this regard would restore the Niagara Gorge rim within the project limits by removing the RMP to allow for further active/passive recreational enjoyment, and to help transform business districts in the Project Study Area to best complement and capitalize on the proximity to these natural/recreational assets.*

The deficiencies and needs presented above are oriented toward improvement of the overall transportation system located within and in proximity to the corridor, as well as enhancement of the recreational, visual and economic opportunities of the corridor. The needs would be met with the construction of the proposed Project between Main Street and Findlay Drive. The Project Area extends north of Niagara Falls State Park (which attracts 9 million annual visitors) and downtown Niagara Falls (i.e., the primary location for lodging and dining facilities). In turn, the Project Area immediately runs along some of the City of Niagara Falls' most densely developed neighborhoods, and would open direct Gorge/waterfront recreational access to its entire ~50,000 residents.

2.2.2.4. Transportation Plans

As discussed in **Section 2.2.1** above, the proposed Project is included on the GBNRTC's approved 2014 – 2018 TIP as the *Niagara River Gorge - RMP North Feasibility Study*. The Project's PIN is 576190 and it is listed as a Miscellaneous Agency Project. Work type is listed as Feasibility Study and the funding source is listed as Interstate Maintenance Discretionary and Interstate Maintenance National Highway Performance Program (NHPP).

The Project is not included in the Draft Constrained Project Listing (2016 - 2040) presented in the GBNRTC's 2040 MTP Update. However, it is listed on the Illustrative Project Listing included in the 2040 MTP Update. This list contains projects that have merit but are beyond the constrained funding available to the area, and in that regard would be considered for implementation if additional funds became available to the region. The Project is listed as *Robert Moses Parkway Enhancements* and is described as "Removal from Niagara Falls CBD to Niagara Falls North City Line; reduction from 4 to 2 lanes from North City Line to Route 18F." A cost of \$64 million is also identified. The currently proposed Project between Main Street and Findlay Drive comprises the first phase of the overall project referenced in the Illustrative Project Listing included in the 2040 MTP Update.

2.2.2.5. Abutting Highway Segments and Future Plans for Abutting Highway Segments

Within the immediate Project Study Area, the RMP is connected to the local road system at only two intersection locations, both of which are the project termini (i.e., Main Street and First Street at the south end and Findlay Drive at the north end). Due to an existing gap in the RMP in downtown Niagara Falls, the RMP in this area (North Segment) actually begins at the Main Street intersection but continues well north of Findlay Drive, past Lewiston to Porter near Lake Ontario.

There are also two primary local roads that are parallel to the RMP in the Project Study Area, including Main Street (NYS Route 104) and Whirlpool Street (NYS Route 182). Whereas Findlay Drive is the northern terminus of Whirlpool Street, Main Street continues to the north of Findlay Drive as Lewiston Road, which is also designated as NYS Route 104). Whirlpool Street, which essentially serves as a continuation of Third Street at the south end, is generally located very close to the RMP throughout the Project Study Area and, in some cases, is less than 100 feet east of the existing parkway. There are also many local city streets that are perpendicular to the existing RMP that abut the NYPA open space lands along the Gorge rim within which the RMP is located; however, none of these streets actually connect with the RMP. Many of the local streets are exclusively residential while others are a combination of residential and commercial. Lane width and shoulder information is presented in **Section 2.3.3.1**.

Future plans for the RMP north of the proposed Project limits between Main Street and Findlay Drive, were presented and discussed along with this Project as part of a public scoping process documented in the *Niagara Gorge Corridor Project: Final Scoping Report* in October 2013. No specific timeline has been identified for subsequent RMP segments at this time, although it is anticipated that the preliminary engineering phase would involve the undertaking of a full Design Report / Environmental Impact Statement (DR/EIS) process.

There are no other specific upcoming plans for improvements to roads that abut or parallel the RMP and the NYPA open space lands that encompass it within the Project limits.

2.3. Transportation Conditions, Deficiencies and Engineering Considerations

2.3.1. Operations (Traffic and Safety) & Maintenance

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 1960s. 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 as follows:

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

All main roads in the Project Study Area are classified under the urban system in the categories of principal arterials / expressways, principal arterial roads, or minor arterial roads. Roads with a classification of collector road or higher are eligible for Federal Aid; thus all major roads within the Project Study Area are Federal Aid eligible. The RMP is listed as a principal arterial / expressway.

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. The RMP from Main Street to Findlay Drive, encompassing the Project Study Area limits, is designated as part of the NHS, given that it provides access to an international crossing at Whirlpool Bridge.

Local roadways within the Project Study Area provide connections between the City of Niagara Falls and points north and east. These arterials within, adjacent to, or connecting to the corridor are generally local streets within the City of Niagara Falls or part of the NYSDOT highway system. Of these arterials, Main Street and the southern segment of Lewiston Road, which together comprise a portion of NYS Route 104, are also NHS-designated roadways. The primary local roadways serving the Project Study Area are identified in **Table-2-1**.

Table 2-1 – Classification Data

Route (s)	Functional Classification	National Highway System (NHS)	Designated Truck Access Route	Qualifying or Access Highway	Highway within 1 mile of a Qualifying Highway	Within the 16 ft Vertical Clearance Network
Niagara Street	Principal Arterial	No	No	No	Yes	No
Ferry Avenue	Principal Arterial	No	No	No	Yes	No
Walnut Avenue	Principal Arterial	No	No	No	Yes	No
Pine Avenue	Minor Arterial	No	No	Yes	Yes	No
Portage Road	Minor Arterial	No	No	Yes	Yes	No
Whirlpool Street	Minor Arterial	No	No	No	Yes	No
Main Street	Principal Arterial	Yes	No	No	Yes	No
Lewiston Road, Main Street to Route 31	Minor Arterial	Yes	No	No	Yes	No
Highland Avenue	Minor Arterial	No	No	Yes	Yes	No
Hyde Park Boulevard	Principal Arterial	No	No	Yes	Yes	No

2.3.1.2. Control of Access

The RMP is the only controlled-access highway located within the Project Study Area, and can only be accessed at the intersections at Main Street in the south and Findlay Drive at the north. All other roads within or near the Project Study Area have uncontrolled access.

2.3.1.3. Traffic Control Devices

A list of traffic control operations at intersections within the Project Study Area is included in **Table 2-2**. It should be noted that there are no signals located along the RMP as traffic control for that roadway is limited to speed limit signs and STOP signs at the ramp exits to other roadways.



Table 2-2 – Intersection Control

	Control Type	Notes
Lewiston Road @ College Avenue	Signalized	
Lewiston Road @ Findlay Drive	Unsignalized	Stop at Findlay Drive
Findlay Drive @ Whirlpool Street	Unsignalized	Stop on Whirlpool Street
Findlay Drive @ NB/SB RMP	Unsignalized	Stop on Findlay Drive
Main Street @ Ontario Avenue	Signalized	
Main Street @ Lockport Road	Signalized	
Main Street @ Pierce Avenue	Signalized	
Main Street @ Pine Avenue	Signalized	
Main Street @ 3rd Street	Signalized	
Main Street @ 2nd Street	Unsignalized	Stop on 2nd Street
Main Street @ 1st Street	Signalized	
Main Street @ Rainbow Boulevard	Signalized	
3rd Street @ Pine Avenue	Unsignalized	Stop on Pine Avenue
3rd Street @ Ferry Avenue	Signalized	
Niagara Street @ Rainbow Boulevard	Signalized	
Niagara Street @ 1st Street	Signalized	
Niagara Street @ 3rd Street	Signalized	
Niagara Street @ John B Daly Boulevard (formerly 8th Street)	Signalized	
Portage Road @ Pine Avenue	Signalized	
Portage Road @ Walnut Avenue	Signalized	
Portage Road @ Ferry Avenue	Signalized	
Portage Road @ Niagara Street	Signalized	

2.3.1.4. Intelligent Transportation Systems (ITS)

There are no ITS facilities along the RMP within the Project Study Area or along its entire length. ITS facilities are located at both the Rainbow and Whirlpool international bridges (video surveillance, incident detection) and in selected segments of Niagara Street on the Rainbow Bridge approaches.

2.3.1.5. Traffic Volumes

2.3.1.5.(1) Existing Traffic Volumes

The existing (2010) traffic data collected for this Project include Automatic Traffic Recorder (ATR) volume counts, turning movement counts, vehicle classification counts, speeds, delays, and travel times. In addition, signal timing and roadway geometrics were collected to construct a roadway network for VISSIM modeling. While the ATR counts were collected from NYSDOT, turning movement / vehicle classification counts were provided by GBNRTC.

Additional ATR counts and turning movement counts were obtained at several locations between Main Street and Findlay Drive during May and September 2015. These counts were taken to verify the traffic data gathered in 2010 and to determine if higher than normal peak hour counts are experienced during summer holidays and weekends. As indicated in **Appendix E.2 - 2015 Traffic Count Program**, the 2015 traffic volumes were similar to the 2010 counts, and the peak hour traffic counted during the summer holidays appeared to be similar to the typical weekday peak hour counts.

Travel time and speed run data were collected for several major roadways, and inventories of existing conditions were conducted during the field investigation and site review.

Since traffic counts on the roadway segments and at intersections were not collected from the same year, some of them were adjusted so that all the counts would reflect traffic volumes for the same base year of 2010 selected for model development and traffic analysis.

Highway and local roadway facilities that pass through or are immediately adjacent to the Project corridor between Main Street and Findlay Drive have been included in the overall traffic study undertaken for this Project. Therefore, the existing traffic volumes and other traffic conditions from Rainbow Boulevard at the south end to College Avenue (Route 31) at the north end are presented in this document. The traffic conditions for this broader study area is presented in order to ensure that any potential traffic impacts associated with the Main Street-to-Findlay Drive project can be adequately identified and assessed.

Average Annual Daily Traffic (AADT)

The Average Annual Daily Traffic (AADT) within the traffic study area for this Project ranges from a low of 2,440 vehicles on a portion of Whirlpool Drive to a high of 9,900 vehicles on a portion of Main Street. AADT along the existing RMP ranges from 3,090 vehicles between Main Street and Findlay Drive to 4,620 vehicles between Findlay Drive and Lewiston Road. The AADT traffic data for selected roadway segments within the corridor are listed in **Table 2-3**.

Table 2-3 – Traffic Volumes (AADT)

Roadway	From	To	2010 Existing Conditions
Robert Moses Parkway	Main Street	Findlay Drive	3090
	Findlay Drive	Lewiston Road	4620
Main Street	Rainbow Boulevard	3rd Street	5250
	3rd Street	Pine Avenue	5250
	Pine Avenue	Portage Road	5200
	Portage Road	Lockport Road	9900
	Lockport Road	Ontario Avenue	6262
	Ontario Avenue	Findlay Drive	6240
Whirlpool Street	3rd Street	Ontario Avenue	3740
	Ontario Avenue	Findlay Drive	2440
Lewiston Road	Findlay Drive	College Avenue	3550
Portage Road	Buffalo Avenue	11th Street	8540
	11th Street	Main Street	4600
11th Street	Portage Road	Lockport Road	6160
	Lockport Road	Ontario Avenue	5760
Highland Avenue	Ontario Avenue	College Avenue	4020

Peak Hour Traffic Volumes

A review of the traffic count data identified the weekday AM and PM peak hours as the following periods:

- AM peak hour: 8:00 AM to 9:00 AM; and
- PM peak hour: 4:45 PM to 5:45 PM.

Existing weekday AM and PM peak hour traffic volumes for key roadway segments within the traffic study area are shown in **Figures 2-4** and **2-5**, respectively. Since not all intersections were counted between the intersections selected as the end points of the key roadway segments, traffic flow volumes were balanced only at those end point intersections. However, averaged traffic flow volumes for the entire roadway segments between those selected intersections are presented based on the balanced traffic flows at those intersections. All existing weekday AM and PM peak hour traffic volumes are also listed in **Table 2-4**.

Figure 2-4 - Existing 2010 AM Traffic Flows by Link

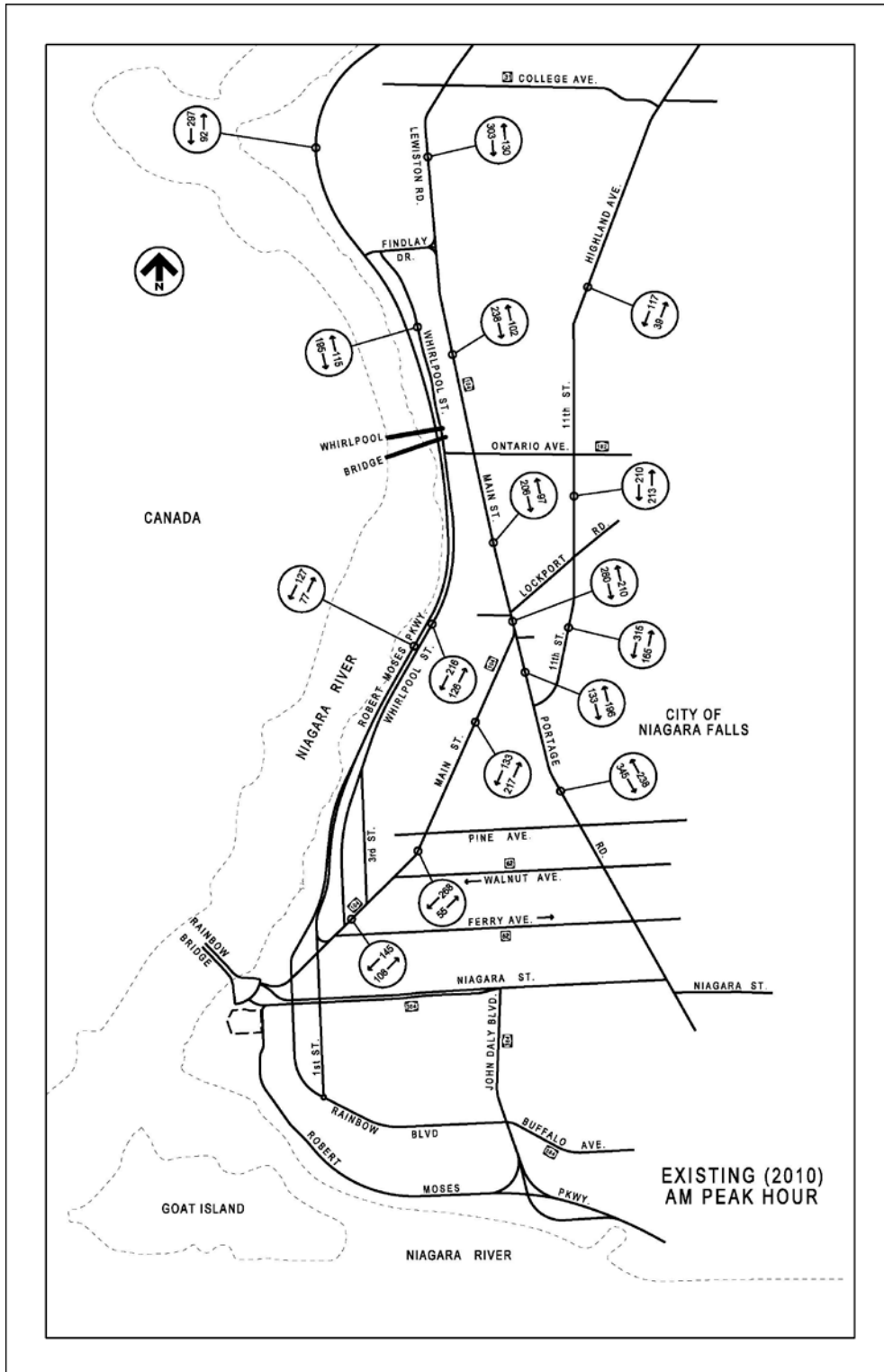


Figure 2-5 - Existing 2010 PM Traffic Flows by Link

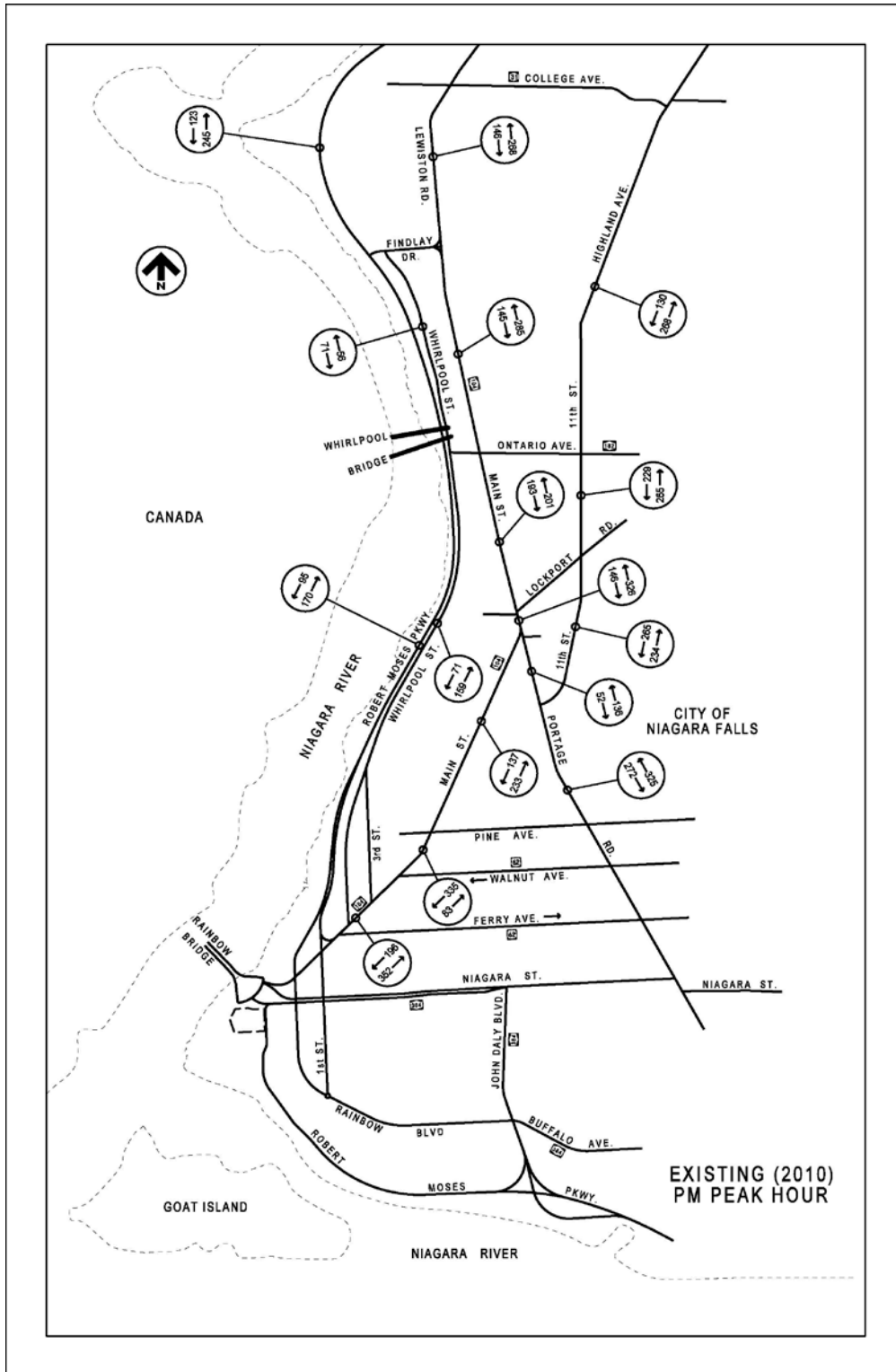


Table 2-4 - Peak Hour Traffic Volumes (2010 Existing Conditions)

Roadway	From	To	2010 Existing Conditions			
			NB		SB	
			AM	PM	AM	PM
Robert Moses Parkway	Main Street	Findlay Drive	77	170	127	95
	Findlay Drive	Lewiston Road	92	245	297	123
Main Street	Rainbow Boulevard	3rd Street	108	352	145	196
	3rd Street	Pine Avenue	55	83	268	335
	Pine Avenue	Portage Road	217	233	133	137
	Portage Road	Lockport Road	210	326	280	146
	Lockport Road	Ontario Avenue	97	201	206	193
	Ontario Avenue	Findlay Drive	102	285	238	145
Whirlpool Street	3rd Street	Ontario Avenue	126	159	216	71
	Ontario Avenue	Findlay Drive	115	56	195	71
Lewiston Road	Findlay Drive	College Avenue	130	268	303	146
Portage Road	Buffalo Avenue	11th Street	238	325	345	272
	11th Street	Main Street	196	136	133	52
11th Street	Portage Road	Lockport Road	165	234	315	265
	Lockport Road	Ontario Avenue	213	265	210	229
Highland Avenue	Ontario Avenue	College Avenue	39	268	117	130

2.3.1.5.(2) Future No-Build Design Year Traffic Volume Forecasts

Projected future traffic under the No-Build condition (i.e., the future condition if the Project is not implemented) is typically presented as a future baseline condition, to which projected traffic for the “Build Alternative” will be compared. For the purpose of this analysis, it is assumed that the estimated-time-of-completion (ETC) year is 2020⁶ and the future No-Build analysis year is the design year of 2040 (=ETC+20). The design year, approximately 20 years after the improvements have been opened for use, is the horizon year specified and used by engineers to represent the end of the economic life of a proposed transportation improvement.

In general, future No-Build traffic volumes are ascertained based on a number of factors:

- Improvements in the roadway network that are planned or underway;
- Traffic from identified development projects in the study area; and
- Traffic from general population growth in the study area.

For this Project, it is assumed that there are no major roadway improvement projects or land use developments in the study area and hence, only the last factor was considered to forecast traffic volumes for the AM and PM peak hour No-Build scenarios. Based on historical traffic counts on the selected

⁶ Use of 2020 was selected for analysis purposes only to coincide with decennial breakdowns of data available. The actual completion of the Project could likely occur before this date, in which case projected traffic levels would be slightly lower.

roadways, it was determined that an ambient traffic growth rate of 0.5 percent per year could be applied to the 2010 existing traffic volumes for expansion to year 2040 traffic conditions. This implies that the growth factor of 1.1614 should be used to adjust the base year (2010) traffic volumes to reflect 30-year growth.

Average Annual Daily Traffic (AADT)

Future 2040 No-Build Average Annual Daily Traffic (AADT) Volumes are presented in **Table 2-5**.

Table 2-5 - Traffic Volumes (2040 AADT)

Roadway	From	To	2010 Existing Conditions	2040 No Build Alternative
Robert Moses Parkway	Main Street	Findlay Drive	3090	3590
	Findlay Drive	Lewiston Road	4620	5370
Main Street	Rainbow Boulevard	3rd Street	5250	6100
	3rd Street	Pine Avenue	5250	6100
	Pine Avenue	Portage Road	5200	6040
	Portage Road	Lockport Road	9900	11500
	Lockport Road	Ontario Avenue	6262	7270
Whirlpool Street	Ontario Avenue	Findlay Drive	6240	7250
	3rd Street	Ontario Avenue	3740	4340
Lewiston Road	Ontario Avenue	Findlay Drive	2440	2830
	Findlay Drive	College Avenue	3550	4120
Portage Road	Buffalo Avenue	11th Street	8540	9920
	11th Street	Main Street	4600	5340
11th Street	Portage Road	Lockport Road	6160	7150
	Lockport Road	Ontario Avenue	5760	6690
Highland Avenue	Ontario Avenue	College Avenue	4020	4670

Peak Hour Traffic Volumes

The future 2040 No-Build averaged traffic volumes by roadway segment are shown in **Figures 2-6** and **2-7** for the AM and PM peak hours, respectively. All No-Build AM and PM peak hour traffic volumes are also listed in **Table 2-6**.

Figure 2-6 – 2040 No Build AM Traffic Flows by Link

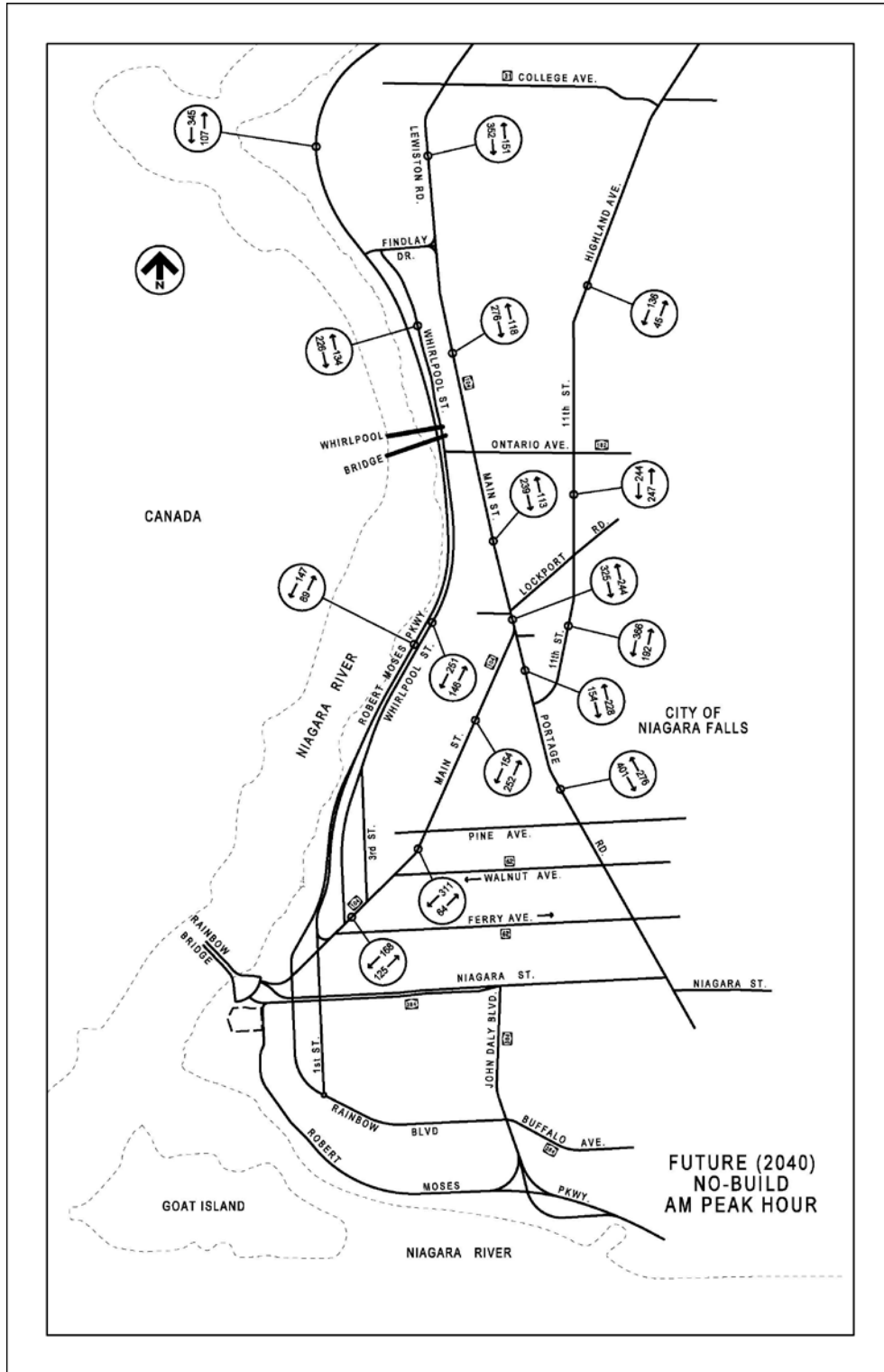


Table 2-6 – Peak Hour Traffic Volumes (2040 No-Build)

Roadway	From	To	2040 No-Build Alt			
			NB		SB	
			AM	PM	AM	PM
Robert Moses Parkway	Main Street	Findlay Drive	89	197	147	110
	Findlay Drive	Lewiston Road	107	285	345	143
Main Street	Rainbow Boulevard	3rd Street	125	409	168	228
	3rd Street	Pine Avenue	64	96	311	389
	Pine Avenue	Portage Road	252	271	154	159
	Portage Road	Lockport Road	244	379	325	170
	Lockport Road	Ontario Avenue	113	233	239	224
	Ontario Avenue	Findlay Drive	118	331	276	168
Whirlpool Street	3rd Street	Ontario Avenue	146	185	251	82
	Ontario Avenue	Findlay Drive	134	65	226	82
Lewiston Road	Findlay Drive	College Avenue	151	311	352	170
Portage Road	Buffalo Avenue	11th Street	276	377	401	316
	11th Street	Main Street	228	158	154	60
11th Street	Portage Road	Lockport Road	192	272	366	308
	Lockport Road	Ontario Avenue	247	308	244	266
Highland Avenue	Ontario Avenue	College Avenue	45	311	136	151

2.3.1.6. Speeds and Delays

The posted speed limit on the RMP between Main Street and Findlay Drive, as well as north of Findlay Drive to the Village of Lewiston is 40 MPH.

Whirlpool Street has a posted speed limit of 35 MPH between Third Street and Lincoln Place. North of Lincoln Place, the speed limit on Whirlpool Street is 30 MPH.

Main Street, as well as the portion of Lewiston Road (NYS Route 104) within the City of Niagara Falls are posted at 30 MPH, with the exception of the School Zone established at the Maple Avenue School which is posted at 20 MPH. The posted speed limit on most other city streets within the traffic study area is 30 MPH.

To measure peak hour travel time and vehicular speeds and to identify locations with traffic delay within the traffic study area, travel time and speed surveys were conducted along five routes. These routes, as shown in **Figure 2-8**, included portions and/or combinations of Whirlpool Street, Main Street, Lewiston Road, Portage Road, 11th Street, Highland Avenue and Hyde Park Boulevard. **Table 2-7** summarizes the average travel time and speeds for each surveyed route by direction during the AM and PM peak hours. In general, travel speeds on all routes were observed to be lower than the posted speed limits.

Figure 2-8 – Travel Time Runs

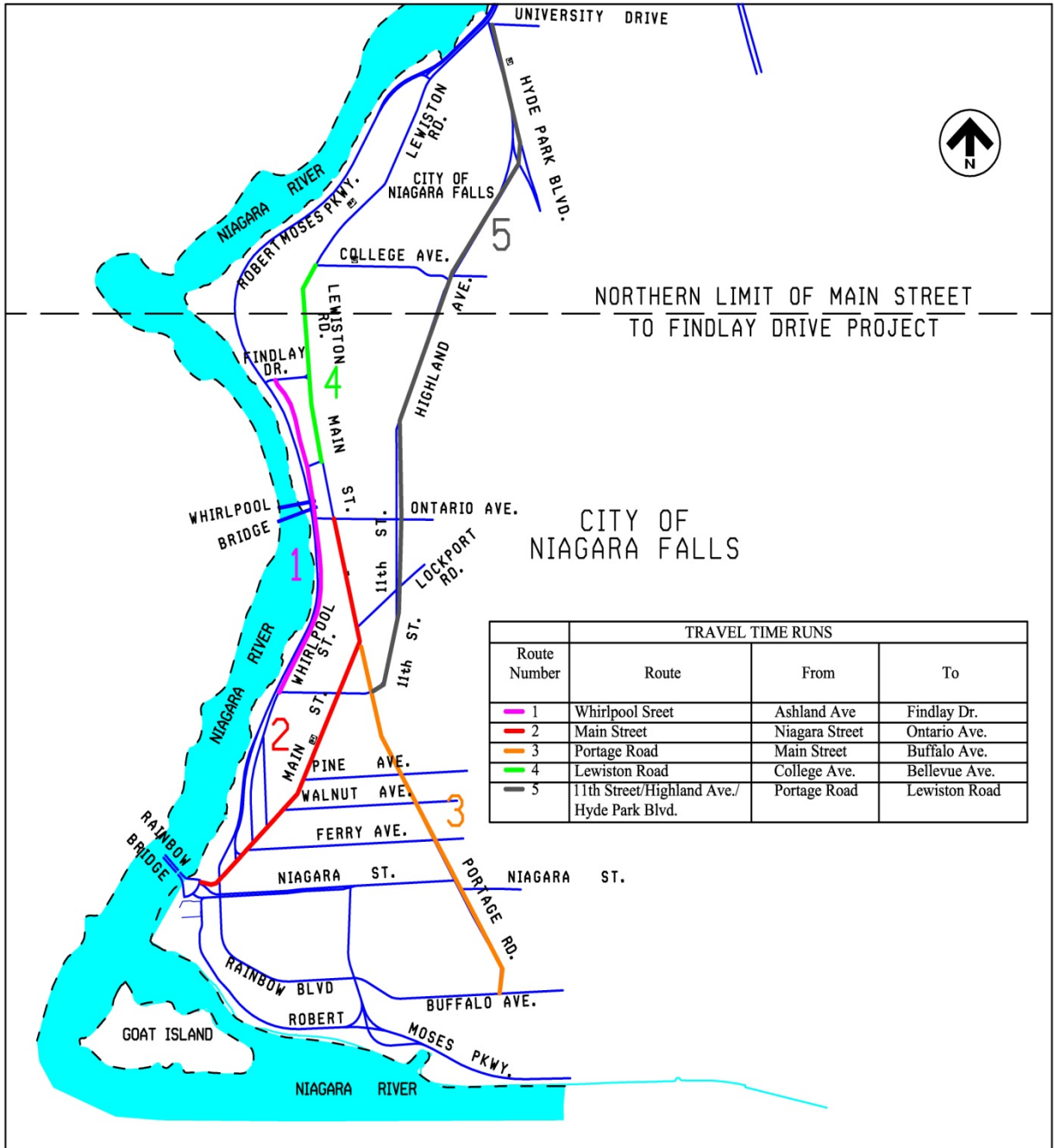


Table 2-7 - 2010 Existing Travel Times and Speeds

Route Number	Route	Direction	Distance (ft)	Travel Time (Sec)		Travel Speed (MPH)	
				AM	PM	AM	PM
1	Whirlpool Street from Ashland Avenue to Findlay Drive	NB	6,538	145	141	31	32
		SB	6,617	149	134	30	34
2	Main Street from Niagara Street to Ontario Avenue	NB	7,980	253	276	22	20
		SB	8,070	255	277	22	20
3	Portage Road from Main Street to Buffalo Avenue	NB	7,931	282	297	19	18
		SB	7,935	292	306	19	18
4	Lewiston Road from College Avenue to Bellevue Avenue	NB	3,892	**	**	**	**
		SB	3,892	105	101	25	26
5	11th Street/Highland Avenue/Hyde Park Boulevard Corridor from Portage Road to Lewiston Road	NB	14,256	303	363	32	27
		SB	13,992	333	367	29	26

** Northbound Lewiston Road was closed for construction.

Travel speeds throughout the traffic study area for the AM peak hour range from 19 to 32 MPH and for the PM peak hour range from 18 to 34 MPH. For most routes, the AM peak hour travel speeds are similar to the PM peak hour speeds. The travel routes with low speeds, i.e., equal to or less than 20 MPH during one or more peak hours, are:

- Main Street from Niagara Street to Ontario Avenue (indicated as Route 2 in **Table 2-7** and **Figure 2-8**) in the northbound and southbound directions (PM peak hour); and
- Portage Road from Main Street to Buffalo Avenue (indicated as Route 3 in **Table 2-7** and **Figure 2-8**) in the northbound and southbound directions (AM and PM peak hours).

The route with the lowest travel speed is Portage Road, ranging from 18 to 19 MPH during the AM and PM peak hours. The route with the highest travel speed is Whirlpool Street from Ashland Avenue to Findlay Drive (indicated as Route 1 in **Table 2-7** and **Figure 2-8**), ranging from 30 to 34 MPH during the AM and PM peak hours. It should be noted that during the travel time runs conducted in 2010, Lewiston Road between College Avenue and Bellevue Avenue (indicated as Route 4 in **Table 2-7** and **Figure 2-8**) was closed for construction in the northbound direction during the time that speeds and travel times were measured.

2.3.1.7. Level of Service and Mobility

2.3.1.7.(1) Existing Level of Service and Capacity Analysis

2.3.1.7.(1.1) Traffic Model Development

A VISSIM traffic simulation model was developed to determine how well the roadway system is operating within the traffic study area. VISSIM is a microscopic, time step and behavior based model typically used to simulate urban traffic and public transit operations. The model can analyze traffic and transit operations under constraints such as lane configuration, traffic composition, traffic signals, bus stops, etc., and produce transportation engineering and planning measures of effectiveness, thus making it a useful tool for the evaluation of various design alternatives.

Input data to VISSIM were grouped into demand, control, and supply. Demand data include traffic volumes and turning movements at intersections. Traffic demands were represented by two separate peak hours, including AM and PM peak hours. Each peak-hour demand was partitioned into 15-minute increments to replicate the temporal variation of traffic. Control data consists of the locations of traffic control devices and signal timing settings, while supply data includes design and traffic flow characteristics of each link and node, such as number of lanes, lane width, grades, curvature, speed limit, and acceleration and deceleration distributions. Bus transit information was also collected, including routes, schedules, and bus idle times. Finally, aerial photography was used to develop and ensure that the simulation network was consistent with the actual roadway layout and geometry.

To validate the VISSIM model, an error checking procedure and calibration process was undertaken by reviewing the on-screen animation and model outputs to determine the model's accuracy in simulating field operations. The calibration parameters consisted of network geometry, traffic demand, general configuration parameters, driver behavior parameters (in the car following and lane-change models), and vehicle characteristics (e.g., desired speed, desired acceleration / deceleration, maximum acceleration / deceleration, and attributes associated with each vehicle type modeled). The simulated trips in the networks were compared to the observed link volumes and travel speeds. The model calibration process was terminated when the discrepancy in volumes and speeds were within an acceptable error range recommended by FHWA's document: *Volume III – Guidelines for Applying Traffic Microsimulation Modeling Software* (Federal Highway Administration, August 2003).

Custom post-processing programs were developed to generate various measures of effectiveness (MOEs) from the VISSIM model. These MOEs include throughput, level of service (LOS), travel time, travel speed, and vehicle hours of delay (VHD). Since VISSIM relies on the random arrival of vehicles, multiple simulation runs are needed to provide a reasonable level of statistical accuracy and validity. The average values for each MOE were calculated based on the results of five separate VISSIM runs for each scenario.

It should be noted that the VISSIM modeling was conducted for a broader study area than just the area of the proposed project limits of Main Street to Findlay Drive. In fact, the modeling study area extends to the

Village of Lewiston and essentially covers all of the key roadways for the entire Niagara Gorge Corridor. As mentioned previously, the traffic study area presented herein extends as far north as College Avenue in order to ensure that any potential traffic impacts associated with the proposed Project are adequately identified and assessed. Therefore, all traffic data presented in subsequent discussions include roadway locations in or near the Main Street-to-Findlay Drive project as well as immediately north of the Project to College Avenue.

For the VISSIM model runs, the traffic counts and travel times were used as the calibration / validation measures. The final results of the model calibration are shown in **Tables 2-8** and **2-9** for the AM and PM peak hours, respectively. The FHWA guidelines for an acceptable level of calibration accuracy include:

- The modeled link volumes that are within 15% of the observed volumes for flows greater than 700 vehicles per hour (VPH) or within 100 VPH for flows less than 700 VPH. These targets must be satisfied for 85% of the cases;
- The GEH statistic (a modified chi-square statistic that accounts for both absolute and relative errors) would be less than 5 for individual link flows for 85% of the cases;

The modeled travel times would be within 15% of observed travel times for 85% of the routes.

A comparison of individual link flows reveals that most of the links with simulated volumes are within 10% +/- of the counted volumes for AM and PM peak hours. Those link flows with more than +/- 10% are typically associated with low-volume links. On an “actual difference” basis, a vast majority of the links have the simulated volumes that match ground counts by less than 30 VPH. In addition, most of the GEH statistic values⁷ are less than 3. All of these results meet the calibration acceptance criteria described above and, hence, the simulated link flows can be considered a good fit.

Observed travel time information was not used in the calibration process and hence can be treated as independent measurements to validate the VISSIM models. As shown in **Tables 2-10** and **2-11**, travel time comparisons between field measurements and model estimation were performed for the seven roadway segments in the model network and for the AM and PM peak hours, respectively. Percent differences for the most segments are found to be between +/- 10%, indicating that the VISSIM models were calibrated reasonably well for existing conditions.

⁷ GEH is a modified chi-square statistic that accounts for both absolute and relative errors.

Table 2-8 – VISSIM Model Calibration Results (AM Peak Hour)

Link Name	Counted Volume	Assigned Volume	Actual Difference	% Difference	GEH
ROBERT MOSES PARKWAY - NORTHBOUND					
Main Street and Findlay Drive	77	86	9	11.7%	1.00
Exit Ramp to Whirlpool Street	16	17	1	6.3%	0.25
After Exit Ramp to Whirlpool Street	61	69	8	13.1%	0.99
Entrance Ramp from Whirlpool Street	31	25	(6)	(19.4%)	1.13
Findlay Drive and Exit Ramp to Lewiston Road	92	94	2	2.2%	0.21
ROBERT MOSES PARKWAY - SOUTHBOUND					
University Drive and Findlay Drive	297	291	(6)	(2.0%)	0.35
Exit Ramp to Whirlpool Street	170	166	(4)	(2.4%)	0.31
After Exit Ramp to Whirlpool Street	127	133	6	4.7%	0.53
Findlay Drive and Main Street	127	135	8	6.3%	0.70
LEWISTON ROAD / MAIN STREET - NORTHBOUND					
Pine Avenue and Willow Avenue	217	181	(36)	(16.6%)	2.55
Willow Avenue and Lockport Road	125	155	20	24.0%	2.54
Lockport Road and Ontario Avenue	170	145	(25)	(14.7%)	1.99
Ontario Avenue and Bellevue Avenue*	170	0	--	--	--
Bellevue Avenue and Findlay Drive*	102	0	--	--	--
Findlay Drive and College Avenue*	130	0	--	--	--
College Avenue and RMP On / Off Ramps	88	82	(6)	(6.8%)	0.65
LEWISTON ROAD / MAIN STREET - SOUTHBOUND					
College Avenue and Findlay Drive	249	250	1	0.4%	0.06
Findlay Drive and Bellevue Avenue	249	339	90	36.1%	5.25

Link Name	Counted Volume	Assigned Volume	Actual Difference	% Difference	GEH
Bellevue Avenue and Ontario Avenue*	240	0	--	--	--
Ontario Avenue and Willow Avenue	206	208	2	1.0%	0.14
Willow Avenue and Pierce Avenue	280	330	50	17.9%	2.86
Willow Avenue and Pine Avenue	133	170	37	27.8%	3.01
HIGHLAND AVENUE / 11TH STREET - NORTHBOUND					
Portage Road and Lockport Road	165	167	2	1.2%	0.16
Lockport Road and Ontario Avenue	213	211	(2)	(0.9%)	0.14
Ontario Avenue and Centre Avenue	220	227	7	3.2%	0.47
Centre Avenue and College Avenue	139	137	(2)	(1.4%)	0.17
HIGHLAND AVENUE / 11TH STREET - SOUTHBOUND					
College Avenue and Centre Avenue	117	132	15	12.8%	1.34
Centre Avenue and Ontario Avenue	204	166	(38)	(18.6%)	2.79
Ontario Avenue and Cleveland Avenue	210	176	(34)	(16.2%)	2.45
Cleveland Avenue and Lockport Road	200	182	(18)	(9.0%)	1.30
Lockport Road and Portage Road	316	327	11	3.5%	0.61
WHIRLPOOL STREET - NORTHBOUND					
Pine Avenue and Ontario Avenue	131	141	10	7.6%	0.86
Ontario Avenue and Bellevue Avenue**	115	103	--	--	--
Bellevue Avenue and Findlay Drive**	15	44	--	--	--
WHIRLPOOL STREET - SOUTHBOUND					
Findlay Drive and Bellevue Avenue	88	87	(1)	(1.1%)	0.11
Bellevue Avenue and Ontario Avenue**	195	406	--	--	--
Ontario Avenue and Pine Avenue	106	119	13	12.3%	1.23

Notes: * Segment closed for construction.
** Segment used as the diversion route.

Table 2-9 – VISSIM Model Calibration Results (PM Peak Hour)

Link Name	Counted Volume	Assigned Volume	Actual Difference	% Difference	GEH
ROBERT MOSES PARKWAY - NORTHBOUND					
Main Street and Findlay Drive	170	171	1	0.6%	0.08
Exit Ramp to Whirlpool Street	14	13	(1)	(7.1%)	0.27
After Exit Ramp to Whirlpool Street	156	158	2	1.3%	0.16
Entrance Ramp from Whirlpool Street	89	92	3	3.4%	0.32
Findlay Drive and Exit Ramp to Lewiston Road	245	247	2	0.8%	0.13
ROBERT MOSES PARKWAY - SOUTHBOUND					
University Drive and Findlay Drive	123	135	12	9.8%	1.06
Exit Ramp to Whirlpool Street	55	64	9	16.4%	1.17
After Exit Ramp to Whirlpool Street	68	73	5	7.4%	0.60
Entrance Ramp from Whirlpool Street	27	23	(4)	(14.8%)	0.80
Findlay Drive and Main Street	95	97	2	2.1%	0.20
LEWISTON ROAD / MAIN STREET - NORTHBOUND					
Pine Avenue and Willow Avenue	233	232	(1)	(0.4%)	0.07
Willow Avenue and Lockport Road	326	312	(14)	(4.3%)	0.78
Lockport Road and Ontario Avenue	199	187	(12)	(6.0%)	0.86
Ontario Avenue and Bellevue Avenue*	285	0	--	--	--
Bellevue Avenue and Findlay Drive*	46	0	--	--	--
Findlay Drive and College Avenue*	238	0	--	--	--
College Avenue and RMP On / Off Ramps	203	201	(2)	(1.0%)	0.14
LEWISTON ROAD / MAIN STREET - SOUTHBOUND					
College Avenue and Findlay Drive	144	135	(9)	(6.3%)	0.76
Findlay Drive and Bellevue Avenue	71	67	(4)	(5.6%)	0.48
Bellevue Avenue and Ontario Avenue*	145	0	--	--	--
Ontario Avenue and Willow Avenue	193	189	(4)	(2.1%)	0.29



Link Name	Counted Volume	Assigned Volume	Actual Difference	% Difference	GEH
Willow Avenue and Pierce Avenue	146	140	(6)	(4.1%)	0.50
Willow Avenue and Pine Avenue	272	278	6	2.2%	0.36
HIGHLAND AVENUE / 11TH STREET - NORTHBOUND					
Portage Road and Lockport Road	234	225	(9)	(3.8%)	0.59
Lockport Road and Ontario Avenue	275	267	(8)	(2.9%)	0.49
Ontario Avenue and Centre Avenue	314	321	7	2.2%	0.39
Centre Avenue and College Avenue	268	258	(10)	(3.7%)	0.62
HIGHLAND AVENUE / 11TH STREET - SOUTHBOUND					
College Avenue and Centre Avenue	130	126	(4)	(3.1%)	0.35
Centre Avenue and Ontario Avenue	251	248	(3)	(1.2%)	0.19
Ontario Avenue and Cleveland Avenue	229	233	4	1.7%	0.26
Cleveland Avenue and Lockport Road	239	248	9	3.8%	0.58
Lockport Road and Portage Road	265	265	0	0.0%	0.00
WHIRLPOOL STREET - NORTHBOUND					
Pine Avenue and Ontario Avenue	199	191	(8)	(4.0%)	0.57
Ontario Avenue and Bellevue Avenue**	285	322	--	--	--
Bellevue Avenue and Findlay Drive**	46	110	--	--	--
WHIRLPOOL STREET - SOUTHBOUND					
Findlay Drive and Bellevue Avenue	71	67	(4)	(5.6%)	0.48
Bellevue Avenue and Ontario Avenue**	145	248	--	--	--
Ontario Avenue and Pine Avenue	93	104	11	11.8%	1.11

Notes: * Segment closed for construction.
** Segment used as the diversion route.



Table 2-10 – Travel Time Comparison (AM Peak Hour)

Roadway Segment	Segment Length (ft)	Observed Time (sec)	Simulated Time (sec)	Actual Difference	% Difference
NORTHBOUND					
Robert Moses Parkway	35,097	509	509	0	0.0%
Whirlpool Street	6,538	145	139	(6)	(4.3%)
Main Street	7,980	253	285	32	11.2%
Portage Road	7,931	292	276	(16)	(5.8%)
Lewiston Road (College Avenue to Bellevue Avenue)	3,892	--	--	--	--
Highland Avenue	13,992	303	304	1	0.3%
SOUTHBOUND					
Robert Moses Parkway	35,424	524	509	(15)	(2.9%)
Whirlpool Street	6,617	149	138	(11)	(8.0%)
Main Street	8,070	255	260	5	1.9%
Portage Road	7,935	282	277	(5)	(1.8%)
Lewiston Road (College Avenue to Bellevue Avenue)	3,892	106	110	4	3.6%
Highland Avenue	14,026	333	329	(4)	(1.2%)

Table 2-11 - Travel Time Comparison (PM Peak Hour)

Roadway Segment	Segment Length (ft)	Observed Time (sec)	Simulated Time (sec)	Actual Difference	% Difference
NORTHBOUND					
Robert Moses Parkway	35,097	559	538	(21)	(3.9%)
Whirlpool Street	6,538	141	132	(9)	(6.8%)
Main Street	7,980	276	292	16	5.5%
Portage Road	7,931	297	249	(48)	(19.3%)
Lewiston Road (College Avenue to Bellevue Avenue)	3,892	--	--	--	--
Highland Avenue	13,992	367	385	18	4.7%
SOUTHBOUND					
Robert Moses Parkway	35,424	582	559	(23)	(4.1%)
Whirlpool Street	6,617	134	135	1	0.7%
Main Street	8,070	277	282	5	1.8%
Portage Road	7,935	306	293	(13)	(4.4%)
Lewiston Road (College Avenue to Bellevue Avenue)	3,892	101	102	1	1.0%
Highland Avenue	14,026	363	378	15	4.0%

2.3.1.7.(1.2) Existing Vehicle Hours of Delay (VHD)

Delay is defined as the additional time required by motorists to travel some distance due to impeding travel conditions on the road. Hence, this measurement provides a general indication of traffic congestion. Delay per vehicle can be computed by finding the difference in travel times using free-flow speed and the actual travel speed between two given points. The combined total of “delay per vehicle” for all vehicles traveling in the roadway network during a specified time period is the vehicle hours of delay (VHD), providing a system-wide assessment of overall delay. The lower the value of VHD, the better the network is operating.

Existing VHD for the roadway system in the traffic study area for the proposed Project was obtained from the VISSIM model. The model results indicate that the base year (2010) VHD was 32 vehicle-hours in the AM peak hour and 63 vehicle-hours in the PM peak hour. The PM peak hour VHD is greater than the AM peak hour VHD, indicating that the evening traffic condition may be slightly worse than the morning traffic condition.

2.3.1.7.(1.3) Existing Level of Service

The operating performance of a roadway segment or intersection is commonly measured by level of service (LOS), based on such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort, and convenience. The 2000 *Highway Capacity Manual* (HCM) defines six LOS ratings (designated as A through F), with LOS A representing free-flow conditions and LOS F signifying unstable or breakdown conditions. The remaining LOS letters represent gradually declining traffic conditions as traffic performance drops from LOS B through LOS E.

Specific criteria/measures are used to define LOS for different types of roadway facilities. In the case of basic freeway segments, LOS is based on the density of vehicles in the traffic stream, defined in terms of passenger car equivalents per mile per lane. LOS for intersections is defined in terms of average control delay (in seconds) per vehicle during peak traffic demand periods. Control delay is defined as the portion of the total delay attributed to traffic control measures, either traffic signals or stop signs. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

For signalized intersections, LOS is related to the control delay for all movements, while for unsignalized intersections, LOS is related to each stop-controlled movement. For two-way stop-controlled intersections, LOS depends on the amount of delay experienced by drivers on the minor (stop-controlled) approaches. All-way stop-controlled intersections require drivers on all approaches to stop before proceeding into the intersection, so LOS is determined by the average computed delay for all movements. The LOS criteria for signalized and unsignalized intersections, as defined in the 2000 HCM, are provided in **Table 2-12**.

Table 2-12 - Intersection Level of Service Criteria

Level of Service (LOS)	Average Control Delay (sec/veh)	
	Signalized Intersection	Unsignalized Intersection
A	≤ 10	≤ 10
B	> 10 - 20	> 10 - 15
C	> 20 - 35	> 15 - 25
D	> 35 - 55	> 25 - 35
E	> 55 - 80	> 35 - 50
F	> 80	> 50

2.3.1.7.(1.4) Intersection Level of Service

VISSIM was used to conduct signalized and unsignalized intersection analyses for the weekday AM and PM peak hours under existing (2010) conditions. VISSIM keeps track of the operating characteristics of each individual vehicle passing through an intersection and determines the LOS through the intersection using parameters such as average vehicle delay for the approaches. While the HCM defines LOS of an intersection based on control delay, VISSIM only reports total delays for all movements at intersections. Control delay is the portion of the total delay attributed to traffic signal operation for signalized intersections. Total delay includes control delay and other delays resulting from conditions such as normal congestion and car following. VISSIM calculates delay for each vehicle by subtracting the ideal travel time from the actual travel time. The ideal travel time is computed assuming no other vehicles on the network and no delays at signal controls or stop signs. Although total delay is larger than control delay, the difference between the two is usually very small. Therefore, LOS information developed by using VISSIM delay data is appropriate and can be considered as a conservative measure for describing intersection operating conditions.

As shown in **Figure 2-9**, a total of nine intersections in the study area were analyzed to evaluate existing traffic operations. The results of the LOS analysis for signalized and unsignalized intersections are presented in **Table 2-13**. Actual existing peak hour turning movements that were factored into the LOS analyses at these intersections are provided in figures included in **Appendix E.1 – Traffic Flow Diagrams - 2010**.

The analysis indicates that under existing conditions, all the intersections operate at an acceptable level-of-service with LOS D or better during the AM and PM peak hours. This implies that these intersections are generally operating without congestion and that reserve capacity exists.

Figure 2-9 - Locations of Analyzed Intersections

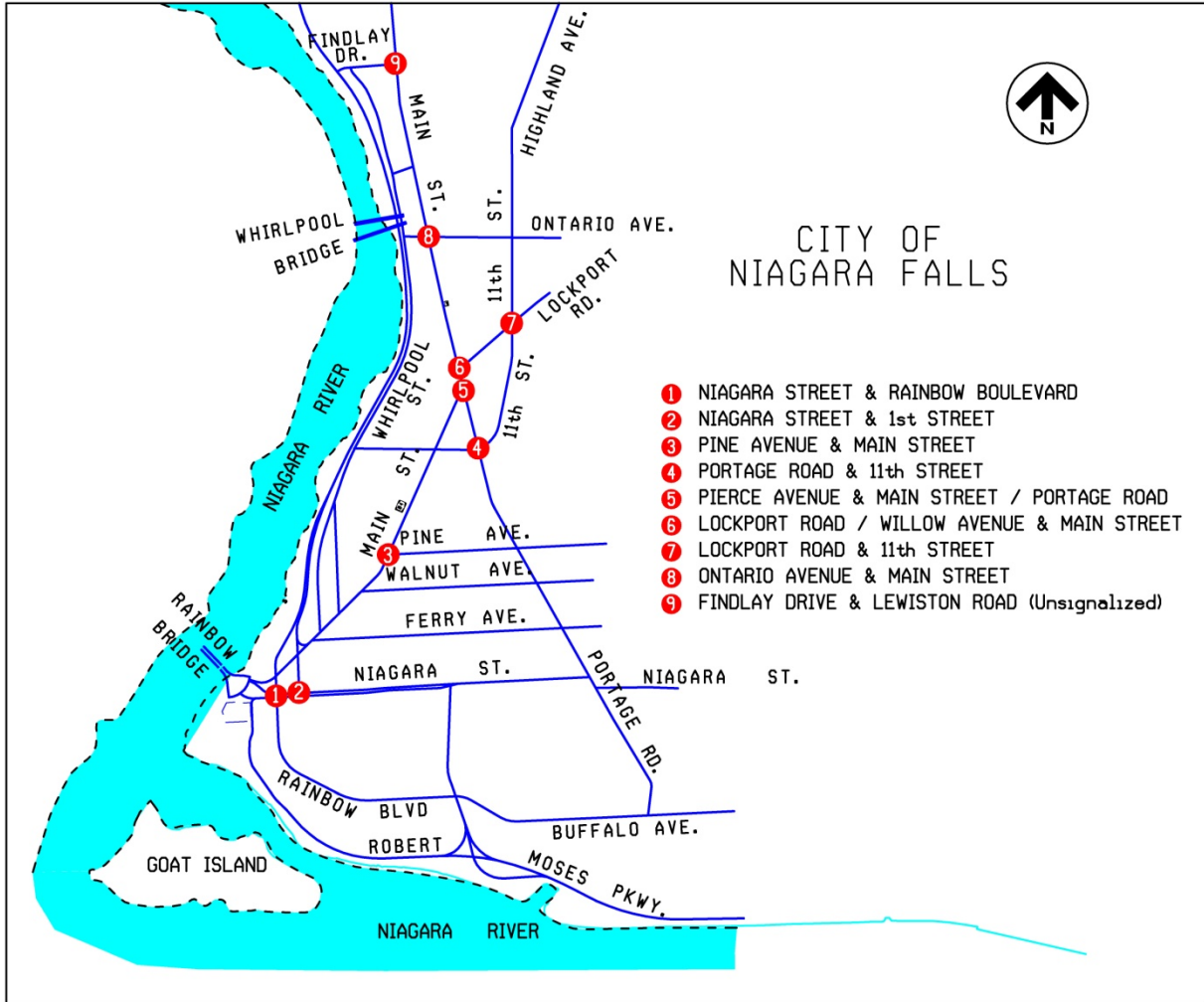




Table 2-13 - Existing Intersection Level of Service

No.	Intersection/Approach	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
1	Niagara Street & Rainbow Boulevard Eastbound Westbound Northbound Southbound <i>Intersection</i>	15.5	C	28.1	D
	A		B		
	C		C		
	B		B		
	B		C		
2	Niagara Street & 1st Street Eastbound Westbound Northbound Southbound <i>Intersection</i>	8.9	A	13.7	A
	C		B		
	B		C		
	B		C		
	A		B		
3	Pine Avenue & Main Street Eastbound Westbound Northbound Southbound <i>Intersection</i>	8.7	A	13.4	A
	C		D		
	A		A		
	A		A		
	A		B		
4	Portage Road & 11th Street Eastbound Westbound Northbound Southbound <i>Intersection</i>	22.1	C	15.4	C
	D		D		
	B		B		
	A		A		
	C		B		
5	Pierce Avenue & Main Street/Portage Road Westbound Northbound (Main Street) Northbound (Portage Road) Southbound <i>Intersection</i>	19.1	D	25.4	D
	B		B		
	B		C		
	B		B		
	B		C		
6	Lockport Road / Willow Avenue & Main Street Eastbound Westbound Northbound Southbound <i>Intersection</i>	28.0	C	9.4	C
	D		C		
	A		A		
	A		A		
	C		A		

No.	Intersection/Approach	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
7	Lockport Road & 11th Street Eastbound Westbound Northbound Southbound <i>Intersection</i>	12.1	B	20.1	C
	B		C		
	A		A		
	B		A		
	B		C		
8	Ontario Avenue & Main Street Eastbound Westbound Northbound Southbound <i>Intersection</i>	21.8	C	12.8	A
	B		B		
	B		B		
	A		A		
	C		B		
9	Findlay Drive & Lewiston Road (Unsignalized) Eastbound Northbound Southbound <i>Intersection</i>	13.8	A	9.3	A
	B		B		
	B		B		
	B		A		
	B		A		

2.3.1.7.(2) Future No-Build Design Year Level of Service

2.3.1.7.(2.1) Future No-Build Travel Time and Speeds

Travel time and travel speed projections for the 2040 No Build condition were performed using the VISSIM simulation software. VISSIM computed the average travel time for all vehicles that traveled within a defined segment for a defined period of time. **Table 2-14** presents the estimated travel time and speeds for each travel route by direction during the AM and PM peak hours. No-Build (2040) travel speeds on all routes would be lower than the existing (2010) travel speeds due to the increased traffic that would occur on these routes during the No-Build scenario. Travel speeds throughout the traffic study area for the AM peak hour range from 15 to 32 MPH and for the PM peak hour range from 14 to 29 MPH. Most routes in the PM peak hour would operate with lower travel speeds than in the AM peak hour. When compared to existing (2010) travel speeds, the 2040 PM peak hour speeds would be generally reduced more than the 2040 AM peak hour speeds. In addition, travel routes 1 and 5 as defined in **Table 2-14** would experience a substantial reduction in speeds under the 2040 No-Build conditions. The travel routes with low speeds, i.e., equal to or less than 20 MPH during one or more peak hours, are:

- Main Street from Niagara Street to Ontario Avenue (indicated as Route 2 in **Table 2-14**) in the northbound (PM peak hour) and southbound directions (AM and PM peak hours);
- Portage Road from Main Street to Buffalo Avenue (indicated as Route 3 in **Table 2-14**) in the northbound and southbound direction (AM and PM peak hours).

- Lewiston Road from College Avenue to Bellevue Avenue (indicated as Route 4 in **Table 2-14**) in the northbound (AM peak hour); and
- 11th Street/Highland Avenue/Hyde Park Boulevard corridor (indicated as Route 5 in **Table 2-14**) in the northbound direction (PM peak hour).

Table 2-14 - 2040 Future No-Build Travel Times and Speeds

Route Number	Route	Direction	Distance (ft)	Travel Time (Sec)		Travel Speed (MPH)	
				AM	PM	AM	PM
1	Whirlpool Street from Ashland Avenue to Findlay Drive	NB	6,538	148	214	30	21
		SB	6,617	161	153	28	29
2	Main Street from Niagara Street to Ontario Avenue	NB	7,980	263	354	21	15
		SB	8,070	271	339	20	16
3	Portage Road from Main Street to Buffalo Avenue	NB	7,931	300	340	18	16
		SB	7,935	355	380	15	14
4	Lewiston Road from College Avenue to Bellevue Avenue	NB	3,892	135	109	20	24
		SB	3,892	106	126	25	21
5	11th Street/Highland Avenue/Hyde Park Boulevard Corridor from Portage Road to Lewiston Road	NB	14,256	305	574	32	17
		SB	13,992	336	412	28	23

2.3.1.7.(2.2) Future No-Build Vehicle Hours of Delay (VHD)

The future No-Build vehicle hours of delay (VHD) for the roadway system in the traffic study area for the proposed Project was obtained from the VISSIM model. The model results indicate that the future No-Build (2040) VHD would be 41 vehicle hours in the AM peak hour and 74 vehicle hours in the PM peak hour. Compared to the base year (2010), these VHD results represent increases of 28 percent and 17 percent for the AM and PM peak hours, respectively. An increase in VHD suggests that by 2040, traffic conditions in the study area would slightly deteriorate.

2.3.1.7.(2.3) Future No-Build Level of Service

Table 2-15 summarizes the LOS for the 2040 No-Build scenario for the eight signalized and one unsignalized intersections that were analyzed for the weekday AM and PM peak hours. As expected, the delay at most intersections would increase because of the projected increase in traffic volumes for the future years. However, the Lockport Road / Willow Avenue/ Main Street intersection (No. 6 in **Table 2-15**) and the Ontario Avenue / Main Street intersection (No. 8 in **Table 2-15**) would have less (overall intersection) delay in 2040 than in 2010 during the AM peak hour due to traffic diversion effects primarily caused by Lewiston Road being closed for construction in 2010 - 2011. In general, all the intersections would continue to operate at LOS D or better.



Table 2-15 - 2040 Future No Build Intersection Level of Service

No.	Intersection/Approach	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
1	Niagara Street & Rainbow Boulevard Eastbound Westbound Northbound Southbound <i>Intersection</i>	27.3	C	29.2	D
	A		B		
	C		C		
	B		B		
	C		C		
2	Niagara Street & 1st Street Eastbound Westbound Northbound Southbound <i>Intersection</i>	9.7	A	16.5	A
	D		B		
	B		C		
	B		C		
	A		B		
3	Pine Avenue & Main Street Eastbound Westbound Northbound Southbound <i>Intersection</i>	10.2	A	17.6	A
	C		D		
	A		A		
	A		A		
	B		B		
4	Portage Road & 11th Street Eastbound Westbound Northbound Southbound <i>Intersection</i>	26.7	D	28.1	D
	D		D		
	C		C		
	A		A		
	C		C		
5	Pierce Avenue & Main Street/Portage Road Westbound Northbound (Main Street) Northbound (Portage Road) Southbound <i>Intersection</i>	19.0	D	28.7	D
	B		B		
	B		C		
	B		B		
	B		C		
6	Lockport Road / Willow Avenue & Main Street Eastbound Westbound Northbound Southbound <i>Intersection</i>	29.4	C	11.8	B
	D		B		
	B		A		
	B		B		
	C		B		



No.	Intersection/Approach	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
7	Lockport Road & 11th Street Eastbound Westbound Northbound Southbound <i>Intersection</i>	13.6	B	20.9	C
	B		C		
	B		B		
	B		B		
8	Ontario Avenue & Main Street Eastbound Westbound Northbound Southbound <i>Intersection</i>	22.2	C	13.4	A
	B		B		
	B		A		
	B		B		
9	Findlay Drive & Lewiston Road (Unsignalized) Eastbound Northbound Southbound <i>Intersection</i>	14.1	A	11.2	B
	B		B		
	B		B		
	B		B		

It should be noted that actual No Build peak hour turning movements that were factored into the LOS analyses at these nine intersections are provided in figures included in **Appendix E.1 – Traffic Flow Diagrams - 2010**.

2.3.1.8. Safety Considerations, Accident History and Analysis

A review of the accident records for the RMP within the Project Study Area was conducted. Accident records along the Project corridor and beyond were provided by the New York State Park Police and Niagara County Sheriff’s Office for a 36-month period (Year 2007 through Year 2010). The accident analysis was conducted for the RMP between Main Street and Center Street / Ridge Road in Lewiston, which included data from the Project corridor between Main Street and Findlay Drive. Additional accident data were collected for Whirlpool Street, Main Street / Lewiston Road to as far north as the city limits of the City of Niagara Falls during Years 2008 through 2011.

Using the accident records obtained for these roadways, Accident Rate calculations for each roadway were developed and compared with the Statewide Average Rates for a similar facility. These data are presented in **Table 2-16**.

Table 2-16 - Mainline Accident Analysis Summary Comparison

Roadway Segment	From	To	No. of Accidents in 3 Years (2007 to 2010)	Distance (Miles)	AADT	Million Vehicle Miles Traveled (MVMT)	Accidents per MVMT (No. of Accident MVMT)	Statewide Average Accident Rate per MVMT
Robert Moses Parkway	Main Street	Center Street/ Ridge Road	26	6.6	4306	31.12	0.84	2.02
Whirlpool Street	Main Street	Findlay Drive	19	1.8	3200	6.31	3.01	2.09
Main Street	Rainbow Boulevard	Bath Avenue	171	1.7	6600	12.29	13.92	2.83
Main Street / Lewiston Road	Bath Avenue	City of Niagara Falls Limits	15	1.4	3600	5.52	2.72	2.83

Notes:

- Accidents / MVMT = $\frac{\text{No. of Accidents} \times 1,000,000}{\text{Segment} \times \text{AADT} \times 365 \text{ days/year} \times \text{No. of years}}$
- Source: NYSDOT "Average Accident Rates for State Highways by Facility Type (Based on accident data November 1, 2007 to October 31, 2009)"

The results of the accident data collection for the noted roadways are presented below:

- Robert Moses Parkway between Main Street and Center Street / Ridge Road** – Twenty-six accidents were recorded within this 6.6-mile section of the RMP during the accident investigation period. Of the 26 accidents, five of them were rear-end type accidents, five of them involved animal's action and four of them were right angle type accidents. Eight accidents that occurred along this roadway segment resulted in personal injuries.
- Whirlpool Street between Main Street and Findlay Drive** – Nineteen accidents were recorded within the 1.8-mile long Whirlpool Street during the accident investigation period. Of the 19 accidents, six of them were with fixed objects, four of them were sideswipe type accidents and three of them were rear end type accidents. Four accidents that occurred along this roadway segment resulted in personal injuries.
- Main Street between Rainbow Boulevard and Bath Avenue** – A total of 171 accidents were recorded within this 1.7-mile section of Main Street during the accident investigation period. Of

the 171 accidents, 41 of them were rear end type, 32 of them were sideswipe type accidents and 30 of them were right angle accidents. There were 27 collisions with a fixed object. A total of 31 accidents occurring along this roadway segment resulted in personal injuries. One accident involving a pedestrian resulted in a fatality.

Along Main Street, over half of the accidents occurred in or near side street intersections, with the highest number of accidents occurring at Pine Avenue (16 accidents), Third Street (10 accidents) and Ashland Avenue (9 accidents). There were 8 accidents each at Cedar Avenue, First Street and Walnut Avenue. At all other intersections, there were 5 or fewer accidents. At the six intersections noted as having higher accident rates, there were many rear end and right angle type accidents. A detailed listing of Project Study Area accident information including the six noted intersections along Main Street is included in **Appendix E.3 – Accident Summaries**.

- ***Lewiston Road between Bath Avenue and the City of Niagara Falls Limits*** – Fifteen accidents were recorded within this 1.4-mile section of Main Street / Lewiston Road during the accident investigation period. Of the fifteen accidents, 5 of them were rear end type of accidents and 3 of them were right angle type of accidents. Three accidents that occurred along this roadway segment resulted in personal injuries.

Based on the accident data, there are no high accident locations within the Project Study Area.

2.3.1.9. Existing Police, Fire Protection and Ambulance Access

Existing municipal police protection within and adjacent to the immediate Project Study Area is provided by the City of Niagara Falls Police, which is located one block east of the RMP at 1925 Main Street.

New York State Park Police provide Police Services in the State Parks and along the Gorge including Search and Rescue. The Niagara Region State Parks Police Station is currently located on Goat Island within Niagara Falls State Park, although, as previously discussed, a new station fronting the RMP at a location immediately north of former DiFranco Park and immediately east of the existing RMP is currently under construction. Both fire protection and ambulance service in the Project Study Area is provided by the City of Niagara Falls Fire Department. Rural/Metro also provides private ambulance service in the Project Study Area.

2.3.1.10. Parking Regulations and Parking Related Conditions

No parking is allowed along the RMP right-of-way within the immediate Project Study Area. However, parking is allowed along the RMP at a designated parking lot for the Niagara Gorge Discovery Center and Whirlpool State Park. The parking facilities are generally adequate for the number of visitors destined for the parks and recreational areas along the Niagara Gorge rim. There are also several large municipal parking lots located just east of Whirlpool Street in the City of Niagara Falls.

Along Whirlpool Street and Main Street / Lewiston Road, parking regulations are set by the City. Parking is not permitted along most sections of Whirlpool Street except in the residential area north of Bellevue

Avenue. Along Lewiston Road north of the immediate Project Study Area but still within the city limits, parking is prohibited at many locations.

Parking along Third Street is permitted on the east side between Main Street and Pine Avenue and along the west side of the street between Pine Avenue and Cedar Avenue.

2.3.1.11. Lighting

There is limited street lighting along the RMP, with most light posts located at park entrances or connections to side roads. The RMP originally had street lighting along its entire length but the poles and luminaires have been poorly maintained, with many locations abandoned years ago. Street lighting is present along Main Street / Lewiston Road and Whirlpool Street.

2.3.1.12. Ownership and Maintenance Jurisdiction

Ownership of the land on which the RMP sits is shared by State Parks and NYPA. The portion of the RMP constructed by NYPA, extending approximately 9.3 miles from the Grand Island Bridges to the intersection with Upper Mountain Road (which includes the Main Street-to-Findlay Drive Project Area), is administered by State Parks. The responsibility for operation and maintenance (O&M) of the RMP was transferred from NYPA to State Parks pursuant to NYPA Trustee Resolutions of 1961 and 1964 and a letter agreement from the latter year.

Highway features such as pavement, pavement markings, curbs, signs, drainage system, parkway median, and snow and ice control are maintained by NYSDOT while State Parks retains jurisdiction based on a MOU dated 1975. All features not directly associated with the roadway of the RMP are maintained by State Parks.

Figures 2-10a – 2-10c illustrate the current ownership of the land along the RMP.

Figure 2-10a - Land Ownership - South

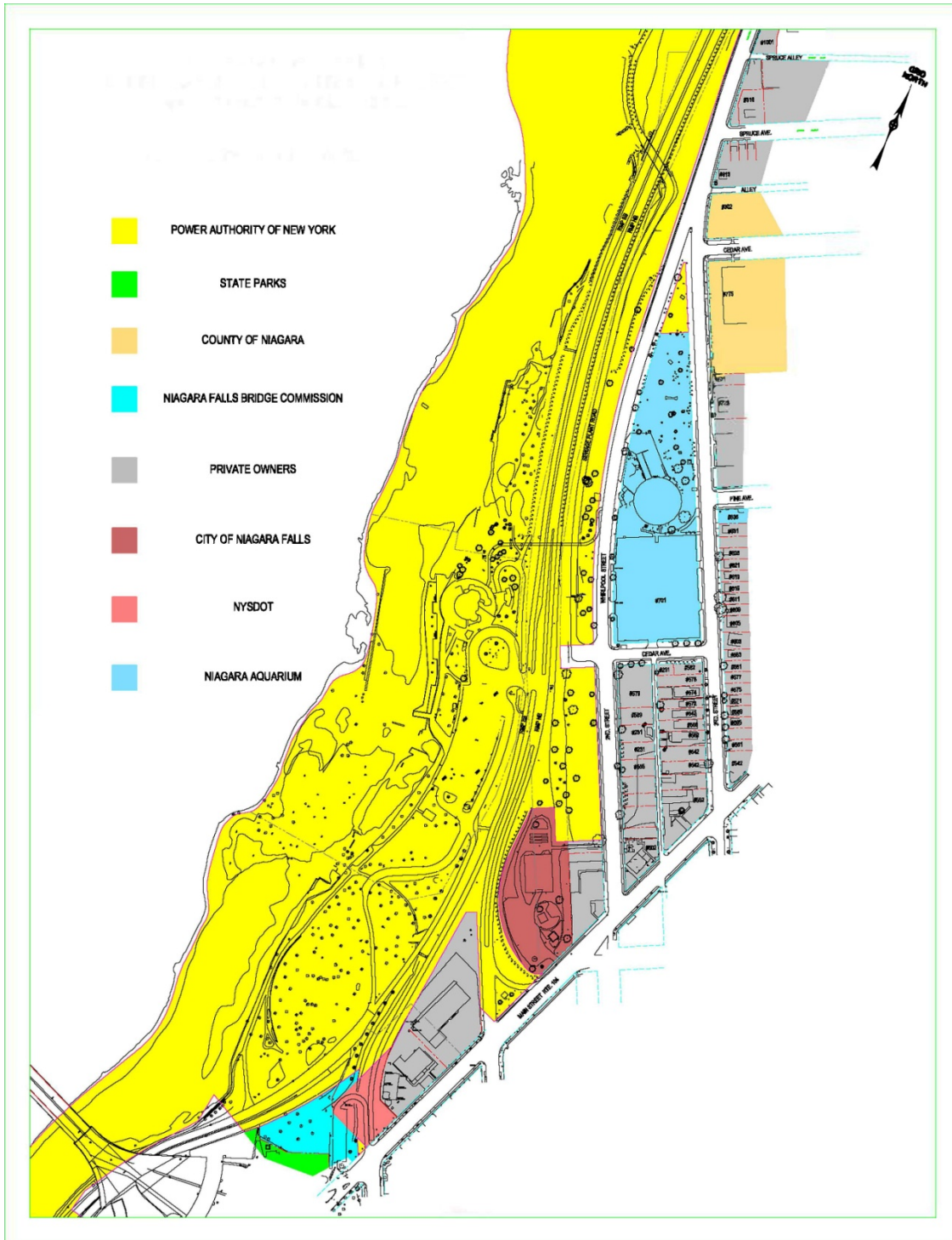


Figure 2-10b - Land Ownership - Central

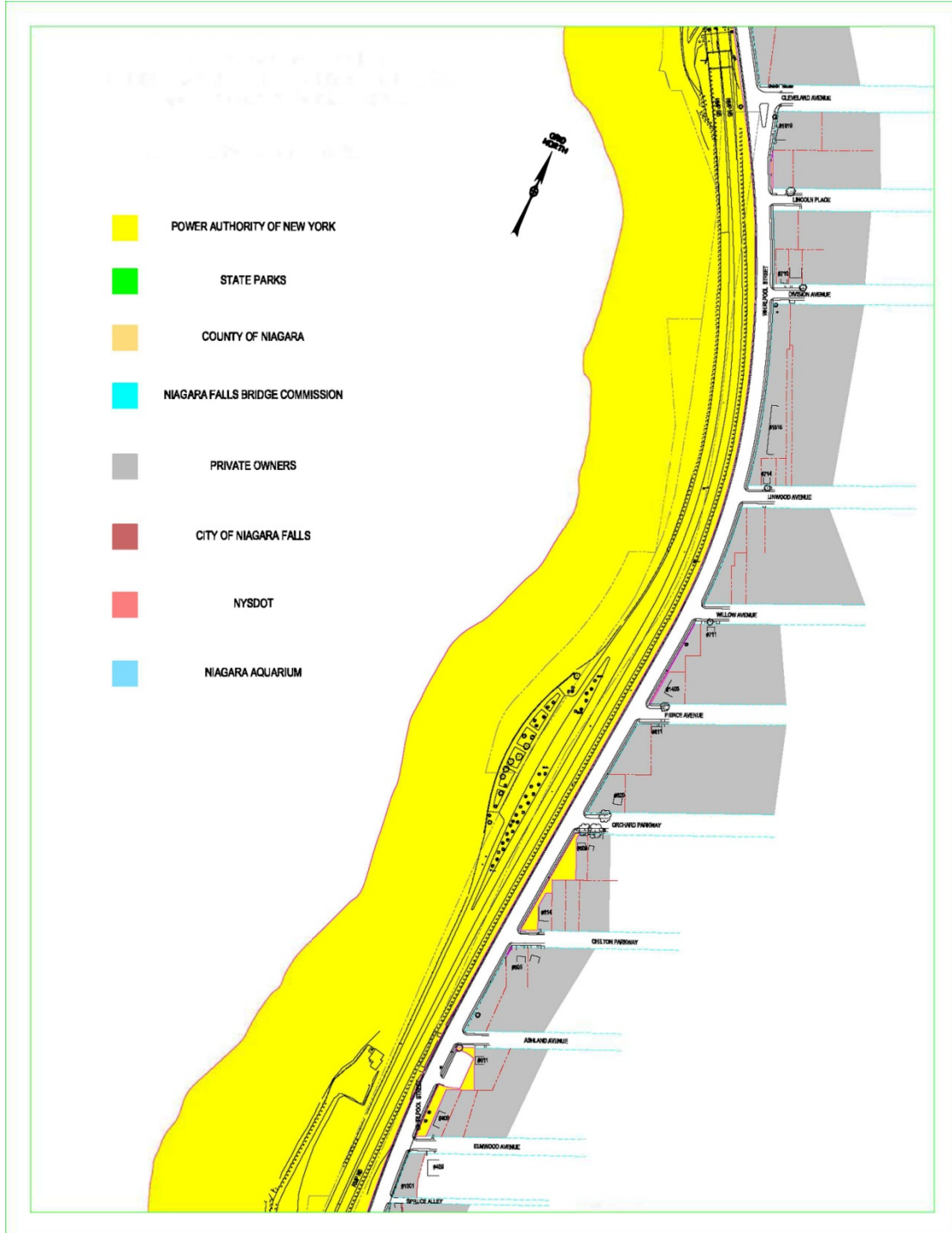
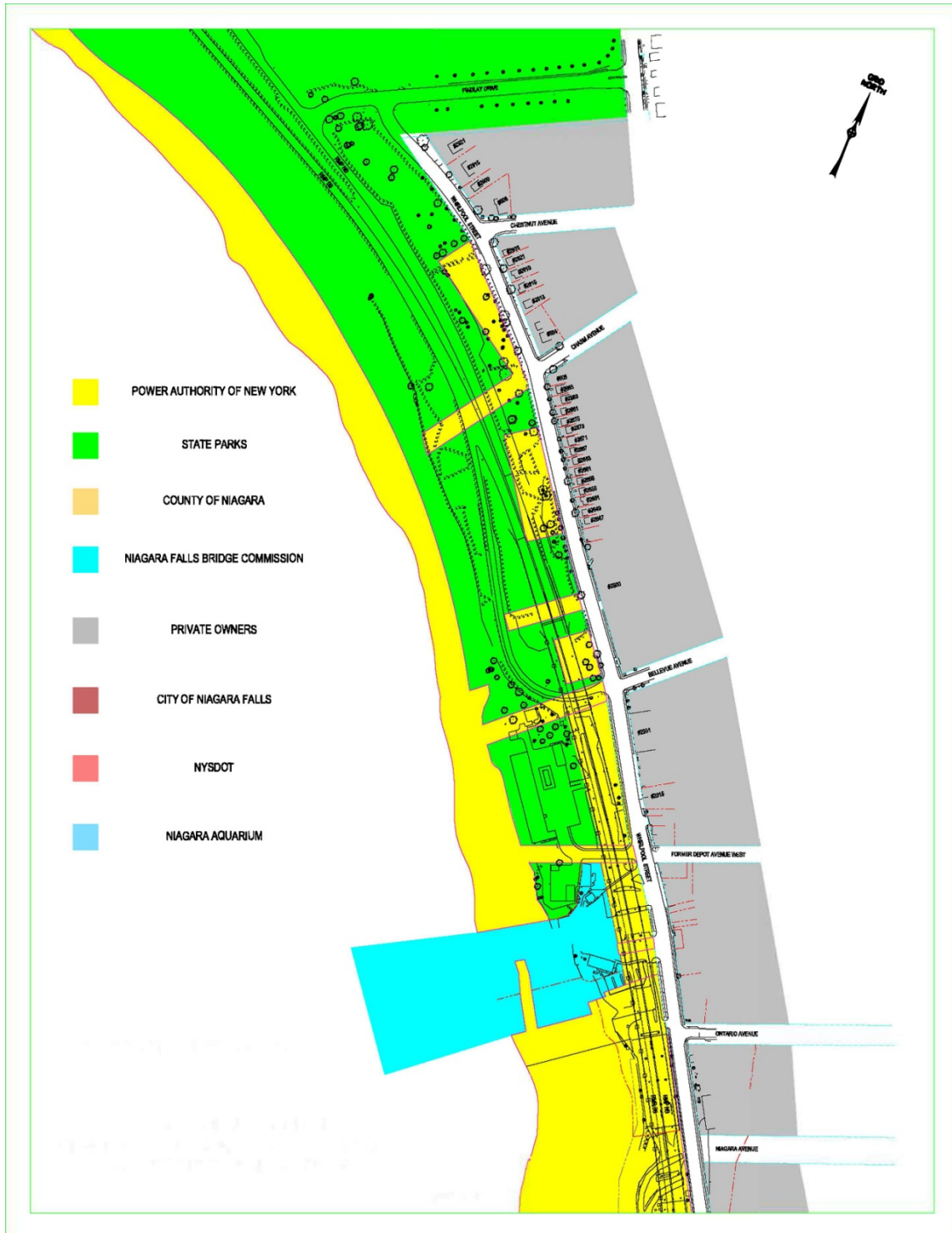


Figure 2-10c - Land Ownership - North



2.3.2. Multimodal

There are limited multimodal access points to trails and paths within the State Parks and along the Niagara Gorge rim within or adjacent to the immediate Project Area. Pedestrian access from the adjacent neighborhoods is available at three locations (i.e., via the Robert Moses Trail at Main Street and Rainbow Boulevard, via a pedestrian bridge at the Aquarium of Niagara and via the converted RMP off-ramp below the RMP viaduct near the Whirlpool Bridge). An additional point of access, however, is located north of the Project Study Area at the at-grade pedestrian crosswalk between Whirlpool and DeVeaux Woods State Parks. This limited number of access points provided along the RMP creates a barrier for the adjacent neighborhoods in accessing the Robert Moses Parkway Trail, the Gorge rim and the lower Niagara River.

The following sections provide detailed descriptions of pedestrian and bicycle facilities located within or adjacent to the immediate Project Study Area.

2.3.2.1. Pedestrians

Pedestrians are presently accommodated by several trails, sidewalks and pathways within the Project Study Area. From the Niagara Gorge Discovery Center to Devil's Hole State Park, the latter of which is situated approximately three-quarters of a mile north of Findlay Drive and well beyond the limits of the proposed Project, rustic and improved paths are located both at the top of the Gorge and at the bottom of the Gorge near the edge of the river. These paths have gravel or earth surfaces and may be difficult for some mobility-limited pedestrians to use (especially the lower Gorge trail). The Robert Moses Parkway Trail, which runs from the southern project limit at Main Street to Devil's Hole State Park, has a concrete surface and follows the alignment of the former RMP southbound expressway lanes.

Along other corridor routes in the City of Niagara Falls, including Main Street, Whirlpool Street and Lewiston Road to the north of Findlay Drive, pedestrians are accommodated on typical urban sidewalks.

2.3.2.2. Bicyclists

Existing facilities providing bicycle access in the immediate Project Study Area include the Robert Moses Parkway Trail, the Riverview Trail along the upper Niagara River and the western terminus of the 365-mile-long New York State Bicycle Route 5 that crosses the state to the Massachusetts state line. In the City of Niagara Falls, Bicycle Route 5 is a signed on-street bicycle route along Ferry and Walnut Avenues (which together comprise U.S. Route 62). Bicycle facilities within or in the general vicinity of the Project Study Area as designated on the GBNRTC 2010 bicycle route map, including suitable on-street routes, are shown on **Figure 2-11**.

The Robert Moses Parkway Trail provides a paved route for cyclists and pedestrians to use, but lacks the character most users desire along a multi-modal trail. This trail, at 24 feet in width, is excessively wide and appears very straight as it follows the RMP alignment.

Figure 2-11 - Bicycle Routes



2.3.2.3. Transit

There are no public transit providers operating services along the northern section of the RMP, including the Project Study Area. However, several local privately-operated tour providers do use the RMP to access attractions including, but not limited to: state parks along the lower Niagara River; the historic Village of Lewiston; and Old Fort Niagara in Youngstown. The operations of these private bus carriers are dependent on the season and the specific destination included in a tour package.

NFTA operates several bus routes along the roads directly adjacent to the RMP. None of the bus routes in the City of Niagara Falls operate over a single specific street, but rather, traverse multiple streets on the city grid. Listed below are the bus routes that include streets within or near the Project corridor as significant portions of their typical route:

- **Route 50 – Main-Niagara** - Travels over portions of Main Street, Portage Road, and Lewiston Road in the City, then continues north of the Project corridor along Lewiston Road and Center Street in Lewiston.
- **Route 52 - Hyde Park** - Travels along Main Street and Hyde Park Boulevard in the City, then continues north of the Project corridor on Lewiston Road and Military Road in the Town of Lewiston.
- **Route 55 – Pine Avenue** - Travels on Main Street between Niagara Street and Pine Avenue.

NFTA also operates a seasonal rubber-wheeled trolley (Route 55T) serving tourists and hotel guests in Niagara Falls, primarily along the U.S. Route 62 corridor between Niagara Falls State Park and the City's LaSalle district on its east side. The 55T route includes portions of Main Street and Whirlpool Street in its service area.

Public discussion regarding the establishment of a public tourist-oriented trolley and/or bus shuttle service along the Niagara Gorge between downtown Niagara Falls and Old Fort Niagara in Youngstown, similar to the 55T, have been discussed over the last decade, including feasibility studies conducted by NFTA, Niagara University, and NYPA. While there is widespread agreement over the desirability for such service, an economically-sustainable business model for its establishment has yet to be identified. For example, the 55T was originally financed by hoteliers along the U.S. 62 corridor that wanted safe, predictable service for their patrons to access Niagara Falls State Park; the service was later financed through a 1% increase in the state-sanctioned hotel occupancy tax in Niagara Falls. Currently, the Niagara Falls National Heritage Area is coordinating with NYPA, State Parks, USAN, the City, State delegation members, Niagara Tourism & Convention Corporation, and other stakeholders to try to conduct a two-year Pilot Program for such a trolley shuttle service. No firm decisions or schedule for this are yet established.

2.3.2.4. Airports, Railroad Stations, and Ports

Niagara Falls International Airport is located approximately 4.5 miles east of the Project Study Area. As noted in **Section 2.2.1.2**, the new Niagara Falls International Railway Station at Whirlpool and Depot Street is nearing completion, and will be served by both U.S. (Amtrak) and Canadian (VIA Rail) passenger service. No port facilities are located within or in the vicinity of the Project Study Area.

2.3.2.5. Access to Recreation Areas (Parks, Trails, Waterways, State Lands)

Vehicle access to most of the recreation areas is provided only for cars and buses using the RMP within the limits of the proposed Project between Main Street and Findlay Drive. Vehicle access off the RMP is available at two locations along this segment (i.e., at the Niagara Gorge Discovery Center and at Whirlpool State Park located just north of Findlay Drive).

As stated previously in **Section 2.3.2**, there are limited locations within the Project Study Area where the parks and recreational areas, including trails, west of the existing RMP can be accessed by bicyclists and pedestrians. **Figure 2-11**, which was previously presented, illustrates the bicycle and pedestrian access points along the RMP.

2.3.3. Infrastructure

2.3.3.1. Existing Highway Section

As illustrated in **Figure 2-12**, the existing highway cross section along the portion of the RMP within the Project Study Area is characterized as a two-lane undivided roadway. Other roadways in the Project Study Area are generally two lanes to four lanes wide with curbs. Existing highway section information for the RMP and Whirlpool Street between Main Street and Findlay Drive is presented in **Table 2-17**.

2.3.3.2. Geometric Design Elements Not Meeting 2R/3R or Bridge Rehabilitation Standards

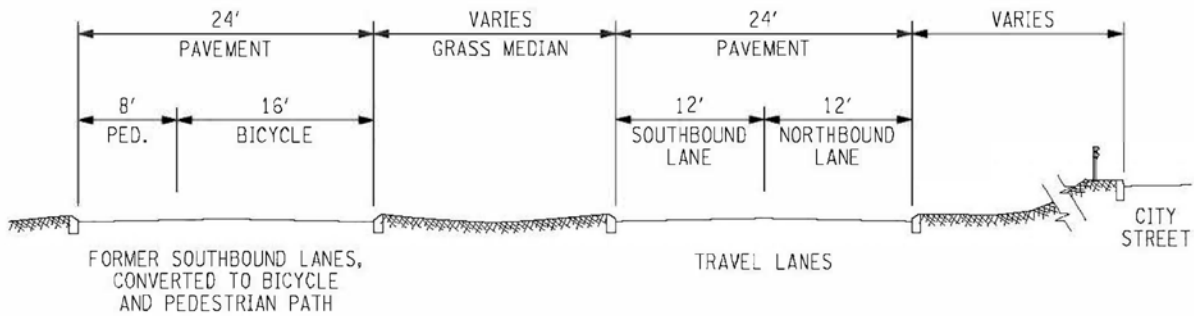
2.3.3.2.(1) Critical Design Elements

The horizontal and vertical alignments of the RMP were evaluated along with the existing cross-sectional elements to determine whether the appropriate standards for 2R/3R projects (resurfacing, restoration and rehabilitation) in accordance with NYSDOT Highway Design Manual Chapters 2 and 7 have been met. With the exception of the mountable curbs at the edge of pavement and the lack of a curb offset or shoulder, the RMP generally meets the 2R/3R design criteria for a limited access expressway. Design Criteria for Whirlpool Street were also compared to existing conditions and the following nonstandard elements were found:

- Vertical clearance at the CSX Railroad Bridge over NYS Route 182 – Whirlpool Street (BIN 7090240) is less than the 14' - 0" minimum clearance specified in the NYSDOT Bridge Design Manual.

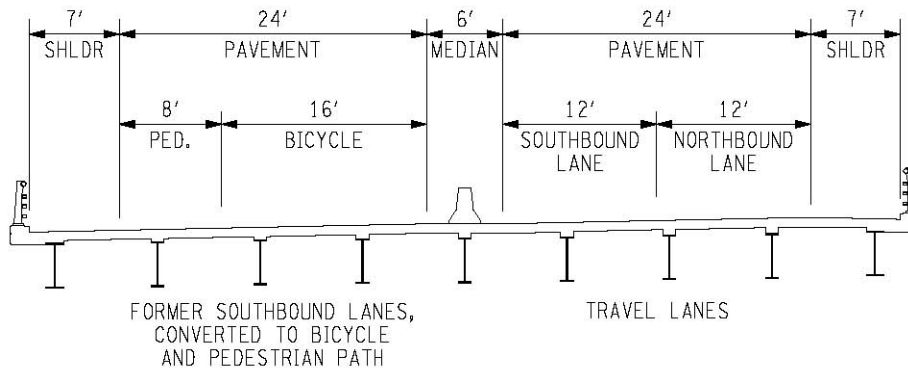
- The existing travel lanes along Whirlpool Street between Third Street and Lincoln Place are a non- standard width. The existing 10-foot wide lanes should be a minimum of 11-feet wide.

Figure 2-12- Existing Highway Sections (All Sections looking North)



2 LANE SECTION WITH GRASS MEDIAN

DISCOVERY CENTER TO FINDLAY DRIVE
 (EXCEPT ON STRUCTURE OVER WHIRLPOOL BRIDGE)



2 LANE SECTION ON STRUCTURE OVER WHIRLPOOL BRIDGE

Table 2-17 - Existing Highway Sections

Route Number	Route Name	Route Section	Travel Lanes	Width	Shoulder/ Curb Offset	Curbs	Median
ROBERT MOSES PARKWAY							
NY 957 A	Robert Moses Parkway	Route 104 (Main Street) to Discovery Center Entrance	4	24 (2)	None	Yes	18
NY 957 A	Robert Moses Parkway	Discovery Center Entrance to Findlay Drive	2	24	None	Yes	N/A
OTHER STUDY AREA ROUTES							
N/A	Whirlpool Street	Route 104 (Main Street) to 3rd Street	2 - 4	24	Varies	Yes	N/A
N/A	Whirlpool Street	3rd Street to Cleveland Avenue	4	41	0	Yes	N/A
NY 182	Whirlpool Street	Cleveland Avenue to Whirlpool Bridge	2	36	6	Yes	N/A
N/A	Whirlpool Street	Whirlpool Bridge to Findlay Drive	2	30	6 (right side)	Yes	N/A

2.3.3.2.(2) Other Design Parameters

There are no existing nonconforming features.

2.3.3.3. Pavement and Shoulder

Review of the record plans for the RMP revealed that the existing pavement section consists of a 9" thick reinforced concrete pavement over a 12" stone base constructed between 1958 and 1962. The pavement data for Whirlpool Street is more limited. Generally, the City of Niagara Falls streets include a minimum 2-1/2" asphalt overlay on an 8" concrete base and an 8" - 12" stone base.

In April 2011, a visual pavement assessment of the RMP was performed, including the Main Street-to-Findlay Drive Project corridor. The pavement was divided into sections based on the geometry of the roadway and segment miles were measured along the RMP beginning at the Main Street entrance (MP 0.0) and ending at Whirlpool State Park (MP 2.2). **Table 2-18** outlines the visual pavement condition assessment. There are no dedicated shoulders along this section of the RMP. The full Visual Pavement Condition Assessment conducted was included as Appendix G in the *Niagara Gorge Corridor Project: Final Scoping Report* (October 2013).

Table 2-18 - Pavement and Shoulder Conditions

RMP Segment	Mile Post		Condition	Additional Notes
	From	To		
1	0.0	0.4	Fair	Transverse cracking/spalling at joints, minor potholes and longitudinal cracking along lane lines.
2	0.4	1.1	Good	Transverse cracks at joints but cracks are tight and pavement rides well.
3	1.1	1.7	Good	Some longitudinal cracking in one slab on the northbound end of the bridge at approximately MP 1.6.
4	1.7	2.2	Good	No edge or lane cracking.

A visual survey of the local roadways (Whirlpool Street and Main Street / Lewiston Road) pavement was conducted in 2011. The majority of the pavement distress found along local roads occurs in the form of cracking and spalling with potholes. Cracking (wheel path, transverse, longitudinal, and edge) was observed in several locations. Longitudinal cracking typically occurs between the travel lanes at the street centerline or at original longitudinal pavement joints. Localized alligator cracks also occur in some locations. The severity of the observed distresses for the street segments at that time was categorized and is presented in **Table 2-19**.

Table 2-19 - Local Roadway Conditions

Street	Limits	Surface Condition Description
Whirlpool Street	Main Street to Walnut Street	Poor surface condition. Poor ride quality. Severe longitudinal cracks with potholes up to 12" long.
Whirlpool Street	Walnut Street to Third Street	This section of Whirlpool Street was closed due to roadwork. Traffic was detoured onto Third Street.
Whirlpool Street	Third Street to Whirlpool Rapids Bridge	Fair to poor surface condition. Alligator cracking occurs at some locations with isolated potholes up to 18" long.
Whirlpool Street	Whirlpool Rapids Bridge to Chestnut Avenue	Fair surface condition. Low severity longitudinal cracks occur along this section of the roadway.
Whirlpool Street	Chestnut Avenue to Findlay Drive	Fair to poor surface condition. Alligator cracking occur at some locations with isolated potholes up to 24" long.
Main Street	Whirlpool Street to Cleveland Avenue	Good to fair surface condition. Good ride quality. Low severity longitudinal cracks occur at isolated locations.
Main Street/ Lewiston Road	Cleveland Avenue to Hyde Park Boulevard	This section of Main Street / Lewiston Road was under reconstruction and was closed for northbound traffic.

2.3.3.4. Drainage Systems

The RMP, Third Street and Whirlpool Street in the immediate Project Study Area have closed drainage systems. Along Third Street and Whirlpool Street, the system consists of drainage inlets connected to stormwater lines that then drain into a combined sewer. These combined sewer lines ultimately flow into a combined sewer tunnel buried deeply (up to 100 feet) beneath Whirlpool Street. The normal flow of this tunnel is carried to the Niagara Falls Water Board (NFWB) Pump Station located at the bottom of the Gorge across from Ashland Avenue. The pump station pumps the water to the NFWB Waste Water Treatment Plant on Buffalo Avenue, where it is processed and then discharged to the Niagara River. Heavy flows that exceed the capacity of the first-flush system result in combined sewer overflow (CSO) being discharged directly to the Niagara River via five CSO outfalls located along the Niagara River between Main Street and Findlay Drive.

The stormwater collection system for the existing RMP between Main Street and Findlay Drive consists of inlets connected to stormwater lines that then drain directly into the five outfalls located along the Niagara River noted above.

2.3.3.5. Geotechnical

Portions of the existing RMP were constructed on rock and soil fill material excavated during construction of the Niagara Power Project. In most areas, the existing pavement is located far enough from the top of the Gorge that the Gorge wall conditions do not affect pavement section stability. No special geotechnical concerns with the soils or rock slopes have been identified within the Project Study Area.

2.3.3.6. Structures

A total of six bridges are located within the Project Study Area. These structures are either carried over, or are crossed by the RMP, NYS Route 182 or NYS Route 104. These structures are discussed below, and their locations are illustrated in **Figure 2-13**.

2.3.3.6.(1) Description:

- Pedestrian Bridge over Robert Moses Parkway
BIN – 1068210
Feature carried and crossed: Pedestrian Bridge over Robert Moses Parkway
Type of Bridge – Steel Box Beam
Width of travel lanes: N/A
Sidewalks: N/A
Utilities carried: N/A
- Robert Moses Parkway over Sewage Treatment Plant Road
BIN – 1068229

Feature carried and crossed: Robert Moses Parkway over Sewage Treatment Plant Road

Type of Bridge – Concrete T-Beam, Encased I beam

Width of travel lanes: 4 – 12 ft lanes.

Sidewalks: N/A

Utilities carried: N/A

- Robert Moses Parkway over NYS Route 182 (Whirlpool Street)

BIN – 1039539

Feature carried and crossed: RMP over Route 182

Type of Bridge – Steel Multi-girder

Width of travel lanes: 4 - 12 ft lanes.

Sidewalks: N/A

Utilities carried: N/A

- CN over NYS Route 182 (Whirlpool Street)

BIN – 7090230

Feature carried and crossed: CN over Route 182

Type of Bridge – Steel Thru Girder

Width of travel lanes: N/A

Sidewalks: none

Utilities carried: N/A

- CSX over NYS Route 182 (Whirlpool Street)

BIN – 7090240

Feature carried and crossed: CSX over Route 182

Type of Bridge – Steel Girder Floorbeam, concrete approach spans

Width of travel lanes: N/A

Sidewalks: none

Utilities carried: N/A

- CSX over NYS Route 104 (Main Street)

BIN – 7036262

Feature carried and crossed: CSX over Route 104

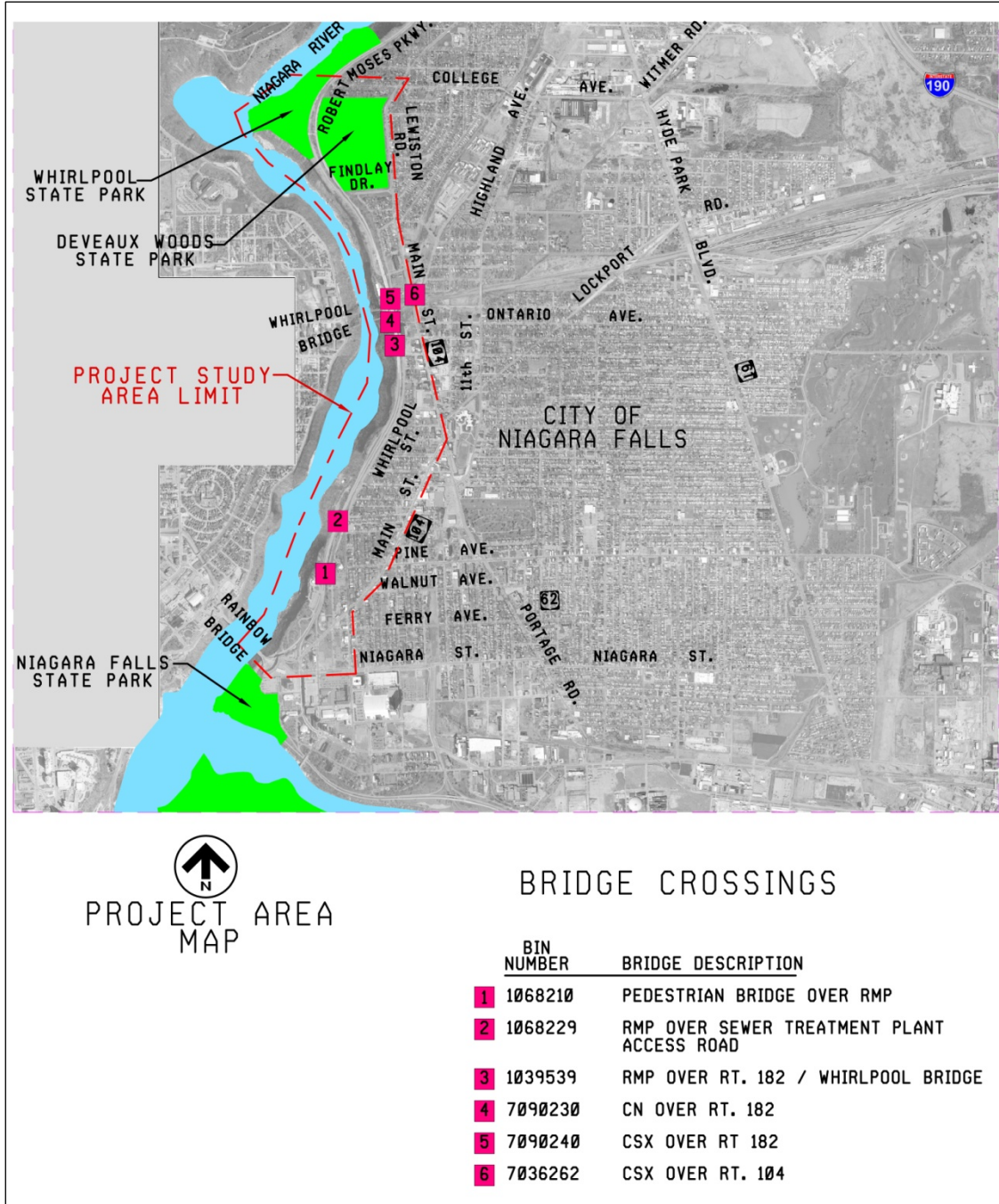
Type of Bridge – Steel Girder Floorbeam

Width of travel lanes: N/A

Sidewalks: none

Utilities carried: N/A

Figure 2-13 - Bridge Crossings



2.3.3.6.(2) Clearances (Horizontal/Vertical)

The bridges listed in **Table 2-20** have reduced vertical and/or horizontal clearance. Vertical clearance restrictions are as indicated on warning signs posted at the bridge.

Table 2-20 - Bridge Clearance

Feature Carried and Crossed	BIN	Posted Vertical Clearance	Insp Report Vertical Clearance	Horizontal Clearance
Robert Moses Parkway over Sewage Treatment Plant Road	1068229	11' - 8"	N/A	N/A
CN over NYS Route 182	7090230	12' - 10"	14' - 9"	1' - 5"
CSX over NYS Route 182	7090240	12' - 10"	13' - 11"	7' - 9"
CSX over NYS Route 104	7036262	11' - 0"	12' - 4"	4' - 0"

2.3.3.6.(3) History and Deficiencies

A brief history of the structures within the Project corridor that are carried over, or are crossed by the RMP, Whirlpool Street, or Main Street is presented below:

- **RMP Structures** – With the exception of the bridge over the Sewage Treatment Plant Road (BIN 1068229) and the pedestrian bridge between the Niagara Aquarium and Niagara Gorge Discovery Center (BIN 1068210), all bridges in the Project Study Area that carry the RMP or cross over the RMP were constructed in 1962 or 1963. The Sewage Treatment Plant Road bridge and the Niagara Aquarium pedestrian bridge were built in 1930 and 1978, respectively.
- **Railroad Bridges** – The existing CSX Railroad Bridge over Main Street (BIN 7036262) was constructed in 1925. A second railroad bridge over Main Street (BIN 7036261) was removed in 2011 and is no longer relevant. The Canadian National (CN) Railroad Bridge over Whirlpool Street (BIN 7090230) was built in 1899 although it is not currently in service (tracks have been removed). The CSX Railroad Bridge over Whirlpool Street (BIN 7090240) was built in 1924.

2.3.3.6.(4) Inspection

Bridge condition ratings from the NYSDOT biennial bridge inspection reports are included in **Table 2-21**. It should be noted that there are no condition ratings presented for railroad bridges since they do not fall within the jurisdiction of the NYSDOT Bridge Inspection Program. Each individual railroad company is responsible for providing inspections on their own railroad bridges.

Table 2-21- Bridge Condition Ratings

Bridge Location / BIN	State Condition Rating
Pedestrian Bridge over RMP / BIN: 1068210	5.639
RMP over Sewage Treatment Plant Road BIN: 1068229	4.564
RMP over Whirlpool Street BIN: 1039539	5.653
CN over Whirlpool Street / BIN: 7090230	N/A
CSX over Whirlpool Street / BIN: 7090240	N/A
CSX over Main Street / BIN: 7036262	N/A

2.3.3.6.(5) Restrictions

All bridges in the Project Study Area are open, although the CN Railroad bridge over Whirlpool Street (BIN 7090230) is not currently in service (tracks have been removed). No load postings were found to exist for any of the bridges. Clearance postings are noted in **Section 2.3.3.6 (2)**.

2.3.3.6.(6) Future Conditions

Routine maintenance of the structures in the Project Study Area is expected to continue for the foreseeable future. During the next few years, no significant changes in the structural condition of the Project Study Area bridges are expected.

2.3.3.6.(7) Waterway

There are no waterways that are crossed by any of the Project roadway segments.

2.3.3.7. Hydraulics of Bridges and Culverts

No known issues were identified related to hydraulics within the Project Study Area.

2.3.3.8. Guide Railing, Median Barriers and Impact Attenuators

The RMP has guide rail sections and a double yellow striped median within the two-lane, two-way section that exists along the Project corridor from Main Street to Findlay Drive. Local roadways in the Project Study Area are part of the City of Niagara Falls' street system with curbed roadway sections. There is no

guide rail, median barrier or impact attenuators located on the local streets within the Project Study Area. However, a white wooden barrier, in fair to poor condition, consisting of wooden posts and wood planking exists along the west side of Whirlpool Street from the Aquarium of Niagara near Cedar Avenue, a distance of approximately 5,000 feet to Ontario Street.

2.3.3.9. Utilities

There are no major utilities along the RMP other than the City of Niagara Falls’ sewer line crossing under the parkway near Ashland Avenue. Service connections for water, sewer and electric within the Project Study Area are provided for the facilities at the Niagara Gorge Discovery Center and Whirlpool State Park.

Along the other Project Study Area routes, the municipal and private utilities that are typically found in an urban area are also present. Utility type and owner information are presented in **Table 2-22**.

Table 2-22 - Existing Utilities

Owner	Type
National Grid	Electric
National Fuel	Natural Gas
Verizon	Telephone
Time Warner Cable	Cable TV

Stormwater

Major municipal utilities include the current stormwater system along Third Street and Whirlpool Street which consists of drainage inlets connected to stormwater lines that then drain into a combined sewer. These combined sewer lines ultimately flow into a combined sewer tunnel (North Gorge Interceptor) buried deeply (up to 100 feet) beneath Whirlpool Street. The tunnel varies in dimensions from 8’ by 8’ to 13’ by 9’ to 10’ by 13’ and runs the length of Whirlpool Street from Chasm Avenue south to Walnut Avenue. The tunnel then continues southwest adjacent to the RMP until it ties into another tunnel located under Rainbow Boulevard.

The normal flow of this tunnel is carried to the NFWB Pump Station located at the bottom of the Gorge west of the RMP across from Ashland Avenue. The pump station pumps the combined storm and sanitary sewerage via a 30” diameter force main from the pump station south under the RMP, then turning east to cross Whirlpool Street near Cedar Avenue. The force main continues east under Cedar Avenue, then turns south under Fourth Street and eventually to the NFWB Waste Water Treatment Plant on Buffalo Avenue.

Water

Water lines along Third Street and Whirlpool Street include a 20" line under Third Street and continuing north under Whirlpool Street to Depot Street (formerly Bath Avenue). A 10" diameter waterline is located under Whirlpool Street from Ontario Street to Chasm Avenue.

Gas

Gas lines along Third Street and Whirlpool Street include a 6" main line under the east sidewalk of Third Street and Whirlpool Street with 2", 3", and 4" service lines branching off to the east at intersections between Main Street and Willow Avenue. The 6" main line transitions to a 4" service line at Willow Avenue, where it turns east under the south sidewalk of Willow Avenue. South of Main Street, there is an 8" main line under the east sidewalk of Third Street. A 4" service line is capped and is located under the east sidewalk of Whirlpool Street 180' +/- south of Ontario Street and runs north to Bellevue Avenue, where it turns east under the south sidewalk of Bellevue Avenue. A 2" service line is capped and located under the east sidewalk of Whirlpool Street at Spring Street and runs north to Chestnut Avenue, where it turns east under the south sidewalk of Chestnut Avenue. A 3" service line runs under the north sidewalk of Chestnut Avenue and turns north along Whirlpool Street under the east sidewalk of Whirlpool Street. This service line runs north along Whirlpool Street and is capped 200' +/- south of Findlay Avenue. There is only one location where a gas line runs underneath Whirlpool Street. There is a 6" line 50' +/- north of Pine Avenue that crosses Whirlpool Street to service the Aquarium of Niagara. There are two 4" gas lines that cross Third Street; one is 150' +/- north of the Main Street intersection and the other is 60' +/- south of the Main Street intersection. There is a 4" service line under the west sidewalk of Third Street that runs between Main Street and Walnut Avenue. This service line turns west at both intersections and does not cross either street.

Electric

There is an underground electric line that crosses Whirlpool Street 130' +/- north of Depot Avenue West. An underground electric line begins under the south sidewalk of Willow Avenue and turns south under the east sidewalk of Whirlpool Street. This underground line continues along Whirlpool Street until it crosses to the west side of Whirlpool Street in two locations. The first crossing occurs 40' +/- north of Ashland Avenue and crosses Whirlpool Street diagonally. The second crossing occurs 35' +/- south of Ashland Avenue and crosses Whirlpool Street perpendicularly. The underground electric line continues along the west side of Whirlpool Street to Walnut Avenue. The line then crosses Walnut Avenue and continues along the west side of Second Street. There is another underground electrical line that runs east and west, north of Walnut Avenue 12' +/- north of the curb. This line turns to the south at Third Street and crosses Walnut Avenue. The line continues south under the west sidewalk of Third Street until it crosses Third Street 130' +/- south of Walnut Avenue.

Fiber Optic

There is an underground Fiber Optic line under the east sidewalk of Whirlpool Street that begins on the south side of Spruce Alley and runs to the south side of the driveway between Elmwood Avenue and Ashland Avenue. Any other fiber optic lines are overhead.

Telephone

There are no underground telephone lines in the Project Study Area. The telephone lines are all overhead.

2.3.3.10. Railroad Facilities

The RMP passes over a two-level approach structure to the Whirlpool Bridge, which is owned by the Niagara Falls Bridge Commission. The bridge has a single set of railroad tracks to accommodate CSX Transportation freight rail and Amtrak passenger traffic between the United States and Canada. Canada's VIA Rail has a station on the Canadian side. As previously discussed, the City of Niagara Falls is building a new passenger rail station at the historic Old Customs House property at Whirlpool Street and Depot Street.

The bridge is a spandrel-braced, riveted, two-hinged arch bridge. It crosses the international border between Canada and the United States. The bridge has two decks. The upper deck carries the railway traffic while the lower deck is a roadway reserved for passenger vehicles only; commercial vehicles and pedestrians are prohibited. The Whirlpool Bridge is reserved for NEXUS members, a joint program implemented by the Canada Border Services Agency (CBSA) and United States Customs and Border Protection (CBP). There is one lane of traffic to the United States and one lane to Canada. Access in the United States is from Whirlpool Street in Niagara Falls.

There are no at-grade crossings within at least 2/3-mile that could impact traffic conditions.

2.3.4. Potential Enhancement Opportunities

The following discussions focus on identification of potential enhancement opportunities related to the Project, as well as opportunities to help avoid and minimize impacts. **Chapter 4** focuses on the impacts, enhancements, and mitigation.

2.3.4.1. Landscape

The at-grade sections of the RMP create a barrier to access the Gorge rim, the Gorge, or the lower Niagara River. Although the RMP has served to block private development from intruding upon the Gorge rim, it perpetuates a highway landscape that is detrimental to water quality, fragments natural habitats, and makes the corridor more vulnerable to invasive non-native species. In turn, the RMP viaduct over the Whirlpool Bridge creates a physical wall for the adjacent residences and businesses along Whirlpool Street. In some cases, views are completely obscured by the retaining walls and piers of

the viaduct. In addition, the RMP parallels Whirlpool Street in this location, creating a tunnel-like effect for motorists traveling along Whirlpool Street.

The features below the Gorge rim, including the Gorge face, Niagara River, and Whirlpool Rapids, are sensitive natural resources that have stimulated and sustained growth in the area. These natural features are unique and irreplaceable assets that provide numerous benefits, including improved quality of life for local residents, healthy activity areas and a protected ecosystem. The shoreline of the Niagara River south of the Whirlpool Rapids is distinctly rocky with occasional mature specimens of willow and poplar trees. Mature and young smaller specimens and understory shrubs dot the shoreline and the top of the Gorge within a matrix of native grasses.

2.3.4.1.(1) Terrain

The topography of the Project Study Area can be classified as a combination of level and rolling terrain where highway sight distances, as governed by both horizontal and vertical restrictions, are generally long or could be made to be so without construction difficulty or major expenses. The channel that was originally carved for the railroad that is now occupied by the RMP is technically the primary component of the terrain in the “rim to sidewalk” cross section of the Project Study Area.

2.3.4.1.(2) Unusual Weather Conditions

There are no unusual weather conditions within the Project Study Area.

2.3.4.1.(3) Visual Resources

The general visual environment of the Project Study Area consists of a divided parkway separating an open park setting from an urban grid of connecting streets, characterized by a diversity of land uses, building types, materials, scales and densities of development. Views of the Niagara River, the Gorge, Canada, the historic Old Customs House, overhead utility wires, the viaduct over Whirlpool Bridge and pockets of vegetation all function as strong visual features in the environment.

Land use along Third Street and Whirlpool Street in the Project corridor is predominately residential, with areas of commercial development and limited public access to the river. Whirlpool Street, with its sidewalks, minimal street trees and light poles, provides a low degree of visual cohesion and unity along the street.

The Niagara River and Gorge, which both have a high visual quality, are significant visual resources adjacent to and visible from the Project Study Area. Other visual resources include the existing state parks, green space and residential neighborhoods.

2.3.4.2. Opportunities for Environmental Improvements

Opportunities for environmental enhancements have the potential to restore the natural environment, reduce the required maintenance and improve the user’s experience within the Project Study Area.

Consideration is being given to re-establishing native species and the elimination of invasive species that are within the plant community found along the RMP. At a minimum, the removal of pavement through the razing of the RMP from Main Street to Findlay Drive presents a vast opportunity to improve the ecological sustainability of the natural communities within the Gorge and the overall water quality of the Niagara River, by reducing the amount of contaminated stormwater runoff from highway surfaces.

However, through the incorporation of various features as part of the final design of the Project, there is an existing opportunity for more substantial environmental enhancements, including:

- Use of “green infrastructure” features, such as bio-swales, rain gardens, and/or drainage features to further limit the amount of untreated stormwater runoff from directly entering the Niagara River or entering the City’s combined sewer system (thereby reducing the extent of potential CSO discharges to the river);
- Use of permeable pavement in the design of trail systems;
- As part of the restoration of the Gorge rim, actively remove non-native invasive species, and design/incorporate a landscape plan that uses native species, employs measures to best prevent the future establishment/spread of invasive species, and eliminates habitat fragmentation to the greatest extent feasible.

Similar opportunities exist to enhance built and cultural resources as part of the Project. For example, as part of the City’s new passenger rail station, an Underground Railroad Interpretative Center is incorporated into the space plan for restoration / adaptive reuse of the Old Customs House. This facility will sit directly across Whirlpool Street from an area reported in historic documents to be a location where Harriett Tubman helped runaway slaves escape to Canada in the 1860’s via a former international rail bridge near the current Whirlpool Bridge. The subject area is now largely used as an unimproved parking lot underneath the RMP overpass. Interestingly, this area is immediately adjacent to a trailhead that State Parks recently improved to lead hikers to the base of the Gorge. There exists a unique opportunity to develop a true activity and interpretative “node” at this location that both contributes to the objectives of the RMP Removal Project and further enhances and links the City’s Underground Railroad Interpretive Center to the Gorge.

Another potential “betterment” enhancement exists at the southern end of the Project corridor, where RMP demolition activities near DiFranco Park could realize economies of scale to permit the removal of deteriorated pavement and unused facilities there, and provide natural restoration of these areas to contribute to the overall setting of the Project. Further, a similar opportunity exists at the northern end of the Project corridor, where an unimproved street (Spring Street) that abuts the Whirlpool Street corridor could also be improved as part of the overall paving activities under the Project.