**New York State Environmental Quality Review Act**

**Draft Generic Environmental Impact Statement**

**Proposed Action:**

# Canal Side Project

**Buffalo, Erie County, New York**

September 2009

Lead Agency:

## New York State Urban Development Corporation d/b/a Empire State Development Corporation


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# List of Acronyms

| Acronym | Definition |
|---|---|
| AADT | Average Annual Daily Traffic |
| ACGIH | American Council of Government Industrial Hygienists |
| AMSL | above mean sea level |
| AST | aboveground storage tank |
| BEA | Bureau of Economic Analysis |
| BMHA | Buffalo Municipal Housing Authority |
| BRPM | NYSTA Bureau of Real Property Management |
| BSA | Buffalo Sewer Authority |
| CAA | Federal Clean Air Act |
| CAF | Coastal Assessment Form |
| CMP | New York State Coastal Management Program |
| CO | carbon monoxide |
| CRMP | Cultural Resource Management Program |
| CSO | Combined Sewer Overflow |
| CZMP | New York State Coastal Zone Management Program |
| dBA | A-weighted noise level |
| DGEIS | Draft Generic Environmental Impact Statement |
| DL&W | Delaware, Lackawanna and Western (Railroad) |
| ECHDC | Erie Canal Harbor Development Corporation |
| ECHMP | Erie Canal Harbor Master Plan |
| EDR | Environmental Data Resources |
| EPM | NYSDOT's Environmental Procedures Manual |
| ESDC | Empire State Development Corporation |
| EO | Executive Order |
| ETC | estimated time of completion |
| FEMA | Federal Emergency Management Agency |
| FGEIS | Final Generic Environmental Impact Statement |
| FHWA | Federal Highway Administration |
| FIRM | Flood Insurance Rate Map |
| FTA | Federal Transit Administration |
| GEIS | Generic Environmental Impact Statement |
| GBNRTC | Greater Buffalo Niagara Regional Transportation Council |
| GPP | General Project Plan |
| HC | hydrocarbons |
| HIST SPILLS | historic spills |
| HSBC | HSBC Bank |
| HUD | United States Department of Housing and Urban Development |
| ISO | International Standards Organization of the United Nations |
| ITE | Institute of Transportation Engineers |
| Leq | one-hour equivalent noise level |
| LBP | lead-based paint |
| LTANKS | Leaking Tanks |
| LOR | Letter of Resolution |
| LOS | Level of Service |
| LWRP | Local Waterfront Revitalization Program |
| MGD | million gallons per day |
| NAAQS | National Ambient Air Quality Standards |

| | |
|---|---|
| NAC | Noise Impact Criteria |
| NAICS | North American Industry Classification System |
| NEPA | National Environmental Policy Act |
| NFTA | Niagara Frontier Transportation Authority |
| NIOSH | National Institute of Occupational Safety and Health |
| NOx | nitrogen oxides |
| NRHP | National Register of Historic Places |
| NYCRR | New York Codes Rules and Regulations |
| NYS | New York State |
| NYSDEC | New York State Department of Environmental Conservation |
| NYSDOT | New York State Department of Transportation |
| NYSOGS | New York State Office of General Services |
| NYSTA | New York State Thruway Authority |
| OHA | Outer Harbor Access |
| OPRHP | New York State Office of Parks, Recreation, and Historic Preservation |
| OSHA | Occupational Safety and Health Administration |
| PA | Programmatic Agreement |
| PAH | polycylic aromatic hydrocarbons |
| PB | lead |
| PCB | poly-chlorinated byphenyl |
| PID | photoionization detector |
| ROD | Record of Decision |
| RCRA | Resource Conservation & Recovery Act |
| RV | Recreational Vehicle |
| SCG | Standards, Criteria and Guidance |
| S/NRHP | State and National Registers of Historic Places |
| SEIS | Supplemental Environmental Impact Statement |
| SEQRA | New York State Environmental Quality Review Act |
| SHPO | New York State Historic Preservation Office |
| SIP | State Implementation Plan |
| Sox | sulfur oxides |
| SPDES | New York State Pollutant Discharge Elimination System |
| STARS | Spill Technology and Remediation Series |
| SVOC | semi volatile organic compound |
| SWPPP | Storm Water Pollution Prevention Program |
| TAL | Target Analyte List |
| TAGM | Technical and Administrative Guidance Memorandum |
| TCL | Target Compound List |
| TCLP | toxicity characteristic leaching procedure |
| TNM | Traffic Noise Model |
| TPH | total petroleum hydrocarbons |
| USACE | United States Army Corps of Engineers |
| USEPA | United States Environmental Protection Agency |
| UST | underground storage tank |
| VOC | volatile organic compound |
| WNY | Western New York |

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# EXECUTIVE SUMMARY

## ES.1 Introduction

The New York State Urban Development Corporation d/b/a Empire State Development Corporation ("ESDC"), as Lead Agency and on behalf of its subsidiary corporation, the Erie Canal Harbor Development Corporation ("ECHDC" or "Project Sponsor"), has prepared this Draft Generic Environmental Impact Statement ("DGEIS") pursuant to the New York State Environmental Quality Review Act ("SEQRA") to assess the economic, social and environmental effects of undertaking the proposed **Canal Side Project** ("Canal Side" or the "Project"), a mixed-use real estate development on the downtown waterfront of Buffalo, New York.

The Project would consist of 1,075,000 square feet of commercial (retail, lodging, office), cultural, and residential space on 20 acres of land ("Project Area")that would be designed to emphasize downtown Buffalo's connection to the Lake Erie waterfront through the construction of a network of interpretive water elements evoking the character and vibrancy of the historic canals that once crossed the area, including segments of the Erie Canal, the Commercial Slip, and the Prime Slip. Anchored by a Bass Pro Outdoor World Store, a destination retailer, the Project would provide various year-round offerings and experiences, including restaurants, entertainment venues, retail outlets, cultural attractions, vast public spaces, and increased access to the Buffalo River, appealing to a wide demographic of visitors and residents. The Project would include approximately 2,613 parking spaces for Canal Side visitors within the Project Area. Each chapter of the DGEIS is summarized below.

## ES.2 Project Background and Evolution

Chapter 2 of the DGEIS discusses the decades-long process of waterfront planning and development that has served as the foundation for the Project. Previous development activities started with a comprehensive Urban Renewal Plan prepared and adopted in the 1960s for waterfront development and includes the Horizons Waterfront Commission that was formed to lead planning and development efforts on the waterfront in the 1980s. In 1999, the Erie Canal Harbor Project included construction of a new "Canal Slip" paralleling the historic right-of-way of the Commercial Slip, construction of a new museum building for the Buffalo and Erie County Naval and Military Park, and construction of a series of transportation access improvements, including a new cobblestone access street, waterfront esplanade (now known as the Central Wharf Green), transit plaza, and bicycle/pedestrian access. As a result of a federal lawsuit filed in 1999, additional funds were programmed in 2002 to address site constraints to allow for refinements to the plan, including, but not limited to rewatering of the Commercial Slip along its historic right-of-way.

In 2005, ESDC established ECHDC, a subsidiary corporation, to focus local efforts to continue and expand the redevelopment of Buffalo's downtown waterfront. Its first tasks were taking over management of the Erie Canal Harbor Project construction from ESDC and facilitating the

next phase of waterfront development, including negotiations, public outreach and planning to locate a Bass Pro store as a destination anchor tenant for a large mixed-use development.

## ES.3 Description of the Project

Chapter 3 of the DGEIS gives a detailed description of the Project, as well as its goals, objectives, and constraints. The sketch planning process undertaken by ECHDC resulted in a specific proposed Project, located at the foot of Main Street, south of the New York State Thruway and between Washington and Pearl/Commercial Streets.

The goal of the Project is to foster economic growth and expand public use and enjoyment of the Erie Canal Harbor area through the implementation of a 20-acre, mixed-use real estate development project, anchored by a major destination retailer. However, the Project is constrained by the presence of the Hamburg Drain, the Skyway, the Thruway and other Project Area infrastructure. Chapter 3 also discusses those actions not a part of the Project, including the Main Street Multi-Modal Access and Revitalization Project ("Cars On Main Project"), the removal of the Skyway, the Michigan Avenue Bridge Replacement Project, the completion of the historic street grid within the Erie Canal Harbor area, and the Buffalo Sewer Authority's floatables control facility. The Project would create a series of walkable "neighborhood districts" which would be defined by the existing street grid, public-access areas, and convenient, yet unobtrusive, vehicle parking options. These districts would provide a cohesive atmosphere united through core design principles such as reconnecting Buffalo to its waterfront, providing activities and events for all seasons, and referencing and interpreting the historic waterfront district.

The Project includes a 130,000-square-foot Bass Pro store which would be located on the block that formerly contained the now-demolished Memorial Auditorium ("Aud"). Bass Pro would serve as the anchor for Canal Side and provide a comprehensive destination retail experience as well as unique recreational opportunities that would take full advantage of the Project's waterfront location. The Project would also include a street-level canal system and freshwater aquarium, Canal Side Hall (an adaptable space with an array of cultural, retail, food, entertainment and community attractions), a remodeled Donovan Building, residential, retail and office structures, and ample public open space to facilitate waterfront accessibility. Parking in the Project Area would be concentrated in five parking garages and supplemented by a few surface lots on parcels under the Thruway and Skyway and on-street parking. The Project would serve a public need by creating diverse uses, including commercial, community, residential, recreational, cultural, and office uses on parcels that are currently vacant or underutilized.

The Project would be constructed in phases, necessitating this Generic Environmental Impact Statement ("GEIS"), because the Project's initial phase of development is more clearly defined than later market-based phases. This DGEIS evaluates the well-defined components of the initial phase of development as well as the quantified, upper limits of expected subsequent phases. The GEIS process provides flexibility to later phases as plans are developed. Should a particular Project component, when fully designed, exceed any threshold or standard established in the

GEIS or be determined to result in an impact not evaluated in the GEIS, additional environmental review will be prepared to address such issues.

## ES.4 Project Alternatives

Chapter 4 of the DGEIS discusses the Project alternatives. SEQRA requires that a DGEIS contain a statement and analysis of the reasonable alternatives to the Project taking into account the objectives and capabilities of the Project Sponsor. The alternatives have been developed through an extensive planning process where much iteration of Project components, including the location of Bass Pro, was considered. However, the fundamental goal of the Project is to construct a mixed-used development to enhance the connection between downtown and the waterfront, with the majority of ground level spaces being retail or restaurant uses, with office, residential and retail uses above. In this regard, two alternatives to the proposed Canal Side project were developed in addition to the No-Build Alternative. Thus, the DGEIS, in addition to this proposed Project ("Preferred Alternative"), evaluates the economic, social and environmental impacts of the following alternatives:

- No-Build Alternative: The No-Build Alternative is the future condition without the proposed Project, to establish a base line to help qualitatively and quantitatively assess the benefits and impacts associated with identified feasible alternatives.

- Low-Density Alternative: This alternative will be based on the same general site layout as the Project; however the overall density would be substantially reduced from 1.0 million square feet of development space to roughly 600,000 square feet.

- High-Density Alternative: Similar to the low density alternative, this alternative would employ the same general layout as the Project. However, the overall density of the development would be substantially increased from 1.0 million square feet of development space to nearly 1.7 million square feet.

These alternatives are described in detail in Chapter 4. In addition, several alternatives were suggested during the scoping process that were found to be infeasible or not consistent with Project goals and objectives are described in this Chapter.

## ES.5 Public Participation

Chapter 5 of the DGEIS details public involvement and outreach during all stages of Project development and the SEQRA process. Public input has been encouraged and incorporated throughout Project development, including the sketch planning process where meetings with key stakeholder groups were held to discuss Project themes. During the public scoping process as part of SEQRA, a Draft Scoping Report was made available through various media. Also, a public scoping meeting was held to hear public comments and provide informative materials and presentations. It is anticipated that after the ESDC Board of Directors determines that the DGEIS is complete and ready for public review, the DGEIS will be distributed and one or more public hearings will be held to solicit comments on the DGEIS. Written comments will also be accepted during the DGEIS public comment period.

## ES.6 Environmental Setting

Chapter 6 of the DGEIS discusses the affected environment within which the Project's social, economic and environmental impacts will be evaluated.

### ES.6.1 Cultural Resources

Historically, the Project Area has been continually occupied by a variety of commercial structures associated with industrial and warehousing operations, transportation, the hospitality trade, and shops since the early nineteenth century. Three National Register of Historic Places ("NRHP")-listed structures, including the USS The Sullivans, the USS Croaker and the Edward M. Cotter fireboat and slip, are located near the Project Area. There are no NRHP-listed structures within the Project Area. Also, several well known NRHP-eligible structures and archaeological resources are located within or adjacent to the Project Area, including the NRHP-eligible Phoenix Die-Casting Building, the Erie Canal Harbor Archaeological District, the NRHP-eligible Commercial Slip, and prehistoric sites in deep locations on the east and west sides of the Commercial Slip. Archaeologically sensitive areas are located within each of the development parcels, except for the Aud Block, which underwent significant excavation during construction of the Hamburg Drain and the Memorial Auditorium.

### ES.6.2 Visual Resources

The general setting of the Project Area is characterized by several vacant, unvegetated lots and surface parking lots framed by the city street grid, a combination of infrastructure, maritime, building and streetscape elements that relate to the Buffalo River shoreline; building elements forming a pedestrian-scale street wall along principal roads bordering the site; and older structures less related to the street. The result is poor visual quality of the Project Area, particularly in terms of its inconsistency with surrounding development. The Project Area's lack of development fragments the landscape.

### ES.6.3 Land Use/Development Policies

The Project Area is characterized by surface parking lots, vacant development parcels, and major infrastructure facilities such as the Skyway, Thruway, the Niagara Frontier Transportation Authority ("NFTA") transit and pedestrian mall and an AMTRAK line. Land uses surrounding the Project Area include a mixture of high-density office and residential, recreational, entertainment, and parking uses. Development of the Project Area is influenced by a series of land use plans, programs, proposals and policies for downtown Buffalo and the Buffalo waterfront, including the Erie Canal Harbor Master Plan, City Zoning Ordinance, Waterfront Urban Renewal Plan, Buffalo Comprehensive Plan, Waterfront Corridor Initiative, and Niagara River Greenway Plan.

### ES.6.4 Community Character

The Project Area generally lacks a defined community character, due in large part to its vacant and underutilized land uses. Neighboring land uses, while to some extent generating activity, are

limited in their contribution to the creation of a vibrant urban environment, and generally do not provide year-round activities and amenities. The Erie Canal Harbor has drawn more visitors downtown, but it is generally a seasonal attraction and has had somewhat limited event programming, although that is starting to change as it enters its second season of operations.

### ES.6.5 Social and Economic Issues

This section provides a socio-economic description of Erie County, the City of Buffalo, and, where information is available, for the area surrounding the Project Area. The Project Area itself currently does not contain any households; however using data from the area surrounding the Project Area will provide a basis on which to understand the analysis of potential economic effects of the Project.

### ES.6.6 Water Resources

The Project Area is located along the lower portion of the Buffalo River near its point of discharge into Lake Erie. Depth to groundwater on the Project Area generally ranges between 6 and 11 feet below ground surface. A narrow portion of the Project Area along the Buffalo River is located within the 100-year floodplain.

### ES.6.7 Coastal Zone Management

The New York State Coastal Management Program ("CMP") governs the development policies within the New York State coastal zone as established by the New York Department of State pursuant to US Coastal Zone Management Act of 1972. The CMP includes 44 individual policies designed to promote sensitive development within the coastal zone. The City of Buffalo has prepared a Draft Local Waterfront Revitalization Program pursuant to state coastal policies; this has yet to be formally adopted.

### ES.6.8 Transportation

The Project Area consists of local roadways and intersections in a general urban grid pattern. The roadway network contains connections to the adjacent interstate and major local highway facilities which provide regional access to the Project Area. In addition, the local roadway network is a continuation of the downtown street grid which provides connections to the business district core and surrounding neighborhoods. Lastly, public transportation facilities are located nearby.

### ES.6.9 Hazardous Waste/Contaminated Materials

Prior hazardous materials investigations associated with the Erie Canal Harbor Project and other prior projects indicated the need for soils management programs to address the handling and disposal of landside excavation. These documents indicated the presence of contaminated, but not hazardous, soils on sites in the Project Area.

### ES.6.10 Public Safety and Security

Existing safety and security conditions in the Project Area primarily involve pedestrian safety beneath the elevated highways and security issues for transit riders and users of surface parking facilities.

### ES.6.11 Community Services

Local police, fire, emergency medical services and solid waste management services are located in the vicinity of the Project Area and service the Project Area.

### ES.6.12 Open Space and Recreation

Several open spaces located on and adjacent to the Project Area provide Buffalo with a wide variety of recreational resources within an urban, highly developed environment, including hiking, biking, boating, fishing and educational resources. In addition, the Buffalo River in the vicinity of the Project Area hosts several recreational waterfront uses, including a Veterans' Park and marinas on the opposite shore extending up the City Ship Canal.

### ES.6.13 Utilities

The Project Area is served by or has access to all major utility facilities, including water, sewer, electric and natural gas.

### ES.6.14 Air Quality

Most ambient air pollution in and around the Project Area is predominantly influenced by motor vehicle activity. Except for ozone, monitored levels for criteria pollutants do not exceed National and State ambient air quality standards in the Project Area.

### ES.6.15 Noise

Noise measurements were taken at representative locations within the Project Area. Measured noise levels are typical traffic noise conditions in semi-urban communities, which are generally characterized by higher noise levels closer to active roadways and lower levels farther away.

### ES.6.16 Physical and Ecological Resources

Soils in the Project Area are classified as urban land. The Project Area is located in an area of disturbed soils and fill material in which a large proportion of the land surface has been paved or covered by other impervious surfaces. As such, little, if any, native vegetation is present in the Project Area. Several previous studies have concluded the Project Area possesses low-quality wildlife habitat due to its developed nature. Several prior studies have evaluated aquatic resources in the Project Area, which have reported that while the Buffalo River supports a variety of fish species, species are generally found in upstream locations and tributaries of the River, outside the navigation channel.

## ES.7 Impacts and Mitigation Measures

Chapter 7 of the DGEIS evaluates the reasonably foreseeable impacts associated with implementation of the Proposed Project and each of the other Build Alternatives. As appropriate, reasonable mitigation measures that could be applied to eliminate or lessen the severity of potential adverse impacts also are discussed.

### ES.7.1 Cultural Resources

The Build Alternatives would not have a direct impact upon architectural resources because no resource eligible for listing on the State and National Registers of Historic Places (S/NRHP) is located within the Project Area. Project Design Guidelines would ensure that final Project designs are compatible with historic resources in the surrounding area, such as the Cobblestone Historic District and Phoenix Die Casting building.

With the exception of the Aud Block, the Project Area is considered to be sensitive for the presence of both prehistoric and historic period archaeological resources. To mitigate any adverse impacts on these resources, a Cultural Resource Management Program (CRMP) would be developed to establish procedures for further evaluating the effects of the Project on archaeological resources as Project designs are finalized and development is progressed.

### ES.7.2 Visual Resources

All of the Build Alternatives would result in a positive impact to the visual setting of the Project Area by creating memorable streets, open spaces, and water features. The Build Alternatives would create a public environment that changes from one place to the next, offers different orientations, provides for a variety of uses and, to varying degrees, would reduce the visual dominance of the Skyway. Visual quality of the Project Area would be further enhanced by adherence to Project-specific Design Guidelines and incorporation of sustainable design features.

### ES.7.3 Land Use/Development Policies

In order to facilitate the successful and timely implementation of the Project and the achievement of the community's long-standing vision of a revitalized Buffalo waterfront, ESDC intends to exercise its statutory authority to override local land use regulations including the zoning provisions in the City Charter and Code. However, the proposed programming of the Preferred Alternative would be largely consistent with, and would achieve many of the goals and objectives set forth in the plans and policies that influence development within the Project Area, including the 2004 Erie Canal Harbor Master Plan, 2004 Urban Renewal Plan Amendment, and City of Buffalo Comprehensive Plan. Also, the Preferred Alternative would be generally consistent with adopted land use regulatory documents, including the zoning provisions of the City Charter and Code and the Waterfront Redevelopment Project Urban Renewal Plan, in regards to both land use and Project features such as parking.

### ES.7.4 Community Character

Each of the Build Alternatives would result in positive impacts to the character of the Project Area by establishing an active urban district with a variety of uses, places and experiences, all connected to the downtown and waterfront.

### ES.7.5 Social and Economic Issues

The Build Alternatives would not have an impact on the region's population and housing characteristics. While the Build Alternatives would have the potential to add from 39,000 square feet to 469,000 square feet of residential development in an area where it previously did not exist, this would be unlikely to result in a noticeable change in City and County populations and housing characteristics or tends.

The Build Alternatives also would not have a disproportionate impact on minority populations because the US Census block groups surrounding the Project Area are less diverse, and thus contain fewer minority residents than the City of Buffalo and Erie County as a whole. However, the Build Alternatives would have impacts to the residents of the Marine Drive Apartments as the result of construction activities including temporary relocation of parking, noise and air quality impacts.

Each of Build Alternative would result in positive short- term (construction) and long-term economic and fiscal impacts. Constriction-related jobs in the Western New York region would range from 2,160 jobs under the Low-Density Alternative to 5,085 jobs under the High-Density Alternative. Employment (direct, indirect and induced) resulting from full build-out would range from 1,735 jobs under the Low-Density Alternative to 3,559 jobs under the High-Density Alternative. Estimated tax revenues that would go to local governments resulting from full build-out are estimated to range from $86.4 million under the Low-Density Alternative to $214.2 million under the High-Density Alternative.

### ES.7.6 Water Resources

A narrow portion of the Project Area along the edge of the Buffalo River is within the 100-year floodplain. If Build Alternative buildings and structures would be located within the floodplain, development would be undertaken in accordance with applicable City of Buffalo floodplain regulations. Thus, the Build Alternatives would not adversely affect area floodplains. Also, given the previous use of this area of the Buffalo River shoreline by the USS The Sullivans and the seasonal nature of the proposed dock system, the Project would not result in a significant adverse impact to river navigation. All Build Alternatives would result in the redevelopment of underutilized lots within the Project Area and a general improvement in storm water management from No-Build conditions. Canal Side, as built out, would include many areas that will function to decrease runoff. Sustainable storm water management concepts have been suggested that could further mitigate Project increases to storm water runoff. Lastly, no adverse impacts to groundwater resources would result of the construction and operation of the Build Alternatives.

### ES.7.7 Coastal Zone Management

The Build Alternatives would reconfigure a portion of the waterfront area designated in the approved New York State CZMP. However, implementation of any of the Build Alternatives would be consistent with the applicable policies embodied in New York State's CZMP because the Project will redevelop an underutilized area of the waterfront, provide public access and enhance recreation opportunities.

### ES.7.8 Transportation

Traffic impacts associated with the Build Alternatives are generally minor through the year 2011, especially under the non-event condition. Future conditions analysis through to the year 2031 indicate increased traffic impacts associated with both background traffic growth and the full build out of the Build Alternatives. Future year 2031 analysis, however, indicates traffic related impacts would occur at only a limited number of intersections. The improvements identified and included in the analysis represent identified mitigation measures to offset any potential impact of the Project-generated traffic on the operations along Project Area roadways and intersections under the Build Alternatives.

### ES.7.9 Hazardous Waste/Contaminated Materials Assessment

Construction and operation of Project components would not expose workers, residents, and visitors to hazardous materials. However, relevant pathways for exposure of humans and aquatic organisms to potential Project Area contamination were identified and analyzed. To mitigate any potential impacts from exposure to contaminated soils during construction activities, detailed soils management plans would be prepared for Project Area components.

### ES.7.10 Public Safety

The Build Alternatives would not result in any significant public safety impacts. Aside from the floating dock system, the Build Alternatives would not include any water-dependent uses or encroachment into the waterway. In addition, the Build Alternatives would improve existing site conditions for those parcels located under the elevated highway structures within the Project Area through the addition of increased lighting, pavement, and non-permanent small structures. However, necessary steps to ensure the safety of the public would be assessed and evaluated with the owners of the elevated highway structures, the NYSTA (Thruway) and the NYSDOT (Skyway), to determine appropriate measures for safety compliance.

### ES.7.11 Community Services

No significant additional demand for law enforcement patrols or traffic/safety services would be generated by the Build Alternatives. All new buildings associated with the Build Alternatives would be designed with appropriate fire suppression equipment and fire-rated construction materials. Emergency medical services in the vicinity of the Project Area would be adequate to

support proposed uses and activities of the Build Alternatives. The Build Alternatives would not likely to create significant adverse impacts on solid waste management.

### ES.7.12 Open Space and Recreation

The Build Alternatives would expand, link and enhance open space and recreational opportunities in and adjacent to the Project Area. Such expanded and enhanced open space and recreational opportunities would include the Canal Side Common, water features, an extended Central Wharf Green, the Prime Slip Canal, a Skyway Plaza, additional seasonal floating dock space, sidewalks and bicycle lanes.

### ES.7.13 Utilities

The Build Alternatives would not result in significant increases in demand upon Project Area utility systems such as water, sewer, electricity, natural gas and fiber optics. Sufficient capacity would exist in each of these systems to provide necessary services. Implementation of certain sustainability strategies could reduce demand on these utilities.

### ES.7.14 Air Quality

None of the uses of the Build Alternatives or other activities associated with the proposed Project would result in the emission of air pollutants that could harm human health or the environment. However, the Project would generate substantial traffic to the Project Area resulting in the increased emission of air pollutants from vehicles. An analysis of air emissions from Project-generated traffic was conducted, and found that no significant air quality impacts would occur, therefore mitigation measures would not be required.

### ES.7.15 Noise

The Build Alternatives would potentially result in impacts to noise levels within the Project Area because of the introduction of new development and activity to the area. Generally, the Build Alternatives would not result in activities taking place on Project site that would generate noise out of character with the existing urban environment, which experiences background noise due to traffic on the Skyway and Thruway. Adverse noise impacts could result from an influx of Project-related traffic to the Project Area as well as construction activities. Such adverse impacts due to traffic would be relatively minor and could be mitigated.

### ES.7.16 Physical and Ecological Resources

None of the Build Alternatives would result in any significant long-term impacts to topography, geology, or soils of the Project Area. Also, the Build Alternatives would result in no significant impacts to vegetation or terrestrial wildlife habitat within the Project Area. Direct impacts to the Buffalo River would be very limited, and none of the Build Alternatives would have a significant adverse impact on aquatic resources.

### ES.7.17 Construction-Related Impacts

Potential construction-related impacts associated with the Build Alternatives would include site preparation (e.g., grading) which may increase sediment loadings in site runoff; disposal of contaminated soils/fill materials, and potential exposure to on-site workers; and temporary impacts to air quality and ambient noise levels. The Build Alternatives would not result in any significant impacts during construction phases in consideration of appropriate construction techniques that would be applied, compliance with local and federal regulations, inspection and monitoring associated with permitting processes, and other mitigation measures.

## ES.8 Irreversible And Irretrievable Commitments Of Resources

The irreversible and irretrievable commitments of resources required for construction and operation of the Build Alternatives would include construction materials, energy (construction and operation phases), labor, capital, and land. ECHDC will undertake efforts to minimize impacts, as feasible and practical, through the implementation of a Project-specific Sustainability Program and compliance with New York State Executive Order 111.

## ES.9 Unavoidable Adverse Effects

Some unavoidable adverse impacts would result from implementation of the Build Alternatives. The unavoidable adverse impacts are similar for each Build Alternative, but may vary in degree of impact. Construction-phase impacts would include localized and temporary impacts to sound levels, air quality, traffic, on- and off-street parking, pedestrian and bicycle facilities, and access to attractions and event venues (e.g., Naval Park, Commercial Slip, HSBC Arena). With just about any form of sizable urban development will come minor long-term impacts, such as increased vehicular traffic, noise and air quality resulting from denser development patterns.

## ES.10 Growth-Inducing Aspects

The Project would provide significant private and public investment and growth within the City of Buffalo through the revitalization of an underutilized area along the downtown waterfront. The Project would include the construction of significant infrastructure components to support and encourage further private investment in residential, office, cultural and recreational opportunities.

## ES.11 Effects On Solid Waste Management

The Project Area is largely comprised of vacant parcels of land, and, therefore, would have little impact on solid waste.

## ES.12 Effects On The Use And Conservation Of Energy Resources

The construction and operation of the Project would have both short-term and long-term impacts on the use and conservation of energy resources. In the short-term, construction of all Build Alternatives would require the use of nonrenewable energy resources including: gasoline, diesel fuel, and electricity. Impacts on the use and conservation of energy would result from traffic generated by the Project, consumption of energy from day-to-day Project operations, such as

building heating, cooling, and lighting, and energy consumption for the operation of unique Project components such as the water features and aquarium. To mitigate these short-term and long-term impacts, ECHDC is exploring various sustainable design principles to minimize Project energy consumption.

## ES.13 Thresholds For Future Actions

Final designs for less-defined Project components as well as any proposed changes to the more well-defined elements (hereinafter referred to as "Future Project Plans") may require further evaluation pursuant to SEQRA. ESDC, as Lead Agency, will be responsible for performing an environmental review on Future Project Plans and must consider Future Project Plans proposed in relation to (i) the Final GEIS which will be issued for the Project and (ii) the Final Findings Statement which will be issued for the Project. Future Project Plans which exceed any one of the conditions or thresholds shall not be considered to have been addressed by this DGEIS and must be evaluated by ESDC to determine whether additional environmental review (e.g., a Supplemental Generic Environmental Impact Statement) would be necessary.

## ES.14 Cumulative Impacts

No significant impacts would result from the addition of the Proposed Project to previously documented, recently planned, and reasonably foreseeable future development projects. The proposed Project, in addition to the collective independent actions in the vicinity of the Project Area, will help achieve the goal of revitalizing the downtown waterfront. Several independent actions/projects are currently in various stages of planning, and implementation is expected in the reasonably foreseeable future. There is a potential for adverse cumulative impacts resulting from development that is visually incompatible with the overall historic elements and pedestrian scale of structures and facilities already in the area; however these types of impacts would be mitigated through the use of Project-specific Design Guidelines to regulate development in conjunction with the application of existing regulatory and review procedures.

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# 1 INTRODUCTION

The New York State Urban Development Corporation, d/b/a Empire State Development Corporation ("ESDC"), as Lead Agency on behalf of its subsidiary corporation, the Erie Canal Harbor Development Corporation ("ECHDC" or "Project Sponsor"), has prepared this Draft Generic Environmental Impact Statement ("DGEIS") pursuant to the New York State Environmental Quality Review Act ("SEQRA") to assess the social, economic and environmental effects of undertaking the proposed **Canal Side Project** ("Canal Side" or the "Project"), a mixed-use real estate development on the downtown waterfront of Buffalo, New York.

The Project would consist of 1,075,000 square feet of commercial (retail, lodging, office), cultural, and residential space on 20 acres of land ("Project Area") (see **Figure 1.1-1**) that would be designed to emphasize downtown Buffalo's connection to the Lake Erie waterfront through the construction of a network of interpretive water elements evoking the character and vibrancy of historic canals that once crossed the area, including segments of the Erie Canal, the Commercial Slip and the Prime Slip. Anchored by a Bass Pro Outdoor World Store ("Bass Pro"), a destination retailer, the Project would provide various year-round offerings and experiences, including restaurants, entertainment venues, retail outlets, cultural attractions, vast public spaces, and increased access to the Buffalo River, appealing to a wide demographic of visitors and residents. The Project would include approximately 2,613 parking spaces within the Project Area

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# 2 PROJECT BACKGROUND AND EVOLUTION

## 2.1 Pre-1999 Project History

The Project is the next major stage in a decades-long process of waterfront planning and development to foster the development of a hub of activity that supports increased economic development opportunities in the Erie Canal Harbor and its surrounds as well as a livable community environment that provides year-round entertainment and recreational activities. Previous development activities undertaken by ESDC that were part of a 1999 master plan for redevelopment of the waterfront include the construction of a new Buffalo and Erie County Naval and Military Park ("Naval and Military Park" and "Naval Museum"), recreation of the Commercial Slip, transportation and access improvements, including a waterfront esplanade, and establishment of some of the development parcels to be utilized by the Project with associated utility systems.

Long before the 1999 master plan, however, waterfront redevelopment had been an important priority for the community. In the 1960's a comprehensive Urban Renewal Plan was prepared and adopted for the City's designated Waterfront Redevelopment Project ("Waterfront Urban Renewal Plan"). In the late 1970s, further planning efforts led to the opening of the original Naval Museum. In the 1980s, the Niagara Frontier Transportation Authority's ("NFTA") Light Rail Rapid Transit system ("Metro Rail") was completed, and the downtown transit/pedestrian mall along Main Street was constructed. During this same period, the Horizons Waterfront Commission was formed to lead waterfront planning and development efforts. Each of the development projects completed under these prior planning efforts, from construction of HSBC Center and the Buffalo News building, to the HSBC Atrium and the HSBC Arena, has helped to create the foundation upon which Canal Side is being planned. Thus, while Canal Side is a new project and the first major undertaking for ECHDC, it is the next phase in a decades-long effort led by the City, ESDC and many other stakeholders to create a vibrant Erie Canal Harbor area, an asset of which the entire community can be proud. It is also directly linked to prior ESDC planning and development efforts which began in earnest with the development of the 1999 master plan.

## 2.2 Erie Canal Harbor Project

### 2.2.1 1999 Design

A portion of the Project Area comprises the prior project boundaries of the *Erie Canal Harbor Project* (see **Figure 2.2-1**), which included an area bounded by Main Street, Marine Drive, and the Buffalo River. This project included a series of infrastructure components to improve multi-modal waterfront access and facilitate new development along the Buffalo River waterfront. It was originally the subject of a 1999 federal/state enivironmental impact statement ("EIS") in accordance with both SEQRA and the National Environmental Policy Act ("NEPA"). The EIS also documented required consultation with the New York State Historic Preservation Office ("SHPO") under the Section 106 of the National Historic Preservation Act and Section 14.09 of

New York State Parks, Recreation and Historic Preservation Law. The Federal Transit Administration ("FTA") served as lead agency under NEPA, while ESDC served as the lead agency under SEQRA.

Key elements of the Erie Canal Harbor Project included a series of marine and landside infrastructure improvements, including:

- Construction of a new "Canal Slip" paralleling the historic right-of-way of the Commercial Slip—a feeder slip at the former western terminus of the Erie Canal—to avoid the need to reconfigure the Hamburg Drain, a combined sewer overflow outfall owned by the Buffalo Sewer Authority ("BSA");

- Construction of a new museum building for the Naval Park and the establishment of a "Naval Basin" to facilitate the relocation of three naval vessels affiliated with the Naval Park;

- Construction of a new "South Basin" to facilitate large tourist-oriented vessels;

- Construction of a series of transportation access improvements, including a new cobblestone access street, waterfront esplanade, transit plaza, and establishment of bicycle/pedestrian access; and

- Creation of a series of landside improvements, including the establishment of parcels for future private development and construction of an on-site utility system to service these development parcels. (Parsons Brinckerhoff Quade & Douglas, Inc., 1999)

A combination of FTA, New York State Thruway Authority ("NYSTA"), Erie County ("County"), and City of Buffalo ("City") funding sources were secured to fund elements of the *Erie Canal Harbor Project*. Federal Highway Administration ("FHWA") funds were programmed for the cobblestone street.

ESDC issued its SEQRA Findings Statement for the project in March 1999. On June 22, 1999, the FTA issued a Record of Decision ("1999 ROD"), which documented its decision and findings on the landside and marine improvements. In addition, as part of the historic resources consultation process for this project, the SHPO issued a Determination of No Adverse Effect on December 18, 1998, conditioned upon the completion of a Phase III archaeological data recovery program along with other actions/procedures to be followed by ESDC should remnants of the Commercial Slip be encountered during the Phase III Program or project construction.

Archaeological investigations conducted during the environmental review process revealed no evidence of intact remnants of the historic Commercial Slip. However, an 80-foot segment of canal wall was encountered in May 1999 as part of the Phase III program. In accordance with the conditions of the No Adverse Effect determination, a subsequent consultation process and alternative assessment was conducted with SHPO.

### 2.2.2 Federal Lawsuit

In October 1999, the Preservation Coalition of Erie County filed a lawsuit in the U.S. District Court for the Western District of New York against FTA, ESDC, and other involved agencies, seeking a preliminary injunction to halt the construction of the project from proceeding, pending the completion of a Supplemental Environmental Impact Statement ("SEIS") that considered the effects on all of the historic resources present at the site.

On March 31, 2000, the Court issued a decision in the matter ordering that an SEIS be prepared on a fast track schedule, specifically focusing upon and documenting additional consultation and alternatives examined with the SHPO regarding the discovered 80-foot wall section of the Commercial Slip, which occurred after the issuance of the 1999 ROD (ESDC, 2000). FTA and ESDC issued a draft SEIS in May 2000, followed by a public hearing and comment period.

At the request of the County and the City, during this public comment period, ESDC agreed to reconsider certain design elements of the original project and thereafter implement the same. Accordingly, the Federal lawsuit was settled, and the May 2000 SEIS was never issued as a final document.

### 2.2.3 Modification of the 1999 Design

In October 2000, then Governor George Pataki announced that the State of New York would provide additional funds to the *Erie Canal Harbor Project* to address reconfiguration of the Hamburg Drain and to allow for a re-watering of the Commercial Slip along its historic right-of-way. Following discussions through June 2002, ESDC, the City, the County, and the BSA entered into a Memorandum of Understanding that allowed a portion of the project to continue (i.e., known as "Phase I"; limited to the new Naval Basin and other park improvements) while planning for modifications was undertaken. It also outlined expectations associated with such modifications, including:

- Relocating the new museum building for the Naval & Military Park and truncating the Hamburg Drain to allow for the re-watering of the Commercial Slip as a navigable harbor feature;

- Providing a greater emphasis on Erie Canal interpretation;

- Examining the potential to use portions of the former street pattern on the project site as part of the site's cobblestone street circulation system; and

- Reconfiguring a planned public plaza along the water's edge to interpret the former location of the City's Central Wharf. (ESDC et. al., 2002). This is the Memorandum of Understanding among the ESDC, City, Erie County, and BSA; it is in Appendix G of the Erie Canal Harbor SEIS.

To facilitate the agreements in the Memorandum of Understanding, ESDC undertook a subsequent public planning process and new federal/state SEIS with agencies and local

stakeholders. This led to the development of the 2004 *Erie Canal Harbor Master Plan* ("2004 ECHMP"), from which the proposed action for the new SEIS was an outgrowth.

The December 2004 SEIS generally focused upon what was termed "Phase II" of the project—involving completion of various marine/landside infrastructure improvements and limited heritage interpretation components—for which FTA, ESDC, and other federal/state funding was committed or programmed. It also set a basis for environmental assessment of what was termed "Phase III" of the project, which involved full build-out on all of the established future development parcels and completion of the entire program of heritage interpretation. The design of future projects on these parcels was to be guided by urban design and architectural guidelines set forth in the 2004 ECHMP and later included in an amendment to the urban renewal plan for the City's 1963 Waterfront Redevelopment Project (the "Erie Canal Harbor Amendment" to the "Waterfront Urban Renewal Plan").

On February 6, 2005, based upon the final SEIS for the modifications to the *Erie Canal Harbor Project*, ESDC issued its SEQRA Findings Statement. Similarly, on February 16, 2005, FTA issued a new ROD ("2005 ROD") outlining its decision on the project, its anticipated impacts, and planned mitigation measures to address such impacts. Among the mitigation measures listed in the Findings Statement and the 2005 ROD were those related to archaeological resources assessed under a subsequent Section 106/Section 14.09 historic resources consultation process with SHPO. Two agreements were entered into with regard to management of archaeological resources.

- A Programmatic Agreement between FTA, ESDC, the City, and SHPO regarding the management of resources related to "Phase II" infrastructure components. ESDC has since satisfied all of its responsibilities under this agreement.

- A Letter of Resolution between ESDC, the City, and the NYS Office of Parks, Recreation, and Historic Preservation ("OPRHP")[1] regarding "Phase III" activities related to future build-out of established future development parcels in the Erie Canal Harbor. FTA specifically excluded itself from this agreement because it provided no funding nor had any involvement in future development on the Erie Canal Harbor site. Because no development has yet occurred on the established parcels, future archaeological investigation responsibilities for the agencies that signed the Letter of Resolution remain in place (see **Appendix A**).

## 2.3 Establishment of Erie Canal Harbor Development Corporation

In response to local calls for a development agency with a singular focus on Buffalo's downtown waterfront (i.e., contrasting to the statewide focus of ESDC), in August 2005, at the direction of Governor Pataki, ESDC established ECHDC as a subsidiary corporation to focus upon redevelopment of Buffalo's downtown waterfront. Its first tasks were taking over management

[1] OPRHP serves as the designated "SHPO" under federal Section 106 regulations for activities involving federal agencies. However, the term "SHPO" is not used for activities or actions undertaken by State agencies under Section 14.09 of the New York State Historic Preservation Law.

of the *Erie Canal Harbor Project* construction from ESDC and facilitating the next phase of waterfront development including negotiations and planning to locate Bass Pro on the downtown waterfront.

ECHDC representatives engaged an urban design/architectural consultant and, after a substantial design effort, agreed with Bass Pro to select Benderson Development Company LLC ("Benderson") as the preferred developer for portions of the Project. The focus of its development efforts include:

- The block containing the former Memorial Auditorium ("Aud Block"), bounded by Main, Scott, Pearl, and Lower Terrace streets, which had sat vacant since the opening of the HSBC Arena in 1996;

- The block containing the General Donovan State Office Building ("Donovan Block"), bounded by Main, Scott, Washington and the CSX railroad right-of-way, was vacated by the State of New York agencies for redevelopment purposes;

- The Webster Block, bounded by Main, Scott, Washington, and Perry Streets, which has been used as an interim parking lost since urban renewal clearance activities in the 1960s;

- The Marine Drive Parking Lot, bounded by Marine Drive, Commercial Street, Pearl Street, the on-ramp to NYS Route 5 and Erie Street; and

- The area termed as Phase III of the *Erie Canal Harbor Project* ("Erie Canal Harbor Parcels").

## 2.4 2006 Re-Evaluation Report

Early on in ECHDC's discussions with Bass Pro and Benderson representatives, it became apparent that certain planned Phase II infrastructure components of the *Erie Canal Harbor Project* needed to be refined in response to lack of funding and/or to provide flexibility in the build-out of future development parcels. These refinements included:

- Delaying and/or eliminating the construction of the South Basin, in response to the apparent national re-programming of federal U.S. Army Corps of Engineers ("USACE") funding in the wake of resources needed for the Hurricane Katrina disaster that occurred in 2005;

- Reconfiguring the interim Phase II plan for street access at the Erie Canal Harbor, from construction of an interim access road along the Prime Slip corridor and limited restoration of portions of certain streets as interpretive elements to full reconstruction of all former cobblestone streets (i.e., Lloyd, Prime, Hanover, and West Perry streets); and

- Elimination of a planned access road connecting to South Park Avenue in lieu of the use of West Perry Street for equivalent access through the Erie Canal Harbor (ESDC, 2006).

In December 2006, ECHDC and ESDC submitted a "Re-Evaluation Report" to FTA on these proposed refinements to the Phase II infrastructure program. This report documented that the changes would not affect the *Erie Canal Harbor Project* in fulfilling its purpose and need, and would not result in any new social, economic or environmental impacts that were not accounted for in the 2004 Final SEIS or the FTA's February 16, 2005 ROD. In its response letter of January 2007, FTA concurred that the proposed refinements were sufficiently addressed by the prior environmental documents (FTA, 2007).

## 2.5 2009 Re-Evaluation Report

As part of the City's final design process for the Erie Canal Harbor Phase II infrastructure program, a number of site-specific engineering design issues were further vetted and evaluated beyond those considered in the 2004 ECHMP process.

The first of these involved the alignment of Lloyd Street, given the presence of a Skyway pier essentially in the middle of the former right-of-way. During the 2004 ECHMP process, uncertainty regarding the constructability of acceptable access around this constraint resulted in a decision to designate this street for pedestrian/bicycle and limited vehicular service access only until such time when/if the Skyway was removed. However, during the final design process, it was determined that an approach to aligning vehicular access around this constraint was available that would be acceptable to the City and New York State Department of Transportation ("NYSDOT"), which owns and controls the Skyway.

The second design issue involved the planned intersection at Hanover Street and Marine Drive. During final design, it was determined that strict replication of the former Hanover Street alignment would create an angled intersection with Marine Drive, which is generally avoided where possible in modern street design. Moreover, such an alignment would conflict with the existing Main Street/Marine Drive intersection, particularly with existing sidewalks and bicycle paths along Main Street.

To address these issues, the following changes were proposed to the Phase II infrastructure program (see **Figure 2.5-1**). These include:

- Realignment of Lloyd Street to create access lanes around the Skyway pier to create vehicular access on Lloyd Street and provide for easier Skyway pier maintenance access;
- Use of flush curbs and paving materials to interpret the historic street path of Lloyd Street north of the Skyway pier; and
- A slight reconfiguration of the western corner of future development Parcel No. 1 to accommodate the Lloyd Street/Marine Drive intersection; and creation of a "T" intersection where Hanover Street would meet Marine Drive to avoid an angled intersection and conflicts with the Scott/Main Street intersection and associated sidewalk and bike path.

Where the proposed alignment would deviate from strict replication of the historic alignments of each street, the road segments would be constructed out of modern materials rather than

cobblestone to inform the visitor that this was not part of the historic street path. Prior planned approaches to material selection and street management would remain unchanged.

In March 2009, ESDC submitted a "Re-Evaluation Report" to FTA on these proposed changes to the Phase II infrastructure program. This report documented that the changes would not affect the *Erie Canal Harbor Project* in fulfilling its purpose and need, and would not result in any new social, economic or environmental impacts that were not accounted for in the 2004 Final SEIS or the FTA's February 16, 2005 ROD (ESDC, 2009). In its response letter of April 16, 2009, FTA concurred that the proposed refinements were sufficiently addressed by the prior environmental documents (FTA, 2009).

## 2.6 Sketch Planning for Canal Side Project

Concurrent with the construction phase for various Phase II infrastructure elements, ECHDC conducted sketch planning activities with Bass Pro and Benderson representatives to structure a conceptual development plan for the Project. These schematic planning exercises sought to identify a site configuration and associated infrastructure components to realize a vibrant mixed-use real estate redevelopment based on the foundation created by the 2004 ECHMP and anchored by the following features:

- A Bass Pro store and associated support facilities;
- A place providing opportunities for smaller retail and entertainment establishments to locate in a shared setting;
- Additional interpretive elements celebrating the Erie Canal and the historic features that once crossed the Project Area (e.g., Prime Slip, Erie Canal, Hamburg Canal);
- A variety of mixed-use structures accommodating residential, hotel, and retail developments to help facilitate the creation of a new vibrant downtown neighborhood at the Erie Canal Harbor area; and
- Various water features and other public amenities.

This effort resulted in a series of conceptual site configurations, each with its associated strengths and challenges. For instance, early on, this process focused upon techniques to allow for an adaptive reuse of the former Aud structure to house the proposed Bass Pro store. After a series of engineering, asbestos, and structural evaluations of the Aud, it was concluded that the single-purpose design of the structure as an arena would not sufficiently facilitate such an adaptive reuse without substantial reconstruction and re-engineering of the structure. Therefore, in light of the conclusions of this effort and roughly a decade of previous re-use evaluations of the Aud, it became apparent that the Aud would need to be razed to facilitate new development upon the site. This assumption was carried forward through the balance of the planning process.

The input of various stakeholders was integral to the conceptual development of the Project. Conversations and interviews among several stakeholders took place on June 20-22, 2007 (Thinkwell Design & Production, 2007). Those stakeholders included representatives from a host of stakeholder and community groups including, but not limited to: Buffalo State Maritime Museum; Naval Park; One HSBC Center; the Partnership Waterfront Group; Buffalo Niagara Riverkeepers; RCR Yachts; Buffalo Common Council; Albright Knox; Buffalo Zoo; Buffalo Niagara Convention and Visitors Bureau; Pierce Arrow Museum; Underground Railroad Museum; Landmark Society; Preservation Coalition of Erie County; the Campaign for Greater Buffalo History, Architecture and Culture; Explore & More Children's Museum; Pedaling History Bicycle Museum; National Park Service; Weather Discovery Center; National Weather Service; Solar Carousel; Niagara Aerospace Museum; Buffalo and Erie County Historical Society; and the Buffalo Museum of Science.

Several recurring themes emerged from the discussions. Nearly all stakeholders brought up the issue of water as key to Canal Side, both in terms of its physical presence and use, and its vital importance to Buffalo's history and future. Also, several key historical threads emerged as being important to the development of Canal Side, including Buffalo's industrial heritage, immigration history, architectural richness, and Erie Canal heritage as a bustling commercial district. In addition to water and history as recurring themes, access and usability issues emerged, in regards to ensuring that the Project appeals to both local residents and out-of-town visitors on a year-round basis by providing access to parking and public transportation. Lastly, multiple stakeholder groups voiced the observation that Canal Side offers the unique opportunity to serve as both a gateway leading visitors and residents to frequent other attractions and cultural offerings throughout Buffalo, and a community gathering place in which major civic celebrations and festivals may be held. These themes were utilized by ECHDC, Bass Pro and Benderson as the basis from which the Project was developed (see Chapter 3) as well as feasible alternatives to the Project (see Chapter 4).

## 2.7 Pre-Development Activities: Site Preparation of Memorial Auditorium and Donovan Office Building Blocks

As a result of the engineering evaluations conducted during the sketch planning efforts, ECHDC concluded that pre-construction activities for site preparation on the Aud and Donovan Blocks had to be conducted in order to facilitate a reasonable construction schedule for the Project. This decision was made in light of the long lead times necessary for items like extensive asbestos abatement, utility relocations and related demolition efforts to allow new development on each block.

To facilitate these efforts, ECHDC led a SEQRA documentation process covering only pre-development and site preparation activities on the Aud and Donovan Blocks to facilitate the Project. Because these activities would occur prior to both final planning and SEQRA review of the full Project, this environmental review fully documented the reasons that these activities needed to occur sooner and how conducting such early actions would be no less protective of the environment. In December 2007, ECHDC issued a SEQRA "Negative Declaration" on these

pre-development activities, indicating that they would result in no significant environmental impacts (ECHDC, 2007). The ECHDC Negative Declaration and supporting environmental documentation are available for review at the offices of the ECHDC.

Consistent with the above actions, ECHDC implemented a comprehensive asbestos abatement program for both the Aud and Donovan Buildings, and is now in the process of razing the Aud and preparing the Aud Block for future development. The Donovan Building has not been razed because ECHDC and Benderson are considering reusing the building structure as part of the Canal Side development.

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# 3 DESCRIPTION OF THE PROJECT

The sketch planning process has resulted in defining a proposed Project that serves as the basis for assessing potential environmental effects. This chapter provides a detailed description of the proposed Project and discusses the various factors that would affect its implementation.

## 3.1 Project Location

The Project is located on approximately 20 acres of land in downtown Buffalo, and is generally bounded by the following streets:

- On the north by Upper Terrace and Exchange Streets and Perry Boulevard;
- On the east by Washington Street and Seymour H. Knox III Plaza;
- On the south by Perry Street and Buffalo River; and
- On the west by Erie Street, Marine Drive, and Pearl and Commercial Streets.

A map illustrating Project Area development parcels is shown as **Figure 3.1-1.**

## 3.2 Project Goal and Objectives

Based on previous planning efforts for the Project Area and extensive public outreach, the following goal and objectives have been established by ECHDC for the Project:

**Goal:**

ECHDC seeks to foster economic growth and expand public use and enjoyment of the Erie Canal Harbor area through the implementation of a 20-acre mixed-use real estate development project, anchored by a major destination retailer.

**Objectives:**

- Developing a setting for year-round, family-oriented uses, including sports, entertainment, cultural, residential, commercial and recreational uses on long vacant or underutilized lands in this area of downtown Buffalo.
- Implementing strategic public investments to leverage private investment that contributes to expanded economic growth, employment and a broadened local tax base.
- Utilizing and building upon the public development framework established through recent and committed public infrastructure investments such as the Erie Canal Harbor, enhancements to Naval Park, and reestablishment of portions of the former street grid (e.g., Prime, Lloyd, Hanover Streets).
- Providing ample, visually interesting, and diverse public spaces encouraging year-round use.

- Maximizing area development potential by consolidating surface parking spaces into structured parking.
- Creating an urban, visually appealing, mixed-use setting that builds upon and complements the 2004 ECHMP urban design guidelines set forth in the City's Waterfront Urban Renewal Plan, as amended.
- Promoting and incorporating architectural elements that celebrate and interpret the historical significance of the Erie Canal and its terminus on the 12.5-acre *Erie Canal Harbor Project* site.
- Enhancing public access and use of the downtown waterfront, including multimodal connections to transit, bicycle, pedestrian and waterborne networks.
- Strengthening and/or establishing the visual and physical connection between adjacent downtown destinations (e.g., Buffalo River, HSBC Arena, Waterfront Village, and Naval Park).
- Creating tenant spaces suitable for a mix of uses by a variety of prospective tenants.
- Phasing implementation in response to available funding and market realities.

## 3.3 Constraints and Influences on Project Planning

### 3.3.1 Design Constraints and Considerations

- The Hamburg Drain, an underground combined sewer overflow ("CSO") conduit with an opening size of 16 feet wide and 13 feet high, a 48" water main, and additional water and sewer lines, are located within the Project Area. During construction, the operation of the Hamburg Drain, sanitary sewer and water services must be maintained.
- The Skyway and its support piers (cast-in-place concrete on steel sheet piles) require perimeter access of 15 feet for regular maintenance. All construction under the Skyway will be subject to consultation with and approval by NYSDOT.
- Interstate 190 (the Niagara section of the NYS Thruway system or "Thruway") and its support piers (steel beams) require perimeter access for regular maintenance. All construction under the Thruway will be subject to consultation with and approval by NYSTA.
- Marine Drive Apartment residents currently use a surface parking lot along the east side of Marine Drive. Replacement parking must be maintained for Marine Drive Apartment residents during construction activities and Project operation.
- Several entertainment and cultural venues are located within or in proximity to the Project Area (i.e., Naval Park, HSBC Arena). Pedestrian and vehicular access must be maintained to such venues during construction activities.
- AMTRAK rail services pass beneath Lower Terrace Street at the north end of the Aud Block. Rail service operations must be maintained during Project construction activities.

### 3.3.2 Actions Not Included as Part of the Project

3.3.2.1 Main Street Multi-Modal Access and Revitalization Project ("Cars on Main Project")

The City, NFTA, NYSDOT and Buffalo Place, Inc. are proposing to reopen a 1.2-mile-portion of Main Street, between Tupper Street and Scott Street/Marine Drive, to vehicular traffic as part of a strategy to improve downtown access and support revitalization efforts for Buffalo's downtown core. Main Street in downtown Buffalo was closed to vehicular traffic with the completion of the Metro Rail system and pedestrian/transit mall in 1984. After several years of study and consultation with numerous stakeholders and interested parties, the concept of sharing the Metro Rail track bed with vehicles between Tupper Street and Scott Street/Marine Drive emerged as the preferred design solution.

The sponsors for this project have completed an Environmental Assessment under NEPA and published the Notice of Completion in March 2009. FTA, as federal lead agency for this project, is anticipated to issue a Finding of No Significant Impact during the summer of 2009. Final designs for each segment of the 1.2-mile-portion of Main Street affected by this project will commence following issuance of the required findings. While the two projects must relate well together, the Cars on Main Project and Canal Side Proejct are independent projects being undertaken by different entities. Thus, it is appropriate that these projects be evaluated through separate environmental reviews and the Cars on Main Project is not an action that is being reviewed in this DGEIS. Nevertheless, Project maps include ECHDC's latest understanding of the proposed design for the Cars on Main Project through the Project Area. (City of Buffalo, 2008).

3.3.2.2 The Removal of the Skyway

The Skyway, an elevated segment of New York State (NYS) Route 5, is a 1.1-mile-long bridge spanning across the Project Area and the Buffalo River. NYS Route 5, including the Skyway, plays a significant role in the regional transportation system, facilitating the local, regional, and interstate movement of goods and people between downtown Buffalo and northern Erie County suburbs with southern Erie County suburbs.

Over the years, the Skyway has been the subject of several community debates regarding its structural integrity, user safety and its impact on waterfront development potential. In an effort to develop information to guide future management decisions for the Skyway, in 2008 the NYSDOT prepared the NYS Route 5, Buffalo Skyway Management Study, PIN 5134.31, BIN 10011579. The scope of the study was "to assemble factual information on the operational characteristics of the Skyway and to make this information widely available to the public and community officials". The study evaluated the functional state of the Skyway including bridge condition and vulnerability, existing traffic and travel patterns, future traffic demand, accident and incident analysis, and Skyway bridge management options. The study was not intended to and did not evaluate alternatives to removing the Skyway and there are no current publicly documented and/or funded plans to remove the Skyway. Thus, while the Project would not

impede the removal of the Skyway should NYSDOT someday choose to do so, the actions reviewed under this DGEIS do not include removal of the Skyway. (Bergmann, 2008).

#### 3.3.2.3 Michigan Avenue Bridge Replacement Project

ECHDC has embarked on an alternatives analysis and preliminary design study to evaluate potential locations for providing local access between the downtown waterfront (Inner Harbor) and the Outer Harbor while maintaining adequate waterway access for commercial and recreational craft. Such a bridge would be located in one of several locations within a 1.5-mile corridor extending from a northern terminus at the mouth of the Buffalo River in the vicinity of the Erie Basin Marina to a southern terminus near the southern navigation limit of the City Ship Canal. The range of alternatives will give consideration to locations derived from previous studies that investigated reconnecting the Harbor. Alternatives under consideration include: (1) taking no action; (2) replacing the South Michigan Avenue Bridge on existing alignment; and (3) constructing a new bridge on new alignment across the Buffalo River and/or City Ship Canal. Incorporated into and studied with the various Build Alternatives will be design variations of grade and alignment. This study was initiated in April 2009, and is expected to be completed in July 2011. Thus, because this effort is just beginning to formulate specific approaches and has independent utility from the Project, the Michigan Avenue Bridge Replacement Program is not an action that is being reviewed in this DGEIS.

#### 3.3.2.4 Erie Canal Harbor Master Plan Historic Streets

The Project would not include the installation of four historic streets (i.e., Lloyd, Hanover, West Perry and Prime streets) previously designed and approved under the *Erie Canal Harbor Project.* The streets will be constructed by the City in 2009, per the 2009 Re-Evaluation Report. Thus, while the street grid will serve as an organizing feature for the Erie Canal Harbor, the re-establishment of the historical street pattern has already been analyzed in prior environmental reviews.

#### 3.3.2.5 BSA Floatables Control Facility

Addressed as a mitigation measure to the 2004 ECHMP, the BSA is preparing designs for the construction of a floatables control facility along the alignment of the Hamburg Drain. This facility would have independent utility[2] from the Project (and is actually a mitigation measure resulting from prior environmental reviews), and would be located outside of the Project Area to the east of The Buffalo News building located on Washington Street. Thus, the BSA's Floatables Control Facility is not an action that is being reviewed in this DGEIS.

[2] Independent utility refers to instances where certain infrastructure features may be related, or even benefit, from one another, but are not in any way predicated or dependent upon one another.

## 3.4 Design Philosophy

Canal Side is based upon a simple philosophy: to evolve and interpret the rich history and resources of this very unique area of the City. Canal Side is intended to create great places emphasizing memorable streets, open spaces, parks, and canals. It should be a place that all can enjoy-a public environment that changes from one place to the next, with differing orientations, and differing types of uses. Canal Side would be a place where water is a unifying theme that would create a rich diversity of enjoyment opportunities. Here, buildings should be more a means to a larger end, that being great public spaces. Several core principles served as a framework for various aspects of the proposal throughout the evolution of the plan including:

- Reconnecting downtown Buffalo to its waterfront through a new, vibrant mixed-use neighborhood;
- Celebrating the best Buffalo has to offer, and creating places that are first and foremost for the residents of the City and their families;
- Creating a new development pattern that is focused around a network of "places" which include a revitalized Main Street, active waterfront, and series of canal water features;
- Providing places for activities and special events for all seasons, using the seasonal climate changes as an advantage to offer a diversity of options;
- Referencing and interpreting Buffalo's historic waterfront and the Erie Canal, while building places that are for the future of Buffalo;
- Emphasizing the pedestrian experience, while offering parking that is convenient, easy to access, and does not dominate views or land use; and
- Incorporating appropriate details during Project phasing, so the Project feels complete from the beginning, despite a multi-year schedule.

Canal Side is comprised of a series of walkable, overlapping neighborhood "districts" which would be defined by the existing street grid, public spaces, and convenient, yet unobtrusive, vehicle parking options (see **Figure 3.4-1**). These districts would include:

**Family Place/Central Place** District – Located at the heart of the Project, this area would be anchored by Bass Pro and would include canal water features, restaurants, recreational attractions, Canal Side Hall, parking, and public access space for visitors; it would be the "front door" of the Project, as well as the location for major public events and gatherings (see **Figure 3.4-2**);

**Entertainment District** – The center of nightlife in the Project, the Entertainment District would be situated between the North and South Donovan Blocks and be home to proposed waterfront nightlife, barges and towpaths (see **Figure 3.4-3**);

**Main Street District** – The Project would seek to restore a vibrant Main Street corridor with shops, cafes, loft apartment residential offerings, offices, and hotels. The Main Street District would connect downtown Buffalo to the riverfront, tying the Canal Side development and the HSBC Arena together, and provides Metro Rail access to the Project (see **Figure 3.4-4**);

**Riverfront District** – Positioned on the banks of the Buffalo River, this area would respect the historic traditions of Erie Canal Harbor and the Central Wharf Green, while providing additional public spaces, lodging, maritime opportunities and boat docking space (see **Figure 3.4-5**);

**Prime Slip District** – this "feeder" canal would be home to an intimate environment of small-scale shops, restaurants and offices, infused with local flair (see **Figure 3.4-6**); and

**Skyway Plaza District** – utilizing canopy-like protection under the Skyway overpass, seasonal vending kiosks would provide merchants and visitors space to display and peruse various goods (see **Figure 3.4-7**).

In addition, two other areas in the concept plan ("Commercial Slip Block" and "Under Thruway Blocks") would include supporting uses.

## 3.5 Project Overview

The DGEIS examines the social, economic and environmental impacts of a Preferred Alternative and its proposed program (see **Figure 3.5-1**) in its proposed configuration (see **Figure 3.5-2**). In general, the Preferred Alternative would comprise $300 million in public/private investment consisting of 1,075,000 square feet of commercial (retail, lodging, office), cultural, and residential space in the Project Area that would be designed to emphasize downtown Buffalo's connection to the Lake Erie waterfront through the construction of a network of interpretive water elements evoking the character and vibrancy of historic canals that once crossed the area, including segments of the Erie Canal, the Commercial Slip and the Prime Slip. Anchored by a Bass Pro store, the Project would provide various year-round offerings and experiences, including restaurants, entertainment venues, retail outlets, cultural attractions, vast public spaces, and increased access to the Buffalo River, appealing to a wide demographic of visitors and residents.

Parking in the Project Area would be consolidated within several parking garages, with a few small surface lots and a limited number of on-street parking options also available. In total, approximately 2,613 parking spaces would be provided within the Project Area (see **Figure 3.5-3**).

The Commercial Slip Parking Garage, to be constructed on the current Marine Drive Apartments' surface lot, is the largest of the proposed parking garages with six levels and approximately 1,280 spaces. Beneath the Bass Pro store, a three-level, 532-space garage would provide convenient parking. This parking garage would be accessed by two entries, one from Main Street and one from Lower Terrace Street. An approximately two-level, 100-space parking deck would be built on the north and east sides of the existing Donovan Building to provide on-

site parking to Parcel D1. This parking garage would be accessible from Washington Street. A four-level Webster Block parking garage, on the east side of the block, would provide approximately 400 spaces and would be accessible from Washington Street. Additionally, 35 spaces would be constructed within the development on Parcel E1, adjacent to the Central Wharf Green.

In terms of off-street surface parking, a total of 121 spaces would be provided within the Project Area. Forty-seven spaces would be provided on Parcel T3 which is under the elevated Skyway access ramps at Pearl Street and Perry Boulevard. Another 22 spaces would be provided on Parcel T1 under the Thruway. Both of these areas currently serve as gravel surface parking lots. Finally, a new surface lot would provide support parking facilities for the waterfront boutique hotel at the terminus of Prime Street.

In addition to standard parking spaces, the Project would include 24 large-size recreational vehicle ("RV") parking spaces along Perry Boulevard, with another six RV parking spaces adjacent to the north side of the Bass Pro store. These RV parking spaces would be intended to accommodate visitors to the Bass Pro store.

In terms of on-street parking, approximately 35 spaces would be available along Marine Drive; approximately 13 spaces would be available along Hanover Street; approximately ten spaces would be available along Prime Street; approximately five spaces would be available along Perry Street; and approximately 80 spaces will be available along Main Street. Parking along Main Street, however, is contingent upon the final design for the Cars on Main Project.

Finally, an important aspect of the Project would be the ease of movement in and around the Project Area. Main Street would act as a tree-lined boulevard running through the heart of the Project Area where pedestrians could stroll past shops, cafes and apartment buildings. Marine Drive would offer access across the Commercial Slip and Prime Slip water elements. All portions of the Project have easy access to the water. **Figure 3.5-4** depicts a diagram of potential pedestrian movement through the Project Area.

## 3.6 Project Components

The following are specific components that would comprise Canal Side, and are depicted in **Figure 3.6-1**.

### 3.6.1 Aud Block

This block would be bounded by Lower Terrace, Pearl Street, Main Street, and Marine Drive where the Aud once stood. As the anchor tenant of the Project and a destination for outdoor sporting goods, the Bass Pro store at Canal Side would be located on the Aud Block. Designed to resemble a canal-era warehouse, the store would include 130,000 square feet of development space, with 121,000 square feet of retail space located above a three–level, 532-space parking garage. The parking levels would include space for boat service and equipment storage. The Bass Pro store would also have 9,000 square feet of restaurant space. The Bass Pro store would be 160 feet high at its highest point, with distinctive signage, and peaked roofs. Also, 30 spaces

for customer RV parking would be available, with 24 located on the Marine Drive Block along Perry Boulevard and 6 located just north of the store. Pedestrians would be able to enter the Bass Pro store either through the primary entrance on the East Canal or from an entrance off Main Street. In addition, there would be a link to the store through a Water Tube that would pass through the West Canal and to the Canal Side Hall. Vehicular traffic would be able to enter/exit the parking garage from Main Street or on the north side of the store. Loading docks would be accessed off of Pearl Street.

Bass Pro's unique exterior and interior motifs have branded them as visually distinctive outdoor stores. The outdoor feel would be brought indoors through massive log and rock work, large indoor aquariums and water features stocked with native fish species, as well as an extensive collection of museum-quality fish and wildlife mounts. Historic photos and exhibits would pay tribute to Western New York's great outdoor heritage. More than just fishing and hunting store, Bass Pro also would offer equipment, clothing and footwear for hiking, backpacking, wildlife viewing, golfing, boating, camping, outdoor cooking and much more. A gift and nature center also would provide a wide variety of outdoor-related items from lamps and dishes to bird feeders and furniture. The Bass Pro store at Canal Side would operate from 9:00 am to 10:00 pm Monday thru Saturday and from 9:00 am to 7:00 pm on Sunday.

In addition to providing a comprehensive destination retail experience, Bass Pro would conduct a number of events to appeal to outdoor- and watersport-enthusiasts, including educational classes and outdoor skills workshops. Bass Pro would host major events that would take advantage of the canals, Canal Side Commons, and the riverfront. These include a spring fishing classic, a hunting classic, holiday events, and canoe and kayak demonstrations. Also, outdoor skills workshops would occur throughout the year, including fly fishing seminars, outdoor cooking seminars, women in the outdoors, archery classes, kids' seminars of all types, turkey calling classes, as well as beginners' fishing classes.

The store's proposed location close to the riverfront also would provide the opportunity to have on-the-water boat demonstrations, guided fishing trips on Lake Erie, and water-based outdoor skills workshops. Bass Pro would utilize the waterfront for boat sales and demonstrations by locating thirty boat slips on the Buffalo River adjacent to the Riverfront District. The boat slips would be perpendicular to the shoreline and would be accessed by a controlled gangway from the Central Wharf Green. Several small structures (100-200 square feet) are planned for this area of the Central Wharf Green. One may be used by Bass Pro to house its boating operations. No on-site fueling facilities would be provided. The Bass Pro slips would be seasonal and removed at the end of the boating season, but while in operation, would be secured and segregated from the public transient boat slips to the north. The Central Wharf Green would remain open and accessible to the public.

In front of Bass Pro would be street-level water features interpreting the alignment of the Erie Canal and Commercial Slip (i.e., which once crossed the Aud Block). The water feature would be constructed to avoid impacting operation and maintenance of the Hamburg Drain (see **Figures 3.6-2 and 3.6-3**). The water features at Canal Side would consist of a street-level canal

system (see Chapter 3.6.1.1) and a freshwater aquarium (see Chapter 3.6.1.2). These are further described below.

### 3.6.1.1 Street-Level Canal System

The street-level canal system west of Main Street ("West Canal") would consist of narrow water bodies that would emulate the original Erie Canal system. Various "barges" could be "anchored" in the canals. Restaurants and cafes could occupy these structures.

Anticipated summertime uses would include boats on this canal including display boats from Bass Pro, as well as paddle boats and/or row boats for rent. During winter months, these water features would be drained out and ice skating rinks would be set up lining the West Canal.

Water depth for the West Canal would range from 18 inches to three feet. Finishes would be dark to enhance the appearance of depth and provide greater reflectivity at the water surface..

### 3.6.1.2 Freshwater Aquarium

A proposed fresh water aquarium would divide the West Canal. The aquarium would be approximately 20-feet-deep with an acrylic tunnel passing through on the ground floor between Canal Side Hall and the Bass Pro atrium. The aquarium would be stocked with species indigenous to the area. This would help local fishermen purchase equipment specifically targeted at catching those kinds of fish. In addition, it is anticipated that Bass Pro would allow guests to fish directly in the aquarium during occasional store events.

### 3.6.1.3 Signature Billboard

A landmark of the Project would be a signature billboard near the intersection of Pearl Street and Perry Boulevard.

### 3.6.1.4 Canal Side Hall and Canal Side Commons

Across from Bass Pro and the canal, Canal Side Hall would be built slightly below grade at the intersection of Pearl Street and Marine Drive, and would be covered by a large public events space to be known as Canal Side Commons. This public space would have access to Bass Pro and Marine Drive. It would also serve as a venue for a variety of events, including major Bass Pro events, throughout the year. Canal Side Commons would be elevated from the street and canal levels and would be connected to the public environment and Bass Pro store by stairs, elevators, and a pedestrian bridge.

Canal Side Hall would be an adaptable space. A subterranean corridor, or "water tube", linking Bass Pro and Canal Side Hall would be installed where visitors could be surrounded by an underwater interpretive display. Canal Side Commons would be located approximately 25 feet above the street level, directly atop Canal Side Hall and fronted by a museum/cultural facility and accessed by both elevators and stairs. Access to Canal Side Commons would include a

ceremonial arrival with stairs rising at a more moderate slope so as to provide van access for event assembly. The stair access points would be the point of the gate closure for the events. A warming hut/fire place would be located in the space to provide heat during cold weather.

The museum/cultural facility would be located contiguous to retail and Canal Side Commons so as to maximize cross-programming opportunities-both within and exterior to-the museum/cultural facility. The museum/cultural facility would contain exhibits, visitor amenities and support space.

Next to Canal Side Hall and Canal Side Commons would be a retail development anchoring the start of the Prime Slip. The Winter Garden would be a three-story facility that would house retail and restaurant uses. An arcade over the section of the Prime Slip north of Marine Drive would create an indoor atrium that would protect visitors from the seasonal climate changes and would include a Prime Slip water feature.

An option still being explored would also mix residential and/or office uses on several levels above the Winter Garden.

### 3.6.2 Donovan Block

The Donovan Block would be bounded by the Thruway, Washington Street, Main Street, and Scott Street. This block would feature a renovated Donovan Building, which would be augmented and clad in a style consistent with the Project Design Guidelines (see **Appendix B**) and would be reused to house retail, office, and/or hotel space. The remodeled Donovan Building would have the ground story extended to eliminate most of the setbacks that currently surround the building.

While the proposed Project assumes the reuse of the existing Donovan Building, an option still being considered would include the demolition of the Donovan Building in order to construct a new parking garage with ground floor retail, residential units, and possible office and hotel uses above.

To the east and north of the existing Donovan Building, surface parking would be maintained, along with a one-story parking deck that would be built above it. This parking would provide approximately 100 spaces for on-site use.

South of the remodeled Donovan Building would be a water element interpreting the former Hamburg Canal serving as the focal point of the Entertainment District, where waterfront restaurants and nightlife would be located. This canal (“East Canal”) would appear to flow under Main Street and connect to the West Canal on the other side of Main Street. Surrounding the East Canal on this block would be wide boardwalks for pedestrian and commercial use. The section of the East Canal on the Donovan Block could also feature barges that could house restaurant and bar uses. Located at the eastern terminus of the East Canal would be one of the iconic elements of the Project, a Liberty Pole similar to the 1838 original, constructed to symbolize American independence. On the South Donovan Block, across the East Canal from

the Donovan Building, would be an additional development parcel with first-floor retail space and residential units on the upper floors.

### 3.6.3 Webster Block

The Webster Block is bounded by Scott Street, Washington Street, Perry Street and Seymour H. Knox III Plaza. The Webster Block would front on Main Street and Perry Street to create a pedestrian-friendly atmosphere of boutiques, cafes and a destination hotel. With the Metro Rail easily accessible, this district would provide a welcoming gateway into the Project Area to those coming from other areas of Buffalo to work, live and play. A parking garage would be situated behind the buildings, thus hidden from Main Street and accessible from Washington Street.

Other options still being considered for the Webster Block would create an office tower on Scott Street, a residential structure fronting on Main Street, and consolidating the hotel program in a tower above.

### 3.6.4 Erie Canal Harbor Parcels

#### 3.6.4.1 Riverfront Parcels

The Riverfront Parcels would front on the Buffalo River, and would be located on the south end of the Central Wharf Green. They would include a boutique hotel building and smaller structures. The Riverfront District would include ample open public space for a variety of recreational activities and public events as well as additional boat docking space for Bass Pro boats sales and demonstrations.

#### 3.6.4.2 Prime Slip Parcels

The Prime Slip Parcels would be centered on a water element evoking a re-watered Prime Slip and would be bordered by Lloyd Street, Marine Drive, Main Street and Prime Street. The district would also include a small extension of the Prime Slip between Prime Street and the Buffalo River. Streets would cross the Prime Slip water element at Prime Street and Marine Drive to facilitate vehicular and pedestrian movement, offering a “bridge-like experience”. Small-scale shops and community gathering space would dominate the area.

On the parcels between Lloyd and Hanover Streets, development devoted to ground-level retail with office above would straddle the Prime Slip on each side of the Skyway.

Similarly, the development on the block between Hanover and Perry Streets would house ground-floor retail with office space above. On the other side of the Skyway would be a complex of buildings, which would contribute to the Main Street District’s neighborhood atmosphere by housing a mix of uses with ground-floor retail. It is anticipated that on-street parking spaces would be located on Prime, Hanover, West Perry and Main (between Scott and Perry) Streets.

#### 3.6.4.3 Skyway Plaza

Stretching from Marine Drive to the terminus of Seymour H. Knox III Plaza (a.k.a. Main Street), the Skyway Plaza would utilize the cover of the Skyway deck to provide a year-round place for vendors to sell goods and produce at seasonal kiosks. NYSDOT will be consulted with respect to all uses and improvements under the Skyway.

### 3.6.5 Commercial Slip Block

This block is located at the juncture of Marine Drive, Commercial Street and Perry Boulevard. At that corner, fronting on Marine Drive and Commercial Street, would be a development parcel with a retail base, and a variety of potential uses above including office, hotel, and/or residential. Behind the building would be the Commercial Slip Parking Garage situated over private surface parking for residents of the Marine Drive Apartments.

### 3.6.6 "Under-Thruway" Blocks

Underneath the Thruway at the northern-most end of the Project Area are two parcels on either side of Main Street that would provide opportunities for additional parking and perhaps some retail use. On the parcel at Main Street and Lower Terrace would be a small structure for retail use and an adjoining surface parking lot that would accommodate RV spaces for visitors of Bass Pro. On the opposite side, east of Main Street there would be another small structure for retail use with an adjoining surface parking lot that could accommodate approximately 20 vehicles.

### 3.6.7 Street Access

The street pattern within the Project Area would remain largely unchanged. Where feasible, all streets would facilitate two-way vehicular traffic. Lower Terrace (between Pearl and Main Streets) would be abandoned by the City, and subsequently closed to traffic and incorporated into the Under-Thruway Blocks.

## 3.7 Project Phasing and Timing

The Project would incorporate a phased, market-based build out. Assuming that appropriate funding would be available and that there would not be any unanticipated delays, the initial phase of the Project would be largely completed by Memorial Day, 2011. The remainder would be built out in accordance with a schedule to be agreed to by ECHDC and its development partners and, in part, would be based on market demand and other economic factors.

Consequently, the Project's initial phase of development is more clearly defined than later market-based phases. Due to this variance of defined scope, the use of a GEIS is well suited to address the impacts for the whole of the Project by evaluating the well-defined components as well as the quantified, upper limits of expected subsequent phases. Accordingly, this DGEIS evaluates impacts associated with the construction of Project facilities and operation of the initial phase of development, particularly the Project's anchor tenant, Bass Pro. In addition, this DGEIS evaluates anticipated impacts associated with the construction and operation of later, market-based phases of Canal Side that would include commercial (retail, lodging, office), and residential uses. The distinction between these two phases is briefly reviewed below in the

context of the SEQRA process, and is more thoroughly analyzed in Chapter 7 – Impacts and Mitigation Measures.

#### 3.7.1.1 Initial Canal Side Build Phase

The initial phase of construction for Canal Side would include the following: 1) the Bass Pro store; 2) portions of the Under-Thruway Blocks that would serve the Bass Pro store (Parcels T-2 and T-3); 3) the Winter Garden; 4) Canal Side Hall, Canal Side Commons, and the West Canal; 5) the Webster Block: a mixed-use development: 6) the Commercial Slip Garage; 7) the Donovan Block North; 8) the Donovan Block South; 9) the East Canal; 10) the Bass Pro slips; and 11) related infrastructure improvements associated with the same (see **Figure 3.7-1**).

#### 3.7.1.2 Market-Based Canal Side Build Phase(s)

The subsequent phase(s) of the Project would be market-driven. This phase would include, in no particular order, the build out of: 1) the Commercial Slip development parcel; 2) the Erie Canal Harbor Parcels: small-scale shops, community gathering space, office, cultural uses, the Skyway Plaza, and the public environments including the Prime Slip; and 3) "Under-Thruway" Blocks: two parcels, each with a small structure for retail use and adjoining surface parking lot (see **Figure 3.7-2**).

While Project components of subsequent phases are more conceptual, and thus less defined, than those of the initial phase, their potential impacts can be reasonably anticipated based on proposed development densities and design guidelines. Consequently, development densities and consistency with design guidelines become established thresholds that future development must comply with or be subject to additional environmental review (see Chapter 13). Also, it is noted that any portion of the market-based build-out could be accelerated based on market conditions. Thus, it is possible that the initial phase of development could include some of the market-based build-out portions.

## 3.8 Public Need and Benefits from the Project

The Project would serve a strong public need and would result in noticeable benefits to the local community, including enhanced services, facilities and opportunities. More specifically, the Project would create diverse uses, including commercial, community, residential, recreational, cultural and office uses on parcels that are currently vacant or underutilized. The following are key benefits to the public that would result from the Project.

- Improving public access to the waterfront through active uses and improved linkages to existing pathways and destinations.
- Achieving further implementation of and development consistent with the 2004 ECHMP.
- Interpreting local canal history at the Erie Canal Harbor Project by adhering to urban design guidelines for new private development consistent with the 2004 Erie Canal Harbor amendment to the Waterfront Urban Renewal Plan.

- Reinforcing urban form and physical character of the remaining portion of the Project Area through appropriate architectural design, scale, and massing, resulting in an overall Project design consistent with the desired character for the Erie Canal Harbor area.
- Generating local tax revenue (either directly or through Payments in Lieu of Taxes [PILOTS]) derived from additional commercial and residential uses within the Project Area and increasing property values in surrounding areas.
- Improving the quality of life resulting from additional year-round cultural, recreational and commercial opportunities as well as public events.
- Creating additional temporary construction work and additional permanent employment opportunities that would expand the local economy.
- Attracting people to the downtown waterfront as the destination of choice to live, work and play.
- Returning significantly underutilized land in the City's urban core to productive use.
- Increasing public transit ridership potential by and concentrating development along the Metro Rail.
- Creating a critical mass of destination retail that would provide additional shopping opportunities for Western New Yorkers and tourists from outside the area.

## 3.9 Property Ownership / Site Control

Current property ownership within the Project Area is vested in various State and local governmental agencies including ECHDC, NYSTA, NYSDOT, the City, BMHA and the BSA (see **Figure 3.9-1)**. Following completion of the SEQRA process, it is anticipated that ECHDC would acquire control of all parcels within the Project Area either through fee ownership or long-term leases, licenses or easements as necessary to complete the Project (see **Figure 3.9-2)**. The City would continue to own all public rights-of-way.

## 3.10 State Environmental Review Process

### 3.10.1 Overview

The basic purpose of SEQRA is to incorporate the consideration of environmental factors into the decision-making processes of government agencies within New York State. To accomplish this goal, SEQRA requires that all agencies determine whether the actions they directly undertake, fund or approve may have a significant impact on the environment, and if so, prepare or request the preparation of an EIS. Because the Project would include funding and approvals by State and local agencies, the Project is required to be assessed in accordance with SEQRA, implemented by regulations under 6 NYCRR Part 617, as amended. In accordance with these requirements, in July 2007, ESDC issued notices to potentially involved agencies to solicit lead agency status for the SEQRA review of the Project. No objections to ESDC serving as SEQRA lead agency were received during the 30-day comment period for lead agency solicitation, and

ESDC was properly established as the SEQRA lead agency for the environmental review of the Project.

### 3.10.2 Generic Environmental Impact Statement

Agencies may prepare a GEIS when there is a need to assess a wide variety of impacts at a more conceptual level over a larger geographic area, often focusing on long-term or cumulative impacts, over project-specific or site-specific EISs. GEISs that are prepared before development or other activities are proposed give agencies an opportunity to plan their future courses of action to avoid or mitigate such impacts. A GEIS may include site-specific analyses for components of a proposed project that are well defined and establish thresholds for further impact reviews of project elements that are more conceptual and/or are not fully developed at the time of the assessment.

By addressing long-term, cumulative impacts and adopting mitigation measures and thresholds for future development and actions upfront, the use of a GEIS at the planning stage can establish a framework that fully addresses potential environmental impacts and substantially reduces SEQRA documentation requirements as new construction actually comes on-line.

Because the Project is based upon a conceptual development plan involving both well-defined elements (e.g., Bass Pro, Canal Side Hall, Webster Block, public infrastructure) and certain less-defined components (e.g., Erie Canal Harbor Project Parcels) that would be designed and developed in the future as part of a market-based build out (subsequent phases), it was determined that a GEIS was the most appropriate way of addressing the environmental review for the Project.

## 3.11 Required Permits and Approvals

Permits, approvals and other discretionary actions may be required from the following governmental agencies for Project implementation[3].

U.S. Army Corps of Engineers
- Permit for structures and work in navigable waters of the United States under Section 10 of the Rivers and Harbors Act
- Clean Water Act 404 Permit for discharging of dredged or fill material in waters of the United States

New York State Department of Environmental Conservation
- SPDES General Permit for Construction Activities
- Floodplain Development Permit, 6 NYCRR 500
- Section 401 Water Quality Certification

[3] This list does not include government actions associated with potential governmental funding sources for the Project.

New York State Department of State, Division of Coastal Resources
- Coastal Zone Consistency Certification, 19 NYCRR 600

New York State Office of General Services
- Grant of an easement, lease, permit or lesser interest for structures such as docks and piers located in navigable waters in accordance with 9 NYCRR 270

New York State Department of Transportation
- Highway Work Permit authorizing work within NYS highway right-of-way, Highway Law, Article 3, Section 52
- Transfer of Real Property interests to ECHDC or other Project participant

New York State Thruway Authority
- Highway Work Permit authorizing work within NYS highway right-of-way, Highway Law, Article 3, Section 52
- Transfer of Real Property interests to ECHDC or other Project participant

New York State Office of Parks, Recreation, and Historic Preservation
- Consultation in compliance with Section 14.09 of State Historic Preservation Law

New York State Public Authorities Control Board
- Approval of Project financing and construction, Public Authorities Law Section 51

Empire State Development Corporation
- Approval of General Project Plan

Erie County Health Department
- Approval of all water and sewer installations and connections

City of Buffalo Common Council
- Transfer of Real Property interests to ECHDC or other Project participant
- Approval of right-of-way encroachments

City of Buffalo Planning Board
- Review and Recommendation of the General Project Plan ("GPP") and subsequent phases for consistency with the GPP

City of Buffalo Sewer Authority
- Approvals for design of sewer lines and connections

City of Buffalo Department of Public Works, Streets and Parks
- Approval of street modifications, utility, sidewalks, curb cuts, etc.

City of Buffalo Water Board
- Approvals for design of water lines and connections

City of Buffalo Control Board
- Consent to transfer of City-owned property to ECHDC

Buffalo Urban Renewal Agency
- Approval for use of land for temporary parking at Waterfront Village

Buffalo Municipal Housing Authority
- Transfer of Real Property interests to ECHDC or other Project participant

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# 4 PROJECT ALTERNATIVES

SEQRA requires that the DGEIS contain a statement and analysis of the reasonable alternatives to the Project taking into account the objectives and capabilities of the Project Sponsor. The purpose of including reasonable alternatives to the Project is to aid members of the public and governmental bodies in assessing the relative costs and benefits of the Project as compared to other specific alternatives. It is not necessary to examine every possible alternative to an action. Instead, the alternatives explored must be reasonable. Importantly, the DGEIS need not include a description and evaluation of alternatives which manifestly would not achieve the objectives of the proposed Project. This chapter describes the evolution of alternative development for Canal Side as well as some of the alternatives suggested during the scoping process. This chapter also describes two build alternatives to the proposed Project that are feasible considering the goals, objectives and capabilities of ECHDC.

### 4.1.1 Evolution of Alternatives

Canal Side, from the beginning, has always been envisioned as the connection of downtown Buffalo to its waterfront. In the early stages of sketch planning, this connection was established through the creation of a harbor that brought the water in to Main Street. Early versions of the plan were centered on reuse of the former Aud building, and various uses that were proposed to inhabit this former arena (Bass Pro was one of these uses). These early schemes maintained the Prime Slip as a major water feature as well, and maintained the design program from the 2004 ECHMP.

Through several iterations of the plan, it was determined that the development would best be served if Bass Pro had water frontage in front of its store. This led to a concept where Bass Pro was proposed to be located on the Central Wharf Green. This concept was the subject of much public concern, and led to a revisit of the Aud site. With the decision that the Aud was not suitable for any type of reuse and should be demolished, tracing the former path of the Erie Canal in front of a Bass Pro store with water features in a public environment became the centerpiece of the proposed development. As the hallmark of the Project, this new, extended system of canals brought the value of the waterfront inland to the Bass Pro store, and created the desirable water frontage for the store in a canal setting.

Throughout the design evolution process and variations of individual components, several major principles have remained from the start, including:

- The connection between downtown and the waterfront;
- A mixed-use development with the majority of ground level spaces being retail or restaurant uses, with office, residential and retail uses above
- Attracting cultural facilities;
- Building upon two anchors, Bass Pro and the HSBC Arena; and

- Using the development to shape a network of world class "places" to create a variety of experiences.

### 4.1.2 Alternatives Suggested During Scoping

During the Scoping process, a number of possible alternatives for different components of the Project were identified through public and agency input. This section contains a brief summary of some of the more significant alternatives suggested during the Scoping process.

#### 4.1.2.1 No Bass Pro

Some commenters suggested that the Project should analyze an alternative that does not include Bass Pro as the anchor tenant. The Project Sponsor feels it is appropriate to include Bass Pro, a destination retailer with a commitment to build and operate a Bass Pro store on a portion of the Aud Block in each of the Build Alternatives. Including Bass Pro will help establish development thresholds for all related impact analysis. In the unlikely event that a Bass Pro store is not constructed as part of the Project, other types of uses, including other destination retailers, could be included in the Project without additional environmental review provided such uses do not exceed the impact thresholds created by the Bass Pro scenarios.

#### 4.1.2.2 Bass Pro on Donovan Block

Some commenters suggested that the Project should consider alternative sites for Bass Pro, including the Donovan Block and the historic footprint of the Spaulding Exchange. With respect to the Donovan Block, this location would not provide sufficient space for Bass Pro's proposed uses and programming. Similarly, the former Spaulding Exchange building, which was located on the northeast corner of what is now the Aud Block where the proposed Bass Pro would reside, would be an even smaller space than the Donovan Block and would not meet necessary space requirements. Thus, moving Bass Pro to another location has not been included in any of the Project alternatives.

#### 4.1.2.3 Interpretive Elements of the 2004 Erie Canal Harbor Master Plan

Several comments were made regarding a perceived encroachment of the Project onto the 12.5-acre area of the 2004 ECHMP. The Canal Side Project is a separate project and distinct action from the Erie Canal Harbor Project (which involved a variety of marine and landside infrastructure components on a portion of the Canal Side Project area)—these infrastructure features (e.g., Commercial Slip, Naval Basin, Veterans Park, cobblestone streets, etc.) have been largely completed or are in the process of completion. However, new uses to be constructed on the designated "future development parcels" envisioned in the Erie Canal Harbor Project will be done so in a manner consistent with the 2004 ECHMP adopted standards to guide such future development (see Chapter 7.3.2.1). In addition, the Project would not preclude any previously suggested use/interpretive elements or programming of the Erie Canal Harbor as envisioned under the 2004 ECHMP from locating in the Project Area.

#### 4.1.2.4 Recreation of Historic Buildings and Canals

The purpose of the Project is not to recreate the historic Erie Canal waterways. Instead, the Project's water features would be interpretive elements (i.e., non-navigable water features). Some may be deep enough for certain types of small watercraft (e.g., paddle boats). Accordingly, the recreation of historic buildings and/or original canals has not been included for evaluation in any of the Build Alternatives. Several commenters suggested that the Project should replicate the original canals with 4-foot- deep, navigable waterways built over the Hamburg Drain for commercial/recreational purposes. However, it would be impractical to make these features fully connected to the Buffalo River and navigable, given constructability issues (e.g., large water pumping/re-circulation facilities would impede making a navigable Prime Slip, and that such a scheme would require new bridge structures wherever canals would cross existing streets), as well as cost considerations associated with recreating historic canal features.

#### 4.1.2.5 Buildings on Water's Edge

One commenter suggested that the Project should allow businesses to build to the edges of the riverfront/canals with multi-story buildings containing first floor restaurants and pubs to add authenticity and to attract year-round use. The Project is being designed for pedestrian access along the water's (i.e., Buffalo River) edge, thus requiring buildings to be set back from the River, while allowing full build-out along the interpretive canal features. Also, consistent with the commenter's view, the Project is intended to spur ground-level activity that would contribute to a vibrant urban setting. Accordingly, building to the water's edge has not been included for evaluation in any of the Build Alternatives. The closest building to the water in any of the Build Alternatives would be the riverfront boutique hotel, which would be set back from the water's edge.

#### 4.1.2.6 "Ellis Island Like" Programming

One commenter suggested that the Project should include a Buffalo-Erie Canal Museum (similar to historic programming at Ellis Island); with features such as a statue of Dewitt Clinton, canal excursions and traveling plays, on-line database, etc. While the provision of such historic programming is not a goal or objective of the Project Sponsor, implementation of the Project would not preclude the suggested use/programming component from locating in the Project Area. Accordingly, no historic programming along the lines suggested by this commenter have been included for evaluation in any of the Build Alternatives.

#### 4.1.2.7 Transient Boater Services

One commenter suggested that the Project should address and incorporate transient boater needs such as docking, showering, and fueling facilities. Earlier phases of the Erie Canal Harbor Project have already added transient boater slips to the Project Area and a wide array of transient boater services are available nearby at the Erie Basin Marina and the NFTA Boat Harbor.

Accordingly, no additional transient boater services have been included for evaluation in any of the Build Alternatives.

#### 4.1.2.8 Cruise Ships

One commenter suggested that the Project could attract cruise ships if it had the right facilities, and that the impacts of attracting cruise ships should be considered. While not a goal or objective of the Project Sponsor, implementation of the Project would not preclude the suggested cruise ship facilities from locating in the downtown waterfront area. Moreover, docking facilities for larger vessels are already available downstream from the Project Area. Accordingly, no cruise ship facilities or services have been included for evaluation in any of the Build Alternatives.

### 4.1.3 No-Build Alternative

The No-Build Alternative is defined as the future condition without the proposed Project. This is considered in order to establish a base line to help qualitatively and quantitatively assess the benefits and impacts associated with identified alternatives. The No-Build Alternative (see **Figure 4.1-1**) assumes the following:

- Completion of pre-development activities for the Aud and Donovan Blocks. Asbestos is abated in both the Auditorium and the Donovan Building. The Donovan Building is then secured and mothballed or demolished for future development. The Aud is demolished with the site being filled, graded and seeded, and is a shovel-ready development site.
- Erie Canal Harbor public infrastructure is built out as described in the Re-Evaluation Reports for Project Refinements, Erie Canal Harbor Project, Empire State Development Corporation, December 2006 and March 2009. Development parcels as per this Erie Canal Harbor Project plan are established, but no specific development occurs.

Beyond these activities, the No-Build Alternative assumes that no other components of the Project would be implemented. With the No-Build Alternative, the Bass Pro store would not be built, nor would the Donovan Building be reused. Similarly, the Webster Block would remain a surface parking lot and the Under-Thruway Blocks and the development parcels under the Skyway would remain in their current state.

### 4.1.4 Low-Density Alternative

#### 4.1.4.1 Low-Density Alternative Proposed Program

In conjunction with the evaluation of the Project, the DGEIS examines the social, economic and environmental impacts of a Low-Density Alternative and its proposed program (see **Figure 4.1-2**). This alternative, which would cost approximately $162.8 million, would be based on the same general site layout as the proposed Project (see **Figure 4.1-3**). The Bass Pro store and Canal Side Hall would remain the same as would the water elements and the Donovan Building renovation. However, the overall density of the development would be substantially reduced from 1,075,000 square feet of retail, entertainment, residential and office space to roughly

603,200 square feet. In addition, the proposed hotel building in the Preferred Alternative on the south end of the Riverfront District would not be included in the Low-Density Alternative.

#### 4.1.4.2 Low-Density Alternative Proposed Parking

Under the Low-Density Alternative, parking in the Project Area would be consolidated into three parking garages, with a few support surface lots and a limited number of on-street parking options also available. In total, approximately 1,798 parking spaces would be provided within the Project Area (see **Figure 4.1-4**).

The Commercial Slip Parking Garage, to be constructed over the current Marine Drive Apartments' surface lot, would be the largest of the proposed parking garages with four levels and approximately 800 spaces. Beneath the Bass Pro store, a three-level, 532-space garage would provide convenient parking for visitors to Bass Pro and Canal Side Hall. This parking garage would be accessed by two entries, one from Main Street and one from Upper Terrace Street. The two-level, Webster Block Parking Garage, on the east side of the block, would provide approximately 175 spaces and would be accessible from Washington Street.

In terms of surface parking, a total of 142 spaces would be provided within the Project Area. 47 spaces would be provided on Parcel T3, which is under the elevated Skyway access ramps at Pearl Street and Perry Boulevard. Another 22 spaces would be provided on Parcel T1 under the Thruway. The existing surface lot at the Donovan Building would be maintained with 50 spaces to provide on-site parking to Parcel D1. All three of these areas currently serve as surface parking lots.

In addition to standard parking spaces, the Low-Density Alternative (the same on the Preferred Alternative) would include 24 RV parking spaces along Perry Boulevard, with another six RV parking spaces adjacent to the north side of the Bass Pro store. These RV parking spaces would be intended to accommodate visitors to the Bass Pro store traveling by RV.

In terms of on-street parking, approximately 35 spaces would be available along Marine Drive; approximately 13 spaces would be available along Hanover Street; approximately ten spaces would be available along Prime Street; approximately five spaces would be available along Perry Street; and approximately 80 spaces would be available along Main Street. Parking along Main Street, however, would be contingent upon the final design for the Cars on Main Project.

### 4.1.5 High Density Alternative

#### 4.1.5.1 High-Density Alternative Proposed Program

In conjunction with the evaluation of the Project, the DGEIS examines the social, economic and environmental impacts of a High-Density Alternative and its proposed program (see **Figure 4.1-5**). Similar to the Low-Density alternative, this alternative, which cost approximately $450.7 million, would employ the same general layout as the proposed Project (see **Figure 4.1-6**). Also, as with the Low-Density Alternative, certain features of the Project would remain unchanged in the High-Density Alternative, including: the Bass Pro store, Canal Side Hall and Canal Side

Commons, the water features and the Donovan Building renovation. However, the overall density of the development would be substantially increased from 1,075,000 square feet of retail, entertainment, residential and office space to nearly 1.7 million square feet. In addition, the proposed hotel building on the south end of the Riverfront District would be included.

#### 4.1.5.2 High-Density Alternative Proposed Parking

Under the High-Density Alternative, parking in the Project Area would be consolidated within five parking garages, with a few support surface lots and a limited number of on-street parking options also available. In total, approximately 2,613 parking spaces would be provided within the Project Area (see **Figure 4.1-7**).

The Commercial Slip Parking Garage, to be constructed over the current Marine Drive Apartments' surface lot, would be the largest of the proposed parking garages with six levels and approximately 1,280 spaces. Beneath the Bass Pro store, a three-level, 532-space garage would provide convenient parking for visitors to Bass Pro and Canal Side Hall. This parking garage would be accessed by two entries, one from Main Street and one from Upper Terrace Street. A five-level, 400-space parking garage would be built on the Donovan Block, accessible from Washington Street. This structure would require the demolition of the existing Donovan Building. The six-level Webster Block Parking Garage, on the east side of the block, would provide approximately 500 spaces and would be accessible from Washington Street.

In addition to standard parking spaces, the High-Density Alternative (the same on the Preferred Alternative) would include 24 RV parking spaces along Perry Boulevard, with another six RV parking spaces adjacent to the north side of the Bass Pro store. These RV parking spaces would be intended to accommodate visitors to the Bass Pro store traveling by RV.

In terms of surface parking, a total of 121 spaces would be provided within the Project Area. 47 spaces would be provided on Parcel T3, which would be under the elevated Skyway access ramps at Pearl Street and Perry Boulevard. Another 22 spaces would be provided on Parcel T1 under the Thruway. Both of these areas currently serve as gravel surface parking lots.

# 5 PUBLIC PARTICIPATION

## 5.1 Introduction

In 2008, ECHDC established a communications plan that incorporates the vision, mission and guiding principles established by the agency's Board of Directors. The plan lays out a broad strategy to inform and energize the general public about Buffalo's Inner and Outer Harbor Developments. The intent of this plan is to better educate and proactively engage those audiences with a vested interest in the redevelopment and rejuvenation of the "Queen City by the Lake."

The goals of ECHDC communications plan are to:

- Support ECHDC's vision for revitalizing the waterfront and restoring economic growth to our City based on the region's legacy of pride, urban significance and natural beauty;
- Better educate and proactively engage the general public regarding the redevelopment and rejuvenation of Buffalo's inner and outer harbor areas; and
- Guide the implementation of a successful communications operation, thereby ensuring more consistent messaging and greater credibility for ECHDC within the community (ECHDC, 2008).

The communications plan also establishes several key messages to help reinforce the agency's role as the driving force behind positive waterfront development. These messages have been infused in all communications offered by ECHDC from the plan's adoption moving forward. A key message ECHDC seeks to convey is **"**transparency". ECHDC believes public input is an essential component to waterfront redevelopment, and strives to incorporate all feasible recommendations forged through the public vetting process. The ECHDC also welcomes public scrutiny, which it considers essential to creating the best final product.

## 5.2 Project Vision

ECHDC's vision is to revitalize Western New York's waterfront by restoring economic growth to Buffalo based on the region's legacy of pride, urban significance, and natural beauty.

ECHDC's objective is to satisfy the needs and wants of the community by reconnecting Buffalo to its waterfront while providing a place that is free and open with water as its unifying theme.

The following benefits associated with Canal Side illuminate how ECHDC is satisfying the overall ECHDC vision and objectives:

**Accessibility**

- Improve public access to the waterfront by improving linkages to pathways and destinations

- Expand public use and enjoyment of the waterfront
- Provide opportunities for a variety of waterfront events and activities that are free of charge to visitors

**Diverse Use**

- Create an authentic, livable neighborhood with mixed-use development, not just a tourist destination
- Attract people to the downtown waterfront as their choice to live, work, and play
- Create diverse use—recreational, cultural, community and residential, retail/commercial, office space, and an interpretation of Erie Canal history

**Design**

- Reinforce urban form and physical character through appropriate architectural design, scale, and massing that is consistent with the overall desired character of the project. Introduce water as key to Canal Side
- Utilize green design principles
- Use variations in seasonal climate to provide diverse options to reconnect to the waterfront, and appeal to visitors on a year-round basis

**Financial Payback**

- Foster economic growth
- Generate local tax revenue
- Create locally owned retail businesses with living wage jobs
- Return underutilized land in the City's urban core to productive use

## 5.3 Project Website

In an effort to share information in a timely manner, ECHDC has created a public website for purpose of distributing Project information, meeting notices, and documents. ECHDC notices and encourages the public to visit www.eriecanalharbor.com regularly for up-to-date Project information.

## 5.4 Public Involvement and Outreach on Canal Side Sketch Planning

In addition to the formal public outreach and participation required as part of the SEQRA process, ECHDC has, and continues to meet with key stakeholder groups to educate stakeholders about Canal Side, and receive input and address concerns. ECHDC has used a diverse array of educational materials, including PowerPoint presentations, three-dimensional images,

renderings, posters, story boards and other printed materials tailored to individual stakeholder groups according to interest, concern, and impact.

After the public coordination associated with the sketch planning process (discussed in Chapter 2.6) was complete, the initial Canal Side concept design was unveiled to key stakeholder groups prior to the initiation of the SEQRA scoping process. From December 10, 2008 to December 15, 2008, an outreach campaign was conducted involving meetings between ECHDC Board members and staff and stakeholders such as Federal, State and local elected officials, government agencies, media outlets, community, advocacy and economic development organizations, and historical and cultural organizations. The goal was to present the initial Canal Side concept in a manner that was inclusive and welcomed participation and feedback in the forthcoming SEQRA process.

Since late December 2008, ECHDC has met with interested stakeholders to share information about Canal Side, receive input and address concerns. Formal and informal meetings, presentations, and educational sessions have been held. Weekly meetings with stakeholder groups have been held by ECHDC representatives and ECHDC staff and Board members have made numerous public presentations and participated in various public forums to continually encourage a transparent dialogue about the Project. A list of many of the stakeholder groups is provided below:

- AAA Travel Counselors Group
- American Institute of Architects – Buffalo Chapter
- Black Fisherman's Association
- Buffalo Club
- Buffalo Common Council
- Buffalo Hockey Experience Museum
- Buffalo Home & Garden Show
- Buffalo Homecoming 2008
- Buffalo Museum of Science
- Buffalo Naval & Military Park
- Buffalo Niagara Convention and Visitors Bureau
- Buffalo Niagara Partnership – Waterfront Committee
- Buffalo Niagara Riverkeepers
- Buffalo Office Managers Association
- Buffalo Place, Inc.
- Buffalo Sailing Club
- Buffalo State College Maritime Center
- Buffalo Tours
- Buffalo Weather Experience Center
- Campaign for Greater Buffalo History, Architecture and Culture
- Canisius College MBA Alumni Association

- Darwin Martin House staff
- ECIDA – Area Managers Group
- Erie Basin Marina
- Erie County Executive
- Erie County Legislature
- Erie County Youth Leadership Seminar
- Explore & More Children's Museum
- Federal, state and local delegations & elected officials
- General Mills Inc.
- Industrial Heritage Committee
- Ira G. Ross Aerospace Museum
- Jewish Community Center of Buffalo
- Landmark Society
- Leadership Buffalo
- Marine Drive Apartment Tenants
- Mayor of Buffalo
- National Parks Service
- Niagara River Greenway Commission & Department of State
- North Boston Fire Company
- NYS Canal Conference – 2008 Conferees
- One HSBC Center Tenants Group
- Oshei Foundation
- Pedaling History Museum
- Pierce-Arrow Museum
- RCR Yachts
- Specialty Restaurants, Inc.
- U.S. Congressman Brian Higgins
- U.S. Senator Charles Schumer
- U.S. Senator Kirsten Gillibrand
- Villa Maria Academy
- WNY Association of Commercial Realtors
- WNY Maritime Charter School
- WNY Properties LLC
- Erie County Department of Environment Planning

ECHDC will continue extensive community outreach as programming for the Project is refined. Feedback from this outreach has and will continue to be considered by the Project design team on an on-going basis. All Public meeting notices, materials and public comments are provided in **Appendix C**.

## 5.5 Public Scoping Process

ESDC, as lead agency, initiated the public scoping process with the purpose of informing the community of the Proposed Action, and to seek input on concerns/issues that should be addressed in the DGEIS. In February 2009, ESDC prepared and issued a Draft Scoping Report, which outlined the evolution of the Project, its goals and objectives, alternatives to the Proposed Action, and a preliminary listing of issues upon which the DGEIS would focus.

The Draft Scoping Report was made available through various media. For example, the Draft Scoping Report was posted on the Project website, and hard-copies were made available for public review at ECHDC's Buffalo offices, the downtown branch of the Buffalo and Erie County Public Library, and the Buffalo and Erie County Historical Society. Briefings were also held with members of the print, radio, and television media to ensure adequate coverage/awareness of the Project. A postcard announcement of the Project and its Scoping Meeting was produced and distributed to over 600 citizens/organizations that had previously expressed interest in the Erie Canal Harbor Project, which overlapped a portion of the Project Area. These announcements in conjunction with a formal public notice in the Environmental Notice Bulletin and The Buffalo News notified the public that a Public Scoping Meeting would be held by ESDC on Wednesday, February 25, 2009 at 7:00 pm at the Waterfront School, 95 4th Street, Buffalo, New York.

At the Public Scoping Meeting, attendees signed in at a reception table, registered to present oral comments, and were offered information materials and comment cards, which could have been submitted at the meeting or returned by mail at a later date. The Project Design Team conducted a brief presentation that introduced the components of the Project, and outlined the environmental review process, including potential environmental issues that may result from the Project. At the conclusion of the presentation, attendees were invited to present verbal Scoping comments, which were transcribed for documentation purposes. The order to the twenty-two speakers was selected at random. Following the public verbal comment session of the Scoping Meeting, attendees were again encouraged to submit to ESDC any written (or e-mail) comments on the scope of the DGEIS to be included in the public record. Attendees were advised that comments would be received until March 13, 2009.

In April 2009, ESDC reviewed all comments received, and issued a Final Scoping Document (Parsons Brinckerhoff Quade & Douglas, 2009). Copies of the Final Scoping Document were distributed, as required under SEQRA, and posted to the Project website. All of the Public Scoping Meeting distribution materials are included in the Final Scoping Report as are copies of all written scoping comments received. The full transcript of the public scoping meeting was posted separately on the Project website.

## 5.6 Post-Scoping Public Outreach

After issuance of the Final Scoping Document and during the drafting of the DGEIS, public outreach continued where ECHDC responded to requests from community organizations to learn more about the Project and also proactively sought out certain organizations that may be

interested in learning about certain Project details related to their organization's mission. Since late March 2009, ECHDC has met with a broad array of stakeholders in an effort to be as inclusive as possible. These stakeholders included the following.

- Buffalo Bills Rookies Group
- Buffalo Building Trades Council
- Buffalo First
- Buffalo Niagara International Airport "Ambassadors" Program
- Buffalo Niagara Partnership Waterfront Tour Group
- Buffalo Niagara Riverkeepers
- Buffalo Place, Inc.
- Buffalo Sailing Club
- Buffalo State College Maritime Center
- Buffalo Tours
- Buffalo Weather Experience Center Group
- Campaign for Greater Buffalo History, Architecture & Culture
- Erie County Youth Leadership Seminar
- Erie-Niagara Tobacco-Free Coalition
- Explore & More Museum
- Hamburg Rotary Club
- Hamburg Seaway Trail Center
- Holy Trinity Lutheran Church
- Office of U.S. Senator Charles Schumer
- Preservation Buffalo Niagara
- Re-Tree WNY
- U.S. Power Squadron
- University of Buffalo
- WNY Maritime Charter School

At these meetings, ECHDC representatives explained to each group its vision for Canal Side: to create unique experiences and provide ample opportunities and facilities for a diversity of both indoor and outdoor, year-round activities on the waterfront. In this regard, ECHDC used Project visuals to describe various Project components or gave a tour of the Project Area and explained

overall Project uses, operations, and potential programming. In addition to a presentation about the look and feel of the Project, a dialogue was had between ECHDC representatives and stakeholders, where stakeholders could offer feedback on the Project, ask questions on topics such as Project planning, timing, construction and phasing, and offer suggestions for Project changes or different activities they would like to see take place at Canal Side or programming that could be housed in the buildings on each block. This ongoing outreach and transparency has allowed stakeholders access to Project details and planning during all stages of Project development. With the issuance of the DGEIS, it is ECHDC's goal that familiarity with the Project will result in thoughtful and informed feedback and comments regarding the Project's potential environmental and socio-economic impacts.

## 5.7 DGEIS Public Comment Period

ESDC and ECHDC facilitated the preparation of this DGEIS to analyze potentially significant adverse impacts that may result from the Project and to address issues identified during the Scoping process. Accordingly, this DGEIS establishes thresholds and review procedures for assessing environmental impacts for less-defined project elements, as well as measures designed to mitigate, or minimize, any potential significant adverse impacts.

After the DGEIS is complete, a Notice of Completion for the DGEIS will be distributed by ESDC in accordance with SEQRA requirements and published in Environmental Notice Bulletin. Copies of the DGEIS will be made available pursuant to 6 NYCRR 617.12(b) and placed on the Project website. One or more public hearings will be held to solicit comments on the DGEIS and GPP. Notice will be published in appropriate local newspapers, thereby initiating the required public comment period on the DGEIS and GPP. Such notice will also indicate the time and location of Public Hearings that will be held to receive comments on the documents. Written comments in addition to or in lieu of comments received at the Public Hearing will be accepted during a comment period.

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# 6 ENVIRONMENTAL SETTING

This chapter of the DGEIS discusses the affected environment within which the Project's social, economic and environmental impacts will be evaluated.

## 6.1 Cultural Resources

### 6.1.1 Historical Resources / Districts

The Project Area is within a heavily urbanized area that has been impacted by construction and demolition of buildings, structures, roadways, canals and rail systems since before the War of 1812. Historically, the Project Area in general has been continually occupied by a variety of commercial structures associated with industrial and warehousing operations, transportation, the hospitality trade, and shops since the early nineteenth century. While foundations and associated artifacts related to these former uses could extend to deep soil horizons (as suggested in various Phase IA investigations), there are no standing structures (i.e., architectural resources) within the Project Area that are listed or eligible for listing on the State and National Registers of Historic Places (S/NRHP). However, three NRHP-listed structures, including the USS The Sullivans, USS Croaker submarine and the Edward M. Cotter fireboat and slip, are located near the Project Area. In addition, a number of NRHP-eligible structures and archaeological resources associated with the Erie Canal, including the Commercial Slip, which is part of an identified archaeological district, and the Phoenix Die Casting Building. Finally, the Cobblestone District, a locally-designated historic district, is located immediately east of the Project Area. **Figure 6.1-1** shows the locations of all S/NRHP-listed or eligible historic resources in the vicinity of the Project Area. Chapter 7 addresses the potential for adverse impacts to these resources.

### 6.1.2 Archaeological Resources

The Project Area is considered sensitive for archaeological resources. This section summarizes the results of the Phase IA Cultural Resources Investigation, which was prepared to characterize the archaeological sensitivity of the Project Area, and to provide recommendations for specific future archaeological investigations. A more complete description of the archaeological study is provided in the *Phase IA Cultural Resources Investigation Report for the Development of the Canal Side Project*, (Panamerican Consultants, Inc., 2008) (see **Appendix D**), and is included on the Project website. The Phase IA investigation was accepted on April 28, 2009 by the OPRHP (OPRHP, 2009).

Numerous archaeological studies have previously been conducted within portions of the Project Area in connection with the EIS and SEIS completed for the Erie Canal Harbor Project, the findings of which have been integrated into the Project's Phase IA report. Given the high archaeological potential of the Project Area and nearly 125 years of dense urban land use, the goal of the Phase IA study was to define, as precisely as possible, those areas with a reasonable archaeological potential. Of equal importance was a determination of those areas where known disturbance resulting from historic land use indicate a low or negative potential for the presence of intact archaeological deposits.

### 6.1.2.1 Archaeological Study Area

The general study area for the Phase IA report is comprised of five focus areas that may be affected by the Project. The five focus areas are depicted in **Figure 6.1-2,** and include:

- Erie Canal Harbor – this focus area is bounded by Marine Drive on the north, by Main Street on the east, by the Buffalo River on the south, and by the historic Lloyd Street on the west. Lloyd Street was located parallel to and approximately 75 feet to the southeast of the now re-watered Commercial Slip. Numerous activities have occurred at the site to prepare it for development. Clearing activities included the demolition of the Naval Park and museum. A new museum complex has been constructed adjacent to the west side of the reconstructed and re-watered Commercial Slip. The project also entailed moving the destroyer – USS The Sullivans - and the guided missile cruiser - Little Rock - from the east side of the slip to newly constructed moorings adjacent to the new museum. Also, the Commercial Slip has been determined individually eligible for S/NRHP listing and the entire parcel lies within the S/NRHP-eligible Erie Canal Harbor Archaeological District.
- The Donovan Block – this focus area is bounded on the north by Exchange Street, on the east by Washington Street, on the south by Scott Street, and on the west by Main Street. The northern third of the parcel, including the depressed railroad bed, the section of the block adjacent to Exchange Street, and an elevated section of the Thruway are not part of the focus of this study. The block is occupied by a single structure, the Donovan Building, and its associated parking lot. The building, constructed in the 1960s, has until recently housed the regional office of the NYSDOT and other state agencies. The structure has been previously determined by the SHPO as not eligible for S/NRHP listing (OPRHP, December 17, 2007).
- The Webster Block – this focus area is located immediately north of the HSBC Arena and is bounded on the north by Scott Street and the Donovan Block, on the east by Washington Street and the HSBC Atrium, on the south by Perry Street, and on the west by Seymour H. Know III Plaza and the Erie Canal Harbor Focus Area. The parcel has been vacant for decades. It has been used primarily as a surface parking lot and is now black-topped and being operated by a private lot operator.
- The Aud Block – this focus area is located north of the Erie Canal Harbor Focus Area and west of the Donovan Block. It is bounded on the north by the Lower Terrace and the Thruway, on the east by Main Street, on the south by Marine Drive, and on the west by Commercial/Pearl Streets. The block was fully occupied by the former arena, which was constructed between 1939 and 1940 and sat upon the filled junction of the Erie Canal and Commercial Slip. The structure was determined by OPRHP to be not eligible for S/NRHP listing, given a number of alterations that significantly affected the structure's integrity (OPRHP, December 17, 2007). This structure is being razed, and site preparation activity continues as of the publication of this DGEIS.
- Marine Drive - this focus area is located in the southeastern portion of a parking lot associated with the Marine Drive Apartment complex. The lot is bounded on the northeast by Perry Boulevard and the Skyway ramp (the historic location of the Erie Canal), on the

southeast by Commercial Street, on the southwest by Marine Drive (which encircles the apartment complex), and on the northwest by Erie Street. The area of concern here occupies the southeastern 25 to 30 percent of the lot and includes portions of the former Canal Street (Dante Place) and Maiden Lane. The area was once part of the vibrant waterfront neighborhood closely associated with the terminus of the Erie Canal.

#### 6.1.2.2 General Study Area Archaeological Sensitivity

To arrive at a general sensitivity model for the study area, sequences of historic maps, ground-level photographs and aerial photographs were examined. For this aspect of the study, maps from two significant periods in the Buffalo waterfront's history, the 1850 and 1894 city atlases, were compared. The year 1850 represents an era that witnessed the apex of Erie Canal activity on Buffalo's waterfront prior to the advent of the railroad era and the significant effects to the City's infrastructure that it entailed. By 1894, railroads were dominant and the City was a major national hub. **Figure 6.1-3** is a composite of the prehistoric and historic sensitivity models and depicts a general sensitivity for the study area.

**Prehistoric Resources**. The general vicinity within and around the City was occupied throughout the prehistoric period. This location, near the confluence of Buffalo River and Little Buffalo Creek as well as Lake Erie, would suggest a high sensitivity for prehistoric resources. The intense urban development experienced in this area resulted in the actual destruction of sites and, at the same time, makes it very difficult to locate intact sites that may be present. Recent excavations on the northwest side of the former Commercial Slip, which was formed from Little Buffalo Creek, yielded significant and intact prehistoric remains. At that location, the prehistoric cultural layers were at an elevation of 575 feet above mean sea level (AMSL). Most of the study area lies within the same landform, specifically the "Flats" section of the Buffalo waterfront, immediately below the terrace. If the same soil stratum can be located within the study area, then it is highly likely that intact prehistoric remains may also be present. This stratum is most likely to occur below fill used to construct the streets and somewhat unlikely to occur where large structures once stood. A pristine prehistoric deposit excavated in 2007 was located below fill underlying Commercial Street.

**Historic Resources**. The study area was densely occupied during the nineteenth and early twentieth centuries. Although the structures were demolished, there is a potential for the existence of buried historic period deposits. Typically, demolition of buildings as large as those that once occupied the study area leaves little valuable information within the former footprints. This has been borne out by excavations conducted in and around the Commercial Slip as well as those conducted in the Marine Drive Focus Area. Significant information, however, can often be recovered from builders' trenches and open areas adjacent to these former structures. Earlier historic period deposits can also be found encapsulated below early paved roadways. Though unusual, it is possible to identify intact historic deposits within former building footprints. This was apparent at excavations conducted in the Marine Drive parking lot and at the Webster Block. The deposits, however, tend to lack clear associations—an important limiting factor of their research value and, thus, their contribution to a site's S/NRHP eligibility. An estimate of where intact historic period deposits may be found within the study area was based on what appear to

be long-term gaps between buildings from an examination of historic maps and aerial photographs as well as excavations conducted to date within the study area. There are three areas beneath the Skyway that may or may not have been affected by its construction. Six Skyway piers are located within the Erie Canal Harbor Focus Area and one in the Memorial Auditorium Block at the corner of Commercial Street and Marine Drive.

#### 6.1.2.3 Focus Area Archaeological Sensitivity

Specific archaeological sensitivity derived from a more in-depth examination of each of the focus areas is presented below.

**Erie Canal Harbor Focus Area**

The archaeological sensitivity of the Erie Canal Harbor Focus Area has been well documented. Experience has shown that former building footprints are, in general, filled with demolition debris and are of little historical or archaeological interest. The sandstone pavers (typically referred to inaccurately as cobblestone) used for street construction in the mid-1800s are quite common (though not always sandstone) and hold no historic significance. The Erie Canal Harbor Focus Area lies within the S/NRHP-eligible Erie Canal Harbor Archaeological District. The District consists of a number of elements that contribute to its significance:

- The Commercial Slip wall remnants, which have already been determined to be individually eligible for listing in the NRHP in the Section 106 process conducted for the Inner Harbor Development Project in 1999;
- The prehistoric or pre-contact archaeological resources, which may be individually S/NRHP eligible;
- The historic period artifact deposits, which may be individually S/NRHP eligible;
- The historic period infrastructure (streets and bridge remains) insofar as they provide a physical, historic landscape to support the potential archaeological district's eligibility, but do not meet the eligibility criteria for individual inclusion in the S/NRHP; and
- Architectural remains (building foundations and features) insofar as they provide an historic texture to support the potential archaeological district's eligibility, but also do not meet the eligibility criteria for individual inclusion in the S/NRHP.

The probability of encountering intact artifact deposits below the historic street pavement is high. As a result, the former street locations, including areas immediately adjacent to foundations (beneath sidewalks, etc.), as well as historically vacant properties, are of the greatest concern. As part of the Programmatic Agreement (PA) and Letter of Resolution (LOR) which was part of the SEIS for the Erie Canal Harbor Project (Parsons Brinckerhoff Quade & Douglas, Inc., 2004), the parties agreed to a number of stipulations. Many of these stipulations, including SHPO consultation on specific design features of reconstruction and re-watering of the Commercial Slip and archaeological investigation of the prehistoric or "pre-contact" deposits along the sides of the Commercial Slip, have been fulfilled.

**Donovan Block Focus Area**

The determination of the specific archaeological sensitivity of the Donovan Block Focus Area began with an assessment of disturbance. This was done by examining the present pavement for signs of restoration (repaving) that may be associated with utility installation. At the time of the inspection, some utilities had been marked. This was particularly notable in the southern section of the block where a number of fiber optic, water and sewer lines were delineated. This location was also the route of Scott Street prior to construction of the Memorial Auditorium. There are also indications of an underground storage tank (UST) associated with a gasoline pump in the southeastern section of the block. The bulk of the disturbance is the result of construction of the Donovan Building itself and associated utilities including a large fuel oil UST on the east side of the building. There is also evidence of trenching immediately east and southeast of the building. In addition to modern activities that have disturbed the site, the southern portion of the block was impacted by the excavation and channelizing of Little Buffalo Creek to create the Main and Hamburg Canal. The southern portion of the block also was significantly disturbed as a result of the construction of the Lehigh Valley Railroad passenger station and the connecting tunnel to the former head house on the east side of Washington Street. The ultimate effect of these past activities on the survivability of intact cultural resources is variable. That is, an historic activity that may have NRHP significance may also be responsible for the destruction of prehistoric deposits.

**Prehistoric Resources**. The general vicinity within and around the City was occupied during prehistoric times. This location, straddling the former Little Buffalo Creek would suggest a high sensitivity for prehistoric resources. There is a recorded site consisting of Early and Late Woodland materials within the block. From its low site number (UB 168), the site was likely recorded in the 1960s and may have coincided with the construction of the Donovan Building or the demolition, in 1961, of the Neo-Classical-style Lehigh Valley Passenger Terminal (built ca. 1914-1915) that previously occupied that block. The kind of disturbances discussed above introduce a random element with respect to the presence of intact prehistoric remains. While much of the block has seen significant disturbance from the construction of the Donovan Building, the Lehigh Valley Railroad Terminal, the Main and Hamburg Canal (and Hamburg Drain), and the installation of USTs, some areas of the block may have escaped destruction. The southern three-quarters of the block is slightly elevated from the "Flats" section of the Buffalo waterfront, immediately below the terrace. If the artifact-bearing soil stratum found in the Flats at an elevation of 575 ft AMSL can be located within the Donovan Block, then it is highly likely that intact prehistoric remains may also be present.

**Historic Resources**. As previously discussed, this site was densely occupied during the nineteenth and early twentieth centuries. Although the structures were demolished, there is potential for the existence of buried deposits. No structures documented on Sanborn insurance maps (1881 to 1981), historic photographs (1890s through 1940s) and aerial photographs (1927 to 1978), other than the Donovan Building (since 1962), are extant. As noted, demolition of buildings as large as those that once occupied the block leaves little valuable information within the former footprints. Significant information, however, can often be recovered from builders' trenches and open areas adjacent to these former structures. There were historically some open

areas within the block. Earlier historic period deposits can also be found encapsulated below early paved roadways such as Quay Street, which paralleled the north side of the former canal. An undisturbed portion of the former street may exist on the east side of the Donovan Building.

**Webster Block Focus Area**
The archaeological sensitivity of the Webster Block Focus Area was identified previously in connection with the once proposed Adelphia Communications office building on the site.

**Prehistoric Resources.** The extensive disturbance as a result of the original 1830s construction along the Main Street (western) section of the block has largely destroyed any potential for locating intact prehistoric resources in that area. It is likely that many, or all, of these buildings had basements that were excavated to a depth close to groundwater. It is unlikely that the original ground surface is at a depth of 10 feet, which is the depth of fill over much of the block as determined from borings. The bulk of this fill is likely within basements of the former structures. The eastern half of the block has a higher likelihood of prehistoric artifacts. Historical research and map analysis indicate that the size and density of structures along Washington Street was not as great as that for those erected along Main Street. The analysis also suggests that there were areas upon which no construction may have ever occurred, which would indicate near ideal conditions for the identification of intact cultural deposits. These open areas may have been access-ways to the rear of buildings fronting Main Street, which became necessary when the original alley was closed off at Perry and Scott streets, and expanded into during the middle to late 1800s. They may also have served as loading and stabling areas as indicated on the 1889 Sanborn map. Therefore, the possibility exists that prehistoric material may be intact over part of the eastern and central portions of the block. If prehistoric cultural deposits exist, it may be possible to locate them. As noted, there is a recorded site consisting of Early and Late Woodland materials in the Donovan Block, immediately north of the Webster Block.

**Historic Resources.** Prior to the rise of major industry in this section of the City, the Webster Block was mixed-use commercial-residential with brick and frame dwellings, small commercial and manufacturing establishments, restaurants, hotels and boarding houses. The area currently consists of an asphalt parking lot. The site was densely occupied during the nineteenth and early twentieth centuries, reaching its peak building density between 1890 and 1915. As a result of the reconfiguration of Scott Street in the early 1980s, the location of the Moeller House, which once stood at 95-97 Main Street, is beneath the street and will not be further impacted by any new construction that may occur on the block. It is unlikely that construction of the present parking lot seriously impacted any existing buried historic resources across the remainder of the block.

**Aud Block Focus Area**
Memorial Auditorium, constructed in 1939-1940, occupied the entire block constituting the Memorial Auditorium Focus Area. The building was massive, constructed primarily of concrete and extended well below grade. The area was historically occupied by large masonry buildings that included the Spaulding Exchange. In addition to the significant disturbance to the area resulting from the auditorium's construction, there is a Skyway pier in the southwestern corner of the block. Prior to their filling in the mid-1920s, the site formed the intersection of the Erie

Canal and Commercial Slip. This area has also been impacted by construction of the Hamburg Drain. Due to the massive disturbance to the block as a result of the construction of the auditorium and Hamburg Drain, it is highly unlikely that intact and S/NRHP-eligible cultural remains exist on the site.

**Marine Drive Focus Area**

The focus area was once part of the area that was at the center of the city's transportation and economic activities. Two nearby slips—the Prime Slip and the Commercial Slip—formerly connected the Erie Canal with the Buffalo River. Because of its location near the canal and the lake, the area served as a major trans-shipment point between lake ships and canal boats and, later, railroads, and was home to numerous commercial and industrial activities. Many of these activities were associated with port operations, shipping and receiving, and storage, but also included retail operations and housing.

**Prehistoric Resources.** This location, near the confluence of Buffalo Creek and Little Buffalo Creek as well as Lake Erie, would be considered highly sensitive if it were a non-urban setting. However, relatively little evidence of prehistoric sites remains within the City as a result of almost 200 years of construction and urban development. The extensive disturbance beginning with the original 1820s construction of the Erie Canal and subsequent development along the canal and the waterfront into the Twenty-First Century has lessened the potential for locating intact prehistoric remains in that area. This area was at one time low and swampy, part of the "Flats." The intact prehistoric site investigated near the new museum and below the fill underlying Commercial Street is less than a hundred yards away. If the artifact-bearing soil stratum found in the Flats at an elevation of 575 ft AMSL can be located within the Marine Drive Focus Area, then it is highly likely that intact prehistoric remains may also be present. Phase IB survey work conducted in the parking lot in 2004 did not locate any intact prehistoric deposits although one deposit was located within a builder's trench. It appears, however, that these excavations did not reach the 575 ft level in the area near Commercial Street.

**Historic Resources.** As previously discussed, this site was densely occupied during the nineteenth and early twentieth centuries. Although the structures were demolished, the potential for the existence of buried deposits exists. No structures documented on Sanborn insurance maps (1881 to 1981), historic photographs (1890s through 1940s) and aerial photographs (1927 to 1978) for the Marine Drive Focus Area are extant. The apartment complex was erected between 1950 and 1952. The area currently consists of an asphalt parking lot. Although the structures were demolished, a high potential exists for the presence of buried deposits. It is unlikely that construction of the parking lot seriously impacted all previously existing buried historic resources at the site. Based on archival and map research, the reconnaissance survey that has already been conducted, as well as general impacts associated with parking lot construction, sections of the focus area have a high potential for archaeological sensitivity for historic resources.

## 6.2 Visual Resources

This section discusses existing visual resources around the Project Area. Visual resources can be characterized by the various elements that form a viewer's perception and aesthetic response to a place, object, or setting (NYSDEC, 1988). Visual quality results from the way elements of the natural and built environment relate to each other to create a sense of harmony, and to give viewers the ability to orient themselves in the area (HUD, 1989; FTA, 1997).

### 6.2.1 Visual Quality of the Project Area

The general setting of the Project Area is characterized by several vacant, unvegetated lots, surface parking lots, and the vacant Donovan Building, all framed by the existing city street grid and a combination of transportation infrastructure elements (i.e., elevated highways and transit mall). The visual environment surrounding the Project Area is characterized by various buildings (i.e., HSBC Arena, HSBC Atrium, The Buffalo News Building, Maine Drive Apartment complex, and Naval Park buildings).

The Project Area has a relatively poor visual quality. Its condition also detracts from the visual quality of adjoining areas. Specifically, the Project Area's current condition serves to visually disconnect adjacent areas from recent investments in the Erie Canal Harbor Project and Buffalo River shoreline.

One of the most pronounced elements that affect the visual quality of the Project Area is the Skyway, which partially obstructs views into and through the Project Area. The highway's concrete support piers, ranging between 80 and 100 feet high, are visible from most view corridors. Moreover, the Skyway ties into the Thruway, which is also an elevated highway, along the northern edge of the Project Area. The decking of these highways casts shadows across the Project Area, and obstructs views of the sky from several vantage points.

Maritime elements visible from the Project Area create a more utilitarian urban port/harbor setting rather than one of a natural or organic waterfront. The primary contributing elements to this are steel bulkheading of the Buffalo River, formal railings lining existing waterfront walkways, concrete or rip rap breakwall structures, and permanent dock/slip facilities. The most prominent of these elements are the naval vessel exhibits currently moored along the Buffalo River bulkhead at the Naval Park. The largest of the three is the USS Little Rock, which extends 610 feet along the shoreline and over 100 feet, at its highest point, above the shore ground level. This vessel, and to a lesser degree the USS The Sullivans, which resides in front of the USS Little Rock, obstructs views of the river from the central portion of the Project Area; the USS Croaker is a WWII submarine that sits considerably lower than the other two vessels, and is less obtrusive. Despite blocking some views of the water, these elements are themselves visual resources that contribute to the identity of the area.

Building elements within and around the Project Area, while once contributing little to the scale and definition of spaces in the area, have begun to establish defined street walls with pedestrian scale facades that relate both to the waterfront as well as to the urban street pattern. These

elements include the HSBC Arena and HSBC Atrium Building to the south and east, and the Donovan Building and The Buffalo News to the north and east. In addition, the Marine Drive Apartments, a grouping of modernist-style, brick, cruciform apartment towers to the west, further help define a relatively dense zone of structures around the Project Area.

### 6.2.2 View Corridors

This section summarizes the existing viewsheds within and surrounding the Project Area. Viewsheds include the various elements which can be seen from a specific location. Elements are those that provide context and an aesthetic quality for a specific place, object, or setting. The locations of viewsheds reviewed as part of this Project are shown in **Figure 6.2-1**, and include the following.

- Pearl Street looking south from Lower Terrace
- Main Street looking south from south of Exchange Street
- Scott Street looking west from Washington Street
- Main Street looking north from Perry Street
- Prime Street looking northwest from west of Perry Street
- Fuhrmann Boulevard looking east across the Buffalo River
- Marine Drive looking east from Marine Drive Apartments

A brief description of each viewshed, along with representative photographs of the existing views are detailed below.

**Location 1 – Pearl Street looking south from Lower Terrace**

This view is largely dominated by the Skyway and ramp from the Skyway to the Thruway south along with the piers associated with both (see **Figure 6.2-2**). Moving left to right, visible buildings include the former Donovan Building, HSBC Atrium, and HSBC Arena. These buildings surround the former Aud Site and Webster Block. Grain elevators along the Kelly Island are visible beyond the Skyway, as are buildings associated with the Commercial Slip. Wide streets and a lack of pavement markings along with deteriorating sidewalks add to an unkept and unwelcoming pedestrian environment. Pedestrian-scale lighting is evident surrounding the former Aud site, and its design attempts to connect Pearl Street with Main Street and the adjacent Metro Rail Station. However, in this viewshed, such lighting style is out of context with the areas looking down Pearl Street to the southwest.

**Location 2 - Main Street looking south from south of Exchange Street**

Two primary elements in this viewshed are the Aud Building (undergoing demolition) on the right and the vacated Donovan Building on the left (see **Figure 6.2-3**). The HSBC Arena is visible beyond the vacant Donovan Building, and the surface parking lot on the Webster Block dominates the space between these two structures. The Skyway and its piers are visible beyond the HSBC Arena. Beyond the Skyway, grain elevators on Kelly Island are evident.

**Location 3 - Scott Street looking west from Washington Street**
This viewshed provides a panoramic aspect of the Skyway with the existing surface lot on the Webster Block and former Aud Site and its adjacent Metro Rail station in the foreground (see **Figure 6.2-4**). A small portion of the HSBC Arena is evident to the left (south) with a plaza in the foreground to the southwest. Also visible consistently throughout this viewshed are numerous lighting poles associated with street and pedestrian scale lighting, as well as those associated with the surface parking lot on the Webster Block. Buildings associated with the Commercial Slip are evident beyond the Skyway.

**Location 4 - Main Street looking north from Perry Street**
This viewshed is dominated by several buildings which bound the Project Area, as well as the Skyway (see **Figure 6.2-5**). The HSBC Center and The Buffalo News building are easily the most dominant features from this location. The Metro Rail, along with its overhead catenary lines, dominates the center of the viewshed, bisecting the former Aud Site from the Webster and Donovan Blocks. A vacant swath of land south of the Aud Site, beneath the Skyway is evident in the foreground, with the Marine Drive Apartments beyond the Skyway. Pedestrian scale lighting is evident along the pedestrian walkway which parallels the Metro Rail, as well as along Main Street northbound.

**Location 5 –Prime Street looking northwest from west of Perry Street**
This view is once again dominated by the Skyway and its piers, as well as a large tract of vacant land which is currently used for construction staging (see **Figure 6.2-6**). The Commercial Slip is evident beyond the vacant parcel and the Marine Drive Apartments tower over the background of the viewshed. A well maintained green space is visible adjacent to the Commercial Slip and vacant parcel. It is separated from the vacant parcel via what appears to be temporary fencing. The Central Wharf Green area exists to the left (west) but is not easily accessible from this point due to ongoing construction.

**Location 6 - Fuhrmann Boulevard looking east across the Buffalo River**
This viewshed includes a large green space and adjacent boardwalk which fronts the Buffalo River in the foreground (see **Figure 6.2-7**). The Skyway and its piers are once again a primary focal point, with numerous buildings evident in the background, including the HSBC Center, City Hall, and Marine Drive Apartments. The Commercial Slip and its buildings are apparent adjacent to the green space. The Naval Park, and specifically, the USS Little Rock and USS The Sullivans along with a naval jet are evident in the right (west) of the viewshed. The boardwalk area includes pedestrian scale lighting and numerous benches. A vacant parcel, used for construction staging, is visible between the green space and the Skyway.

**Location 7 - Marine Drive looking east from Marine Drive Apartments**
This viewshed provides a panoramic view of the Skyway and the Thruway interchange (see **Figure 6.2-8**). Beyond the Skyway and the Thruway, several buildings are apparent, including the HSBC Atrium, the Aud (undergoing demolition), HSBC Center, as well as numerous lower-rise buildings beyond the piers of the interchange. The foreground includes the lawn of the Marine Drive Apartments and its adjacent surface parking lot.

## 6.3 Land Use / Development Policies

### 6.3.1 Land Use

The Project Area is located in an urban setting, and is primarily comprised of one vacant building, vacant land, and several paved, surface parking lots (see **Figure 6.3-1**).

The vacant Donovan Building is located on a site bounded by Main Street, Scott Street, Washington Street, and the CSX railroad right-of-way. The building is an eight-story office building that formerly housed the regional offices of several state agencies such as NYSDOT and State Assembly/Senate offices. The building was vacated in 2007, and transferred by the New York State Legislature from the News York State Office of General Services to ESDC. An asbestos abatement program was completed in early 2009. With these actions complete, the building has been mothballed for future reuse, depending on final planning decisions associated with the Project.

The Project Area contains a number of surface parking lots that serve development outside of the Project Area including the Marine Drive Apartments, HSBC Center, Coca-Cola Field, the Buffalo News building, HSBC Atrium and HSBC Arena. The largest of these is the Marine Drive Apartments surface lot between Marine Drive and Perry Boulevard (383 spaces), followed by the Webster Block surface lot (290 spaces) and the Donovan Block surface lot (134 spaces). In addition, there are 2 small gravel surface lots under elevated portions of the Skyway and Thruway in the Project Area with a total of approximately 80 spaces.

Additionally, the Project Area is crossed by several major infrastructure facilities. The Skyway crosses the navigational channel of the Buffalo River at a maximum height of approximately 100 feet above water level. Consequently, the Skyway passes over the central portion of the Project Area with numerous support piers located at ground level. The area under the Skyway includes an approximately 100-foot-wide swath of land owned, or controlled through easements, by the NYSDOT that allows access for maintenance of the highway's support piers and decking, and control of certain uses beneath the highway. The Skyway ties into the Thruway, also an elevated highway, along the northern edge of the Project Area. Similar to the Skyway, numerous support columns for the Thruway are located at ground level in the Project Area.

The Metro Rail transit and pedestrian mall terminates in the central-eastern portion of the Project Area at the Erie Canal Harbor Station (formerly the Auditorium Station) located at the intersection of Main and Scott Streets. In addition, a Special Events Station is located in the southern portion of the Project Area between Scott and Perry Streets. This station only operates during events at the HSBC Arena, which is located southeast of the Project Area across Main Street.

An AMTRAK rail line runs along the northern boundary of the Project Area. This line passes under a portion of the Project Area through a tunnel beneath Lower Terrace between Erie Street and Main Street, and continues as a surface line along Exchange Street. AMTRAK operates a passenger station for this rail line just beyond the Project Area on Exchange Street.

Land uses surrounding the Project Area include a mixture of high-density office and residential, recreational, entertainment, and parking uses (see **Figure 6.3-1**). Directly north of the Project Area is the commercial/office district of downtown Buffalo, including the city's tallest structure, the HSBC Center (38 stories). Uses directly east of the Project Area include offices of The Buffalo News and the HSBC Atrium as well as the HSBC Arena (20,000-seat sports/entertainment facility) and the DL&W terminal (a former passenger train terminal, in which the ground floor is used by the NFTA to service transit cars). Further east, uses include structured and surface parking facilities associated with the HSBC Arena, and a mixture of commercial and light industrial structures within the Cobblestone District, a local historic district. The Project Area is bounded on the south by the Buffalo River. Uses directly west of the Project Area include the Marine Drive Apartments, which consists of seven twelve-story, cruciform structures and ancillary surface parking facilities, and both the Naval Park and Veterans Park along the Buffalo River. Further west of the Project Area, land uses include a mixture of surface parking facilities, open space and commercial uses associated with the Waterfront Village and the Erie Basin Marina.

### 6.3.2 Local Plans and Programs

Development of the Project Area is influenced by a series of land use plans, programs, proposals, and policies for downtown Buffalo and the Buffalo waterfront. Once ESDC adopts and ratifies the GPP, all Project development consistent with the GPP would not be subject local land use controls. However, in an effort to ensure consistency between Canal Side Project and the various plans and policies of the City outlined below, all relevant City departments, agencies and boards, including the Common Council, the Planning Board, the Department of Public Works, the Office of Strategic Planning, and the BSA have been included in the review process of this DGEIS.

#### 6.3.2.1 Erie Canal Harbor Master Plan

The 2004 ECHMP builds on the 1999 Plan for the Erie Canal Harbor project site to specifically address the rich history and importance of Buffalo's Erie Canal era. Four overarching goals (Heritage Preservation and Interpretation, Activity and Land Use, Economic Development, and Public Access and Transportation) frame the overall vision for the Master Planning effort which is consistent with the vision expressed in Buffalo's Downtown Master Plan, *The Queen City Hub*. In addition, a set of guiding principles were established to develop a strategy that would respect the history of the site and effectively relate it to the public.

The 2004 ECHMP outlines the overall planning process and highlights various design components developed through a public design process. An associated phased implementation approach and budget for the project is also included within the document. The design components were developed with consideration of the site's historic context and the need for a renewed focus on the vitality of the Buffalo Harbor and adjacent commercial areas. Various elements of the design components outlined in the 2004 ECHMP include circulation, buildings, the Harbor, open space, the Hamburg Drain, and site interpretation (Flynn, et.al., 2004).

#### 6.3.2.2 City Zoning Ordinance

As depicted in **Figure 6.3-2**, the vast majority of the Project Area is currently zoned as II-Institutional Light Industrial with a small portion in the northeast corner of the Project Area zoned as DO-Downtown Opportunity. In general, these classifications are intended to support expanded downtown office, retail, and entertainment attractions as well as to promote downtown residential development. While permitted uses are similar for both zones, they differ slightly in regard to building size and form regulations with the II-Institutional Light Industrial District having fewer requirements. (City of Buffalo).

#### 6.3.2.3 Waterfront Redevelopment Project Urban Renewal Plan

The Project Area is within the 1963 designated Urban Renewal Area for the Waterfront Redevelopment Project (see **Figure 6.3-3)**. The corresponding Urban Renewal Plan sets forth an overall use plan, development design standards, an acquisition plan, and a disposition plan stating how acquired lands will be disposed for redevelopment. In addition, the plan includes procedures for implementing new development in the Project Area. These land controls supplement City zoning requirements referenced in Chapter 6.3.2.2.

Originally adopted over 45 years ago, the Urban Renewal Plan has been amended several times. The last major amendment was in 2004, when the preceding 1999 Inner Harbor Amendment was repealed (City of Buffalo, 2004). This action occurred in recognition of the 2004 ECHMP, which called for specific development regulations, design guidelines, streetscape guidelines and architectural standards. The 2004 Urban Renewal Plan Amendment was specifically adopted to implement the land uses and design guidelines set forth in the 2004 ECHMP. Roughly 1/3 (i.e., Erie Canal Harbor Parcels) of the Project Area is within this amended portion of the Urban Renewal Plan (see **Figure 6.3-4)**.

### 6.3.3 Buffalo Comprehensive Plan

In 2006, the City adopted a comprehensive plan, named *The Queen City in the 21st Century* ("Comprehensive Plan"), establishing a shared community vision for the future of the City. Specifically, this plan is intended to guide the physical and land use development of the City through the year 2025. The primary goal of the Comprehensive Plan is to reverse Buffalo's long-term decline in population, employment and the quality of the physical environment through coordinated and strategic investments in economic development, neighborhood revitalization, and the infrastructure of the City, through the implementation of smart growth principles. However, the City has yet to prepare an ordinance (e.g., zoning) implementing plan policies (City of Buffalo, 2006).

The downtown element of the Comprehensive Plan, referred to as *The Queen City Hub Strategic Plan*, is the product of concerted civic efforts to improve the City center. This document presents the vision and key priorities for implementation related to both strategic investment areas and priority neighborhood development sites. Also included is a detailed work plan intended to reinforce the implementation process with the needed tools (zoning, design guides,

management practices), additional planning, and further analysis. The work plan establishes a flexible framework for the multiparty collaborations that would be required to realize the vision for the downtown area. Specific to the Project Area and its surrounds, *The Queen City Hub Strategic Plan* calls for programming event and activities to increase public enjoyment and access to the waterfront, expanding retail to increase shopping opportunities and convenience, converting Pearl Street from one-way to two-way traffic, improving the Events Only Station to enhance access to waterfront, and completing the Cars on Main Project to Scott Street.

### 6.3.4 City of Buffalo Waterfront Corridor Initiative

Established in 2003, the Buffalo Waterfront Corridor Initiative is an action-oriented program with policy statements that are intended to collaborate efforts and to provide guidance toward improving the City of Buffalo's waterfront. Specific recommendations were established after the review of more than 20 years of waterfront planning and the compilation of a comprehensive inventory of existing waterfront sites and recently completed projects. Substantial public input during conferences in 2002 an 2003 helped to establish public priorities for waterfront projects. Key objectives of this initiative include making the City's waterfronts more accessible and environmentally healthy, reconnecting neighborhoods to the waterfronts, and getting best possible economic use from them (Wendell Duchscherer Architects and Engineers, 2007). In addition, the initiative developed two detailed project proposals, one of which, the *Erie Street Expanded Project Proposal*, would abut the Project Area.

### 6.3.5 Niagara River Greenway Plan

The Niagara River Greenway Plan is a regional comprehensive plan focusing on the development of interconnected parks, river access points and waterfront trails along the eastern bank of the Niagara River between Lake Ontario to Lake Erie. Established in 2004 by then-New York State Governor George Pataki, the Greenway is defined by the municipal boundaries of 13 towns, villages, and cities, including the City of Buffalo, which is the southern most municipality. The plan, adopted in 2006, outlines a set of broad principles to guide projects within the corridor, and includes a number of action-oriented concepts articulated as goals for the Greenway (Niagara River Greenway Commission, 2007). State agencies contemplating actions within the greenway are required to review their actions in relation to the consistency of such actions with the approved Niagara River Greenway Plan.[4]

## 6.4 Community Character

The Project Area generally lacks a defined community character, due in large part to its vacant and underutilized land uses. For example, the primary existing functions are surface parking facilities on the Webster Block, beneath the Skyway and the Thruway and on Marine Drive. The former Donovan Building is vacant, with several boarded up windows, and the bulk of the parcels south of Marine Drive beneath the Skyway are under construction. The former Aud site is also a construction zone with the demolition of the Aud close to completion. None of the sites add any significant aesthetic quality to the surrounding areas and do not represent the historic

[4] Laws of New York, 2004, Chapter 460, Article 39 Niagara River Greenway Commissions, §39.19 State Actions.

nature of Buffalo's once-thriving waterfront. While the waterfront exists just a short walk from these areas, accessing the waterfront can be difficult, and few opportunities exist for entertainment, dining, shopping, or recreation.

Neighboring land uses, while to some extent generating activity, are limited in their contribution to the creation of a vibrant urban neighborhood, and generally do not provide year-round activities and amenities. For example, the HSBC Arena and the Coca-Cola Field generate considerable activity, but only during certain times of the year and typically for a short period of time on those days when there is activity. While these facilities are major traffic generators during events, they do not draw virtually any activity to the Project Area on non-event days. Consequently, the Project Area is generally lively during events, particularly at the more proximate HSBC Arena, but is largely deserted other evenings. Even with the pedestrian traffic generated during HSBC Arena events, there are few destinations for visitors to visit. During non-event times, pedestrian traffic is especially absent in the Project Area. The only limited exception to this is the Erie Canal Harbor with its re-created Commercial Slip which now draws visitors to this portion of downtown, but is generally a seasonal attraction and has had limited event programming. There are few attractions adjacent to the Commercial Slip to allow visitors to remain in the area for a significant length of time. In addition, traversing the Project Area is difficult at many locations as sidewalks and crosswalk markings have not been maintained. Due to the desolate atmosphere of the area, drivers may not anticipate pedestrian activity, creating a more challenging walking environment.

The Marine Drive Apartments and its roughly 1,200 residents generate the most consistent level of activity throughout the year, yet the complex, which is surrounded by a ring road, is generally internalized and is not well integrated with the Project Area.

## 6.5 Social and Economic Issues

An analysis of the demographic and socioeconomic character of the region is provided below. The population, household, employment and income data is largely derived from prior area EISs and updated with current census data. This examination includes both the City of Buffalo and Erie County, and supports the goals and objectives for the Project to revitalize approximately 20-acres of Buffalo's Erie Canal Harbor and create some economic growth in Western New York, based on a combination of residential, commercial, open space and cultural elements.

Using 2000 U.S. Census data, this section provides a description of Erie County, the City of Buffalo, and, where information is available, for the area surrounding the Project Area (Census Tract 72.02, Block Group 1 and Census Tract 13.01, Block Group 3). The Project Area itself currently does not contain any households. Using data from the area surrounding the Project Area will provide a basis on which to understand the analysis of potential economic effects of the Project.

### 6.5.1 Population and Households

The Project Area is located within Erie County. The 2000 U.S. Census population estimate for Erie County is 950,265. Population decreased by two percent from the 1990 Census estimate of 968,532 (see **Table 6.5-1**). Population has remained relatively stable compared to the 4.6 percent decrease in population that occurred between 1980 and 1990. The 2005-2007 U.S. Census American Survey estimates a decrease in county population to a total of 919,112. The City of Buffalo decreased in population between 1990 and 2000 by 10.8 percent (see **Table 6.5-2**). In 2000, The City of Buffalo had a total population of 292,648 individuals, of which 1,267 resided in the area immediately surrounding the Project Area, which includes Waterfront Village and Marine Drive Apartments. According to the Greater Buffalo Niagara Regional Transportation Council's (GBNRTC's) 2025 population projections, both the county and Project Area are expected to grow by 9.3 percent and 37 percent respectively (GBNRTC, 2007).

The number of households in Erie County increased by 1.3 percent during the period of 1990-2000. The average household size decreased slightly from 1990 (2.5 persons) to 2000 (2.4 persons). This drop in household size represents a national trend, with the average American household consisting of 2.63 persons in 1990 and 2.59 persons in 2000. The City of Buffalo experienced a loss in the number of households with a 10.1 percent decrease between 1990 and 2000. Household size remained relatively unchanged. Households within the two Census block groups of which the Project Area is located tend to be small (1.5 persons on average), with 61 percent of households being one-person households.

Table 6.5-1
Erie County Population & Households

| Characteristic | 1990 | 2000 | Change | Percent Change |
|---|---|---|---|---|
| Population | 968,532 | 950,265 | -18,267 | -1.9% |
| Households | 376,019 | 380,873 | 4,854 | 1.3% |
| Average Household Size | 2.51 | 2.41 | -0.10 | -4.0% |

*Source: U.S. Census, 1990 & 2000.*

Table 6.5-2
City of Buffalo Population & Households

| Characteristic | 1990 | 2000 | Change | Percent Change |
|---|---|---|---|---|
| Population | 328,123 | 292,648 | -35,475 | -10.8% |
| Households | 136,436 | 122,720 | -13,716 | -10.1% |
| Average Household Size | 2.33 | 2.29 | -0.04 | -1.7% |

*Source: U.S. Census, 1990 & 2000.*

### 6.5.2 Age Distribution

Approximately 59 percent of the population in the census blocks surrounding the Project Area is over the age of 50, compared to 26 percent in the City of Buffalo and 29 percent in the County as a whole. Only eight percent of the surrounding Project Area population is age 21 or under, compared to 33 percent for the City of Buffalo and 29 percent for all of Erie County. This reflects the demographics of the Marine Drive Apartments and the Waterfront Village.

### 6.5.3 Racial and Ethnic Distribution

Erie County represents a diverse population, with 82 percent identifying themselves as White (alone), 13 percent Black (alone), 1.5 percent Asian (alone), and 0.6 percent American Indian or Alaskan Native (alone)[5]. The remaining 2.8 percent of the population consists of Hawaiian or other Pacific Islanders, persons of other races, or individuals who identified themselves as being from more than one race. Hispanic Americans, who may be of any race, make up 3.3 percent of Erie County's population. The City of Buffalo racial demographic is more diverse with 54.8 percent White (alone), 37.2 percent Black (alone), 1.3 percent Asian (alone), and 0.8 percent American Indian or Alaskan Native (alone). Persons of Hispanic origin made up 6 percent of the population in City of Buffalo. The Census block groups surrounding the Project Area are also somewhat diverse with 89 percent White, 8 percent Black, 1 percent Asian, 2 percent of Hispanic Origin and 2 percent Other/Multiple Races.

### 6.5.4 Housing Characteristics

During the timeframe of 1990-2000, the total number of housing units in Erie County has increased by approximately three percent, at the same time, the vacancy rate has grown from six percent to eight percent, as households move into newer homes while population continues to decline. The median value of owner-occupied housing units has increased over the same timeframe from an estimated $74,000 in 1990 to $88,200 in 2000. The City of Buffalo had a 4.3 percent decrease in the total number of housing units between 1990 and 2000 and an increase in vacancy rate from 10 percent to 16 percent. The median value of owner-occupied housing units increased from $46,600 (1990) to $59,300 (2000). In 2000, the two Census block groups representing the Project Area included 73 percent renter-occupied housing units and a vacancy rate of six percent.

### 6.5.5 Income

The median household income in Erie County was less than the national and statewide median incomes for both 1989 and 1999 estimates. However, median household incomes in Erie County grew at a faster rate than New York State as a whole. The City of Buffalo grew at a similar rate to New York State with a 2.9 percent annual growth rate. **Table 6.5-3** provides a comparison of median household incomes at national, state, county, and city levels.

[5] In the 2000 Census, individuals were allowed to identify themselves as being of multiple races. Persons identifying themselves as being Black or African-American in combination with various other races, for example, make up an additional 0.7 percent of the Erie County population.

Table 6.5-3
Median Household Income 1989 vs 1999*

| Characteristic | United States | New York State | Erie County | City of Buffalo |
|---|---|---|---|---|
| Median household income in 1989 | $30,056 | $32,965 | $28,005 | $18,482 |
| Median household income in 1999 | $41,994 | $42,393 | $38,567 | $24,536 |
| Total growth 1990-2000 | 40% | 32% | 38% | 33% |
| Annual growth 1990-2000 | 3.4% | 2.8% | 3.3% | 2.9% |

**Figures are not adjusted for inflation.*
*Source: U.S. Census, 1990 & 2000.*

In 2006, according to the Bureau of Economic Analysis ("BEA"), total personal income from all sources in Erie County was almost $32 billion. Despite a slight decrease in population between 1990 and 2006 (the most recent year for which figures are available), total personal income increased annually in real dollars.

According to Census figures, poverty levels in Erie County have remained static in the past decade, and comparatively similar with national figures, with 12 percent of the population living in poverty in Erie County in both 1989 and 1999 (see **Table 6.5-4**). However, over a quarter of the population in the City of Buffalo lives below the poverty line.

Table 6.5-4
Percent of Persons Living Below the Poverty Line

| Year | United States | New York State | Erie County | City of Buffalo |
|---|---|---|---|---|
| 1989 | 13% | 13% | 12% | 26% |
| 1999 | 12% | 15% | 12% | 27% |

*Source: U.S. Census, 1990 & 2000.*

### 6.5.6 Labor Force and Unemployment Trends

The "labor force" includes all individuals who work or actively seek employment, or who are in the military. For both years 1990 and 2000, over 62 percent of the population age 16 and over in Erie County (1990: 767,000 individuals; 2000: 745,293) was in the labor force. In 2000, the 62 percent labor force participation rate in Erie County is equal to the statewide average (62 percent), but lower than the national average (66 percent).

According to figures from the Bureau of Labor Statistics (see **Table 6.5-5**), for most of the past ten years, the unemployment rate in the Buffalo – Niagara Falls region was lower than that of

New York State, but during the timeframes of 1999 - 2001 and 2005 - 2007, the situation was reversed. In 2002 and 2004, the New York and Buffalo-Niagara Falls region unemployment rates were equal, at 6.1 percent and 5.8 percent respectively.

Table 6.5-5
Unemployment Rates

| Year | Buffalo/Niagara Falls Region | New York State |
|---|---|---|
| 1997 | 5.3% | 6.4% |
| 1998 | 5.3% | 5.6% |
| 1999 | 5.4% | 5.2% |
| 2000 | 5.0% | 4.6% |
| 2001 | 5.4% | 4.9% |
| 2002 | 6.1% | 6.1% |
| 2003 | 5.9% | 6.4% |
| 2004 | 5.8% | 5.8% |
| 2005 | 5.3% | 5.0% |
| 2006 | 5.1% | 4.6% |
| 2007 | 4.8% | 4.5% |

*Source: U.S. Bureau of Labor Statistics, 2008*

**Table 6.5-6** shows the rate of employment growth over the period of 1980 through 2006. There has been a relatively stable increase in the employment trend for Erie County during this timeframe. The county experienced a significant growth in total employment between 1985 and 1990 after hitting a low of 456,000 jobs in 1983. Total employment for 2006 was estimated at 564,177 and provided $24,688,696 in income.

Table 6.5-6
Erie County Employment Rates

| Year | Total Employment | Growth Since Previous Period |
|---|---|---|
| 1980 | 487,563 | -- |
| 1985 | 482,163 | -1.1% |
| 1990 | 535,136 | 11.0% |
| 1995 | 532,634 | -0.5% |
| 2000 | 552,994 | 3.8% |
| 2005 | 557,620 | 0.8% |
| 2006 | 564,177 | 0.6% |

*Source: Bureau of Economic Analysis (BEA) 2008.*

As shown in **Table 6.5-7**, the top three industry sectors in 2006 for Erie County were Government and Government Enterprises, Health Care and Social Assistance, and Retail Trade with these sectors respectively employing 13.6 percent, 12.1 percent and 11.4 percent of the total

nonfarm employment for Erie County. In comparison to the State of New York, Erie County has a higher percentage of employment in the following industries: Retail Trade, Manufacturing, Accommodation and Food Services, Wholesale Trade, and Management of Companies and Enterprises. The top three sectors of employment for New York State when compared to Erie County include Information (2.9 percent), Professional and Technical Services (7.9 percent), and Health Care and Social Assistance (13.5 percent). Since 1990, the industry sectors of Manufacturing and Retail Trade for Erie County have significantly decreased in their share of the employment total with Manufacturing decreasing from 14.5 percent in 1990 to 9.5 percent in 2006, and 18.8 percent in 1990 to 11.4 percent in 2006 for the Retail Trade sector.

Table 6.5-7
Employment by Sector (2006)[6]

| Industry Sector | Erie County | | New York State | |
|---|---|---|---|---|
| | Employment | Percent of Total | Employment | Percent of Total |
| Government and Government Enterprises | 76,309 | 13.6% | 1,500,173 | 13.8% |
| Health care and social assistance | 67,462 | 12.1% | 1,466,699 | 13.5% |
| Retail Trade | 63,924 | 11.4% | 1,065,731 | 9.8% |
| Manufacturing | 53,032 | 9.5% | 598,993 | 5.5% |
| Accommodation & Food Services | 37,379 | 6.7% | 598,360 | 5.5% |
| Finance and Insurance | 35,658 | 6.4% | 733,599 | 6.7% |
| Professional & Technical Services | 35,787 | 6.4% | 866,101 | 7.9% |
| Administrative and Waste Services | 34,803 | 6.2% | 539,449 | 4.9% |
| Other Services, except Public Administration | 26,271 | 4.7% | 605,482 | 5.6% |
| Construction | 23,404 | 4.2% | 508,530 | 4.7% |
| Wholesale Trade | 23,747 | 4.2% | 394,772 | 3.6% |
| Real estate and rental and leasing | 19,555 | 3.5% | 466,261 | 4.3% |
| Educational Services | 15,796 | 2.8% | 401,273 | 3.7% |
| Transportation and Warehousing | 15,477 | 2.8% | 337,573 | 3.1% |
| Arts, Entertainment & Recreation | 10,103 | 1.8% | 295,198 | 2.7% |
| Information | 9,484 | 1.7% | 312,293 | 2.9% |
| Management of Companies and Enterprises | 8,869 | 1.6% | 135,334 | 1.2% |
| Utilities | 1,654 | 0.3% | 40,506 | 0.4% |
| Forestry, Fishing, related activities, and other | 326 | 0.1% | 23,707 | 0.2% |
| Mining | 477 | 0.1% | 9,959 | 0.1% |
| **Total Non-Farm Employment** | **559,517** | **100%** | **10,899,933** | **100.0%** |

*Source: Bureau of Economic Analysis (BEA) 2008.*

[6] Estimates for employment for 2001-2006 are based on the 2002 North American Industry Classification System (NAICS)

## 6.6 Water Resources

This section provides a description of water resources and floodplain management within the Project Area.

### 6.6.1 Surface and Groundwater Resources

The primary body of water within the Project Area is the Buffalo River, which generally flows from east to west. The Buffalo River watershed drains an area of almost 446 square miles with three main tributaries, Cazenovia Creek, Buffalo Creek, and Cayuga Creek.

The Project Area is located along the lowest portion of the Buffalo River near its point of discharge into Lake Erie. The Buffalo River abuts roughly 1,100 feet of the landside portion of the Project Area between the Commercial Slip and the foot of Main Street. The lower Buffalo River is a navigable channel maintained by the USACE. Its gradient change is extremely small, less than one foot per mile. The lower Buffalo River is affected by its interaction with Lake Erie due to dredging activities required to maintain the channel. The River has riverine characteristics during high flow conditions (typically in the spring), and estuarine characteristics during mean and low flow conditions due to Lake level variations associated with the passage of storms on Lake Erie and seasonal thermal difference between the Lake and River waters. **Table 6.6-1** provides the landside and water elevations at the water's edge and the Buffalo River.

Depth to groundwater on the Project Area generally ranges between six and eleven feet below ground surface. Groundwater flow is generally east to west across the Project Area, toward the Buffalo River.

Table 6.6-1
Landside and Water Elevations

| Location | Elevation |
|---|---|
| Existing Bulkhead Line | 580.50 |
| 100-Year Floodplain | 581.00 |
| Mean Annual Water Level (1918-2007) | 571.32* |
| IGLD Water Datum | 569.20 |
| Mean Annual Water Level (1997) | 573.62 |
| Mean Annual Water Level (2007) | 571.36 |
| Current Water Level (January 2009) | 570.80 |
| **Seasonal Variations** | |
| Average Summer Conditions | +6" |
| Average Winter Conditions | -6" |
| **Daily Variations** | |
| Minor Lake Erie Sieche (5 days per year) | +2' - +4' |
| Major Lake Erie Sieche (2 days in non-winter months) | +4 to +8' |

### 6.6.2 Floodplain Management

A narrow portion of the Project Area along the Buffalo River is located within the 100-year floodplain as delineated by the Federal Emergency Management Agency ("FEMA") on Flood Insurance Rate Maps ("FIRM") (see **Figure 6.6-2**). The FIRM's defined floodway for the river is wholly contained within the Buffalo River Channel. In addition, the elevations of the existing harbor bulkhead (approximately nine feet above the mean water datum of the River) are designed to reduce the flooding potential on the Project Area.

## 6.7 Coastal Zone Management

A portion of the Project Area, including the Marine Drive Apartments parking lot and Erie Canal Harbor site, lies within the New York State Coastal Zone Boundary (see **Figure 6.7-1**). The New York State Coastal Management Program ("CMP") governs the development policies within the New York State coastal zone as established by the New York Department of State pursuant to the United States Coastal Zone Management Act of 1972. The CMP includes 44 individual policies designed to promote sensitive development within the coastal zone.

A number of these policies are applicable to the Project, including:

- Restoration and revitalization of deteriorated and underutilized waterfront areas for commercial, industrial, cultural, and recreational uses;
- Development of multi-use recreational opportunities as part of other types of projects;
- Encouragement of publicly owned recreational facilities in waterfront areas; and
- Retention of public ownership/access to lands on the foreshore and immediately adjacent the foreshore (NYS Department of State, 2001).

The CMP authorizes local municipalities to draft and adopt Local Waterfront Revitalization Programs ("LWRP") for the portion of the coastal zone within their jurisdiction. These programs are intended to assess local conditions along the waterfront; establish more specific policies; and implement appropriate waterfront land uses and projects from a local perspective. The City continues work on a Draft LWRP (City of Buffalo, 2007) to restore and revitalize the deteriorated and underutilized areas of its waterfront. However, because the Draft LWRP has not been formerly adopted, the Project will be evaluated against State coastal policies. A Coastal Assessment Form ("CAF") has been completed for this Project, and is attached in **Appendix E**.

## 6.8 Transportation

The Project Area consists of local roadways and intersections in a general urban grid pattern. The roadway network contains connections to the adjacent interstate and major local highway facilities which provide regional access to the Project Area. In addition, the local roadway network is a continuation of the downtown street grid which provides connections to the business district core and surrounding neighborhoods.

Several significant interstate and regional expressway facilities pass through or near the Project Area. Each facility has ramp connections to the downtown roadway network which provide access to the Project Area. These facilities include:

- The Thruway, which has access ramps at Niagara Street, Court Street and Seneca/Elm Street, runs through the area elevated above portions of Lower Terrace Street;
- The Skyway/Route 5 complex, which carries traffic between downtown Buffalo and Lackawanna and the southtown communities, crosses directly over the Project Area and has access ramps at Delaware Avenue and via connections to the Thruway; and
- NYS Route 33, the Kensington Expressway, which provides access to the waterfront via the Elm/Oak Arterials and intersecting streets.

### 6.8.1 Existing Transportation Access

Local roadways in the Project Area provide connections from the center of downtown and the regional expressways to the Project Area. Pedestrian and bicycle access, as well as public transit service is provided throughout the Project Area as well. More specific descriptions of the roadways, public transit service, pedestrian access and bicycle access follows.

#### 6.8.1.1 Street/Road Network

All at-grade streets within the Project Area are part of the City of Buffalo street system and are posted at the city-wide speed limit of 30 MPH. The primary local roadways serving the Project Area are identified in **Figure 6.8-1**, and include the following.

**Washington Street**
Washington Street is a north/south, four-lane minor arterial which serves as the eastern boundary of the Project Area. The right-of-way width for this section of Washington Street is 66 feet. The pavement section is 42 feet wide with two, 10.5-foot-wide travel lanes provided in both directions. Sidewalks are provided on both sides of the roadway with tree pits along the east side of the roadway. Signalized intersections are located at Exchange Street to the north and Scott Street to the south of the Buffalo News Building. A channelized left-turn lane is provided on the southbound travel lanes to access the Thruway. A three-way stop is located at the southern terminus of Washington Street where it meets Perry Street. Two-hour, metered parking is permitted on the east side Washington Street between Scott and Perry streets.

**Perry Street**
Within the Project Area, Perry Street provides a connection between Washington Street and Main Street to the west and is bounded by two, unsignalized, three-way stop intersections. Perry Street is a minor arterial with two, 11-foot-wide traffic lanes in each direction. Sidewalks are provided along Washington and Perry streets. Restricted parking is permitted on the north side of Perry Street between Washington and Main streets.

**Main Street / Seymour H. Knox III Plaza**

Main Street runs parallel and to the west of Washington Street and provides a north to south connection from Exchange Street to South Park Avenue within a 99-foot-wide right-of-way. The portion of Main Street south of Scott Street has been officially designated as Seymour H. Knox III Plaza. The NFTA Metro Rail system operates at grade along the entire length of Main Street in the Project Area from 5:30 am to 1:00 am daily. Sidewalks are located along both sides of Main Street to the north of Scott Street/Marine Drive and along the east side of the street to the south of Scott Street/Marine Drive. Automobile and bicycle traffic are prohibited on Main Street between Exchange Street and Scott Street/Marine Drive in the Project Area, however the City and NFTA plan to restore Main Street to accommodate both automobile traffic and Metro Rail service through their Multi-Modal Access and Revitalization Project. The Erie Canal Harbor Transit Plaza, located adjacent to the intersection of Main Street and Scott Street/Marine Drive, was completed in 2008 and contains bicycle racks and bench seating for transit riders and others. On-street parking is prohibited on Main Street throughout the Project Area.

**Pearl Street/Commercial Street**

To the west of Main Street lies Pearl Street which connects Upper Terrace Street to the north to Perry Boulevard. South of Perry Boulevard, Pearl Street becomes Commercial Street and connects with Marine Drive and the Erie Canal Harbor Project at the south boundary of the Project Area. Pearl Street has a right-of-way width of 66 feet. The street accommodates 2-way traffic south of Upper Terrace with a 40-foot-wide roadway and provides a 10-foot-wide parking lane on each side. Four-foot-wide sidewalks are located along both east and west sides of the roadway. Parking is prohibited on Pearl Street between Upper Terrace and Scott Street.

**Marine Drive**

Marine Drive serves as the Project Area boundary to the west, and accommodates two-way traffic northwest toward Erie Street. Marine Drive encircles the Marine Drive Apartments and reconnects back to Scott Street at Main Street. Sidewalks are not provided along the outside edge of the Marine Drive loop road. On-street parking is permitted on portions of Marine Drive.

**Perry Boulevard**

Perry Boulevard is a two-lane, local street that runs parallel and north of the Project Area segment of Marine Drive. Perry Boulevard starts at Pearl Street/Commercial Street and terminates at Erie Street and lies underneath the elevated Thruway and Skyway structures. It has a cartway width of 50 feet that includes two, 15-foot-wide travel lanes. Unrestricted, on-street parking is permitted on both sides of the street; sidewalks are not present.

**Scott Street**

Scott Street is a local street and provides an east/west connection between Main and Washington Streets. An existing right-of-way width of 60 feet contains a 32-foot-wide roadway with two, 13-foot-wide travel lanes and 3-foot-wide dedicated bicycle lanes delineated in each direction throughout the length of the Project Area. Sidewalks are also provided along both sides of the street. Two signalized intersections are located on this section at Main and Washington Streets.

**Skyway and Thruway**
Two controlled-access highways, supported by elevated structures, are located within the Project Area. The Skyway is a north/south, 4-lane highway that traverses the Project Area at a height of approximately 100 feet above grade. The Skyway connects to the Thruway, also an elevated structure, and consists of a 6-lane highway which runs east/west along the northern boundary of the Project Area.

**Reconstruction of Historic Streets**
The reconstruction of the historic street grid within the Erie Canal Harbor portion of the Project Area (see **Figure 2.5-1**) is scheduled for construction in Summer 2009. This effort, known as Phase II of the Erie Canal Harbor Project, is separate from the Canal Side Project, and will utilize materials, including cobblestone, to replicate the appropriate era for the historic canal district. Segments of four local streets Lloyd, Hanover, Perry and Prime Streets will be constructed as approved under the Erie Canal Harbor Project and subsequent EIS re-evaluations. This street system will connect Main Street and the Metro Rail station to the Buffalo River. Prime Street will run parallel to the Buffalo River and connect the southern terminus of Main Street to future Lloyd Street. Lloyd Street will run parallel and to the east of the Commercial Slip and connect Prime and Scott Streets. Hanover Street, to be located to the east of Lloyd Street, will also serve as a north/south connection between Prime and Scott Streets. Lastly, the new segment of Perry Street will provide a continuation of the existing Perry Street at the existing Main and Perry Streets Intersection. This new road will provide a short connection between Main and Prime Streets.

6.8.1.2 Public Transportation

**Figure 6.8-1** depicts existing transportation-related systems in and around the Project Area.

**Metro Bus**
Local bus service is provided within the Project Area via six Metro Bus routes (6, 8, 14, 16, 36, and 74). New bus shelters were erected along Marine Drive to the west of the Project Area as part of the Veterans Memorial Park improvements during Phase I of the Erie Canal Harbor Project.

**Metro Rail**
The Metro Rail runs between the University at Buffalo's South Campus Station and the NFTA maintenance facilities at the DL&W terminal to the south of the HSBC Arena. The alignment runs at-grade in downtown Buffalo (i.e., south of Tupper Street in the Theater District) along a one-mile transit/pedestrian mall on Main Street. A portion of the Main Street pedestrian mall between South Park Avenue and Perry Street (Seymour H. Knox III Plaza) shares the roadway with vehicular traffic.

Two Metro Rail stations are located within the Project Area. The Erie Canal Harbor Station (formerly known as the Auditorium Station) is located immediately north of Scott Street between the Donovan Block and the Aud Block, and serves as the system's southern terminus during normal daily and weekend service periods; and the Events Only Station, which was added to the

system in 1997, is located south of Scott Street near Perry Street, and operates when events are held at the HSBC Arena.

**AMTRAK**
An AMTRAK passenger rail line runs along the northern boundary of the Project Area as a subsurface line beneath Lower Terrace between Erie Street and Main Street, and continues at grade along Exchange Street. The AMTRAK Exchange Street passenger station is a scheduled stop on the Empire and Maple Leaf routes, and is located immediately adjacent to the northeast corner of the Project Area.

#### 6.8.1.3 Pedestrian Access

Pedestrian routes in the Project Area are shown in **Figure 6.8-2**. Pedestrians are presently accommodated along the roadways within the Project limits by means of sidewalks, most of which have ramps for handicapped accessibility. Concrete sidewalks are currently provided on both sides of all site perimeter roadways, and on all roadways within the Project limits with the exception of Perry Boulevard between Pearl Street/Commercial Street and Erie Street. Completed phases of the Erie Canal Harbor Project have added routes/walkways and points of interest to the pedestrian network.

#### 6.8.1.4 Bikeways

Bicycle access is provided along various routes in the vicinity of the Project Area (see **Figure 6.8-2)**. These include on-street lanes such as along Marine Drive, Main Street and South Park Avenue, as well as off-street lanes such as the Riverwalk. There are no significant bicycle storage facilities in the Project Area.

#### 6.8.1.5 Parking

Existing available parking within the Project Area is shown in **Figure 6.8-3**. These spaces include metered and restricted on-street and off-street surface parking/ramp parking. The existing surface parking lots and on-street parking identified within the Project Area are identified in **Table 6.8-1**.

Table 6.8-1
Existing Parking within the Project Area

| Canal Side Lot Identifier | Parking Assessment Lot Identifier | Number of Parking Spaces |
|---|---|---|
| C1, C2 (Marine Drive Apartment Lot) | n/a | 383 |
| W1 (Webster Block) | 305 | 290 |
| D1, D2 (Donovan Lots) | 64 | 157 |
| T3 (NYSDOT Lot) | n/a | 40 |
| T1 (NYSTA Lot) | 60 | 40 |
| On-street parking (metered/restricted) | n/a | 121 |

*Sources: ECHDC, 2009 and Desman Associates, 2008.*

A complete inventory of existing on-street and off-street parking spaces was conducted for the 1999 Inner Harbor FEIS. The inventory examined four designated parking districts within the area: then-named Marine Midland Arena District; Office District, Erie Basin Marina District and portions of the Waterfront District and Elm-Oak Corridor. A radius of 1,500 feet was identified as a comfortable walking distance, and 2,000 feet as a maximum walking distance for event and activity-type parking. A total of 306 on-street /11,009 off-street and 226 on-street/954 off-street available parking spaces were identified within the two distances, respectively, from the Inner Harbor site. (Parsons Brinckerhoff Quade & Douglas, 1999).

More recently, the City of Buffalo completed the Comprehensive Parking Assessment Downtown Buffalo New York in December 2008 ("Parking Assessment"), which evaluated current and future parking supply and deficit conditions within the downtown area. The Parking Assessment study area is bounded by Goodell Street to the north, Michigan Avenue to the east, Elmwood Avenue to the west, and the Thruway and Inner Harbor to the south. As a subsection of the core study area, the HSBC Arena Parking District is defined as the area bounded by the Route 5 Skyway to the west, Inner Harbor to the south, Exchange Street to the north, and properties to the east of Michigan Avenue. The HSBC Arena Parking District contains a large portion of the Project Area, with the exception of land to the west of the Skyway. The Parking Assessment reports that this district, which also includes the HSBC Arena structured parking ramp and all of the surface lots to the east of the Arena and the HSBC Atrium, currently has an existing supply of 4,890 private and public off-street parking spaces and 162 on-street parking spaces. Under current conditions, with most of the Project Area undeveloped, there is a district wide surplus of approximately 2,181 parking spaces during peak occupancy hours (City of Buffalo Board of Parking, 2008).

### 6.8.2 Existing Traffic Volumes

Intersections within the study area consist of signalized and unsignalized vehicle control. An overview of the local roadways and study area intersections are illustrated in **Figure 6.8-4**.

#### 6.8.2.1 Event Conditions Roadway Network

During special events at the HSBC Arena and to a lesser extent Coca-Cola Field, transportation operational patterns can vary based on vehicle demand and special event roadway closures. The intersections of Michigan Avenue at Perry Street, Michigan Avenue at South Park Avenue, Michigan Avenue at Scott Street and Washington Street at Scott Street, and Washington Street at Perry Street are observed by City of Buffalo Police personnel during the peak hours generally one to two hours before and after an event. When traffic conditions warrant, the police override the controller operation at signalized intersections and the stop control condition at unsignalized intersections and give right-of-way through the intersection for the associated heavy movements. The block of Perry Street between Main Street and Washington Street is reserved for limousine traffic only and no general vehicular traffic is allowed through this section during event operations. Vehicular access to Seymour H. Knox III Plaza is typically shut down to allow the pedestrian movements to/from the Events Only Metro Rail Station. As a result, traffic flow and operating conditions vary. The inclusion of Arena event traffic on the adjacent roadway network, while producing traffic operations at over capacity conditions, is acknowledged to be of relatively limited duration before and immediately after the events and anticipated by many of the attendees to these events, and, as noted above, all key intersections are police controlled.

The event-related over-and near-capacity operating conditions are due both to the constraints of the street network around the Arena itself, and also to the vehicular access/egress options available along routes between the Arena and five main vehicle approach and departure routes used immediately preceding and following arena events. These approach and departure routes are:

**City Roadway Network/Downtown Buffalo/Theatre District/Chippewa via Pearl/Franklin/Washington:**
The major connections from the Buffalo City districts including Chippewa, Theatre District, Lafayette Square, Buffalo Convention Center, Main Place Mall, Allentown, and the Elmwood Strip, to the Arena and adjacent to the Project Area are along Pearl Street, Franklin Street and Washington Street. Post-event traffic can be delayed by the transfer of northbound traffic along Upper Terrace Street to Franklin Street, as the two-way Pearl Street Extension gives way to one-way southbound Pearl Street at Exchange Street.

**Southtowns via NYS Route 5 (Skyway):**
The Skyway traverses the Project Area overhead and terminates at Church Street, where vehicle operators have two options to turn south to the HSBC Arena and the Project Area. Skyway motorists can turn south at Pearl Street and follow the route described previously, or cross Main Street taking South Division to Washington Street, which has become the gateway to the Arena, depositing vehicles at the front door at Perry Street. Post-event delays are caused by attendees from this area who have parked east of Main Street and must travel back across Main Street, against northbound traffic along Perry Boulevard and Bingham Street to the Thruway south and the Skyway exit (N7) or Franklin Street to Church Street, entering the Skyway at the foot of South Elmwood Avenue.

**East Buffalo/Cheektowaga Area via NYS Route 33 (Kensington Expressway*):***
Residents of the City and eastern suburbs traveling downtown to HSBC Arena or the Project Area by way of Route 33 (Kensington Expressway) may continue onto Oak Street, a 4-lane, one-way thoroughfare with well timed traffic control devices, and plenty of maneuvering room. Event goers can take a variety of intersecting side streets to the arena's main entrance or to Perry Street, where numerous event parking lots are located. Some motorists from the east may choose to exit Route 33 at Goodell Street and continue south at the beginning of Pearl Street. Post-event delays occur along Washington Street or Michigan Avenue north, which provide direct access to Route 33 outbound.

**North Buffalo/Northern Erie County/Canada via the Thruway:**
The Thruway's three-lane section adjacent to LaSalle Park, which gathers traffic from the Tonawandas, North Buffalo, Black Rock, and Canada via the Peace Bridge can become congested in the southbound direction prior to an event. Many southbound Thruway motorists exit early at Niagara Street (Exit N8), using South Elmwood Avenue to Lower Terrace to Erie Street, parking in Waterfront Village parking lots or along Perry Boulevard. Users of the Elm Street exit (Exit N6), tend to encounter congestion at the Seneca Street ramp, and join other traffic south on Michigan Avenue.

Post-event delays occur approaching the Thruway north on Michigan Avenue and Washington Street to the Thruway entrance ramps at Oak Street (Exit N6). Delays on the mainline Thruway northbound are typical from the Elm/Oak interchange with the Thruway through the Niagara Street/Peace Bridge exit (Exit N9). Congestion occurs at the Bingham/Church Street intersection as event traffic travels towards the Church Street interchange along Bingham Street but is unable to turn onto Church Street due to the increased traffic along Church Street approaching the Thruway entrance ramps.

**Southtowns/Orchard Park/East Aurora via the Thruway:**
Inbound congestion along this route occurs at the Elm Street exit (N6) along Michigan Avenue south to Perry Street, as the Seneca Street ramp merges very near the Michigan Avenue intersection. Outbound conditions can be impacted by event traffic along Washington Street at the Thruway Ramp intersection.

#### 6.8.2.2 Existing Average Annual Daily Traffic (AADT)

Average Annual Daily Traffic (AADT) volumes on roadways in the Project Area were obtained for almost all roadways within the Project Area. Regional AADT count data is maintained by the GBNRTC and the NYSDOT. In addition to local roadway AADT volumes, the Project Area is influenced by traffic from the adjacent elevated highways (the Thruway and Skyway). As a result, the AADT traffic volumes for these roadways are included in the information summary. The most recent AADT traffic data for selected roadway segments in the Project Area are listed below in **Table 6.8-2** and are illustrated with additional roadway segments in **Figure 6.8-5**.

Table 6.8-2
Annual Average Daily Traffic (AADT) Counts

| Road | Segment | AADT | Count Year |
|---|---|---|---|
| Church Street | Delaware Ave. to Franklin St. | 10,000 | 2007 |
| Elm/Oak Street | Swan St. to Division St. | 30,200 | 2005 |
| Exchange Street | Pearl St. to Main St. | 3,200 | 2005 |
| Lower Terrace | Pearl St. to Church St. | 1,800 | 2007 |
| Marine Drive | Erie St. to Pearl St. Extension | 2,600 | 2005 |
| Pearl St. Extension | Marine Dr. to Exchange St. | 2,250 | 2007 |
| Perry Street | Main St. to Washington St. | 700 | 2005 |
| Scott Street | Main St. to Washington St. | 2,400 | 2006 |
| Main Street | South Park Ave. to Scott St. | 1,000 | 2005 |
| Washington Street | Scott St. to Seneca St. | 8,100 | 2004 |
| Route 5 (Skyway) | Fuhrmann Blvd. to Thruway | 40,100 | 2006 |
| Thruway | Rt. 5 Skyway to Church St. | 90,800 | 2004 |

*Source: GBNRTC, NYSDOT*

### 6.8.2.3 Existing Levels of Service

An existing conditions intersection Level of Service (LOS) analysis was conducted for the Project Area intersections. A total of 32 intersections in the Project Area were analyzed as part of the intersection analysis. The intersection LOS is related to the average delay experienced by motorists traversing an intersection. LOS may range from A to F, with A being the best quality of service and F being the poorest. LOS E is the worst level of service that can occur before intersection volumes exceed capacity. When LOS F occurs, there are substantial queues on intersection approaches, and multiple changes of a signal are required to traverse an intersection. A summary of the average control delay along with qualitative descriptions of traffic flow associated with each LOS are listed **Table 6.8-3**. This description of delay is based on definitions established in the *Highway Capacity Manual, 2000 Edition* (Transportation Research Board, 2000).

Table 6.8-3
Level of Service Criteria for Intersections

| Level of Service | Average Control Delay (seconds/vehicle) | Traffic Flow Description |
|---|---|---|
| A | <10 | Represents free flow conditions. Individual users are virtually unaffected by the presence of others in the traffic stream. Freedom to select desired speeds and to maneuver within the traffic stream is extremely high. |
| B | >10 and <20 | In the range of stable flow, but the presence of other users in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver within the traffic stream from LOS A. |

Table 6.8-3
Level of Service Criteria for Intersections

| | | |
|---|---|---|
| C | >20 and <35 | In the range of stable flow, but it marks the beginning of the range of flow in which the operation of individual users become significantly affected by interactions with others in the traffic stream. |
| D | >35 and <55 | Represents high density, but stable flow. Speed and freedom to maneuver are severely restricted, and the driver experiences a generally poor level of comfort and convenience. |
| E | >55 and <80 | Represents operating conditions at or near the capacity level. Freedom to maneuver within the traffic stream is extremely difficult. Comfort and convenience levels are extremely poor, and driver frustration is generally high. |
| F | >80 | Describes forced or break-down flow. This condition exists when the amount of traffic approaching a point exceeds that which can traverse the point. |

*Source: Highway Capacity Manual, 2000 Edition*.

The existing conditions LOS analysis was conducted for four analysis scenarios. The four scenarios were identified based on anticipated traffic generation patterns from the Canal Side Project site and in conjunction with the City of Buffalo Department of Public Works, Street and Parks and GBNRTC. The analysis scenarios include the following:

- Weekday PM Peak
- Weekday PM Peak w/Event (Coca-Cola Field and HSBC Arena)
- Saturday Afternoon Peak
- Saturday Afternoon Peak w/Event (Coca-Cola Field)

Traffic volume data was collected for the analysis scenarios from a number of sources. The information included recent traffic count information provided by the GBNRTC, recent traffic count information from the Seneca Buffalo Creek Casino Traffic Impact Study, and included manual turning movement counts at five intersections for both weekday and Saturday conditions.

**Peak Period Levels of Service – Non- Event Conditions**

Existing LOS during the PM peak hour and Saturday afternoon peak hour non-event conditions for intersections in the Project Area are identified in **Table 6.8-4**. A summary of the intersection LOS by location for the non-event conditions are illustrated in **Figure 6.8-6**.

Overall intersection LOS are all found in the acceptable range from A to C during both the weekday PM peak hour and Saturday afternoon peak hour non-event conditions periods. In addition, all approaches to signalized intersections within the Project Area were found to also operate at acceptable levels of service of A to D. No intersections or their approaches were found to operate in an over-capacity condition, LOS F. Of the signalized intersections, only the southbound movement at Franklin Street approaching Church Street and the westbound Swan Street approaching Elm Street were found to operate at an LOS D during the weekday PM peak hour. Of the unsignalized intersections, only the northbound movement at Bingham Street

approaching Church Street was found to operate at an LOS D during the weekday PM peak hour. No intersection approaches were found to operate at unacceptable levels of service during the Saturday afternoon peak hour.

Table 6.8-4
Existing Non-Event Conditions

| Intersection | PM Peak | Saturday | Control Type |
|---|---|---|---|
| Church Street & Bingham Street | A/11.8 | A/3.2 | Unsignalized |
| NB | D | A | |
| Church St. & Elmwood Ave. | B/19.4 | B/18.3 | Signal |
| EB | C | C | |
| WB | C | B | |
| SB | B | B | |
| Church St. & Delaware Ave. | B/13.5 | B/12.6 | Signal |
| EB | A | A | |
| WB | A | A | |
| NB | C | C | |
| SB | C | C | |
| Church St. & Franklin St. | C/20.8 | B/19.3 | Signal |
| EB | B | B | |
| WB | B | B | |
| NB | C | C | |
| SB | D | D | |
| Church St. & Pearl St. | B/12.1 | B/11.7 | Signal |
| EB | A | A | |
| WB | A | A | |
| SB | C | C | |
| Church St. & Main St. | A/2.0 | A/2.0 | Signal w/LRT |
| EB | A | A | |
| WB | A | A | |
| Erie St. & Bingham St. | A/4.2 | A/3.6 | Unsignalized |
| Erie St. & Perry Blvd. | A/1.3 | A/1.1 | Unsignalized |
| Erie St. & Marine Drive | A/7.5 | A/7.4 | Unsignalized |
| Erie St. & Lakefront Blvd. | B/12.7 | A/6.9 | Unsignalized |
| Marine Dr. & Pearl St. Ext. | A/8.0 | A/7.4 | Unsignalized |
| Pearl St. Ext. & Perry Blvd. | A/6.7 | A/6.4 | Unsignalized |
| Pearl St. Ext. & L. Terrace | N/A | N/A | Unsignalized |
| Pearl St. & U. Terrace/ Exchange St. | A/8.3 | A/8.1 | Unsignalized |
| Pearl St. & Seneca St. | B/10.5 | A/10.3 | Signal |
| EB | A | A | |
| SB | B | A | |
| Main St./Knox Plaza & Scott St. | A/7.6 | A/8.0 | Signal w/LRT |
| EB | A | A | |
| WB | A | A | |
| NB | B | B | |
| Main St./Knox Plaza & Perry St. | A/7.4 | A/7.1 | Unsignalized |
| Main St. & Exchange St. | A/1.9 | A/1.9 | Signal w/LRT |
| EB | A | A | |
| WB | A | A | |
| Main St. & Seneca St. | A/2.1 | A/2.0 | Signal w/LRT |
| EB | A | A | |
| Main St. & Swan St. | A/2.2 | A/2.1 | Signal w/LRT |
| WB | A | A | |
| Washington St. & Swan Street | B/19.4 | B/13.3 | Signal |
| WB | B | A | |
| NB | C | C | |
| SB | B | B | |

Table 6.8-4
Existing Non-Event Conditions

| Intersection | PM Peak | Saturday | Control Type |
|---|---|---|---|
| Washington St. & Seneca Street | A/9.9 | A/9.8 | Signal |
| EB | B | B | |
| NB | A | A | |
| SB | A | A | |
| Washington St. & Exchange Street | B/15.1 | B/14.4 | Signal |
| EB | A | A | |
| WB | A | A | |
| NB | B | B | |
| SB | C | B | |
| Washington St. & Thruway Ramp | A/6.5 | A/1.3 | Unsignalized |
| SB | B | A | |
| Washington St. & Scott St. | B/17.0 | B/12.3 | Signal |
| EB | A | A | |
| WB | A | A | |
| NB | C | B | |
| SB | B | B | |
| Washington St. & Perry St. | A/8.2 | A/7.5 | Unsignalized |
| Michigan Ave. & South Park Avenue | A/9.9 | A/7.9 | Signal |
| EB | B | B | |
| WB | B | B | |
| NB | A | A | |
| SB | B | A | |
| Michigan Ave. & Perry St. | A/9.5 | A/7.2 | Signal |
| EB | B | B | |
| WB | B | B | |
| NB | A | A | |
| SB | A | A | |
| Michigan Ave. & Scott St. | A/6.3 | A/2.3 | Unsignalized |
| Michigan Ave. & Seneca St. | A/9.2 | A/7.3 | Signal |
| EB | A | A | |
| WB | A | A | |
| NB | B | B | |
| SB | B | B | |
| Michigan Ave. & Swan St. | A/8.2 | A/10.2 | Signal |
| EB | B | B | |
| WB | B | B | |
| NB | A | A | |
| SB | B | A | |
| Elm St. & Swan St. | B/13.1 | B/10.9 | Signal |
| WB | D | C | |
| NB | A | A | |
| Oak St. & Swan St. | B/11.2 | A/7.7 | Signal |
| EB | C | B | |
| WB | C | B | |
| SB | A | A | |

*Source: PB, 2009, GBNRTC, 2005-2008, FRA, Seneca Buffalo Creek Casino 2005*

## Peak Period Levels of Service - Event Conditions

Existing LOS during the PM peak hour and Saturday afternoon peak hour during event conditions for intersections in the Project Area are identified in **Table 6.8-5**. A summary of the intersection LOS by location for event conditions are illustrated in **Figure 6.8-7**.

Overall intersection LOS with event conditions are all in the acceptable range from A to C during both the weekday PM peak hour and Saturday afternoon peak hour. In addition, all approaches to unsignalized intersections within the study area were found to also operate at acceptable LOS of A to D, with the exception of the Bingham Street approach to Church Street. The unsignalized Bingham Street approach to the Church Street intersection was found to operate at a LOS F during the weekday PM peak period with event conditions. Of the signalized intersections, the southbound movement at Franklin Street approaching Church Street and the westbound Swan Street approaching Elm Street were found to operate at an LOS D during the weekday PM peak hour with event conditions. No intersections were found to operate at unacceptable overall LOS during the Saturday afternoon peak hour with Event Conditions. The southbound approach of Franklin Street to Church Street was found to operate at a LOS D during the Saturday afternoon peak with event conditions, however, no additional intersection approaches were found to operate with an LOS worse than C.

Table 6.8-5
Existing Event Conditions

| Intersection | PM Peak | Saturday | Control Type |
|---|---|---|---|
| Church St. & Bingham Street | B/27.4 | A/9.4 | Unsignalized |
| NB | F | C | |
| Church St. & Elmwood Ave. | C/20.0 | B/17.9 | Signal |
| EB | C | C | |
| WB | C | B | |
| SB | B | B | |
| Church St. & Delaware Ave. | B/14.6 | B/12.2 | Signal |
| EB | A | A | |
| WB | A | A | |
| NB | C | C | |
| SB | C | C | |
| Church St. & Franklin St. | C/22.6 | B/18.7 | Signal |
| EB | B | B | |
| WB | B | B | |
| NB | C | C | |
| SB | D | D | |
| Church St. & Pearl St. | B/12.8 | A/11.5 | Signal |
| EB | A | A | |
| WB | A | A | |
| SB | C | C | |
| Church St. & Main St. | A/2.1 | A/1.9 | Signal w/LRT |
| EB | A | A | |
| WB | A | A | |
| Erie St. & Bingham St. | A/4.4 | A/3.7 | Unsignalized |
| Erie St. & Perry Blvd. | A/1.4 | A/1.2 | Unsignalized |
| Erie St. & Marine Drive | A/7.7 | A/7.5 | Unsignalized |
| Erie St. & Lakefront Blvd. | C/17.4 | A/7.3 | Unsignalized |
| Marine Dr. & Pearl St. Ext. | A/8.4 | A/7.4 | Unsignalized |
| Pearl St. Ext. & Perry Blvd. | A/6.9 | A/6.4 | Unsignalized |
| Pearl St. Ext. & L. Terrace | N/A | N/A | Unsignalized |
| Pearl St. & U. Terrace/ Exchange St. | A/8.7 | A/7.7 | Unsignalized |
| Pearl St. & Seneca St. | B/10.7 | A/10.3 | Signal |
| EB | A | A | |
| SB | B | B | |
| Main St./Knox Plaza & Scott St. | A/7.8 | A/8.2 | Signal w/LRT |
| EB | A | A | |

Table 6.8-5
Existing Event Conditions

| Intersection | PM Peak | Saturday | Control Type |
|---|---|---|---|
| WB | A | A | |
| NB | B | B | |
| Main St./Knox Plaza & Perry St. | A/7.6 | A/7.1 | Unsignalized |
| Main St. & Exchange St. | A/2.0 | A/1.9 | Signal w/LRT |
| EB | A | A | |
| WB | A | A | |
| Main St. & Seneca St. | A/2.2 | A/2.0 | Signal w/LRT |
| EB | A | A | |
| Main St. & Swan St. | A/2.3 | A/2.0 | Signal w/LRT |
| WB | A | A | |
| Washington St. & Swan Street | C/20.2 | | Signal |
| WB | B | | |
| NB | C | | |
| SB | B | | |
| Washington St. & Seneca Street | B/10.4 | A/9.3 | Signal |
| EB | B | B | |
| NB | A | A | |
| SB | A | A | |
| Washington St. & Exchange Street | B/16.2 | B/13.3 | Signal |
| EB | A | A | |
| WB | B | A | |
| NB | C | B | |
| SB | C | B | |
| Washington St. & Thruway Ramp | B/11.8 | A/6.0 | Unsignalized |
| SB | C | A | |
| Washington St. & Scott St. | B/19.4 | B/15.6 | Signal/Officer Controlled |
| EB | A | A | |
| WB | A | A | |
| NB | C | B | |
| SB | B | B | |
| Washington St. & Perry St. | A/8.9 | A/7.3 | Unsignalized |
| Michigan Ave. & South Park Avenue | B/10.6 | A/8.4 | Signal/Officer Controlled |
| EB | B | B | |
| WB | B | B | |
| NB | A | A | |
| SB | B | A | |
| Michigan Ave. & Perry St. | B/10.6 | A/8.7 | Signal/Officer Controlled |
| EB | B | B | |
| WB | B | B | |
| NB | A | A | |
| SB | B | A | |
| Michigan Ave. & Scott St. | A/9.8 | A/1.7 | Unsignalized /Officer Controlled |
| Michigan Ave. & Seneca St. | A/9.5 | A/7.7 | Signal |
| EB | A | A | |
| WB | A | A | |
| NB | B | B | |
| SB | B | B | |
| Michigan Ave. & Swan St. | A/8.7 | A/8.7 | Signal |
| EB | B | B | |
| WB | B | B | |
| NB | A | A | |

Table 6.8-5
Existing Event Conditions

| Intersection | PM Peak | Saturday | Control Type |
|---|---|---|---|
| SB | B | B | |
| Elm St. & Swan St. | B/17.7 | B/10.3 | Signal |
| WB | D | C | |
| NB | A | A | |
| Oak St. & Swan St. | B/13.1 | B/11.8 | Signal |
| EB | C | B | |
| WB | C | B | |
| SB | A | A | |

*Source: PB, 2009; GBNRTC, 2005-2008; FRA Seneca Buffalo Creek Casino, 2005*

### 6.8.2.4 Accident Analysis

A review of the accident records for the roadways in the study area was conducted. Accident records for the intersections along the Project Area roadways were provided by the City of Buffalo Department of Public Works, Parks and Streets for a three-year period (January 1, 2006 to December 31, 2008). A summary of the accident occurrences at the Project Area intersections is indicated in **Figure 6.8-8**. The following sections summarize the results of the data collection for the noted roadways.

A. Church Street at Bingham Street

Seventeen accidents were recorded in the vicinity of and at this intersection during the accident investigation period. Of the seventeen accidents, seven of them were angle type accidents and five were rear end collisions. Three accidents occurring at this intersection resulted in minor injuries and two of these three originated from a single vehicle colliding with a fixed object (Thruway pier). The third injury accident was an angle type collision. A traffic signal installation is planned at the Church Street with Bingham Street intersection by NYSDOT in the year 2010. The operation of the intersection under signalized control would help to reduce accident occurrences at this intersection.

B. Pearl Street/Commercial Street – Marine Drive to Church Street

Thirteen accidents were recorded along Pearl Street/Commercial Street during the accident investigation period. Four of the accidents occurred at the entrance of a parking lot, which were all angle type accidents while four of the accidents were sideswipes in the same direction. There was one pedestrian accident which caused the only injury (minor) during the course of this accident investigation period.

C. Erie Street - Franklin Street to Marine Drive

Six accidents were recorded along Erie Street during the accident investigation period. One injury accident (minor) occurred during this investigation period, which resulted from a pedestrian accident. Five of the six accidents occurred between the hours of 1:00 pm and 4:00

pm. Accident types were very spread out during this investigation period which included a rear end collision, two sideswipes, a left turn (wrong way) on a one-way street and one head on collision.

D. Marine Drive - Erie Street to Main Street

Eight accidents were recorded along Marine Drive during the accident investigation period. One injury accident (minor) occurred during this investigation period which resulted from a pedestrian accident. Three of the collisions were of the angle type; while two of the collisions were sideswipes. All of the accidents occurred on Marine Drive and were not at any intersections.

E. Perry Street – Main Street to Michigan Avenue

Four accidents were recorded along Perry Street during the accident investigation period. Two collisions were with fixed objects with one of them causing injury. The operator of the motor vehicle, who was injured, ran a stop sign on Main and Perry subsequently colliding with HSBC Arena. Three of the four of the collisions occurred between the hours of 9:00 pm and 11:00 pm.

F. Perry Boulevard - Pearl Street to Erie Street

Eight accidents were recorded along Perry Boulevard during the accident investigation period. Four of the collisions were rear end collisions with parked vehicles. A single head on collision caused three of the four injuries during this investigation period. The other injury occurred when a passenger jumped out of a moving vehicle. The other two accidents were sideswipes; one in the same direction and one in opposite directions.

G. Main Street/Seymour H. Knox III Plaza - South Park Avenue to Scott Street

Seven accidents were recorded along this section of Main Street during the accident investigation period. Three injuries during this investigation period were caused by a truck explosion. The explosion was not cause by a collision. Two of the collisions were rollovers due to loss of operator control which resulted in no injuries. Only one collision occurred at an intersection (Seymour H. Knox III Plaza and Scott Street) where the operator collided with a fixed object.

H. Scott Street - Main Street to Michigan Avenue

Six accidents were recorded along Scott Street during the accident investigation period. One collision resulted in injury, which was a pedestrian accident in a parking lot. Three of the collisions were of the angle type and the other two sideswipes. One of the angle type and one of the sideswipe collisions involved limousines. Both of these collisions were at the Washington Street and Scott Street intersection.

I. Exchange Street - Michigan Avenue to Pearl Street

Eighteen accidents were recorded along Exchange Street during the accident investigation period. Fifty percent of the collisions involved injuries, most of them resulting from pedestrian accidents. Seven pedestrian accidents occurred when the pedestrian was crossing the street. Only one pedestrian accident did not result in injuries. Eight of the nine pedestrian collisions occurred at Exchange Street and Washington Street intersection. No identifiable pattern was derived from a review of the pedestrian accidents occurring at the Exchange Street with Washington Street intersection. Due to the high frequency of these accidents and the proximity of this intersection to the project study area, pedestrian impacts to this intersection resulting from the project impact will need to be further investigated.

J. Bingham Street - Erie Street to Church Street

Three accidents were recorded along Bingham Street during the accident investigation period. No injury accidents were reported. Two of the three accidents were of the angled type and one consisted of a vehicle backing into another.

K. Washington Street – Perry Street to Swan Street

Eleven accidents were recorded along Washington Street during the accident investigation period. Two separate injury accidents were reported. One of which was a pedestrian accident and the other in which the passenger exited a moving vehicle. A wide array of collision types occurred during this investigation period which included two angled type, one head on (parking lot), two sideswipes, two rear end collisions, and two collisions with fixed objects.

L. Seneca Street – Michigan Avenue to Franklin Street

Nineteen accidents were recorded along Seneca Street during the accident investigation period. Over 80 percent of the collisions were either rear ends or angle type. Six injuries were reported during this period, all occurring as a result from either a rear end or an angle type. Other collisions that occurred during this investigative period included one sideswipe, four collisions with fixed objects and three angle type collisions. Accident occurrences at the Seneca Street at Pearl Street intersection would likely be reduced by the city's proposed conversion of Pearl Street to two-way operation.

## 6.9 Hazardous Waste / Contaminated Materials

### 6.9.1 Summary of Prior Hazardous Materials Reports

Prior hazardous materials investigations associated with the Erie Canal Harbor Project and other prior projects indicate the need for soils management programs to address the handling and disposal of landside excavation. These documents indicated the presence of contaminated soils on sites within the Project Area. This section summarizes the results of documentary research and on-site testing that has been conducted on various parcels within the Project Area to

determine the presence of subsurface contamination. This summary is based on a review of the publicly available hazardous materials reports that are relevant to the Project Area, including:

- Buffalo Inner Harbor Soil Characterization Study, 1994
- Final Site Investigation, Buffalo Inner Harbor Development Project, 1998
- Draft Hazardous Waste/Contaminated Materials Screening Report, Inner Harbor and Waterfront Development Transportation Infrastructure Facility, 2003;
- Phase II Environmental Site Assessment, Webster Block Property, August 2000;
- Summary of Test Pit Investigation Findings, Webster Block Property, Buffalo, New York, July 2001;
- Environmental Record Site Preparation Activities at 125 & 140 Main Street, Buffalo, New York, December 2007;
- Phase I Environmental Site Assessment for the Buffalo Memorial Auditorium, 130 Main Street, Buffalo, New York, August 2006;
- Uniform Hazardous Waste Manifest Nos. 001709959, 001059843, and 001059841, Buffalo Memorial Auditorium, 140 Main Street, Buffalo, New York 14203, October 2, 2008;
- Draft Phase II Environmental Site Assessment Report of the General William J. Donovan State Office Building, 125 Main Street, Buffalo, New York, November 2007; and
- Tank Closure report, Donovan Building, 125 Main Street, Buffalo, New York, LCS File No. 08B2364.26, NYSDEC Spill No. 080672, December 9, 2008.

The following summarizes known soil and groundwater conditions within the Project Area.

### 6.9.2 Erie Canal Harbor Focus Area

An assessment of the Erie Canal Harbor Focus Area was conducted as part of the 1999 Inner Harbor FEIS and is based on site history, the results of a Buffalo Inner Harbor soil characterization study completed in 1994 (Malcolm Pirnie Inc., March and May, 1994) and a supplemental sampling and testing program performed during Spring 1998. Complete descriptions of these studies are provided in Draft Final Site Investigation, Buffalo Inner Harbor Development Project (URS-Greiner 1998), which is on file with the ESDC. A soils management plan developed in 1999, and amended in 2005, was also prepared and contains the specific conditions and requirements for managing soils within this Erie Canal Harbor Project Area.

The results from the analyses conducted for the 1999 Inner Harbor FEIS are found below.

#### 6.9.2.1 General Characteristics of Soil and Bedrock, 1994 Program

The results of the soil boring program indicated that fill materials were present in each of the borings and ranged in thickness between 6 and 20.7 feet. In addition to soil and crushed stone, the fill material contained bricks, mortar, wood, cinders, white ash, glass, concrete, slag, and

coal. Underlying the fill was a layer of glacial silt ranging in thickness between 0 and 22.3 feet. The glacial silt layer was underlain by a layer of glacial sand ranging in thickness between 4.1 and 22.1 feet. In 20 of the 23 borings, a thin (0.2 to 4.9 feet) glacial till layer was found just above Onondoga Limestone bedrock, which ranged in depth between 29.4 and 42.2 feet below the surface. Groundwater was present in the fill and overburden soils at slightly above the Buffalo River level.

**Presence of Contaminants:**

- There were no exceedances of the NYSDEC-recommended soil cleanup objectives for Volatile Organic Compounds (VOCs) in the six samples analyzed except for one sample (B-105) at the bedrock/overburden interface (40 to 42 feet). The presence of VOC's in this sample is not considered to be related to on-site materials.
- Semi-volatile Organic Compounds (SVOCs) were detected in five of the six samples collected from the fill materials. Elevated levels of carcinogenic polyaromatic hydrocarbons (PAHs) were exhibited in four of the six samples (B-101, B-103, B-112 and B-117) at concentrations greater than the NYSDEC-recommended soil cleanup objectives.
- Elevated levels of TPHs were detected in both samples analyzed for petroleum compounds (B-101, B-112).
- No detectable levels of pesticides or PCBs were observed in any of the six samples analyzed.
- Lead was detected in each of the 76 samples analyzed for total lead at concentrations ranging from 10.9 mg/kg to 1,834 mg/kg. Elevated concentrations of lead were generally detected in the shallow fill material and were particularly concentrated at boring locations B-101, B-112, B-113, B-115 and B-117. All seventy-six samples exhibited total lead concentrations greater than the NYSDEC-recommended soil cleanup objectives.
- Mercury concentrations exceeded NYSDEC recommended soil cleanup objectives in 38 of the 44 samples analyzed. Elevated concentrations of mercury were dispersed among the upper and lower fill materials, but were particularly concentrated in boring locations B-101, B-113, B-114 and B-117. Metal concentrations exceeded the NYSDEC-recommended soil cleanup objectives including cadmium (B-101 and B-112), copper (B-101, B-103, B-112 and B-117), and zinc (B-101, B-103, B-112, B-117 and B-118).
- There were no exceedances of the regulatory concentration for TCLP metals in any of the thirty samples tested except for B-101 (10 to 12 feet) and B-115 (2 to 4 feet) which exhibited a TCLP lead concentration of 8.59 mg/l and 10.1 mg/l, respectively.

6.9.2.2 General Characteristics of Soil and Bedrock, 1998 Program

Fill materials consisting of silt, sand, and gravel with varying amounts of brick, wood, cinders, ash, clay, glass, slag, and concrete were encountered in all the borings. These materials vary in thickness from about six to 25 feet, and generally increase toward the bulkhead. The top of bedrock in the west area ranged from 28 to 29.7 feet below ground level.

The groundwater levels across the site typically range from about six to eleven feet below the ground surface. Groundwater flow is generally from east to west across the site, toward the Buffalo River.

The newly tested area on the western portion of the site exhibited comparable contamination levels as the site tested during the 1994 sampling program. The results of the 1998 program are consistent with the results of the 1994 program. Detected contaminants consist primarily of metals, SVOCs, and one hazardous lead exceedance observed in the vicinity of the previously identified problem area.

**Presence of Contaminants:**

- No VOCs, pesticides, or PCBs were detected in any of the soils/fill at levels that exceed the recommended soil cleanup objectives. The only exception is a single exceedance in B-105 at the bedrock interface (40 to 42 feet) which is not considered to be related to site activities and/or sources.
- SVOCs, consisting primarily of PAHs (carcinogenic), and metals were detected in most borings within the fill materials both above and below the water table, at levels which exceeded the recommended soil cleanup objectives (B-1 to B-8 and B-18 to B-23). Elevated levels of PAHs across the site are attributed to the composition of existing onsite fill materials. The presence of ash, cinder, burnt wood, and some isolated oil staining was identified in the till material.
- The glacial silts which underlie the fill materials across the site do not show any detectable levels of VOCs, SVOC, pesticides, or PCBs. However, they do exhibit detectable levels of several metals which exceed the recommended soil cleanup objectives and/or typical background levels for soils in the eastern United States. The levels of elevated metals may be associated with the source of the glacial silts, which are derived from glacial tills originating in the Canadian Shield area, which is noted for numerous high-grade metal ore deposits.
- All the soils/fill encountered during the investigation are nonhazardous, with the exception of three samples collected in the west-central portion of the site, which exceeded the TCLP criteria for lead.
- Numerous petroleum-related compounds were detected at low levels in the soil/fill samples in the nonexcavation area. Only naphthalene in one boring exceeded the NYSDEC STARS criteria. Additionally, naphthalene was not detected in groundwater from the monitoring well which was installed at this location.
- Elevated levels of lead were observed in three of the six borings installed to delineate the previously-identified area containing hazardous levels of lead. However, only one sample from B-10 (4 to 6 feet) exceeded the TCLP hazardous lead level of 5 mg/L. This is consistent with the previous investigation results which identified exceedances of the TCLP criteria in B-101 and B-115 located west and south of B-10.

- No VOCs, SVOCs, pesticides, or PCBs were detected at levels which exceeded the standards for Class GA waters. Only a limited number of metals (e.g., aluminum, iron, magnesium, manganese, sodium, and zinc) exceeded the standards for Class GA waters. These metals are typically high in groundwaters in Western New York. A sample of water from the Buffalo River, adjacent to the site, exhibited the same list of metals but at somewhat lower concentrations.
- No sources of on-site/off-site petroleum were identified during the investigation. The PAH contamination identified in the on-site fill materials may be related to residual oils and/or ash materials in the original fill material.
- Based on the groundwater data, it appears that there are no significant impacts from migration of contaminants onto the site from off-site sources. Additionally, there are no apparent impacts to off-site groundwater due to migration of contamination from the site.

6.9.2.3 Results of 1998 Supplemental Petroleum Testing Program

The supplemental testing program for petroleum did not yield any specific indication of petroleum contamination in soils at the site. Specifically the testing results were as follows:

- No PID readings above site background levels (0.5 ppm) and no visual evidence of petroleum (i.e., staining, odors or sheens) were observed in any of the eleven test trenches. The grab samples collected were submitted for chemical analysis.
- Analytical results for ten of the eleven soil samples showed no detections of any NYSDEC STARS compounds, VOCs, or SVOCs. The exception was a sample where naphthalene was detected, but at an estimation well below the extraction guidance value. Lead was not detected in any of the eleven samples collected.

### 6.9.3 Donovan Block Focus Area

6.9.3.1 Environmental Record Site Preparation Activities at 125 & 140 Main Street, Buffalo, New York, December 2007

This report was part of the SEQRA environmental documentation for the proposed site preparation activities to be undertaken by ECHDC at both the Aud and Donovan Blocks to facilitate the Project. In December 2007, ECHDC issued a Negative Declaration on these pre-development activities, indicating that they would result in no significant environmental impacts (ECHDC, 2007). Consistent with the above action, ECHDC has implemented a comprehensive asbestos abatement program for both the Aud and Donovan Buildings, and is in the process of razing the Aud. The environmental documentation included the following information regarding contaminated materials at the Aud and Donovan Buildings.

A Phase I Environmental Site Assessment for the Donovan Block was conducted in July 2007. This assessment also included field reconnaissance and other record searches to identify suspect materials that would require remediation. This assessment yielded the following:

- Miscellaneous hazardous materials observed at the Donovan Block include paints, water treatment chemicals (e.g. aquacides, acids, etc.), solvents, coolants, compressor oil, diesel fuel, and gasoline. The majority of the hazardous materials were stored in flammable storage lockers in the penthouse.
- Mercury-containing gauges were observed in the penthouse during site inspection and mercury-containing gauges were reported to be present in the boiler room.
- No hazardous wastes or universal wastes were observed at the subject property. The majority of the old fluorescent light ballasts that may have contained PCBs have been replaced with non-PCB fluorescent light ballasts, but some PCB-containing fluorescent light ballasts may still be present. According to the on-site representatives, used fluorescent lamps were sent to a central New York State facility for recycling.
- Two active USTs are associated with the Donovan property: one 4,000-gallon steel gasoline UST located by the vehicle refueling area near the Scott Street entrance to the south parking lot; and one 2,000-gallon steel diesel fuel UST located by the south side of the building for the emergency generator. Additionally there is one inactive 30,000 gallon steel Number 6 fuel oil UST located by the east side of the building that had previously been use to store oil for the boilers. Two monitoring wells are present in the vicinity of the gasoline UST, one monitoring well is present in the vicinity of the diesel fuel UST, and two monitoring wells are in the vicinity of the Number 6 fuel oil UST. The Number 6 fuel oil tank was taken out of service and reportedly cleaned and closed in accordance with applicable NYSDEC regulations. However, no documentation was available from by NYSOGS. There are no records of leaks or spills associated with any of these USTs in the EDR database. However, no additional information was provided by NYSOGS. Based on the age of site development (1961), there may be lead-based paint (LBP) on surfaces at the subject property.
- One off-site property, The Buffalo News, is an industrial property located upgradient of the Donovan property and is listed in the Leaking Tanks (LTANKS), historic leaking tanks (HIST LTANK), spills (SPILLS), and historic spills (HIST SPILLS) databases. There is the potential that discharged oil may have migrated onto the subject property.
- According to the Sanborn fire insurance maps, the Hamburg Canal, which ran east-west through what is now the south parking lot, was filled between 1899 and 1925. The source and nature of the fill material is not known. (ECHDC, 2007).

The report found that the proposed site preparation activities would result in positive effects by proper documentation, investigation, and remediation/disposal of hazardous waste and contaminated materials on both the Aud and Donovan Blocks. The proposed action would include procuring qualified contractors to undertake remediation activities in accordance with all applicable NYSDEC and other regulations.

### 6.9.3.2 Draft Phase II Environmental Site Assessment Report of the General William J. Donovan State Office Building, 125 Main Street, Buffalo, New York, November 2007

ECHDC commissioned a limited Phase II ESA to collect the necessary data to determine the nature and extent of any contamination that may be associated with the areas of concern identified in the Phase I ESA Report (see Chapter 6.9.3.1). In addition, geotechnical data was obtained as part of the work scope for use in designing future structures on the site (geotechnical findings are not summarized here). The site investigations focused on evaluating fill material in the former Hamburg Canal; fill materials in the remaining area of the site; and groundwater and soil in the vicinity of underground storage tanks.

The analytical data obtained from soil/fill and groundwater were compared to appropriate New York State standards, criteria and guidance (SCG) values. For soils, considering the proposed future use of the site is commercial redevelopment, the NYSDEC Regulations 6NYCRR Subpart 375 6.8(b) Restricted Use Soil Cleanup Objectives for commercial uses were utilized. NYSDEC Division of Water Technical and Operational Guidance series (1.1.1) "*Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations*" (TOGS 1.1.1) were used for groundwater.

**Former Hamburg Canal**
Analytical results from soil/fill samples from six borings located in the Hamburg Canal are presented below.

*Volatile Organic Compounds* – Acetone and benzene were present above detection limits in samples two of the six borings collected at depths of 13 to15 feet and 5 to 7 feet. However, concentrations of the detected VOCs did not exceed New York State SCG values.

*Semivolatile Organic Compounds* – SVOCs consisted primarily of polycyclic aromatic hydrocarbons (PAHs) were present above detection limits in samples from five of six borings collected at depths ranging from 7 to 17 feet. However, only benzo(a)pyrene in two borings exceeded New York State SCG values.

*Metals* – Various metals were present above detection limits in all of the soil/fill samples. However, none of the concentrations exceeded the New York State SCG values.

*RCRA Characteristics* - None of the six samples exceeded the New York State SCG values for RCRA characteristics.

**Remaining Areas of the Site**
Analytical results from soil/fill samples from ten borings located in the remaining areas of the site are presented below.

*Volatile Organic Compounds* – Toluene and xylene were present above detection limits in samples from two borings at depths of 3 to 5 feet. Additionally methylene chloride and methyl cyclohexane were present above detection limits in one boring at a depth of 13 to15 feet. However, none of the concentrations of detected VOCs exceeded New York State SCG values.

*Semivolatile Organic Compounds* – SVOCs, primarily consisting of PAHs, were present above detection limits in samples from three of the ten of six borings collected at depths ranging from 5 to 17 feet. However, only one sample exhibited concentrations of Benzo(a)anthracene, benzo(a)pyrene, benzo(b)flouranthene, chrysene and indeno(1,2,3-cd)pyrene that exceeded New York State SCG values.

*Metals* – Various metals were present above detection limits in all of the soil/fill samples. However, only copper in the soil/fill sample from one boring at a depth of 15.0 to 15.6 feet exceeded the New York State SCG values.

**Underground Storage Tanks**

Analytical results for the soil/fill samples collected from six borings located in the vicinity of the three underground storage tanks are presented below.

*Volatile Organic Compounds* – Acetone was present above detection limits in samples from one of the six bore holes collected at depths of 14 to 16 feet. However, the concentration did not exceed New York State standards, criteria and guidance values.

*Semivolatile Organic Compounds* – SVOCs, primarily consisting of PAHs, were present above detection limits in samples from two of six borings collected at depths ranging from 11 to 16 feet. However, only one sample collected at a depth of 14-16 feet exhibited concentrations of benzo(a)anthracene, benzo(a)pyrene, benzo(b)flouranthene that exceeded New York State SCG values.

Analytical results for the groundwater samples collected in the vicinity of underground storage tanks are presented below.

*Volatile Organic Compounds* – Detectable concentrations of acetone were observed in groundwater samples were collected in the two monitoring wells located in the vicinity of the 30,000-gallon No. 6 fuel oil UST. However, only the concentrations in one of the two monitoring wells exceeded New York State SCG values.

The draft Phase II report offered the following conclusions.

- The northern half of the site contains up to 9 feet of crushed slag fill. This material appears to be free of any other C&D material which indicates that it was most likely placed during construction of the Donovan Building in the 1960's for grading the site.
- The entirety of the site, including areas below the crushed slag, have been filled primarily with sand containing varying amounts of C&D debris, ash cinders, and coal fragments to depths of 20 feet or more. The depth of fill in the former Hamburg Canal appears to be slightly greater than the depth of fill in other areas of the site.
- There were few detectable concentrations of VOCs in soil/fill samples. However, none of the concentrations exceed the SCGs, and do not appear to be a concern at the site.
- There were detectable concentrations of SVOCs, primarily PAHs, in most of the soil/fill samples collected from the Hamburg Canal and southern portion of the site. However, only concentrations in four borings exceeded SCGs. None of the samples exceeded the RCRA

characteristic criteria. Consequently, the soil/fill would be classified as contaminated, non-hazardous material.

- Metals were detected in all of the soil/fill samples. However, only copper slightly exceeded the SCGs in one sample. Consequently, metals do not appear to be a particular concern at the site.
- Soil/fill samples collected in the vicinity of the three USTs do not indicate any leakage associated with any of the tanks. Likewise, groundwater date from the monitoring wells in the vicinity of the No. 6 fuel and gasoline USTs do not show any contaminants associated with gasoline or fuel oil.
- The groundwater samples collected from two of the three monitoring wells exhibited detectable concentrations of acetone. The concentrations in one of the two samples exceeded SCGs. There is no evidence that acetone was ever used on the Donovan site, and it is not characteristic of No. 6 fuel oil. Consequently it is likely that the acetone is associated with an off-site source.

Given the results of the site investigation, the draft Phase II ESA report recommended the following.

- Other than crushed slag in the northern portion of the site, the soil/fill materials should be classified as contaminated, non-hazardous material. A Soil management Plan (SMP) should be developed for the site. This SMP should identify the nature and extent of the contamination, potential risks associated with the soil/fill materials, and procedures for handling, transporting and disposing of soil/fill during any redevelopment activities such that workers and/or future site users are adequately protected.
- The three USTs and associated piping should be properly closed and removed in accordance with applicable regulations.

6.9.3.3 Tank Closure report, Donovan Building, 125 Main Street, Buffalo, New York, LCS File No. 08B2364.26, NYSDEC Spill No. 0806072, December 9, 2008

In August 2008, three USTs and one "day tank" were permanently closed (removed) from 125 Main Street. Due to the discovery of petroleum contamination, as required by law, the NYSDEC was notified and Spill No. 0806072 assigned to the site. Results of site tank closure activities are summarized below.

**Day Tank Removal**

Concurrent with on-site UST removal activities, an approximate five-gallon diesel fuel tank, servicing an emergency generator located within the building was removed. The tank contents were emptied into a 55-gallon drum, and subsequently transferred into a vacuum truck and disposed of with the contents from Tank 1. The tank was reported to be in good condition with no evidence of deterioration. The tank was removed from the property and retained by the contractor for future use.

**Tank 1 (1,000-gallon Diesel Fuel UST) Removal**
On August 27, 2008, excavation of the 1,000-gallon diesel fuel UST began. Upon excavation of the gravel backfill place around the tank, a petroleum-type odor was noted. Due to the apparent presence of petroleum impact, the NYSDEC was notified.

Excavation crews continued the excavation, removed and thoroughly cleaned the interior of the UST. Upon inspection, the tank appeared to be in good condition with no apparent holes. Following cleaning of the tank, it was transported, along with the associated ancillary piping, to a metal recycling facility. The contents of the tank were transferred into a vacuum truck and subsequently disposed of off-site.

Based on the analytical results, soil/fill samples collected proximate to Tank 1 exhibited one VOC (benzene) and six SVOCs (benzo(a)anthacene, chrysene, benzo(b)flouranthene, benzo(a)pyrene, and dibenzo(a,h)anthracene) at concentrations above TAGM Soil Cleanup Objectives. Based on the report prior site investigations, significant amounts of fill material are present and reportedly include, but is not limited to slag, ash, cinders and coal. Such materials may be the source (in part or entirely) of the SVOC impact discovered within the confirmatory samples collected following the removal of the UST.

**Tank 2 (4,000-gallon Gasoline UST) Removal**
On September 23, 2008, excavation of the 4,000-gallon gasoline fuel tank began. Work crews excavated, cleaned, removed and disposed of the UST and all ancillary piping at a metal recycling facility. The tank contents were transferred into a vacuum truck and subsequently disposed of off-site.

Based on the analytical results, soil/fill samples collected proximate to Tank 2 exhibited six SVOCs (benzo(a)anthacene, chrysene, benzo(b)flouranthene, benzo(k)flouranthene, benzo(a)pyrene, and dibenzo(a,h)anthracene) at concentrations above TAGM Soil Cleanup Objectives. Based on the report prior site investigations, significant amounts of fill material are present and reportedly include, but is not limited to slag, ash, cinders and coal. Such materials may be the source (in part or entirely) of the SVOC impact discovered within the confirmatory samples collected following the removal of the UST.

**Tank 3 (30,000-gallon No. 6 Fuel Oil UST) Removal**
On September 4, 2008, excavation of the 30,000-gallon No. 6 fuel oil UST began. Upon excavation of soil/fill material directly above the tank, fuel oil-type odors were detected. The UST had been previously closed in place will flowable fill. As such, work crew cut the top of the UST to access the tank interior, and began to excavate the flowable fill from the interior of the tank. Work crews removed, cleaned and disposed of the UST and all accessible ancillary piping to a metal recycling facility. Due to a rain event, storm water collected within the excavation. Approximately 11-tons of storm water were removed from the excavation, transferred into a vacuum track and subsequently disposed of off-site.

Based on the analytical results, soil/fill samples collected proximate to Tank 3 exhibited two SVOCs (benzo(b)flouranthene andbenzo(k)flouranthene) at concentrations above TAGM Soil

Cleanup Objectives. Based on the report prior site investigations, significant amounts of fill material are present and reportedly include, but is not limited to slag, ash, cinders and coal. Such materials may be the source (in part or entirely) of the SVOC impact discovered within the confirmatory samples collected following the removal of the UST.

### 6.9.4 Webster Block Focus Area

6.9.4.1 Phase II Environmental Site Assessment, Webster Block Property, August 2000

The approximately two-acre Webster Block property is bounded on the west by Main Street, on the east by Washington Street, on the north by Scott Street, and on the south by Perry Street. The objective of the Phase II Environmental Site Assessment was to obtain subsurface soil samples for physical characterization and chemical analysis. Chemical analyses were performed on select samples of the subsurface fill materials, in order to identify and delineate any possible zones of subsurface concern. The Phase II Environmental Site Assessment was conducted on June 29, 2000 (Malcolm Pirnie Inc., 2000).

All samples collected during the Phase II Environmental Site Assessment were analyzed using EPA-approved analytical methods. A total of 12 field samples were analyzed for Target Compound List (TCL) VOCs, 11 of the 12 samples also were analyzed for SVOCs, polychlorinated biphenyls (PCBs), pesticides and Target Analyte List (TAL) metals and cyanide.

The analytical results were compared to appropriate NYSDEC standards.

*Volatile Organic Compounds* - Out of the 12 samples submitted for laboratory analysis for VOCs, only acetone and methylene chloride were detected. Each compound was detected in one sample at concentrations below their respective NYSDEC standards. These compounds are common laboratory contaminants and therefore not likely site related. One of the 12 samples submitted for VOC analysis exhibited slightly elevated PID readings, petroleum odor and a sheen. This sample was subsequently analyzed for petroleum product to identify the constituents of the oil in the sample. Although the petroleum scan indicated that gasoline, kerosene, fuel oil and motor oil were not detected, the extract did exhibit a product with a boiling point between fuel oil and motor oil. It is possible that the petroleum product present in the sample is a different type of petroleum product, such as cutting oil or lubrication oil. Alternatively, the petroleum product may have experienced weathering processes due to its presumed old age. Based on the age of the parking lot (30 years), it is likely that the petroleum product has undergone some degree of weathering.

*Semivolatile Organic Compounds* - A total of 20 SVOCs were detected in one or more samples. Six of the SVOCs detected were polycylic aromatic hydrocarbons (PAHs), and were detected at concentrations above the conservative NYSDEC standards. With the exception of chrysene and benzo(a)pyrene, these PAHs were detected at concentrations below the background ranges in urban areas provided in the toxicological profile for PAHs published by the US Department of Health and Human Services, August 1998.

*Pesticides and PCBs* - Pesticides and PCBs were not detected in any of the soil samples.

*Metals* - Twenty metals were detected in the soil samples; however, only beryllium, copper, iron, lead, mercury, nickel, and zinc were detected at concentrations above the conservative TAGM Soil Cleanup Objectives. Beryllium and iron concentrations were below the Eastern U.S. Background Range.

Based on the observations during the test boring program and the samples collected at the property, the subsurface soils generally consist of seven to ten feet of granular fill materials, presumably originating from the historical demolition of structures at the property. Groundwater was encountered at only one location at a depth of eight feet below ground surface. The depth of the water surface may not be representative of the natural water table because of potential perched conditions that could be caused by buried building foundations.

The analytical results indicate that no VOCs, pesticides, or PCBs were detected at concentrations of concern in samples collected at the property. PAHs and metals are present in the soil/fill material at concentrations above the NYSDEC standards. Because PAHs are formed through anthropogenic combustion processes such as the burning of coal, oil and gasoline, they are generally ubiquitous in soils, especially urban soils. The PAHs and metals appear to be ubiquitous at the property as they were detected at all but one location and at every depth interval sampled between two and eight feet below grade. The presence of PAHs at this property is consistent with its urban location. Additionally, the petroleum product observed in one boring has likely been present in the soil for more than 30 years (the approximate age of the parking lot), and has therefore likely undergone some degree of weathering. Although some metals were detected at concentrations above the soil cleanup guidelines, the presence and concentrations of these analytes are also consistent with its urban location and past uses.

The contaminants (PAHs and metals) present in the soil underlying the property at concentrations exceeding the background ranges and/or the TAGM Soil Cleanup Objectives are generally found in urban areas at similar concentrations with the exception of two SVOCs. The suite of organic compounds remaining in the soil at the property (PAHs and the petroleum product observed in one boring) are likely the compounds remaining after the weathering of organic compounds, and are therefore the most recalcitrant and least mobile organic compounds. Additionally, the metals detected in the soil samples are generally immobile. Therefore, no remedial measures are required to restrict the movement of these contaminants in the subsurface.

The property appears to be suitable for commercial/industrial redevelopment. However, measures can always be taken to limit the potential exposure of these environmental concerns to humans working on the property during redevelopment and use following redevelopment. These precautionary measures should include:

- Establishing health and safety protocols for specific redevelopment activities to minimize exposure potential to property redevelopment workers.

- Developing protocols for assessing, handling and disposing potentially contaminated fill material excavated during property redevelopment activities.
- Covering identified soils of concern with barrier materials such as asphalt, concrete, or certified clean soil to minimize exposure potential to workers following redevelopment of the property.

6.9.4.2 Summary of Test Pit Investigation Findings, Webster Block Property, Buffalo, New York, July 2001

An electromagnetic (EM-61) geophysical survey was performed across the property in July, 2001 to identify and define areas within the site boundary that may be indicative of buried metal or other highly conductive materials. A number of suspect buried metallic anomalies were identified across the site and six locations were targeted for intrusive test pit investigation based upon apparent size, shape and location within the property. Five of six text pits confirmed the presence of metallic objects of a non-environmental concern such as metal sheeting and/or reinforced concrete. Excavation of one test pit, however, revealed the presence of an estimated 800-gallon UST. No free product or sludge heel was identified to be present; however, some water was contained within the tank.

At each test pit location, fill was present and groundwater was not encountered. The fill material consisted of generally fine grained and very loose soil with mixtures of brick, reinforced concrete, wood, glass, ash, and various metallic debris. During test pit soil characterization, soil samples were screened for volatile organic vapors with a PID at test pit locations where visually impacted soil was identified. Only the test pit where the UST was encountered was identified as visually impacted. Analytical results for the discrete samples collected at this test pit indicated the presence of petroleum (motor oil) contamination.

The investigation also included development of a waste profile for subsurface soil/fill materials. The waste profile was performed for the purpose of both verifying the acceptability of sanitary landfill disposal for non-backfilled test pit spoils and for establishing future disposal requirements during property redevelopment. Discrete soil samples were collected from each test pit and composited into one representative sample. The composite soil sample results indicated that the soil/fill is not characteristically hazardous and should be acceptable for sanitary landfill disposal or possibly NYSDEC-approved disposal at a regulated site under a beneficial use determination. However, the immediate area surrounding the test pit where the UST is located will require excavation and removal of the UST and appurtenant piping (if any) as well as any visually impacted soil/fill.

### 6.9.5 Aud Block Focus Area

6.9.5.1 Environmental Record Site Preparation Activities at 125 & 140 Main Street, Buffalo, New York, December 2007

This report was part of the SEQRA environmental documentation for the proposed site preparation activities to be undertaken by ECHDC at both the Aud and Donovan Blocks to facilitate the Project. In December 2007, ECHDC issued a Negative Declaration on these pre-development activities, indicating that they would result in no significant environmental impacts (ECHDC, 2007). Consistent with the above action, ECHDC has implemented a comprehensive asbestos abatement program for both the Aud and Donovan Buildings, and is in the process of razing the Aud. The environmental documentation included the following information regarding contaminated materials at the Aud and Donovan Buildings.

A Hazardous Waste/Contaminated Materials Inventory for the Aud property was conducted in August 2006. This inventory included field reconnaissance to identify suspect materials that would be removed for proper disposal. This inventory yielded the following:

- Records indicate the presence of three USTs on the Aud property. Detailed information regarding these is incomplete and their present existence is uncertain.
- One aboveground storage tank (AST) was identified in the sub-basement.
- One rooftop elevator room contains mechanical equipment and containers with lubricants.
- One large transformer exists on the property labeled "Caution - Contains PCBs" (polychlorinated biphenyls).
- Two rooftop air conditioning units were identified that would require disposal.
- A variety of universal wastes were identified including fluorescent lights, mercury-based high intensity discharge lights, mercury thermostats, batteries, refrigerator units, paints, miscellaneous solvents and cleaning supplies.
- Six boilers were identified; ash may contain heavy metals.
- The scoreboard features may include circuit boards with heavy metals.

6.9.5.2 Phase I Environmental Site Assessment for the Buffalo Memorial Auditorium, 130 Main Street, Buffalo, New York, August 2006

A Phase I ESA was completed for the Buffalo Memorial Auditorium in August, 2006. Assessment activities included interviews with government agencies and persons knowledgeable with the subject property, a site inspection, and a review of government and historical records. The Phase I ESA identified known or suspect environmental conditions, historical recognized environmental conditions, and de minimus conditions, among other environmental conditions, in connection with the subject property.

A potential recognized environmental condition exists for the subject property in the area of the loading dock at the southwest corner of the property. A 550-gallon diesel oil underground storage tank was installed in 1958 to supply a generator. In addition, other record plans indicate the presence of two other USTs for an onsite generator or boiler. The tanks appear to have been located near the loading platform on the southwest corner of the building. In addition, this was

the location of seven large historical transformers (that have since been removed). There is potential for, but no record of, a spill onto the ground, groundwater or surface water of the property. The database search and historical research did not uncover any indication that the USTs have been removed.

Potential recognized environmental conditions may exist associated with the general urban history of the site and surrounding area. The subject property and adjoining properties are located within a former industrial area which has historically utilized a variety of hazardous chemicals in various manufacturing processes. No evidence of more than de minimus environmental problems were discovered on the subject property or at any of the adjacent properties as a result of this report, however, releases to the environment may have occurred on or adjacent to the subject property in the past that were not reported. No intrusive soil testing is known to have taken place on the subject property, however, documentation of potential environmental concern include the following.

- The Former Gas Station at 163 Main Street located across the street from the Aud in the 1940s.
- The database search identified five spill files and five USTs with a combined storage capacity of 40,000 gallons of petroleum which were formerly used at the Donovan State Office Building immediately across Main Street from the subject property.
- Approximately 55 spill reports were identified on or in the immediate vicinity of the subject property, which is not uncommon for an urban area such as this. For the most part these spills have been found to have been cleaned up and closed, however, reporting of and cleanup of spills in a traceable manner began only approximately 20-30 years ago. Historic sources indicate that this area has an industrial history of more than 175 years (145 of which little or no reporting or cleanup of spills was required or performed). In addition, the former Erie Canal and Commercial Slip, beneath the Aud, were filled in at a time when environmental regulations were not in existence.

The proposed use of the site may dictate the requirements for additional studies to be performed at the site. The findings of this assessment indicate the likelihood that widespread hazardous waste contamination is not present at the site. However, there is the potential that contaminated soils or groundwater is present at the site due to miscellaneous historic sources including fill materials (former canals), onsite USTs, and PCB transformers. As these potential environmental concerns are underground, not visible, and the area is mostly paved, a public safety concern has not been identified (depending on the scope of the renovations). (Watts Engineering & Architecture PC, Phase I, 2006).

6.9.5.3 Uniform Hazardous Waste Manifest Nos. 001709959, 001059843, and 001059841, Buffalo Memorial Auditorium, 140 Main Street, Buffalo, New York 14203, October 2, 2008

Uniform Hazardous Waste Manifests indicate polychlorinated biphenyl (liquid) from electrical transformers, mercury containing switches, and polychlorinated biphenyl (solid mixture) from

lighting ballasts were removed from the site. (Clean Harbors Environmental Services, Inc., 2008).

### 6.9.6 Marine Drive Focus Area

#### 6.9.6.1 Draft Hazardous Waste/Contaminated Materials Screening Report, Inner Harbor and Waterfront Development Transportation Infrastructure Facility

A Hazardous Waste/Contaminated Materials Screening was conducted for a former development proposal, the Inner Harbor and Waterfront Development Transportation Infrastructure Facility, on the 4.5 acre site of the Marine Drive Apartments parking lot, a portion of which is within the Project Area. The screening was completed in accordance with the NYSDOT Environmental Procedures Manual and identified environmental conditions on the site. Although the investigation found no indications of the presence of hazardous waste or contaminated materials, records review identified a need for additional environmental investigation. The following facilities were listed under the City of Buffalo City Directories.

- 1951 City Directory - Valley Garage Auto Repair (28 Maiden Lane)
- 1941 City Directory - Buffalo Plating Company, 91 Dante Place (formerly Canal Street)
- 1931 City Directory - Clothes Cleaner, 104 Dante Place (formerly Canal Street)

In addition, the following facilities were depicted on City of Buffalo Sanborn Fire Insurance Maps.

- Charles Nelson Boiler Shop (1889, 1899) – 45 LeCouteulx Street
- Sutton Brothers Foundry and Machine Shop (1889, 1899) – 55 LeCouteulx Street
- Buffalo Plating Company (1951) – 90, 94, 98 and 108 Dante Place (formerly Canal Street)

In order to determine if the subject site has been impacted by past use, the report concluded that it would be necessary to collect soil and/or groundwater samples for laboratory analysis.

## 6.10 Public Safety and Security

Existing safety and security conditions in the Project Area primarily involve pedestrian safety beneath the elevated highways and security issues for transit riders (Metro Bus and Metro Rail) and users of surface parking facilities.

Because the Thruway and the Skyway are elevated highways, the potential exists for debris to fall from vehicles passing over the Project Area. This is especially true in the winter months with snow plows pushing snow to the edges of the roadways, and occasionally over the jersey barrier to the sidewalks and streets below.

Within the Project Area, there are two Metro Rail stations, the Erie Canal Harbor Station and the Events Only Station, both along the Main Street right-of-way. Each of the stations includes facilities for sheltered waiting, lighting, as well as phone service. Patrol of the transit stations is regularly conducted by both the Buffalo Police, as well as the NFTA security personnel. Bus stop locations in the Project Area are all on-street stops with sufficient sidewalk space for passenger waiting. New bus shelters were erected along Marine Drive to the west of the Project Area as part of the Veterans Memorial Park improvements during Phase I of the Erie Canal Harbor Project.

Parking lot facilities at the Marine Drive Apartments and the Webster Block are attendant controlled. The lots are also equipped with lighting facilities, and are within viewing range of Buffalo Police patrol areas. The remaining surface parking lots in the Project Area are located under sections of the elevated highways, and consequently are not as well lit as the more formal lots at Marine Drive and the Webster Block.

## 6.11 Community Services

This section describes various community facilities and services relevant to the Project. Given the nature of the Project, the public school system, religious institutions, and other community facilities and services not directly affected are excluded from this discussion.

### 6.11.1 Police Protection

The City of Buffalo Police Department has principal jurisdiction over the Project Area. The Project Area is located in the Department's "B" District, with station facilities at 695 Main Street. Police headquarters are located approximately 0.4 miles north of the Project Area at the corner of Franklin and Church Streets. NFTA police provide an additional public safety presence along the pedestrian mall and at Metro Rail stations. Additional services, as necessary, are available from the Erie County Sheriff's Department and the New York State Police.

### 6.11.2 Fire Protection

Fire protection for the Project Area is provided by the Buffalo Fire Department. The nearest fire stations to the Project Area include Engine 1 and Hook and Ladder 2, located at South Division and Ellicott Streets, roughly 0.4 miles from the area; and Engine 32 and Hook and Ladder 5, located at Seneca and Swan Streets, approximately 1.4 miles from the Project Area. Fire headquarters are located approximately 0.7 miles north of the Project Area at 195 Court Street.

### 6.11.3 Emergency Medical Services

All hospitals in the City of Buffalo are part of the Emergency Medical Services Program of Erie County. This program maintains a 24-hour medical emergency radio system. Ambulance services are assigned a specific radio frequency during all medical emergencies. Erie County's program personnel monitor the status of all situations and coordinate various hospital facilities in the region to ensure adequate coverage and service delivery during emergencies. Emergency medical facilities in the vicinity of the Project Area are located Buffalo General Hospital located on the Buffalo Niagara Medical Campus, approximately 1.7 miles north of the Project Area.

### 6.11.4 Solid Waste Management

The refuse collection system in the City of Buffalo is administered by the Department of Public Works, Streets and Parks. Municipal solid waste is collected at curbside and deposited at one of two privately managed transfer stations facilities in the City. Non-recyclable waste is then taken by private hauler to a waste-to-energy facility in Niagara County or deposited in a regional landfill facility. At several commercial establishments (e.g., restaurant facilities, large office complexes), solid waste is handled by private contractors.

## 6.12 Open Space and Recreation

In an urban environment, open space is generally considered to involve publicly accessible areas suitable for passive or active recreation. Several open spaces located on and adjacent to the Project Area provide residents and visitors with a wide variety of recreational resources within an urban, highly developed environment, including hiking, biking, boating, fishing and educational resources. Nearby parks and publicly accessible open spaces are shown in **Figure 6.12-1**. In addition, the Buffalo River in the vicinity of the Project Area hosts several recreational waterfront uses, including the Outer Harbor Pathway and marinas on the opposite shore extending up the City Ship Canal.

One of the highlights of the Inner Harbor and the initial phase of Erie Canal Harbor Project adjacent to the Project Area is the Central Wharf Green and Commercial Slip. The Central Wharf Green is a public area along the Buffalo River with an expansive boardwalk, benches, lampposts, lawns and landscaping providing a welcoming area to enjoy the waterfront. The Central Wharf Green hosts concerts and public events including a limited summer concert series. The Commercial Slip was recreated in its historic location during the initial phase of Erie Canal Harbor Project and is crossed by the Whipple Truss bridge connecting the Central Wharf Green to Naval Park. Along the banks of the Commercial Slip are interpretive features such as building ruins from the peak of development at the Erie Canal.

The Erie Canal Harbor is also home to the Naval Park within the 6.5-acre Veterans Memorial Park. This facility includes a museum devoted to Western New York's contributions to America's seapower, and a 1,300 feet stretch of waterfront that provides dockage for the USS The Sullivans, which is a national historic landmark, the USS Little Rock, and the USS Croaker (submarine). The upland portion of the Naval Park also displays naval jet fighters, a minesweeper and other military artifacts.

A small, triangular open space ("Transit Plaza") located at the intersection of Marine Drive and Main Street features bicycle racks as well as sandstone bench seating for visitors utilizing the nearby Metro rail and bus stops. In addition, interpretive signage at the Transit Plaza conveys the historical significance and geographic layout of the harbor.

The Central Wharf Green and the Naval Park are connected to trail systems, such as the Riverwalk and Industrial Heritage Trail, which are part of the Niagara River Greenway ("Greenway"). The Greenway is a developing network of interconnected parks, trails, and river

access points along the Niagara River to provide linkages between communities and public access to green spaces and the waterfront. The boundary of the Greenway follows municipal lines and encompasses the shoreline municipalities stretching from Lake Ontario to Lake Erie. The Greenway is connected to other systems, including the Seaway Trail, the Niagara Wine Trail and the Erie Canalway. These systems traverse upstate New York, with the Erie Canalway, for example, consisting of 524 miles of navigable waterways. As a component of the Greenway, the Riverwalk follows the shoreline of the Niagara River from northern Erie County southward and turns inland behind the Waterfront Village, where it then follows the shoreline of the Buffalo River across the Central Wharf Green and continues along the shoreline at the Erie Basin Marina. The Riverwalk can be accessed at various point, including Busti Avenue, Porter Avenue, and at Erie Street at Waterfront Village. The Industrial Heritage Path also connects to the Project Area and continues through the industrial development on Kelly Island.

## 6.13 Utilities

The Project Area is served by or has access to all major utility facilities, including water, sewer, electric, and natural gas. While the provision of water and sewer is administered by public authorities, other utility service is provided by private companies. Descriptions of existing utilities within the Project Area are provided below.

### 6.13.1 Water Supply

The City operates and maintains the water supply system for the City under contract with the Buffalo Water Board as owner of the system. Lake Erie is the source of the city's potable water supply. Water is drawn from the lake from a water intake located roughly 6,000 feet off-shore from Erie Basin Marina and is pumped to the Colonel Ward Treatment Station located at the northern edge of LaSalle Park. An emergency backup to the system is provided by the Massachusetts Pumping Station, located along the New York State Thruway near the Peace Bridge. The water system has a daily capacity of roughly 160 million gallons per day. City daily consumption rates average about 75 million gallons per day (City of Buffalo Water Board, 2009). Most of the water lines in the Project Area are located within street rights-of-way (see **Figure 6.13-1**). However, a 48-inch main crosses the northern end of the Aud Block and the Marine Drive Apartments parking lot.

### 6.13.2 Sewer Facilities

Sewer service in the City is provided by the BSA. Almost 96 percent of the City's sewer system consists of combined sanitary and storm sewers. The City's treatment plant is located on Squaw Island, approximately 4 miles north of the Project Area on the Niagara River. The City's daily treatment of wastewater averages roughly 160 million gallons per day, while the system's total treatment capacity is 180 million gallons per day (City of Buffalo Sewer Authority, 2009).

**Figure 6.13-2** depicts sewer facilities within the Project Area. In particular, combined 10-inch sewer lines exist in the right-of-way of Marine Drive and Main Street. In addition, two major sewer mains cross the site. The Kelly Island main, a 30-inch sanitary force main leading to the Squaw Island Treatment Plant, passes through the Project Area from a tunnel under the Buffalo

River. Relocated in 1999 to the public right-of-way, the main runs under Main Street, west along Marine Drive behind the Aud Block, and continues north along Pearl Street through the Marine Drive Apartments parking lot. Also, a pump station and vent for this main is located within the Project Area. The Hamburg Drain, a 16- by 13-foot combined sewer overflow following the former Hamburg Canal right-of-way, crosses the site. The drain has an outfall to the Buffalo River via the Commercial Slip, which borders the Project Area.

Addressed as a mitigation measure to the 2004 ECHMP, the BSA is preparing designs for the construction of a floatables (i.e., trash, landscaping remnants and other organic materials that float in combines sewer overflow) control facility along the alignment of the Hamburg Drain. This facility would be located outside of the Project Area to the east of The Buffalo News building located on Washington Street. Because this BSA project would have independent utility from Canal Side, the BSA's Floatables Control Facility is not an action that is being reviewed in this DGEIS.

Dedicated storm sewers are located in various portions of the Project Area, including the rights-of-way of Main Street, Perry Boulevard, and Commercial Street as well as the parking areas of the Marine Drive Apartments and the Donovan Block.

### 6.13.3 Electricity

National Grid supplies electricity within the City of Buffalo. Electrical facilities within the Project Area include underground cable ducts in the rights-of-way of Main, Hanover, and Pearl Streets as well as the Marine Drive loop road and Perry Boulevard (see **Figure 6.13-3**).

### 6.13.4 Natural Gas

Natural gas is provided by National Fuel Gas Company. Distribution lines within the Project Area include a 6-inch line in the Marine Drive right-of-way and a 4-inch line in the Marine Drive right-of-way (see **Figure 6.13-4**).

### 6.13.5 Fiber Optics

Fiber optic lines are located in the rights-of-way of Pearl Street, Main Street, Washington Street, Scott Street, and Marine Drive (see **Figure 6.13-5**).

## 6.14 Air Quality

The Project would generate new vehicle trips and alter traffic conditions on the roadways in and around the Project Area, potentially resulting in air quality impacts. The air quality analysis of the Project would be conducted in accordance with the procedures outlined in several guidance documents, including: the US Environmental Protection Agency's ("USEPA") *Intersection Modeling Guidelines* (USEPA, 1992); USEPA's *United States Green Book – Air Quality Planning and Standards*, which is available online (USEPA); the NYSDOT's *Environmental Procedures Manual* ("EPM") (NYSDOT, 2001). These documents were used to determine whether the Project would result in violations of ambient air quality standards or health-related guideline values.

### 6.14.1 Relevant Air Pollutants for Analysis

Various air pollutants have been identified by USEPA as being of nationwide concern: carbon monoxide (CO); hydrocarbons (HC); nitrogen oxides (NOx); photochemical oxidants; particulate matter (PM10 and PM2.5); sulfur oxides (SOx); and lead (Pb). Ambient concentrations of CO, HC, and photochemical oxidants in and around the Project Area are predominantly influenced by motor vehicle activity, while NOx emissions are from both mobile and stationary sources. Emissions of SOx are associated mainly with stationary sources. Emissions of particulate matter are associated with stationary sources and, to a lesser extent, diesel-fueled mobile sources (heavy trucks and buses). Lead emissions, which historically were influenced principally by motor vehicle activity, have been substantially reduced due to the elimination of lead from gasoline. These pollutants of concern are each discussed below.

#### 6.14.1.1 Carbon Monoxide

CO is a colorless and odorless gas that is generated in the urban environment primarily by the incomplete combustion of fossil fuels in motor vehicles. Prolonged exposure to high levels of CO can cause headaches, drowsiness, loss of equilibrium, or heart disease. Relatively high concentrations of CO are typically found near congested intersections, along heavily used roadways carrying slow-moving traffic, and in areas where atmospheric dispersion is inhibited by urban “street canyon” conditions.

#### 6.14.1.2 Hydrocarbons, Nitrogen Oxides, and Photochemical Oxidants

Hydrocarbons include a wide variety of volatile organic compounds, emitted principally from the storage, handling, and use of fossil fuels. NOx constitute a class of compounds that include nitrogen dioxide (NO2) and nitric oxide, both of which are emitted by motor vehicles and stationary sources. Both hydrocarbons and NOx are of concern primarily because most of those compounds react in sunlight to form photochemical oxidants, including ozone. This reaction occurs comparatively slowly and ordinarily takes place far downwind from the site of actual pollutant emission. The effects of these pollutants are examined on an areawide, or mesoscale, basis.

#### 6.14.1.3 Particulate Matter

Particulate matter is a broad class of air pollutants that exist as liquid droplets or solids, with a wide range of sizes and chemical composition. Particulate matter is emitted by a variety of sources, both natural and man-made. Natural sources include the condensed and reacted forms of natural organic vapors; salt particles resulting from the evaporation of sea spray; wind-borne pollen, fungi, molds, algae, yeasts, rusts, bacteria, and debris from live and decaying plant and animal life; particles eroded from beaches, desert, soil and rock; and particles from volcanic and geothermal eruptions and forest fires. Major man-made sources of particulate matter include the combustion of fossil fuels, such as vehicular exhaust; power generation and home heating; chemical and manufacturing processes; all types of construction (including equipment exhaust and re-entrained dust); agricultural activities; and wood-burning fireplaces. Fine particulate

matter is also derived from combustion material that has volatilized and then condensed to form primary particulate matter (often after release from a stack or exhaust pipes) or from precursor gases reacting in the atmosphere to form secondary particulate matter. It is also derived from mechanical breakdown of coarse particulate matter, e.g., from building demolition or roadway surface wear. Of particular health concern are particles that are smaller than or equal to 10 microns (PM10) and 2.5 microns (PM2.5) in size. The principal health effects of airborne particulate matter are on the respiratory system.

#### 6.14.1.4 Sulfur Oxides

High concentrations of SO2 affect breathing and may aggravate existing respiratory and cardiovascular disease. SO2 emissions are generated from the combustion of sulfur-containing fuels (oil and coal), largely from stationary sources such as coal and oil-fired power plants, steel mills, refineries, pulp and paper mills, and nonferrous smelters. In urban areas, especially in the winter, smaller stationary sources, such as space heating, contribute to elevated SO2 levels. Ambient SO2 levels recorded in the Greater Buffalo Metropolitan Area have complied with ambient air quality standards for over 20 years.

#### 6.14.1.5 Lead

Lead emissions are principally associated with industrial sources and motor vehicles using gasoline-containing lead additives. Since the leaded gasoline has been eliminated from use, motor vehicle-related lead emissions have decreased, resulting in a significant decline in concentrations of lead. Atmospheric lead concentrations in the Greater Buffalo Metropolitan Area are well below national standards.

### 6.14.2 National and State Ambient Air Quality Standards

National ambient air quality standards (NAAQS) are concentrations set for each of the criteria pollutants specified by USEPA that have been developed primarily to protect human health. The secondary goal is to protect the nation's welfare and account for the effect of air pollution on soil, water, vegetation and other aspects of general welfare. For the most part, New York has adopted the NAAQS as state ambient air quality standards. Timeframes, based on ways that these pollutants adversely affect health, have also been established. These standards, together with their health-related averaging periods, are presented in **Table 6.14-1**.

Table 6.14-1
National and New York Ambient Air Quality Standards

| Pollutant | Averaging Period | National and NY State Standards | |
|---|---|---|---|
| | | Primary | Secondary |
| Ozone | 8 Hour | 0.08 ppm (157 µg/m$^3$) | Same as Primary |
| Carbon Monoxide | 8 Hour | 9 ppm (10 mg/m$^3$) | Same as Primary |
| | 1 Hour | 35 ppm (40 mg/m$^3$) | Same as Primary |
| Nitrogen Dioxide | Annual Average | 0.053 ppm (100 µg/m$^3$) | Same as Primary |
| Sulfur Dioxide | Annual Average | 80 µg/m$^3$ (0.03 ppm) | - |
| | 24 Hour | 365 µg/m$^3$ (0.14 ppm) | - |
| | 3 Hour | -- | 1,300 µg/m$^3$ (0.5 ppm) |
| Coarse Particulate Matter ($PM_{10}$) | 24 Hour | 150 µg/m$^3$ | Same as Primary |
| Fine Particulate Matter ($PM_{2.5}$) | 24 Hour | 35 µg/m$^{3(1)}$ | Same as Primary |
| | Annual Neighborhood | 15 µg/m$^3$ | Same as Primary |
| Lead | Quarterly Average | 1.5 µg/m$^3$ | Same as Primary |
| | Rolling 3-Month Average | 0.15 µg/m$^{3\,(2)}$ | Same as Primary |

*Source: U.S. Environmental Protection Agency and New York State Department of Environmental Conservation*
Notes:
1. EPA recently revised the 24-hour $PM_{2.5}$ standard from 65 µg/m$^3$ to 35 µg/m$^3$, but the previous standard is currently applicable.
2. EPA recently revised the lead standard on October 15, 2008. Federal standard for lead not yet officially adopted by NYS, but is currently being applied to determine compliance status.

ppm: parts per million
µg/m$^3$: micrograms per cubic meter

### 6.14.3 Regulatory Setting and Compliance with Standards

The federal Clean Air Act ("CAA") defines non-attainment areas as geographic regions that have been designated as not meeting one or more of the NAAQS listed in the above table. The affected Project Area is currently designated as attainment for all criteria pollutants except for the 8-hour ozone standard. The CAA requires that a State Implementation Plan ("SIP") be prepared for each non-attainment area, and a maintenance plan be prepared for each former non-attainment area that subsequently demonstrated compliance with the standards. The SIP is a state's plan for how it will meet the NAAQS by the deadlines established by the CAA.

### 6.14.4 Ambient Air Quality

Representative monitored ambient air quality data for the Project Area are shown in **Table 6.14-2**. Data were compiled by NYSDEC for 2007, the latest calendar year for which data are available. With the exception of the recently promulgated 8-hour ozone, monitored levels for the criteria pollutants do not exceed National and State ambient air quality standards in the Project Area.

Table 6.14-2
Representative Pollutant Data (2007)

| Pollutant | Location | Averaging Time | Value[1,2] | NAAQS |
|---|---|---|---|---|
| Carbon Monoxide | Buffalo | 8 hour | 1.4 ppm | 9 ppm |
| | | 1 hour | 4.1 ppm | 35 ppm |
| Nitrogen Dioxide | Buffalo | Annual | 0.016 ppm | 0.053 ppm |
| Ozone | Amherst | 8 hour | 0.086* ppm | 0.08 ppm |
| Sulfur Dioxide | Buffalo | Annual | 0.003 ppm | 0.03 ppm |
| | | 24 hour | 0.012 ppm | 0.14 ppm |
| | | 3 hour | 0.023 ppm | 0.5 ppm |
| $PM_{2.5}$ | Buffalo (F) | Annual | 11.9 µg/m$^3$ | 15 µg/m$^3$ |
| | | 24 hour | 34.9 µg/m$^3$ | 35 µg/m$^3$ |
| $PM_{10}$ | Niagara Falls | 24 hour | 68 µg/m$^3$ | 150 µg/m$^3$ |

*Source: EPA AirData (http://epa.gov/airdata) and NYSDEC 2007 Annual Monitoring Report*
Notes:
* Denotes an exceedance of an NAAQS.
1. Values shown correspond to NAAQS time periods and standard definitions.
2. If data are available from more than one monitoring station in a county, the highest values are provided.

## 6.15 Noise

### 6.15.1 Noise Descriptors and Noise Impact criteria

#### 6.15.1.1 Sound Descriptors

Noise levels are measured in units called decibels. Since the human ear does not respond equally to all frequencies (or pitches), measured sound levels are often adjusted or weighted to correspond to human response to the range of frequencies of sound and the human perception of loudness. One of the weighting systems used in noise measuring equipment (sound level meter) is called "A-weighting;" and the resultant noise level, as measured by a sound level meter, is called the "A-weighted noise level" ("dBA"). Traffic noise levels are expressed in terms of hourly equivalent continuous noise level which is abbreviated as $L_{eq}$ (1-hr) dBA. $L_{eq}$ (1-hr) is defined as the equivalent steady-state sound level that, in a period of one hour, contains the same acoustic energy as the time-varying sound level during that hour. This descriptor correlates well with human response to changes in noise levels. The one-hour equivalent noise level ($L_{eq}$) during the noisiest traffic hour, expressed as $L_{eq}$ (1-hr), is used by NYSDEC and NYSDOT the descriptor for determining the effects of traffic and other project related noise impacts. Noise measurements, future noise level predictions, and identified impacts contained in this report were evaluated using the $L_{eq}$ (1-hr) dBA descriptor.

#### 6.15.1.2 Community Response to Changes in Noise Levels

Noise is defined as unwanted sound perceived subjectively by individuals. Environmental noise varies from place to place. It also varies during different time periods consistent with the daily

cycle of human activities. For reference and orientation to the decibel scale, representative environmental noise sources and their respective dBA levels are shown in **Figure 6.15-1**.

The average individual's ability to perceive changes in community noise levels is well documented. Generally, changes in noise levels on the order of 3 dBA or less will be barely noticed by most listeners, a change of 5 dBA is readily perceptible, whereas a 10 dBA change will be perceived as doubling (or halving) of loudness. **Table 6.15-1** provides a estimation of an individual's probable perception of changes in noise levels.

Table 6.15-1
Average Ability to Perceive Changes in Noise Levels

| Human Perception of Sound | Change (dBA) |
|---|---|
| Barely perceptible | 2-3 |
| Readily noticeable | 5 |
| A doubling of the loudness of sound | 10 |
| A dramatic change | 20 |
| Difference between a faintly audible and a loud sound | 40 |

Various government and research institutions have proposed criteria that attempt to relate changes in noise levels to community response. One commonly applied criterion for estimating response is incorporated into the community response scale proposed by the International Standards Organization (ISO, 1969) of the United Nations (see **Table 6.15-2**). This scale relates changes in noise level to the degree of community response and permits direct estimation of the probable response of a community predicted change in noise level.

Table 6.15-2
Community Response to Increases in Noise Levels

| Change (dBA) | Category | Description |
|---|---|---|
| 0 | None | No observed reaction |
| 5 | Little | Sporadic complaint |
| 10 | Medium | Widespread complaints |
| 15 | Strong | Threat of community action |
| 20 | Very Strong | Vigorous community action |

*Source: 1S0, 1969.*

### 6.15.1.3 Applicable Noise Criteria for Determining Noise Impacts

The basic goals of noise criteria, as they apply to highway or land development projects, are to minimize the adverse noise impacts on the community and, where necessary and appropriate, to provide feasible and reasonable measures to abate noise impacts. The NYSDEC document entitled *Assessing and Mitigating Noise Impacts* (NYSDEC, 2001) provides the following guidance shown in **Table 6.15-3** for assessing noise impacts:

Table 6.15-3
Relative Noise Impact Criteria: Effect of Increases in Noise Levels on Receptors

| Increase in Existing Ambient Sound Levels (dBA) | Expected Effect on Receptors |
|---|---|
| 0-3 | No appreciable effect |
| 3-6 | Potential for adverse noise impact only in cases where the most sensitive receptors are present |
| >6 | Potential noise impact. Requires a close analysis of impact potential depending on existing SPLs and the character of surrounding land use and receptors. |
| 10 | Perceived as a doubling of the sound level |

The NYSDEC guidelines states that noise level increases of 3 dBA or less should have no appreciable effort on receptors, increases of 3 to 6 dBA may have the potential for adverse impact only in cases where the most sensitive of land uses are present, and increases beyond 6 dBA will require a closer analysis of impact potential depending on the character of the surrounding land use.

NYSDOT has established Noise Impact Criteria ("NAC") that it uses for evaluating potential noise impacts associated with roadway improvements subject to its jurisdiction. NYSDOT has adopted the noise criteria of the Federal Highway Administration ("FHWA") as described in FHWA regulation 23CFR 772 which sets fixed upperlevel limits that can be generated from highway traffic noise ($L_{eq}$ (1-hr) dBA) at exterior land uses and activities, and for certain indoor activities. NYSDOT guidelines presented in **Table 6.15-4** indicate that a traffic noise impact occurs if predicted noise levels with the Project approach or exceed the applicable NAC; or when the predicted future noise levels substantially exceed existing noise levels by 6 or more dBA. NYSDOT defines "approach noise level" as 1 dBA below the NAC. For example, for receptor sites described under FHWA Category "B" land use activity, an impact is considered to have occurred when exterior noise level with the Project is equal to or exceeds a $L_{eq}$ (1-hr) of 66 dBA (i.e., 1 dBA less than the NAC of 67 dBA for that category of land use). FHWA Category "E" is to be used if there are no exterior activities where frequent human use or activity occurs and noise sensitivity is limited to the interior spaces. The Category "E" NAC applies only to interior spaces of Category "B" land uses and defines impact occurring with an interior noise level of 51 dBA or greater.

Together, the NYSDOT and NYSDEC noise guidelines provide a comprehensive set of impact assessment criteria for determining noise impact consisting of both a "fixed" noise criteria and "relative" noise criterion. The fixed noise criterion consists of the FHWA NAC and the relative criterion consistent with both the NYSDOT and NYSDEC 6 dBA noise level increase threshold limit.

Table 6.15-4
Noise Abatement Criteria for Highway Projects

| Activity Category | A-Weighted Sound Level (dBA) $L_{eq(1-hr)}$ | Description of Activity |
|---|---|---|
| A | 57 | Lands on which serenity and quietness of extraordinary significance serve an important public purpose and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose. |
| B | 67 | Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries and hospitals. |
| C | 72 | Developed lands, properties, or activities, not included in Categories A or B. |
| D | -- | Undeveloped lands. |
| E | 52 | Interior spaces of Category B, where applicable. |

Source: *Federal Highway Administration 23 CFR 772.*
NYSDOT "approach" noise abatement criteria are 1 dBA less than the $L_{eq}$ (1-hr) levels shown.

### 6.15.2 Noise Impact Assessment Methodology

The methodology used to assess the noise impacts of the proposed development on adjacent noise-sensitive receptors included the following steps:

- Identifying sensitive and representative receptor locations which have the greatest potential for being adversely affected by noise from project-generated traffic;
- Determining existing noise levels through field measurements;
- Determining future noise levels, both with and without the proposed Canal Side development;
- Determining project impacts by comparing predicted Build noise levels with No Build noise levels, and project impact criteria; and
- Where necessary, examining and evaluating noise abatement measures for mitigating or reducing noise impacts.

The FHWA Traffic Noise Model (TNM version 2.5) was utilized for determining noise levels generated from the project's projected on-site truck traffic movements and induced roadway traffic. The TNM model is the standard roadway noise model used throughout the United States for traffic noise impact analysis. The model input parameters include a number of factors, including traffic volumes, vehicle classifications, vehicle operating speeds, roadway alignment, grade adjustments, and physical barriers, such as building rows and noise walls in calculating resultant noise levels.

### 6.15.3 Existing Noise Measurements

Noise measurements were taken during the period of March 21, 2009 through March 25, 2009 at 8 representative locations identified within the Project Area. Noise measurement locations were selected to provide broad geographic coverage and to be representative of existing and future proposed noise sensitive land uses in the Project Area. All noise measurements were collected at

properties where development currently exists and may be affected by noise from the Project or where development is proposed as a result of the Project. Noise measurements were collected in conformance with the procedures described in the NYSDOT manual *Field Measurement of Existing Noise Levels*. Noise measurements were obtained by using Brüel & Kjær (B&K) sound level meters Type 2231 fitted with B&K Type 5155 condenser microphones and windshields. Calibration of all of the noise equipment was performed before and after each measurement. All measurements were performed under acceptable climatic and street surface conditions (i.e., dry road surface and wind speeds less than 20 km/h (12 mph)).

#### 6.15.3.1 Existing Noise Levels

Short-term noise measurements of 30 minute duration were recorded at the 8 representative noise impact assessment locations depicted in **Figure 6.15-2**. Noise measurements where collected for the Project peak travel time periods identified as weekday 4 to 6 pm and Saturday 12-2 pm. The results of the noise measurement survey are presented in **Table 6.15-5**. Measured noise levels are typical of traffic noise conditions in semi-urban communities, which are generally characterized by higher noise levels closer to active roadways and lower levels farther away. Existing measured noise levels at all monitoring locations are below the NYSDOT impact thresholds shown in **Table 6.15-4**. Receptor sites R1, R2 and R8 are described as Category "B" land uses where the noise impact threshold is set at 66 dBA. Receptor sites R3 through R7 are described as Category "C" land use activities where the noise impact threshold is set at 71 dBA. At each site, measured noise levels were slightly lower during the Saturday time period. Measured $L_{eq}$ (1-hr) noise levels ranged from a peak PM noise level of 66 dBA at Site R3, the Commercial Slip Parking Garage, to a low reading of 58 dBA near the Central Wharf Green boardwalk at Site R8 on Saturday.

Table 6.15-5
Summary of Peak Hour Noise Measurements

| Receptor Number | Receptor Description | Existing Land Use | Proposed Development Land Use | Measurement Date | Measurement Time Period | $L_{eq}$ (1-hr)[1] (dBA) |
|---|---|---|---|---|---|---|
| R1 | Marine Drive Apartment Complex | Residential | Residential | 3/24/09 | Weekday PM | 65 |
| | | | | 3/21/09 | Saturday MD | 61 |
| R2 | Naval Park Museum | Recreational | Recreational | 3/24/09 | Weekday PM | 57 |
| | | | | 321/09 | Saturday MD | 53 |
| R3 | Existing Marine Drive Apartment Complex Parking Area | Surface Parking Lot | Mixed Use (Residential & Commercial) | 3/24/09 | Weekday PM | 66 |
| | | | | 3/21/09 | Saturday MD | 65 |
| R4 | Memorial Auditorium[2] | Vacant Structure Undergoing Demolition | Commercial (Retail, Restaurant) | 3/24/09 | Weekday PM | 64 |
| | | | | 3/21/09 | Saturday MD | 63 |
| R5 | Existing Donovan South Parking Area | Surface Parking Lot | Mixed Use (Residential, Office, Retail, Restaurant) | 3/25/09 | Weekday PM | 65 |
| | | | | 3/21/09 | Saturday MD | 62 |
| R6 | Vacant land near Skyway (NYS Route 5) | Open Space | Mixed Use (Retail, Restaurant, Office) | 3/25/09 | Weekday PM | 64 |
| | | | | 3/21/09 | Saturday MD | 60 |
| R7 | Webster Block | Surface Parking Lot | Mixed Use (Residential, Hotel, Retail, Restaurant, Parking Garage) | 3/25/09 | Weekday PM | 63 |
| | | | | 3/21/09 | Saturday MD | 62 |
| R8 | Central Wharf Green | Open Space | Open Space & Hotel | 3/25/09 | Weekday PM | 63 |
| | | | | 321/09 | Saturday MD | 58 |

Notes:
1 Noise measurements were recorded for 30-minute duration per reading.
2 Proposed Winter Garden Site

## 6.16 Physical and Ecological Resources

### 6.16.1 Topography, Geology, and Soils

The topography of the Project Area is generally flat with a slight slope from north to south between Upper Terrace and Scott Street.

The Project Area lies within the Erie Ontario Lowlands physiographic province. This province is generally flat and trends east to west, encompassing areas of Lake Erie and Ontario formed through deposition in ancient glacial lakes. The Lake Erie Plain is approximately 6 to 12 miles wide and is bounded by escarpments formed by more resistant rocks (Bueler and Tesmer, 1963).

Borings taken in the Project Area in 1994 indicated that on-site fill materials vary in thickness between 6 and 21 feet. In addition to soil and crushed stone, fill materials included bricks, mortar, wood, cinders, white ash, glass, concrete, slag, and coal (Malcolm Pirnie, 1994). Beneath the fill materials, the borings indicated a glacial silt layer ranging between 0 and 22 feet in thickness. Beneath this layer, a glacial sand layer was present, ranging between 4 and 22 feet,

followed by a thin layer of glacial till (0.2 to 5 feet). Bedrock was encountered on the site at depths of 30 to 42 feet, consisting of Onondaga Limestone (Malcolm Pirnie, 1994).

Soils on the Project Area are classified as urban land. This broad category consists of nearly level urbanized areas and areas of well- to poorly-drained soils and disturbed soils on lowland plains. The Project Area is located in an area of disturbed soils and fill material in which a large proportion of the land surface has been paved or covered by other impervious surfaces. As a result of the configuration and bulkheading of the Buffalo River shoreline, areas of coastal marshes and floodplains have been systematically filled over time.

### 6.16.2 Terrestrial Resources

The Project Area is located within a heavily developed portion of downtown Buffalo at the foot of Main Street in close proximity to the Buffalo River. This area has been significantly altered over the years by development activities including paving, excavations, demolition, filling and construction activities. As such, little, if any, native vegetation is present at the Project Area. Vegetation is limited to conventional grasses and ornamental evergreen and deciduous trees primarily on the northwest and northeast corners of the Main at Marine Drive intersection and along the newly constructed Central Wharf Green. Several previous studies have concluded the Project Area possesses low-quality wildlife habitat due to its developed nature.

In 1993, the *FEIS for Amending of the Waterfront Urban Renewal Plan and the Development of the Crossroads Arena* (Ecology & Environment, Inc., 1993) concluded that due to the nature of this area (located one block south of the Canal Side Project Area) the site is considered a low-quality wildlife habitat. Buildings and rubble piles may provide nesting habitat for birds and roosting sites for bats. The study further stated that similar habitats are found extensively throughout the City of Buffalo and particularly the area sounding the site. Since the time of this FEIS, the HSBC Arena and arena parking garage have been constructed on this site.

In 1999, *The Buffalo Inner Harbor Development Project Final Environmental Impact Statement* (Parsons Brinckerhoff Quade & Douglas, Inc., 1999) concluded that the Project site (12.5-acres) does not contain any habitat for threatened or endangered species, or significant coastal habitat. The FEIS also reported the presence of two New York State Significant Coastal Fish and Wildlife Habitat area located within 1 mile of the project site, the Times Beach Diked Disposal Site (1,500 feet to the southwest) and the North Buffalo Harbor (within 3,500 feet of the site).

The *Erie Canal Harbor Project Supplemental Final Environment Impact Statement* (Parsons Brinckerhoff Quade & Douglas, Inc., 2004) subsequently confirmed in 2004 that no significant changes have occurred to the physical or ecological resources from those that were reported in the 1999 FEIS for the original Project.

Verification of the presence of rare or state-listed animals and plants, significant natural communities and other significant habitats was requested from the New York State Natural Heritage Program in 2009. A NYSDEC Natural Heritage Report on Rare Species and Ecological Communities (Salerno, 2009) reported the Peregrine Falcon (Falco pergrinnus) and the Four-

flowered Loosestrife (Lysimachia quadriflora) as "Endangered" species in New York State within one mile of the project site. In addition, the report identified a Waterfowl Winter Concentration Area in the Upper Niagara River. The area contains three major feeding locations, which are shallow sections of this area serving as feeding locations by waterfowl during winter months.

### 6.16.3 Aquatic Resources

Several prior studies have evaluated aquatic resources in the Project Area. *The Buffalo Inner Harbor Development Project Final Environmental Impact Statement* (Parsons Brinckerhoff Quade & Douglas, Inc., 1999) reported that while the Buffalo River supports a variety of fish species, species are generally found in upstream locations and tributaries of the river, outside the navigation channel. The EIS also stated that the lower Buffalo River in the vicinity of the Project Area does not provide significant habitat for fisheries, given maintenance dredging activities, its relatively poor water quality, and relative absence of shallow, vegetated areas necessary to support spawning and rearing.

In December 2004, the *Erie Canal Harbor Project Supplemental Final Environment Impact Statement* (Parsons Brinckerhoff Quade & Douglas, Inc., 2004), confirmed that no significant changes have occurred to the physical or ecological resources from those reported in the 1999 FEIS for the Original Project.

Fish listed as "Threatened" in New York, which occur within one mile of the Project Area in Lake Erie and Niagara River waters, include the Lake Sturgeon (Acipenser fulvenscens) (Salerno, 2009).

# 7 IMPACTS AND MITIGATION MEASURES

This chapter provides an evaluation of the reasonably foreseeable social, economic, and environmental impacts associated with implementation of the Project, including each of the other alternatives. To help establish a baseline, each section begins with an analysis of conditions which could be expected with the future No-Build Alternative, that is, the future without the Canal Side Project. Impacts are identified for two analysis years: construction-related effects for the estimated year of completion of the initial phase of construction (2011); and operation-related effects for the Project's design year of 2031, or 20 years after initial build out. As appropriate, reasonable mitigation measures that could be applied to eliminate or lessen the severity of potential adverse impacts are also discussed.

For purposes of analysis and comparison, the Project is referred to as the "Preferred Alternative." For some types of environmental impacts, there is no significant difference amongst the Preferred Alternative; Low-Density Alternative; and/or High-Density Alternative (collectively "Build Alternatives"). In such cases, anticipated impacts and mitigation are discussed collectively for all Build Alternatives.

## 7.1 Cultural Resources

As noted in Chapter 6, cultural resources include both architectural and archaeological resources.

### 7.1.1 No-Build Alternative

The No-Build Alternative would not result in any impacts to architectural and archaeological resources within the Project Area.

### 7.1.2 Build Alternatives

#### 7.1.2.1 Architectural Resources

Impacts to architectural resources can result from activities that result in either direct or indirect effects on a resource. Direct effects involve a physical change to a historic resource, such as removal, demolition, damage, or alteration of the resource. Indirect or contextual effects involve a change to the setting within which the resource is viewed, such as changes in the scale or pattern of surrounding development which affect the context or visual prominence of a resource. A significant impact would typically occur when the effects from a proposed activity would either directly or indirectly compromise or diminish the characteristics that make a resource eligible for listing on the S/NRHP, including the integrity of the resource's location, design, setting, materials, workmanship, feeling, or association.

As indicated in the Cultural Resources section of Chapter 6, it has been determined that there are no architectural resources within the Project Area that are listed or eligible for listing on the S/NRHP. This determination has been confirmed by the New York State OPRHP. Therefore, none of the Build Alternatives would have the potential to result in direct effects to architectural resources. Nonetheless, in order to ensure that Build Alternatives would be compatible with

former historical design features of the Erie Canal and existing nearby historic resources, such as those within the Cobblestone Historic District, architectural Design Guidelines have been developed for the Project in accordance with the principles set forth in the 2004 *Erie Canal Harbor Project Master Plan* and the Erie Canal Harbor Amendment to the Waterfront Urban Renewal Plan. The architectural Design Guidelines would include design standards for new buildings and other improvements, such as streetscape elements, requiring that they relate to the character of former structures and historic development patterns from the Erie Canal Era (ca. 1825-1880s) in terms of such design features as height, scale, massing, and materials.

In order to assess the potential indirect effects of the Build Alternatives on architectural resources in the vicinity of the Project Area, architectural resources within a ¼ mile radius of the Project Area were identified. This distance generally represents the extent of the area in which the Project could potentially result in indirect effects to architectural resources. As described more thoroughly in Chapter 6.1, architectural resources located within a ¼ mile of the Project Area include the USS The Sullivans, the USS Croaker submarine, the Edward M. Cotter fireboat and slip, and the Phoenix Die Casting Building (located within the Cobblestone District, a locally designated historic district).

In terms of indirect effects to the USS The Sullivans, the USS Croaker and the Edward M. Cotter fireboat and slip, the Build Alternatives would not affect the qualities that contribute to their historical significance, such as their association with historically significant events. Additionally, their current setting on the Buffalo River does not contribute to the USS The Sullivans and USS Croaker eligibility for NRHP-listing. Therefore, the Build Alternatives would not have an adverse effect on the historical significance of these resources. Furthermore, the Build Alternatives would redevelop and revitalize the areas adjacent to the Buffalo River where these resources are located, thus attracting more people to the area and improving public views and awareness of these resources.

The Phoenix Die Casting Building, located at the corner of South Park Avenue and Illinois Street, would also not be indirectly impacted by the Build Alternatives, as views to and from the Project Area are obstructed by the HSBC Arena and its parking garage. Only the High-Density Alternative may be partially visible from this resource.

Indirect impacts to the Cobblestone District, a locally designated historic district, are expected to be minimal as the Preferred and Low-Density Alternatives would only be visible from buildings fronting Perry and Illinois Streets. Furthermore, the HSBC Atrium and HSBC Arena would obstruct views of these Alternatives with the exception of the proposed Webster Block street wall along Perry Street between Washington Street and Seymour H. Knox III Plaza. The High-Density Alternative would potentially be more visible, as development on the Webster Block would likely be visible above the HSBC Atrium roof line. However, the HSBC Arena would still obstruct views to the Project Area from properties at the south end of Illinois Street.

Thus, the Build Alternatives will not have a significant adverse impact upon architectural resources. The Design Guidelines would require that final Project designs are compatible with

the historic character of the Project Area as well as historic resources in the surrounding area, such as the Cobblestone Historic District and Phoenix Die Casting building complex.

#### 7.1.2.2 Archaeological Resources

The Phase IA Cultural Resources Investigation Report (see **Appendix D**) prepared for the ECHDC found that all of the focus areas, except for the Aud Block, are sensitive for the presence of prehistoric and historic period archaeological remains. Therefore, the report recommended that additional Phase IB and Phase II archaeological testing programs be conducted within these areas to verify the presence or absence of potential archaeological resources (Phase IB Investigation) and, if resources are found to be present, determine their eligibility for inclusion in the S/NRHP (Phase II Investigation). The Phase 1A Report determined that the Aud Block is not likely to contain intact and S/NRHP-eligible archaeological remains due to the extensive disturbance of the block resulting from the construction of the auditorium and Hamburg Drain (Panamerican Consultants Inc., 2008). Therefore, no further archaeological investigations are warranted on this parcel.

In a letter dated April 28, 2009, the OPRHP concurred with the Phase IA Report's recommendations for additional Phase IB and Phase II archaeological testing, and provided specific guidance for conducting the archaeological testing program (see OPRHP letter in **Appendix A**).

A portion of the Project Area (i.e., the Erie Canal Harbor Focus Area) also is located within the NRHP-eligible Erie Canal Harbor Archaeological District, which was established as an outcome of previous archaeological investigations conducted in connection with the FEIS and Supplemental FEIS for the *Erie Canal Harbor Project*. The Erie Canal Harbor Archaeological District consists of a number of elements that contribute to its historical significance, including: the NRHP-eligible archaeological remains of the Commercial Slip; NHRP-eligible prehistoric period archaeological resources encountered in the district; potentially archaeological sensitive areas beneath historic street remains, which may contain NHRP-eligible archaeological deposits; and the additional historic period archaeological resources encountered that contribute to the district's NHRP eligibility but are not individually eligible. In order to mitigate potential archaeological impacts from the *Erie Canal Harbor Project*, a Programmatic Agreement (PA) and Letter of Resolution (LOR) were entered into by the involved parties to establish procedures for the recovery and management of archeological remains that would be affected by future development. The PA primarily pertained to infrastructure improvements included as part of the *Erie Canal Harbor Project*, which have since been completed, and the stipulations of this agreement have all been satisfied. The LOR contained additional stipulations pertaining to the future build out of established developments parcels within the *Erie Canal Harbor Project* site. Because no development has yet occurred on the established parcels, future archaeological investigation responsibilities for the agencies that signed the LOR remain in effect (see **Appendix A**).

As discussed above, with the exception of the Aud Block, the Project Area is considered to be sensitive for the presence of both prehistoric and historic period archaeological resources. As

recommended in the Phase 1A report, further archaeological investigation and testing will be conducted to more precisely identify the presence and location of archaeological resources and determine their historical significance. Therefore, pending the results of further archaeological testing, construction of the Build Alternatives may occur in areas where significant archaeological resources are present and may result in the disturbance of those resources. However, there may be variations in the amount of disturbance by alternative. For example, the height of structures and corresponding foundation designs, particularly in the case of the Preferred and High-Density Alternatives, may require deeper foundations and excavations than the Low-Density Alternative increasing the potential to encounter and impact pre-historic resources. Therefore, the Build Alternatives would potentially result in significant adverse impacts to archaeological resources, and appropriate mitigation measures would be developed.

ECHDC and ESDC have been consulting with OPRHP regarding the Build Alternatives effects on archaeological resources, and will continue the consultation process to identify ways of mitigating potential impacts. The consultation process will result in the development of a Cultural Resource Management Program (CRMP) to establish procedures for further evaluating the effects of the Project on archaeological resources as Project designs are finalized and development is progressed. In areas where the archaeological testing determines that Project development would affect significant archaeological resources, procedures will be included for the recovery of archeological remains in order to mitigate Project impacts. The CRMP requirement is embodied in a draft LOR (see **Appendix A**) that would be entered into by ECHDC, ESDC, and OPRHP. The draft LOR outlines the procedures to be followed for future archaeological investigation in areas that would be affected by development and, where appropriate, the recovery of archaeological resources. The draft LOR also establishes the specific responsibilities of each party involved in the administration and approval of future Project development with respect to the cultural resource management procedures.

The CRMP will build upon the Phase IA archeological investigations completed for the Project to date. As a first step, as recommended in the Phase IA Report, Phase IB and Phase II archaeological testing programs would be conducted in archaeologically sensitive areas that would be affected by Project construction prior to initiation of construction activities in any archeologically sensitive areas. Such investigation programs may be carried out separately over several years as individual phases of the Project move forward. The Phase IB level of reconnaissance would involve physically excavating small test units to verify the presence or absence of archaeological resources and, if present, make a preliminary assessment of their type, integrity, and potential historic significance. The archaeological testing procedures provided in the April 28, 2009 letter from OPRHP would be incorporated into the Phase IB testing program. If encountered cultural deposits are determined to have integrity and potential historic significance, then a Phase II investigation would be required to determine the resource's eligibility for inclusion in the S/NRHP. If the resource is not eligible and the OPRHP concurs, then no additional investigations would be required. However, if an S/NRHP-eligible resource would be impacted by Project development, then a Phase III data recovery program would be required to mitigate the effect of the proposed construction on the resource.

The Phase III data recovery program would involve the preparation of a research design to guide the overall program. This would be followed by an excavation program to retrieve a representative sample of NRHP-eligible resources impacted by the Project. The data recovery is completed by conducting analysis, issuing findings based upon the questions posed in the research design, and curating the artifacts retrieved. As the value or significance of an archaeological resource relates to its potential to provide important information, the adverse effects of the Project on the resource would be mitigated by the information recovered through this systematic archaeological investigation. Therefore, the implementation of the above measures would serve to mitigate the Project's potential impact on archaeological resources.

As noted above, the LOR for the *Erie Canal Harbor Project* is still in effect for the portion of the Project Area located within the Erie Canal Harbor Archaeological District (i.e., the Erie Canal Harbor Focus Area). However, that agreement was developed for the former project, which had a different development program than the current Proposed Project. Therefore, it is anticipated that the draft LOR developed for the Project will amend and/or supersede the existing LOR for the *Erie Canal Harbor Project* in order to specifically address the effects of Project development within the Erie Canal Harbor Project Area.

## 7.2 Visual Resources

Impacts to visual resources occur when there is a detrimental effect on the perceived beauty of a place or structure. Significant aesthetic impacts are those that may cause a diminishment of the public enjoyment and an appreciation of an inventoried resource. In order to assess the aesthetic impact of an action, the existing and potential aesthetic resources of the site should be evaluated and compared. Because this process can be somewhat subjective, it is important to describe the details used to determine the level of impact at a site.

### 7.2.1 No-Build Alternative

The No-Build Alternative would result in no significant change to the visual character of the Project Area or its surrounds except for the construction of Prime, Hanover and Lloyd Streets in the area adjacent to the Central Wharf Green and Commercial Slip. The existing poor visual character of the Project Area would remain, and Project infrastructure in context with the surrounding urban environment would not be developed to provide visual interest and enhance the City's waterfront setting.

### 7.2.2 Build Alternatives

All of the Build Alternatives would result in a positive impact to the visual setting of the Project Area by creating memorable streets, open spaces and water features. The Build Alternatives would create a public environment that changes from one place to the next, offers different orientations, provides for a variety of uses and, to varying degrees, would reduce the visual dominance of the Skyway. To gain a better understanding of the general size of proposed buildings, massing models have been prepared to illustrate similarities and differences in scale and density of structures among the Build Alternatives (see **Figures 7.2-1 through 7.2-3**). The primary distinctive elements for the Low-Density Alternative include a number of lower-rise

structures as compared to Preferred Alternative and no hotel on the Central Wharf Green. The lower scale of these structures would be out of context with the surrounding development and would not mask the elevated Skyway, which detracts from the overall aesthetic quality of the Project Area. On the other hand, the High-Density Alternative model shows structures with additional height that would better screen the Skyway and offers a more urbane environment.

With an understanding of how overall Project development could appear, the remainder of this section summarizes how the Build Alternatives would improve specific Project Area viewsheds, and focuses particularly on the various elements that would be visible from these locations (the same locations as discussed in Chapter 6.2; see **Figure 6.2-1**). The viewsheds analysis focuses on pedestrian-level views to the Project Area from:

- Pearl Street looking south from Lower Terrace;
- Main Street looking south from south of Exchange Street;
- Scott Street looking west from Washington Street;
- Main Street looking north from Perry Street;
- Prime Street looking northwest from west of Perry Street;
- Fuhrmann Boulevard looking northeast across the Buffalo River; and
- Marine Drive looking east from Marine Drive Apartments.

A brief description of each improved viewshed under the Preferred Alternative is provided below, along with comparisons to the Low- and High- Density Build Alternatives.

**Location 1 – Pearl Street looking south from Lower Terrace**

As illustrated in **Figure 7.2-4**, the primary focal points of this viewshed would be the western façade of the Bass Pro building to the left (east) and rear of the "Canal Side" landmark. The "Canal Side" landmark would serve as a memorable focal point/meeting place for visitors. Smaller retail buildings evoking the historic nature of the waterfront from this location, and the Commercial Slip and Bass Pro water features would be evident as one passes beneath the Skyway.

The Low-Density Alternative would primarily affect the west (right) side of the viewshed. Here the Commercial Slip Building and Commercial Slip Parking Garage, while covering the same lot area, would be shorter in height. Both structures would be shorter than the Skyway thereby retaining some of the visual dominance of the Skyway. Under the High-Density Alternative, the Commercial Slip Parking Garage would remain the same in both height and build footprint as the in the Preferred Alternative. However, the Commercial Slip Building could be up to twice the height of the Preferred Alternative – rising well above the adjacent Skyway, and a pedestrian bridge would cross over Commercial Street connection the Commercial Slip Garage with Bass Pro.

**Location 2 - Main Street looking south from south of Exchange Street**
This viewshed would be improved through the creation of a uniform streetwall along both sides of Main Street and Seymour H. Knox III Plaza, as shown in **Figure 7.2-5**. The Donovan Block to the east (left) would include a renovated structure or a new building similar in scale to the existing Donovan Building, but would include new, attractive design features, which would conform to the Project Design Guidelines. Low and mid-rise buildings consistent with the scale and design features of the Project Area would be visible on the Webster Block. These buildings would partially obscure views to and the visual dominance of the HSBC Area. New buildings to the west (right) would serve to reduce the visual impact of the Skyway. Improved sidewalks and pedestrian scale lighting would be installed consistent with the Cars on Main Project design for the Project Area. With the development of new buildings along Main Street and Seymour H. Knox III Plaza, the visual connection between the Project Area and downtown would be strengthened.

The viewshed for this location under the Low-Density Alternative would result in a similar design of structures and streetscape environment. However, the North Donovan Block development would not extend to the Main Street lot line thereby reducing the building footprint. Development along both sides of Main Street and Seymour H. Knox III Plaza would have reduced building heights, with the exception of the Bass Pro building. The reduced height of the structures would do less to minimize the visual dominance of the HSBC Arena and Skyway within this viewshed. Under the High Density Alternative, lot coverage would remain the same as in the Preferred Alternative. However, all buildings would be measurably taller, with the exception of the Aud Block development (Bass Pro and Winter Garden), which would remain the same as the Preferred Alternative. The South Donovan Block and Webster Block developments on the east (left) would reduce the visual dominance of the HSBC Arena; while the Prime Slip Parcel developments on the west (right) of Seymour H. Knox III Plaza would obscure a greater portion of the Skyway.

**Location 3 - Scott Street looking west from Washington Street**
This viewshed provides an image along the major east/west connector (Scott Street/Marine Drive) through the Project Area (see **Figure 7.2-6**). Prominent buildings in this viewshed would include the Winter Garden to the north (right) at Marine Drive and Main Street. To the south (left) new low- to mid-rise buildings would be visible along Marine Drive. The newly constructed Hanover Street would be visible at its intersection with Marine Drive. All buildings would be constructed to the lot line. As shown, generous sidewalks, pedestrian- scaled lighting and landscaping would create an attractive walking environment along Scott Street and Marine Drive. As can be seen, all structures would reduce the visual dominance of the Skyway from the pedestrian level. However, existing unimpeded views to the Buffalo River and Outer Harbor would be greatly reduced.

Under the Low-Density Alternative, building footprints would remain as in the Preferred Alternative, however, the scale and height of the buildings would be reduced. This would increase the visibility of the Skyway as a dominant feature. The High-Density Alternative would

be generally consistent with the Preferred Alternative with the Winter Garden and buildings south (left) of Marine Drive remaining similar in terms of scale and height.

**Location 4 - Main Street looking north from Perry Street**
As in the existing condition, this viewshed would be dominated by the HSBC Center, which towers over the Project Area, as illustrated in **Figure 7.2-7**. However, Main Street would be transformed into a tree-lined boulevard with the Metro Rail operating down the center as part of the City's Cars on Main Project. Representative of the concept of the Project Area, buildings along the Donovan and Webster Blocks, Prime Slip, and former Aud site would front Main Street, and would be augmented with pedestrian scale lighting and appropriate sidewalk treatments. As the primary north/south artery within the Project Area, Main Street would serve as a major thoroughfare for pedestrians and vehicular traffic, which would support the development of ground-level retail along this corridor. Mid-rise buildings within the Prime Slip area would reduce the dominance of the Skyway over the surrounding landscape, and would supplement the scale of other buildings within the Project Area.

The viewshed at this location for the Low-Density Alternative would provide a slight difference to the Preferred Alternative with the height of structures being at a reduced height on both the west and east sides of Main Street. The High-Density Alternative would differ with increases in both height and scale of the structures on the east side of Main Street.

**Location 5 - Prime Street looking northwest from west of Perry Street**
This viewshed, illustrated in **Figure 7.2-8**, includes the Riverfront District buildings in the foreground. The Buffalo River and Central Wharf Green, with pedestrian treatments, would be evident to the right (west). The reconstructed Prime Street would provide vehicular circulation to the waterfront along with opportunities for on-street parking. The Prime Slip buildings that would front Prime Street would help create, through scale and design, the context of the Project Area's historic waterfront, and would frame views that would extend beyond the Whipple Truss Bridge and the Commercial Slip. A small portion of the Prime Slip, which would bisect a large swath of green space, would be visible as well. The Marine Drive Apartments would be apparent in the background looking north. As in Location 4, the Skyway would be still prominent, but the Prime Slip buildings would provide an urban context to diminish the overpowering nature of the Skyway and its piers.

The Preferred and High-Density Alternatives would include a hotel structure that would further reduce the Skyway's prominence over the Project Area as well as enhance the vitality of this key area along the waterfront. Conversely, the Low-Density Alternative would not include this structure, and would therefore not have as positive an impact to this portion of the Project Area, by not generating as much activity and pedestrian traffic. In addition, the Low-Density Alternative view would not include a parking garage to the north of the Marine Drive Apartments of the mass and scale as the Preferred and High-Density Alternatives, and therefore not effectively conceal the Skyway structure to the north.

**Location 6 – Fuhrmann Boulevard looking east across the Buffalo River**
This viewshed would be dominated by a large swath of green space, the Central Wharf Green, a boutique hotel, the Prime Slip water feature, and seasonal floating docks in the foreground, as shown in **Figure 7.2-9**. New low-rise buildings would front onto Prime Street (in the foreground of the Skyway). These buildings would obstruct views of the Skyway piers, and would orient activity towards the water's edge. The boutique hotel on the south (right) would obscure views to the HSBC Arena. The Donovan Block (north and south), Aud Block and Webster Block developments would be visible over the Skyway establishing a new urban skyline, and would further reduce the visual dominance of the Skyway.

The Low-Density Alternative would differ in several ways. The boutique hotel would not be constructed thereby maintaining views of the HSBC Arena. New buildings along Prime Street as well as development on the Donovan Blocks and Webster Block would be lower in height. This would effectively retain the Skyway as the defining skyline image and would emphasize the lack of context and continuity between nodes of waterfront development.

The High-Density Alternative would be similar to the Preferred Alternative with respect to development in the foreground of the Skyway. However, this alternative would establish a taller building line behind the Skyway that would diminish the visual dominance of the Skyway and create a taller skyline, thus reinforcing the Project's urban setting, but obstructing waterfront views from other downtown viewpoints.

**Location 7 - Marine Drive looking east from Marine Drive Apartments**
As illustrated in **Figure 7.2-10**, the primary feature in this viewshed would be the mid-rise Commercial Slip building (left foreground), which would obscure portions of the Skyway. The Canal Side Hall and Winter Garden would be visible behind the Skyway piers on the north (left) side of Marine Drive. Also visible is a water feature which would create a visual extension of the Commercial Slip north into the Aud block. The Marine Drive/Scott Street vista would terminate at the new building constructed on the South Donovan Block creating a point of visual interest. New low rise buildings would be visible south of Marine Drive along with Prime Street and the Commercial Slip.

The Low-Density Alternative would reduce the height of the Commercial Slip Building; however its footprint would remain as in the Preferred Alternative. The height of developments on the Aud Block, South Donovan Block and buildings fronting Lloyd and Marine Drive would also be reduced increasing the visibility of Skyway piers. Also, the terminus of the Marine Drive/Scott Street vista would be less impressive.

The High-Density Alternative would see the Commercial Slip Building increase substantially in height. The Canal Side Hall and Winter Garden would appear as in the Preferred Alternative, as would the buildings constructed along Lloyd, Hanover and Prime Streets. However, buildings east (behind) the Skyway on the Donovan (north and south) and Webster Blocks would be substantially taller establishing a new skyline above the Skyway. Thus the visual dominance of the Skyway would be further diminished. In addition, a more interesting vista along Marine Drive/Scott Street would be retained.

### 7.2.3 Mitigation

The Project would result in a positive impact on the visual quality of the Buffalo waterfront, with a configuration, scale and design that would place it in context with surrounding urban development and infrastructure, providing a more continuous skyline and welcoming landscape. The Project's cohesive visual character, consistent with surrounding development and Project Area heritage, would be achieved through consistency with Design Guidelines (see **Appendix B**) applicable to all Build Alternatives. The Project Area Design Guidelines have incorporated the urban design guidelines established in the 2004 Erie Canal Harbor Amendment to the Waterfront Redevelopment Urban Renewal Plan for the 12.5-acre Erie Canal Harbor Project site. The Design Guidelines govern architectural features such as storefront and retail facades, cornices, canopies, building materials and color, glass, fenestration, signage and lighting. Also, the design guidelines will ensure that building massing, setbacks, stepbacks, and height are complementary throughout the Project Area.

The intent of the Design Guidelines is to foster the formation of active, visually-interesting spaces with high-quality materials and contemporary techniques that connect to the unique history of the Project Area and Buffalo as a whole. To this end, the Guidelines address how development should or should not impact the public environment. In particular, the focus of the Guidelines is on the pedestrian - to provide a human- scaled setting with good way finding and a comfortable walking environment; the automobile is considered and sought to be convenient, but not dominate the view. Moreover, the Design Guidelines are also intended to create visual interest from near and far. Up close, ground level design features should produce comfortable, inviting, and stimulating environments. From afar, a variable skyline of roof edges, vertical shafts, and signage should create visual interest.

Incorporation of certain sustainable development features into the Project could further enhance its visual quality. Integrating aesthetics with functional responsive design of outdoor areas at Canal Side would offer both environmental and economic benefits. To enhance the pedestrian experience, landscaping and tree plantings would be provided along pedestrian routes to create shade and buffer traffic noise. Also, energy efficient exterior lighting could be incorporated that would minimize glare and be controlled by automatic timers (see **Appendix F**).

An architectural design review committee will be established by ECHDC for the purpose of reviewing Project development. The committee's responsibilities are defined in **Appendix B**.

## 7.3 Land Use / Development Policies

This section examines Project consistency with existing land use controls and local development plans and policies to evaluate the Project components alongside the visions for this area of the City. As explained in Chapter 7.3.5, Design Guidelines would apply to all development parcels and all final designs for all phases of the Project will be reviewed by an Architectural Design Review Committee established by ECHDC. In order to facilitate the successful and timely implementation of the Project and the achievement of the community's long-standing vision of a revitalized Buffalo waterfront, ESDC intends to exercise its statutory authority to override local

land use regulations including the zoning provisions in the City Charter and Code. Specifically, this statutory override eliminates the need for (1) the Common Council to rezone the Project Area, (2) the need for the Common Council and Buffalo Urban Renewal Agency to adopt a revised Urban Renewal Plan for the Project Area, (3) site plan review by the Planning Board for each structure associated with the Project, and (4) any area variances from the Zoning Board of Appeals for structures associated with the Project.

It is important to emphasize that the intent of this override is to expedite Project implementation rather than circumvent established regulations or eliminate public involvement in the planning process. Thus, the Project will still be subject to approval by the Common Council in conjunction with the disposition of city-owned properties to ECHDC. In addition, Project components will be presented to the city Planning Board to review for consistency with the GPP and the Design Guidelines. ECHDC will also extend public comment on the DGEIS for a minimum of 60 days. Finally, all appropriate building permits will be obtained from the City's Department of Economic Development, Permits and Inspections.

### 7.3.1 No-Build Alternative

7.3.1.1 Policies, Plans and Programs

The No-Build Alternative would not support the primary goals and objectives of the various downtown waterfront plans that call for the creation of an active, 24-hour, mixed-use neighborhood with public access and recreational opportunities along the downtown waterfront.

7.3.1.2 Land Use and Zoning

The No-Build Alternative would result in the continuation of existing land use trends within the Project Area and its surrounds, and would not maximize these lands' highest and best use that is eligible under current zoning.

### 7.3.2 Preferred Alternative

7.3.2.1 Policies, Plans and Programs

The proposed programming of the Preferred Alternative (see **Figure 3.5-1**) would be largely consistent with, and would achieve many of the goals and objectives set forth in the plans and policies that influence development within the Project Area including the 2004 ECHMP, 2004 Urban Renewal Plan Amendment and Buffalo's Comprehensive Plan. The Preferred Alternative would construct a destination with multiple uses and activities along the downtown waterfront that would create a vibrant urban setting for local residents and regional visitors. In addition to its proposed mix of land uses, the Preferred Alternative's proposed form and scale of development would conform to visions set forth in the aforementioned plans and policies. The development would be comprised of structures that range in heights, including lower structures (i.e., maximum of 60 feet) on the Erie Canal Harbor Parcels, and taller structures (i.e., maximum of 160 feet) placed on parcels that would abut existing, tall and mid-rise structures such as the Marine Drive Apartments, HSBC Atrium, and HSBC Arena as well as the Skyway. Such

variation in building heights would blend with existing buildings heights, would contribute to a visually interesting skyline, and would reduce the perceived dominance of the Skyway. More specifically, the Preferred Alternative would be consistent with the following plans and policies (see Chapter 6.3 for an overview of the plans and policies):

**2004 Erie Canal Harbor Master Plan and 2004 Urban Renewal Plan Amendment**
The 2004 ECHMP envisions Erie Canal Harbor as "a hub of activity, with a wide range of uses including interpretive activities, recreational uses, and festival gatherings that will ensure its active use by residents and visitors alike." As mentioned in Chapter 2.2.3, the 2004 ECHMP designated the 12.5-acre Erie Canal Harbor as "future development parcels" organized by the historical street pattern. On these parcels, the 2004 ECHMP recommended commercial development, with mixed uses such as museum facilities, restaurants, clothing stores, bike and boat rentals, boutique shops, offices, confectioners and some upper level office space to add to the character and vitality of Erie Canal Harbor. The 2004 ECHMP anticipated that the ground floor uses will be commercial and the upper floors would allow more private uses such as office and residential. It is clear that the Erie Canal Harbor parcels in the Preferred Alternative, which would include small-scale shops, community gathering space, and ground-level retail with office uses above, are consistent with the 2004 ECHMP.

The 2004 ECHMP also provided urban design guidelines to guide building form and massing on the Erie Canal Harbor parcels. These urban design guidelines formed the basis of and were incorporated into the 2004 Urban Renewal Plan Amendment (see Chapter 6.3.2.3). Under the 2004 ECHMP and the 2004 Urban Renewal Plan Amendment, "the buildings on the development parcels located throughout the site should evoke the character of the historic buildings of the canal district through the scale, massing and materials of the new construction." As discussed in Chapter 7.1.2.1 and below, Design Guidelines have been developed for the Project in accordance with the principles set forth in the 2004 ECHMP and the 2004 Urban Renewal Plan Amendment. In fact, the design guidelines incorporate, in whole, the urban design guidelines from the 2004 Urban Renewal Plan Amendment relative to any development on the Erie Canal Harbor Project parcels.

There are two specific changes to the land use designations contemplated in the 2004 ECHMP that are part of the Preferred Alternative. First, the 2004 ECHMP designated the area where the waterfront hotel would be located as the south basin, an excavated inlet open to the Buffalo River. This water use was eliminated in 2006 in response to apparent national re-programming of federal funds in the wake of Hurricane Katrina (see Chapter 2.4). In addition, under the 2004 ECHMP and 2004 Urban Renewal Plan Amendment, frontages along the Skyway's right-of-way were to remain open space as access to Skyway infrastructure. Under the Preferred Alternative, this area will be a public plaza.

**Buffalo Comprehensive Plan**
As discussed in Chapter 6.3.3, the downtown element of the Comprehensive Plan, *The Queen City Hub Strategic Plan,* focused on efforts to improve the City center. At the waterfront, this plan echoes the 2004 ECHMP overall conceptual goal of creating significant heritage attractions,

maritime activity, enhanced waterfront access, and new development to produce a place of activity and excitement. When viewed together with the improvements at the waterfront that have already been completed, such as the Commercial Slip, Central Wharf Green and Naval Park, the Preferred Alternative would be complementary to these features through architectural design, additional open space, and a mix of development to provide waterfront access and draw additional attention to these existing features. The Preferred Alternative would create activity and excitement at the waterfront and is clearly consistent with these goals.

**Buffalo Waterfront Corridor Initiative**
The Buffalo Waterfront Corridor Initiative, as discussed in Chapter 6.3.4, included a transportation corridor project to be implemented near to the Project Area, the *Erie Street Expanded Project Proposal* ("Erie Street Project"), which proposes to extend the segment of Erie Street from the Erie Basin Marina to West Swan Street with a proposed extension to the Main Street, Church Street and Division Street intersection to enhance multi-modal travel from the City interior to the Buffalo River and Lake Erie waterfront. The Erie Street Project would take place well outside of the Project Area and Project plans would not impact implementation of the Erie Street Project. Thus, the Preferred Alternative is not inconsistent with the Buffalo Waterfront Corridor Initiative.

**Niagara River Greenway Plan**
As discussed in Chapter 6.3.5, the Niagara River Greenway Plan outlines a set of broad principles to guide projects within the Greenway corridor. Although none of the principles of the Greenway Plan are specific to the Project Area, several will be promoted through design and implementation of the Project. These principles include promoting public access to the Greenway through the development of water-based trails and waterfront access points, physical connections that link destinations and communities, and revitalization, reinvestment and renewal in the cities and communities along the Greenway through sustainable development, tourism and improved quality of life factors.

Consistent with these principles, the Preferred Alternative would expand, link and enhance open space and Greenway trails in or adjacent to the Project Area, as discussed in Chapter 7.12.2. The Preferred Alternative would extend the Central Wharf Green to South Park Avenue, providing additional waterfront access and connecting the Project Area to the Riverwalk and Industrial Heritage Trails, which are components of the Greenway. Also, sidewalks and bicycle lanes throughout the Project Area would connect to existing systems, linking the Project Area to other city- and region-wide resources. As a whole, the Preferred Alternative would be consistent with the Greenway's core principles of revitalization and reinvestment by transforming an undeveloped and underutilized area to a destination for recreation and tourism with a diversity of amenities that would enhance the quality of life on the waterfront.

#### 7.3.2.2 Land Use and Zoning

The Preferred Alternative would be generally consistent with adopted land use regulatory documents, including the zoning provisions of the City Charter and Code and the Waterfront Urban Renewal Plan. As discussed in Chapter 6.3, the greater part of the Project Area is

currently zoned as II-Institutional Light Industrial with a small portion in the northeast corner of the Project Area zoned as DO-Downtown Opportunity. Since no buildings are proposed for parcels covered by the DO-Downtown Opportunity District, the focus of analysis is on the requirements of the II District. This zoning district allows for the Preferred Alternative's proposed residential, various retail and restaurant-service uses, but does not explicitly permit office or hotel uses. In this regard, the Preferred Alternative would be inconsistent with the zoning provisions. The II District regulations indicate that there is no height limit or minimum, and does not address setbacks. Thus, the Preferred Alternative is consistent with all applicable bulk requirements.

With regard to the Urban Renewal Plan, it important to distinguish the area comprising the Erie Canal Harbor Project parcels from the larger area covered by the plan. As discussed above in Chapter 7.3.2.1, an amendment to the plan was adopted in 2004 to better match visions for future development in this area. The Preferred Alternative would largely adhere to the regulations in this amendment with the exception of the waterfront hotel and the Skyway Plaza. Conversely, the areas beyond the Erie Canal Harbor, but still within the Waterfront Urban Renewal Area, are regulated by the base Urban Renewal Plan, which has not been amended to reflect updated visions for these areas and recent activities, such as the vacating of the Donovan Building and the clearing of the Aud Block. Consequently, the Preferred Alternative's proposed improvements to these areas would not be permitted under the Urban Renewal Plan. This is an example of where the override of local land use regulations, as described in the introduction to Chapter 7.3, would expedite the process of permitting land uses that would fulfill the visions set forth in various policies and plans.

The Preferred Alternative would create a significant increase in the demand for parking. The City's recent Parking Assessment (November 2008) concluded that with most of the Project Area undeveloped, there is a peak hour surplus of 2,181 parking spaces within the HSBC Arena Parking District which includes the Project Area (with the exception of the Marine Drive surface lot), the HSBC Arena structured parking ramp and all of the surface lots to the east of the Arena and the HSBC Atrium.

Following the completion of build-out of the Preferred Alternative, the Project Area would contain approximately 277,250 square feet of retail space; approximately 173,750 square feet of restaurant space; approximately 293,600 square feet of office space; approximately 190,400 square feet of residential space; approximately 120,000 square feet of hotel/lodging space and approximately 20,000 square feet of cultural space. Based on this build-out, current zoning regulations would require a minimum of 2,227 off-street parking spaces for the Project (see **Table 7.3-1**).

Table 7.3-1
Preferred Alternative
Off-Street Parking Requirements Per City Charter and Code

| Type of Use | Square Feet (sf) | Off-Street Parking Ratio | Required Spaces |
|---|---|---|---|
| Retail | 277,250 | 1 per 500 sf | 555 |
| Restaurant | 173,750 | 1 per 150 sf | 1,158 |
| Office | 293,600 | 1 per 1,000 sf | 294 |
| Residential | 190,400 (150 units) | 1 per unit | 150 |
| Hotel/Lodging | 120,000 (150 rooms) | 1 per 3 rooms | 50 |
| Cultural | 20,000 | 1 per 1,000 sf | 20 |
| **Total** | **1,075,000** | | **2,227** |

The proposed parking plan associated with the Preferred Alternative, would provide 2,471 off-street parking spaces (see **Figure 3.5-3**). This would be slightly more than the 2,227 that would be required under the City's zoning requirements. In order to minimize adverse impacts to land, parking would be concentrated within five parking garages spread across the Project Area. In addition, new surface lots would be generally limited to areas under the elevated portions of the Skyway and Thruway, areas which are generally not suitable to other uses. This approach would minimize the amount of land dedicated to parking and would avoid a proliferation of visually unattractive surface parking lots.

During the scoping process, a few commenters expressed the concern that Project plans not place too much emphasis on parking and that parking plans should not attempt to provide parking for the absolute maximum number of visitors for Harbor front events which only occur a few days a year. The Project sponsor agrees with this position and has endeavored to provide an appropriate level of parking for an urban development such as Canal Side. By way of comparison, in a suburban community such as the Town of Orchard Park, the Preferred Alternative would require in excess of 4,400 off-street parking spaces pursuant to the local zoning code or 56% more off-street parking spaces than proposed. With the wide-spread availability of mass transit to the Project Area and the existing parking surplus in the HSBC Arena Parking District, providing slightly more than the minimum number of parking spaces required under the City's zoning regulations would be a reasonable approach, balancing parking demands with the effective utilization of land.

### 7.3.3 Low-Density Alternative

#### 7.3.3.1 Policies, Plans and Programs

Similar to the Preferred Alternative, the proposed programming of the Low-Density Alternative (see **Figure 4.1-2**) would be largely consistent with the vision and goals of current policies, plans and programs. However, the Low-Density Alternative would not be likely to fully achieve the desired goal of creating a vibrant waterfront destination, due to its reduced amount of square

footage compared to the Preferred Alternative (603,200 and 1,075,000 respectively). Consequently, the smaller form and scale of structures in the Low-Density Alternative would not blend as well into the existing urban fabric, as compared to the Preferred Alternative. In addition, a key component that differs between these two alternatives is the waterfront hotel, which would be excluded from the Low-Density Alternative. The elimination of the waterfront hotel would be more consistent with the 2004 ECHMP and the 2004 Urban Renewal Plan Amendment as this area would remain public open space.

#### 7.3.3.2 Land Use and Zoning

Since proposed programming of land uses would be largely the same and because existing land use controls do not contain minimum or maximum development thresholds, the Low-Density Alternative would have similar conflicts with land use regulations as would the Preferred Alternative. The one exception would be the exclusion of the waterfront hotel from the Low-Density Alternative, (an unauthorized use in the II District) which would therefore be slightly less inconsistent with existing zoning provisions.

As with the Preferred Alternative, the Low-Density Alternative would create a significant increase in the demand for parking. Following the completion of build-out of the Low-Density Alternative, the Project Area would contain approximately 229,625 square feet of retail space; approximately 96,825 square feet of restaurant space; approximately 187,750 square feet of office space; approximately 39,000 square feet of residential space; approximately 30,000 square feet of hotel/lodging space and approximately 20,000 square feet of cultural space. Based on this build-out, current zoning regulations would require a minimum of 1,387 off-street parking spaces for the Project (see **Table 7.3-2**).

Table 7.3-2
Low-Density Alternative
Off-Street Parking Requirements Per City Zoning Ordinance

| Type of Use | Square Feet (sf) | Off-Street Parking Ratio | Required Spaces |
|---|---|---|---|
| Retail | 229,625 | 1 per 500 sf | 459 |
| Restaurant | 96,825 | 1 per 150 sf | 646 |
| Office | 187,756 | 1 per 1,000 sf | 188 |
| Residential | 39,000 (45 units) | 1 per unit | 45 |
| Hotel/Lodging | 30,000 (90 rooms) | 1 per 3 rooms | 30 |
| Cultural | 20,000 | 1 per 1,000 sf | 20 |
| **Total** | **603,200** | | **1,387** |

The proposed parking plan associated with the Low-Density Alternative, would provide 1,656 off-street parking spaces (see **Figure 4.1-4**). This would be somewhat more than the 1,387 that would be required under the City's zoning requirements. In order to minimize adverse impacts

to land, the parking would be concentrated within three parking garages spread across the Project Area although this alternative has a higher proportion of surface to structured parking than the Preferred Alternative. As with the Preferred Alternative, new surface lots would be generally limited to areas under the elevated portions of the Skyway and Thruway, areas which are generally not suitable to other uses.

### 7.3.4 High-Density Alternative

7.3.4.1 Policies, Plans and Programs

Similar to the Preferred Alternative, the proposed programming of the High-Density Alternative (see **Figure 4.1-5**) would be largely consistent with the vision and goals of current policies, plans and programs. However, the High-Density Alternative would put so much square footage on the local real estate market that it could adversely impacts activity elsewhere in the downtown market by drawing tenants from other districts and/or over saturating the marketplace resulting in deflated lease/rent prices. Key components that differ between the Preferred and High-Density Alternatives include taller developments under the High-Density Alternative on the Commercial Slip Block (300 feet versus 150 feet), Donovan North Block (200 feet versus 150 feet), and Webster Block (200 feet versus 150 feet). Consequently, the form and scale of structures in the High-Density Alternative would not blend as well into the existing urban fabric, as compared to the Preferred Alternative.

7.3.4.2 Land Use and Zoning

Since proposed programming of land uses would be largely the same and because existing land use controls do not contain minimum or maximum development thresholds, the High-Density Alternative would have similar conflicts with land use regulations as would the Preferred Alternative (office and hotel uses), although it is noted that the High-Density Alternative would provide more of these prohibited uses (almost 500,000 square feet of office and 280,000 square feet of hotel space).

The High-Density Alternative would create a dramatic increase in the demand for parking within and around the Project Area. Following the completion of build-out of the High-Density Alternative, the Project Area would contain approximately 287,250 square feet of retail space; approximately 184,750 square feet of restaurant space; approximately 493,600 square feet of office space; approximately 469,000 square feet of residential space; approximately 215,000 square feet of hotel/lodging space and approximately 20,000 square feet of cultural space. Based on this build-out, current zoning regulations would require a minimum of 2,933 off-street parking spaces for the Project (see **Table 7.3-3**).

Table 7.3-3
High-Density Alternative
Off-Street Parking Requirements Per City Zoning Ordinance

| Type of Use | Square Feet (sf) | Off-Street Parking Ratio | Required Spaces |
|---|---|---|---|
| Retail | 287,250 | 1 per 500 sf | 575 |
| Restaurant | 184,750 | 1 per 150 sf | 1,225 |
| Office | 493,600 | 1 per 1,000 sf | 294 |
| Residential | 469,000 (455 units) | 1 per unit | 150 |
| Hotel/Lodging | 215,000 (480 rooms) | 1 per 3 rooms | 50 |
| Cultural | 20,000 | 1 per 1,000 sf | 20 |
| **Total** | **1,669,600** | | **2,933** |

The proposed parking plan associated with the High-Density Alternative, would provide 2,871 off-street parking spaces (see **Figure 4.1-17**). This would be slightly less than the 2,933 that would be required under the City's zoning requirements. As with the Preferred Alternative, in order to minimize adverse impacts to land, the parking would be concentrated within four parking garages spread across the Project Area. In addition, new surface lots would be generally limited to areas under the elevated portions of the Skyway and Thruway, areas which are generally not suitable to other uses.

### 7.3.5 Mitigation

While the Build Alternatives would not result in adverse impacts on land use because they largely adhere to the goals and objectives of local land plans and policies, as explained above, certain Project components would not comply. Amendments to regulatory documents would not be necessary as ESDC intends to exercise its statutory authority to override local land use regulations in order to expedite the implementation of the Project. Pursuant to ESDC's statutory authority, the Planning Board must review and make a formal recommendation on not only the GPP (which will include a description of the multi-parcel development associated with all phases of the Project), but also on the final designs of future, market-driven developments to ensure consistency with the GPP.

In addition, the GPP will include the Design Guidelines and ECHDC will form a Design Review Committee to ensure final Project designs conform to the Design Guidelines. The intent of the Design Guidelines (see **Appendix B**) is to foster the formation of active, visually-interesting spaces with high-quality materials and contemporary techniques that connect to the unique history of the Project Area and Buffalo as a whole. To this end, the Guidelines address how development should or should not impact the public environment. In particular, the focus of the Guidelines is on the pedestrian - to provide a human- scaled setting with good wayfinding and a comfortable walking environment; the automobile is considered and sought to be convenient, but not dominate the view. Moreover, the Design Guidelines are also intended to create visual interest from near and far. Up close, ground level design features should produce comfortable,

inviting, and stimulating environments. From afar, a variable skyline of roof edges, vertical shafts, and signage should create visual interest.

These goals of the Guidelines would be achieved through a general consistency of design intent, communicated through standards concerning such features as fenestration, materials, color, scale, lighting, and signage. The guidelines also encourage visual interest throughout the Project Area, achieved through a variety of forms and materials. The goal for the full build-out of the Project is the appearance of a variety of buildings and spaces that have been built over time, by different owners and designers. **Figures 7.3-1** through **7.3-3** depict how development in the Project Area could appear under the influence of these Design Guidelines.

## 7.4 Community Character

### 7.4.1 No-Build Alternative

The No-Build Alternative would result in no significant changes to the character of the Project Area or its surrounds. The existing underutilized parcels and surface parking lots would remain the dominant feature in an inactive urban setting.

### 7.4.2 Build Alternatives

Each of the Build Alternatives would result in positive impacts to the character of the Project Area by establishing an active urban district with a variety of uses, places and experiences all connected to the downtown and waterfront. Pedestrian activity and mobility would be enhanced significantly by the construction of new walkways and improved sidewalks and crosswalks (see **Figures 7.4-1** and **7.4-2**). Ground-level retail shops, restaurants, and outdoor kiosks in addition to the destination retailer, Bass Pro, would draw residents and visitors to the Project Area creating a significant level of street level activity that does not currently exist. The introduction of residential development further strengthens the Project Area as a 24/7 environment. Proposed uses, both public and private, also expand year-round use of Project Area attractions. The infusion of vibrant buildings, with designs compatible with the historic context of the Project Area, would create an attractive, unique destination within the Project Area. The construction of low- and mid-rise buildings associated with all of the Build Alternatives would be at a scale appropriate with the surrounding area, including the Skyway and buildings surrounding the Project Area. Importantly, the Build Alternatives would reduce the physical and psychological barriers separating the Project Area from the downtown and waterfront through streetscape, lighting and other improvement under and adjacent to elevated highways (i.e., Skyway and Thruway).

The inclusion of water features throughout the Project Area would emphasize the proximity of the Project Area to the waterfront (see **Figure 7.4-3**) and the Project Area's historic connectivity to the Erie Canal. Improvements to green spaces adjacent to the waterfront would provide further opportunities for passive recreation within the Project Area. Overall, the development of the Project Area under all of the Build Alternatives would transform the current under-utilized parcels into a lively regional destination with multiple districts including a multitude of activities. The anchor tenant (Bass Pro) would include a mix of retail and recreational uses,

while the surrounding developments would include a mix of retail, office, residential, and recreational uses in shared-use facilities.

In an effort to create and maintain a cohesive character for the Project Area, ECHDC has prepared Design Guidelines that would be applicable to all Build Alternatives. These guidelines will give shape and character to all public spaces and built forms in the Project Area. These Design Guidelines incorporate and apply the 2004 Erie Canal Harbor Project urban design guidelines to the 12.5-acre Erie Canal Harbor Project Site located within the Project Area.

The Low- and High-Density Alternatives would result in the same level of public access improvements as the Preferred Alternative, including water features and connections to the waterfront and downtown attractions. These Alternatives would also improve upon the existing community character along the waterfront by providing a regional destination. However, the Low- and High-Density Alternatives would provide somewhat different outcomes in the overall community character.

The Low-Density Alternative would result in lower scale buildings and less development in terms of residential and commercial uses. Thus, there would likely be less activity primarily due to fewer people living in or visiting the Project Area and less street-level activity during the commercial off-hours. In addition, this Alternative would not include the boutique hotel along the Central Wharf Green. As a result a larger, continuous open space would be created west of Prime Street.

Conversely, the High-Density Alternative would provide greater development densities than the Preferred Alternative thereby increasing the number of people living, working and visiting the Project Area. This Alternative would likely result in higher levels of street-level activity during the commercial off-hours. However, the increased density, primarily in the number of residential units, would result in added vehicular traffic and noise.

While each of the Build Alternatives would likely result in varying degrees of impacts to community character, impacts associated with the Build Alternatives would result in a beneficial change to the existing community character.

## 7.5 Social and Economic Issues

### 7.5.1 No-Build Alternative

The No-Build Alternative would cause no changes in the population, racial and ethnic distribution, household numbers or size, housing characteristics, or income of the Project Area or the region. No new development would occur in the Project Area. Similarly, no change is anticipated in labor force size or characteristics, or unemployment rates or trends, as there would be no change in on-site uses nor additional on-site development. Finally, the No-Build Alternative would provide no increase in the value of the Project Area or in tax revenues accrued from the Project Area.

### 7.5.2 Build Alternatives

The following analysis uses the Regional Economic Model, Inc. to evaluate economic impacts. The model is a 10-region structural, dynamic economic forecasting model used to forecast the economic and fiscal impacts of a project on the regional and statewide economy.

#### 7.5.2.1 Preferred Alternative

**Population and Housing**

The Preferred Alternative would not have an impact on the region's population and housing characteristics. The Preferred Alternative would add 190,400 square feet of residential space (150 units) to the waterfront where it previously did not exist. This would create a center of 24/7 year-round activity and provide a sense of community to an underutilized area. However, this minor addition of housing is unlikely to result in a noticeable change in City and County populations and housing characteristics or trends.

The Preferred Alternative would not have a disproportionate impact on minority populations, because, as described in Chapter 6.5.3, the Census block groups surrounding the Project Area are less diverse, and thus contain proportionally fewer minority residents, than the City of Buffalo and Erie County as a whole. However, the Preferred Alternative would have impacts to the residents of the Marine Drive Apartments, a Buffalo Municipal Housing Authority-owned development. These impacts would result from construction activities associated with the Preferred Alternative (For a detailed discussion of construction-related impacts, see Chapter 7.17.2). The approximately 375 on-site surface parking spaces currently used by Marine Drive residents would be temporarily displaced during construction of the Commercial Slip Parking Garage. Temporary replacement parking spaces are currently being identified within a 1,000-foot-radius of the Marine Drive parking lot and would be provided to the residents of Marine Drive Apartments as mitigation. Also, construction noise resulting from construction equipment and construction-related vehicles traveling to and from the Project Area may be audible at these residences. Lastly, construction-related impacts on air quality may result from short-term increases in fugitive dust and mobile source emissions from construction equipment and traffic. Noise and dust impacts will be mitigated with the use of best management construction practices. In addition, ECHDC will establish a "hot line" for the receipt and resolution of complaints regarding construction activities. Also, ECHDC would develop regular public information releases regarding construction activities to inform Marine Drive residents about anticipated short-term disruptions.

After the Project is fully built out (Year 2018), traffic would be generated that would impact the Marine Drive residents. As discussed in Chapter 7.8, the Project would result in increased traffic along Marine Drive. This impact would be mitigated by conversion of a portion of the Marine Drive loop roadway to two-way operation allowing direct access from the Commercial Slip Parking Garage driveway to Marine Drive without impacting the residential loop roadway traffic.

Implementation of the Preferred Alternative would result in long-term improvement in community character and the visual appearance of the Project Area, particularly as viewed from Marine Drive Apartments. Residents of Marine Drive would also have enhanced access to the waterfront, with the construction of new walkways, improved sidewalks and crosswalks. Lastly, the mix of retail, office, residential and recreational uses throughout the Project would provide residents with amenities and recreational opportunities that previously did not exist.

**Direct and Indirect Employment and Fiscal Impacts**

Implementation of the Preferred Alternative would result in direct and indirect employment and fiscal impacts as well as accrual of tax revenues due to changes in land use at the Project Area. Direct impacts are consequences of economic activities carried out by users of the Project, including employment of labor and purchase of locally produced goods and services. Indirect impacts occur as a result of direct spending and employment which induces additional cycles of spending throughout the local economy. These impacts would result from spending at the Project Area's recreational, commercial, and cultural uses, from new spending off-site by day visitors to Canal Side, and from new spending for food and lodging on- or off-site by overnight visitors. Local employment would also increase, principally as a result of the Project's proposed commercial/retail uses. Net new impacts have been calculated to estimate new spending and employment which would occur with the Preferred Alternative.

The Preferred Alternative would involve the construction of approximately 277,250 square feet of retail space, 173,750 square feet of restaurant space, 293,600 square feet of commercial office space, 190,400 square feet of residential space (150 units), a 120,000-square foot hotel (150 rooms), a 20,000 square foot museum, and 2,471 parking spaces. Based on the proposed program, estimated construction cost would be approximately $300 million. The construction investment does not include land costs and site preparation at the Aud Block and Donovan Block including the demolition of the Auditorium, because these activities are separate and took place independent of the Project.

**Table 7.5-1** summarizes the Preferred Alternative's economic and fiscal impact during construction on the Western New York (WNY) region and statewide (NYS) economies. The analysis assumes a 10-year construction period from 2009-2018 for full build-out of Canal Side.

Table 7.5-1
Preferred Alternative
Construction Economic and Fiscal Impact

| | WNY | NYS |
|---|---|---|
| **Employment** | | |
| Direct | 2,157 | 2,273 |
| Indirect & Induced | 1,466 | 1,545 |
| **Total** | **3,623** | **3,818** |
| **Personal Income (mil 2009$)** | | |
| Direct | $97.705 | $106.594 |
| Indirect & Induced | $66.440 | $72.484 |
| **Total** | **$164.145** | **$179.078** |
| **Tax Revenues* (mil 2009$)** | **$12.377** | **$15.000** |

*Tax revenues reported for the Western New York region are primarily City of Buffalo and Erie County taxes. Dollar values are in 2009$, net present value over 10 years, using a 6% discount rate. NYS employment is inclusive of regional employment.

Total employment (direct, indirect, and induced) resulting from construction-related activity is estimated to be 3,623 in the Western New York region and 3,818 jobs in New York State (inclusive of Western New York). Total personal income earned by direct, indirect, and induced construction-related wage earners is estimated to be $164.1 million in the region and $179.1 million in New York State (inclusive of Western New York).

In general, estimated higher impact numbers reported for New York State employment and personal income include the region-specific impacts. The difference between the WNY and NYS values reflects the impacts that the Project would have on areas outside of the region but within New York State. Project construction and operations labor and purchases of supplies, goods, and services would be made in areas beyond the immediate local or regional economy. Likewise, consumption expenditures by wage earners would happen both within and outside of the region within New York State. Both sets of impacts are captured in the analysis.

Tax revenue collected by localities, primarily City of Buffalo and Erie County as a result of construction-related activity and employment is estimated to be $10.5 million and $13.3 million by New York State. Tax revenues include sales tax on construction materials used in the private development portions of the Preferred Alternative. In addition, tax revenues include estimated personal income tax, corporate income tax, and mortgage recording tax on the private portions of the Project, and miscellaneous other taxes. Included in the fiscal total for New York State is the anticipated rent collection (annual payments) paid by Bass Pro of $600,000 annually. Over 30 years, this yields an estimated $8.8 million.

**Table 7.5-2** summarizes the Preferred Alternative's long-term economic and fiscal impacts from the operations of Canal Side and visitor spending. Total employment (direct, indirect, and induced) resulting from full build-out of the Preferred Alternative is estimated to be 2,560 in Western New York and 2,631 jobs statewide, including the region.

Table 7.5-2
Preferred Alternative
Long-Term Economic and Fiscal Impact

| | WNY | NYS |
|---|---|---|
| **Employment** | | |
| Direct | 1,670 | 1,670 |
| Indirect & Induced | 890 | 961 |
| **Total** | **2,560** | **2,631** |
| **Personal Income (mil 2009$)** | | |
| Direct | $1,516.45 | $1,607.97 |
| Indirect & Induced | $1,031.19 | $1,093.42 |
| **Total** | **$2,547.64** | **$2,701.39** |
| **Tax Revenues* (mil 2009$)** | **$155.711** | **$184.585** |

*Tax revenues reported for the Western New York region are primarily City of Buffalo and Erie County taxes. Dollar values are in 2009$, net present value over 30 years, using a 6% discount rate. NYS employment is inclusive of regional employment.

Total personal income earned by direct, indirect, and induced full and part-time wage earners is estimated to be over $2.5 billion in the region and $2.7 billion statewide, including Western New York, over the 30-year period of analysis. Estimated tax revenue resulting from the full build-out of the Preferred Alternative that would go to local governments is estimated to be $155.7 million. Included in this total is an estimated $20.3 million in property tax collections by the City of Buffalo and Erie County on the Benderson development minus the parking structures. New York State estimated tax revenues generated are $184.6 million over the 30-year period of analysis.

### 7.5.2.2 Low-Density Alternative

**Population and Housing**

The Low-Density Alternative would have similar impacts to population and housing compared to the Preferred Alternative. However, those impacts to the Marine Drive Apartment community due to traffic generation would be lesser because of the lower level of traffic generation associated with the Low-Density Alternative (see **Chapter 7.8.2**). The mitigation measures for impacts from the Low-Density Alternative would be identical to those discussed above for the Preferred Alternative.

**Direct and Indirect Employment and Fiscal Impacts**

The Low-Density Alternative would involve the construction of approximately 229,625 square feet of retail space, 96,825 square feet of restaurant space, 187,750 square feet of commercial office space, 39,000 square feet of residential space (45 units), a 30,000-square foot hotel (90 rooms), and 1,656 parking spaces. Based on the proposed program, estimated construction cost would be approximately $162.8 million. **Table 7.5-3** summarizes the Low-Density Alternative's economic and fiscal impact during the 10-year construction period on the WNY region and NYS economies.

Table 7.5-3
Low-Density Alternative
Construction Economic and Fiscal Impact

| | WNY | NYS |
|---|---|---|
| **Employment** | | |
| Direct | 1,286 | 1,357 |
| Indirect & Induced | 874 | 923 |
| **Total** | **2,160** | **2,280** |
| **Personal Income (mil 2009$)** | | |
| Direct | $58.692 | $64.189 |
| Indirect & Induced | $39.910 | $43.648 |
| **Total** | **$98.602** | **$107.837** |
| **Tax Revenues* (mil 2009$)** | **$8.200** | **$8.915** |

*Tax revenues reported for the Western New York region are primarily City of Buffalo and Erie County taxes. Dollar values are in 2009$, net present value over 10 years, using a 6% discount rate. NYS employment is inclusive of regional employment.

The Low-Density Alternative would result in total of 2,160 regional construction-related jobs and 2,280 jobs statewide, including Western New York. The Low-Density Alternative would also result in an estimated $98.6 million in construction-related personal income in Western New York and $107.8 million statewide, including Western New York. This growth in construction employment and personal income is a 40% reduction from job and personal income growth due to the Preferred Alternative. The Low-Density Alternative would generate an estimated $8.2 million in taxes for local government from construction-related activity and $8.9 million in New York State taxes. These revenues are also a reduction in revenues compared to the Preferred Alternative. Therefore, while the Low-Density Alternative would positively impact job growth and tax revenues, that impact would not be as significant as that due to the Preferred Alternative.

**Table 7.5-4** summarizes the Low-Density Alternative's long-term economic and fiscal impacts from the operations of Canal Side and visitor spending. Total employment (direct, indirect, and induced) resulting from full build-out of the Low-Density Alternative is estimated to be 1,736 in Western New York and 1,786 jobs statewide, including the region.

Table 7.5-4
Low-Density Alternative
Long-Term Economic and Fiscal Impact

| | WNY | NYS |
|---|---|---|
| **Employment** | | |
| Direct | 1,127 | 1,127 |
| Indirect & Induced | 609 | 659 |
| **Total** | **1,736** | **1,786** |
| **Personal Income (mil 2009$)** | | |
| Direct | $1,022.54 | $1,084.77 |
| Indirect & Induced | $695.32 | $737.64 |
| **Total** | **$1,717.86** | **$1,822.41** |
| **Tax Revenues* (mil 2009$)** | **$86.414** | **$128.563** |

*Tax revenues reported for the Western New York region are primarily City of Buffalo and Erie County taxes. Dollar values are in 2009$, net present value over 30 years, using a 6% discount rate. NYS employment is inclusive of regional employment.

Total personal income earned by direct, indirect, and induced full and part-time wage earners is estimated to be over $1.7 billion in the region and $1.8 billion statewide, including Western New York, over the 30-year period of analysis. Estimated tax revenue resulting from the full build-out of the Low-Density Alternative that would go to local governments is estimated to be $86.4 million, including approximately $10.3 million in property tax collections by City of Buffalo and Erie County. New York State estimated tax revenues generated are $128.563 million over the 30-year period of analysis.

#### 7.5.2.3 High-Density Alternative

**Population and Housing**

The High-Density Alternative would have similar impacts to population and housing compared to the Preferred Alternative. However, those impacts to the Marine Drive Apartment residents due to traffic generation would be greater because of the higher level of activity that would result from the High-Density Alternative. The mitigation measures for impacts from the High-Density Alternative would be identical to those discussed above for the Preferred Alternative.

**Direct and Indirect Employment and Fiscal Impacts**

The High-Density Alternative would involve the construction of approximately 287,250 square feet of retail space, 184,750 square feet of restaurant space, 493,600 square feet of commercial office space, 469,000 square feet of residential space (455 units), a 215,000-square foot hotel (480 rooms), and 2,871 parking spaces. Based on the proposed program, estimated construction cost would be approximately $450.7 million.

**Table 7.5-5** summarizes the High-Density Alternative's economic and fiscal impact during the 10-year construction period on the WNY region and NYS economies.

Table 7.5-5
High-Density Alternative
Construction Economic and Fiscal Impact

| | WNY | NYS |
|---|---|---|
| **Employment** | | |
| Direct | 3,027 | 3,188 |
| Indirect & Induced | 2,058 | 2,168 |
| **Total** | **5,085** | **5,356** |
| **Personal Income (mil 2009$)** | | |
| Direct | $137.573 | $150.213 |
| Indirect & Induced | $93.550 | $102.145 |
| **Total** | **$231.123** | **$252.358** |
| **Tax Revenues* (mil 2009$)** | **$20.876** | **$21.937** |

*Tax revenues reported for the Western New York region are primarily City of Buffalo and Erie County taxes. Dollar values are in 2009$, net present value over 10 years, using a 6% discount rate. NYS employment is inclusive of regional employment.

The High-Density Alternative would result in total of 5,085 regional construction-related jobs and 5,356 jobs statewide, including Western New York. The High-Density Alternative would also result in an estimated $231 million in construction-related personal income in Western New York and $252 million statewide, including Western New York. This growth in construction employment and personal income is a 40% increase from job and personal income growth due to the Preferred Alternative. The High-Density Alternative would generate an estimated $20.9 million in taxes for local government from construction-related activity and $22.0 million in New York State taxes. These revenues are also an increase in revenues compared to the Preferred Alternative. Therefore, the High-Density Alternative would have a more positive impact on job growth and tax revenues than the Preferred Alternative.

**Table 7.5-6** summarizes the High-Density Alternative's long-term economic and fiscal impacts from the operations of Canal Side and visitor spending. Total employment (direct, indirect, and induced) resulting from full build-out of the High-Density Alternative is estimated to be 3,559 in Western New York and 3,666 jobs statewide, including the region.

Table 7.5-6
High-Density Alternative
Long-Term Economic and Fiscal Impact

| | WNY | NYS |
|---|---|---|
| **Employment** | | |
| Direct | 2,299 | 2,299 |
| Indirect & Induced | 1,260 | 1,367 |
| **Total** | **3,559** | **3,666** |
| **Personal Income (mil 2009$)** | | |
| Direct | $2,200.83 | $2,336.93 |
| Indirect & Induced | $1,496.57 | $1,589.12 |
| **Total** | **$3,697.40** | **$3,926.05** |
| **Tax Revenues* (mil 2009$)** | **$214.230** | **$264.682** |

*Tax revenues reported for the Western New York region are primarily City of Buffalo and Erie County taxes. Dollar values are in 2009$, net present value over 30 years, using a 6% discount rate. NYS employment is inclusive of regional employment.

Total personal income earned by direct, indirect, and induced full and part-time wage earners is estimated to be over $3.7 billion in the region and $3.9 billion statewide, including Western New York, over the 30-year period of analysis. Estimated tax revenue resulting from the full build-out of the High-Density Alternative that would go to local governments is estimated to be $214.2 million, including approximately $36.4 million in property tax collections by City of Buffalo and Erie County. New York State estimated tax revenues generated are $264.7 million over the 30-year period of analysis.

## 7.6 Water Resources

### 7.6.1 Floodplain Management

#### 7.6.1.1 No-Build Alternative

Under the No-Build Alternative, there would be no change to the existing site features, including bulkhead along the Buffalo River. Therefore, there would be no impact to floodplains in the vicinity of the Project Area. In addition, the No-Build Alternative would not impact the nearby floodway (i.e., Buffalo River), as the proposed seasonal floating dock system (up to 30 slips) along the Buffalo River's edge would not be installed.

#### 7.6.1.2 Build Alternatives

A narrow portion of the Project Area along the edge of the Buffalo River is within the 100-year floodplain (see **Figure 6.6-2**). However, all Build Alternatives site buildings and structures outside of the floodplain area. Improvements within floodplain areas include passive recreational uses consisting of walkways, street furniture and lighting along the Central Wharf Green. Both the Preferred Alternative and the High-Density Alternative proposed the construction of a boutique hotel near the river's edge, which would require additional study at

time of design and construction to confirm its location being outside of a mapped floodplain. Thus, the Build Alternatives are not anticipated to adversely affect area floodplains.

All Build Alternatives would include the construction of a seasonal floating dock system (up to 30 slips) within Buffalo River floodway. A typical slip accommodating two boats would be approximately 24 feet wide by 30 feet deep in size (see **Figure 7.6-1**). The floating dock system, adjacent to the east edge of the river, is located in an area where the USS The Sullivans had been permanently moored for many years (see **Figure 7.6-2**). The seasonal docks would be used by Bass Pro for boat sales and demonstrations. The docks would be accessed by pedestrians via a moveable gangway from Central Wharf Green. Given the previous occupation of this area by the USS The Sullivans and the seasonal nature of the floating dock system, the Project is not anticipated to result in a significant adverse impact to the floodway.

#### 7.6.1.3 Mitigation

A survey of floodplain boundaries will be performed concurrently with boutique hotel design to delineate the 100-year floodplain for final design purposes. If located within the floodplain, hotel development would be undertaken in accordance with applicable City of Buffalo floodplain regulations. This would minimize the potential for increased flood risks, and would likely include:

- Establishing grading plans and building elevations that are above floodplain elevations;
- Prohibiting of any habitable areas of buildings/structures at floodplain elevations;
- Implementing flood proofing measures for non-habitable portions of buildings/structures (i.e., commercial uses) within the floodplain, if necessary;
- Best practices in developing "green marinas" would be implemented, as feasible, to further protect contaminants from entering the Buffalo River. These could include:
    - Developing and implementing spill prevention programs;
    - Using environmentally preferred materials in dock system design;
    - Installing trash and recycling receptacles; and
    - Training staff to management the facility in keeping with adopted green marina standards.

### 7.6.2 Navigation

#### 7.6.2.1 No-Build Alternative

Under the No-Build Alternative, there would be no change to the navigation features along the Buffalo River.

#### 7.6.2.2 Build Alternatives

As mentioned above in Chapter 7.6.1, a floating dock system, adjacent to the east edge of the Buffalo River, is proposed to be located in an area where the USS The Sullivans had been permanently moored in all Build Alternatives. The dock system would be seasonal, meaning the docks would be removed from the waterway during the winter snow and ice season. Of particular concern is the location of the proposed dock system in relation to the federal channel line. As illustrated in **Figure 7.6-2,** the docks would extend into the federal navigation channel. However, given the previous use of this area by the USS The Sullivans and the seasonal nature of the dock system, the Project would not result in a significant adverse impact to river navigation.

The dock system also would not have an adverse impact on surface water quality due to fueling or boat maintenance activities, because the Project would not include fueling facilities at the waterfront, and any boat maintenance activities would be conducted within the Bass Pro store, not at the docks.

#### 7.6.2.3 Mitigation

- ECHDC will consult with the United States Army Corps of Engineers, United States Coast Guard and City of Buffalo Department of Public Works, Street and Parks regarding design, placement, and operation and maintenance of the seasonal dock system.
- ECHDC will consult with the NYSDEC to identify possible aquatic habitat enhancements that could be included as part of the design for the floating dock system.

### 7.6.3 Storm Water Management

#### 7.6.3.1 No-Build Alternative

The No-Build Alternative would have no impact on Project Area storm water management which would remain as is.

#### 7.6.3.2 Build Alternatives

All Build Alternatives would result in the redevelopment of underutilized lots within the Project Area and a general improvement in storm water management from No-Build conditions. The Project design under each Build Alternative offers several benefits over the current stormwater management system in place. While the Project Area currently consists of impervious, unplanted and paved surfaces, Canal Side, as built out, would include many areas that will function to decrease runoff. Street trees and plantings would be included where possible, the canals would have a drainage system, and public spaces, such as the Canal Side Common, would help to decrease and slow runoff. These Project features would help to ease the stress on the City's combined sewer system that is aggravated by current conditions.

In addition, ECHDC has retained the firm Atelier Ten to develop environmental and sustainability concepts for the Project Area, including suggested strategies for mitigating storm water runoff (see Sustainable Development at Canal Side, included as **Appendix F** ("Sustainability Report"). Suggested storm water management concepts would seek to optimize the ability of Project components to capture, treat and store storm water to be reused for non-potable uses such as irrigation or toilet flushing. These mitigation measures would be further examined in the FGEIS for feasibility in the context of Project design, construction and operations. For example, the Sustainability Report suggests:

- Reusing grey water, storm water, and condensate water for appropriate non-potable uses such as refilled canal water, toilet flushing, and irrigation;
- Enhancing storm water management through reduction and slowing of runoff water;
- Balancing soil cut and fill on-site during Project construction;
- Constructing paved areas with permeable surfaces or groundwater recharge systems where applicable to increase infiltration and reduce storm water runoff;
- Incorporating vegetated buffers along roadways; and
- Implementing best practices for snow management.

Storm water management would not greatly differ between all Build Alternatives. Building lot coverage would be similar under each Build Alternative. Also, Project open space designs are consistent for all Build Alternatives in providing water features (i.e., canals) and plantings that would capture rainfall and snowmelt. However, the Low-Density Alternative would not include the construction of a boutique hotel along the Central Wharf Green. As a result, this Alternative would provide slightly less impervious surface within the Project Area and storm water infiltration would be slightly improved along the Central Wharf Green.

In summary, the Build Alternatives would improve current storm water handling within the Project Area and reduce stress on the City's combined sewer system. As compared to the Preferred Alternative and the High-Density Alternative, the Low-Density Alternative would further improve Project Area storm water runoff conditions by reducing impervious surfaces with the elimination of the boutique hotel along the Central Wharf Green.

### 7.6.4 Groundwater

#### 7.6.4.1 No-Build Alternative

A majority of the Project Area is comprised of impervious surfaces (e.g., streets, sidewalks, paved parking lots, and structures) and has limited opportunities for storm water runoff to enter the groundwater system. In addition, groundwater is not used as a source of potable water. Therefore, the No-Build Alternative would not impact groundwater in the Project Area.

#### 7.6.4.2 Build Alternatives

No adverse impacts to groundwater resources would result from the construction and operation of the Build Alternatives. However, experiences from other development projects in the area (e.g., HSBC Arena, HSBC Atrium) indicate a potential need to consider the impact of the water table on building design. Depending on the type of construction techniques employed, development site excavations may require dewatering during construction. In such situations, water removed from the excavation area would be discharged to a combined sewer in accordance with the requirements of the Buffalo Sewer Authority.

## 7.7 Coastal Zone Management

### 7.7.1 No-Build Alternative

The No-Build Alternative would not result in any changes to existing land or water uses within the New York State Coastal Zone Management Program ("CZMP") boundary. Therefore, under the No Build Alternative, several important CZMP development policies would fail to be implemented in the Project Area. These include, but are not limited to the following: Policy 1, because the Project Area would remain undeveloped and underutilized; Policy 2, because water-dependent uses and facilities would not be sited along the shoreline of the Project Area; and Policy 4, because maritime uses and activities would not be developed within the Project Area to strengthen the economic base of the Erie Canal Harbor; Policy 5, because there would be no development in the Project Area which has available public services and infrastructure; Policy 21, because water-dependent and water-enhanced recreation would not be encouraged in the Project Area; and Policy 25, because the scenic quality of the Project Area will remain low (full statements of each CZMP development policy are provided in Chapter 7.7.2 below).

### 7.7.2 Build Alternatives

The Build Alternatives would reconfigure a portion of the waterfront area designated in the approved New York State CZMP. However, implementation of any of the Build Alternatives would be consistent with the applicable policies embodied in New York State's CZMP. This is demonstrated by the following assessment, which identifies all 44 New York State CZMP policies, and evaluates the consistency of the Build Alternatives with these policies. (NYS Department of State, 2001)

#### Development Policies

***Policy 1: Restore, revitalize, and redevelop deteriorated and underutilized waterfront areas for commercial, industrial, cultural, recreational, and other compatible uses.***

The Build Alternatives would redevelop vacant or underutilized lands along the City's downtown waterfront. The Project would provide a vibrant reuse of land which will offer a mix of commercial, cultural, recreational and residential opportunities consistent with this policy.

***Policy 2: Facilitate the siting of water-dependent uses and facilities on or adjacent to coastal waters.***

The Build Alternatives would involve the installation of 30 seasonal boat slips along the Buffalo River shoreline for use by Bass Pro, the Project's anchor tenant whose store will be located outside of the CZMP boundary. The Build Alternatives would also improve access to the waterfront where water related activities occur.

***Policy 3: Further develop the state's major ports of Albany, Buffalo, New York, Ogdensburg, and Oswego as centers of commerce and industry, and encourage the siting, in these port areas, including those under the jurisdiction of state public authorities, of land use and development which is essential to, or in support of, the waterborne transportation of cargo and people.***

This policy is not applicable as the Project Area is not near the Port of Buffalo.

***Policy 4: Strengthen the economic base of smaller harbor areas by encouraging the development and enhancement of those traditional uses and activities which have provided such areas with their unique maritime identity.***

Each of the Build Alternatives would result in the continued development and further enhance the Erie Canal Harbor, which includes the recreated historic Commercial Slip.

***Policy 5: Encourage the location of development in areas where public services and facilities essential to such development are adequate.***

The Project Area is located on the City's downtown waterfront where all essential public services are already available in adequate capacity to provide for the Project's infrastructure needs.

***Policy 6: Expedite permit procedures in order to facilitate the siting of development activities at suitable locations.***

The ECHDC is actively engaging appropriate state, regional and local agencies during the Project development phase in an attempt to expedite the permit review and approval procedures. A project coordination team has been meeting weekly to provide input and guidance to the DGEIS.

Fish and Wildlife Policies

***Policy 7: Significant coastal fish and wildlife habitats will be protected, preserved, and where practical, restored so as to maintain their viability as habitats.***

The Project Area does not contain significant coastal fish and wildlife habitats, and therefore this policy does not apply.

***Policy 8: Protect fish and wildlife resources in the coastal area from the introduction of hazardous wastes and other pollutants which bio-accumulate in the food chain or which cause significant sublethal or lethal effect on those resources.***

Operation of the Build Alternatives would not result in the introduction of hazardous wastes or other pollutants into the Buffalo River. While dock slips will be added to the river for boat sales, no boat maintenance or fueling will occur on the river. A Storm Water Pollution Prevention Program (SWPP) would be prepared for the site that would include an erosion and sediment control plan to protect water resources during construction.

***Policy 9: Expand recreational use of fish and wildlife resources in coastal areas by increasing access to existing resources, supplementing existing stocks, and developing new resources.***

This policy is not applicable.

***Policy 10: Further develop commercial finfish, shellfish, and crustacean resources in the coastal area by encouraging the construction of new, or improvement of existing on-shore commercial fishing facilities, increasing marketing of the state's seafood products, maintaining adequate stocks, and expanding aquaculture facilities.***

This policy is not applicable as there is no commercial fishing on the Buffalo River.

Flooding and Erosion Hazards Policies

***Policy 11: Buildings and other structures will be sited in the coastal area so as to minimize damage to property and the endangering of human lives caused by flooding and erosion.***

Structures constructed under the Build Alternatives, with the exception of walkways from the Commercial Wharf to docks on the river, would be constructed outside of mapped floodplain areas. Additionally, the ground floor levels of structures constructed within the CZMP boundary would be constructed above the flood elevation.

***Policy 12: Activities or development in the coastal area will be undertaken so as to minimize damage to natural resources and property from flooding and erosion by protecting natural protective features including beaches, dunes, barrier islands and bluffs.***

Existing sheet piling along the Buffalo River shoreline in the vicinity of the Project Area protects properties from flooding and erosion. No modification to this protection system is anticipated.

***Policy 13: The construction or reconstruction of erosion protection structures shall be undertaken only if they have a reasonable probability of controlling erosion for at least thirty years as demonstrated in design and construction standards and/or assured maintenance or replacement programs.***

Modifications to existing erosion protection structures are not anticipated under any of the Build Alternatives.

***Policy 14: Activities and development, including the construction or reconstruction of erosion protection structures, shall be undertaken so that there will be no measurable increase in erosion or flooding at the site of such activities or development, or at other locations.***

All anticipated development would occur outside of mapped floodplain areas and will not increase flooding or erosion potential.

***Policy 15: Mining, excavation or dredging in coastal waters shall not significantly interfere with the natural coastal processes which supply beach materials to land adjacent to such waters and shall be undertaken in a manner which will not cause an increase in erosion of such land.***

This policy is not applicable.

***Policy 16: Public funds shall only be used for erosion protective structures where necessary to protect human life, and new development which requires a location within or adjacent to an erosion hazard area to be able to function, or existing development; and only where the public benefits outweigh the long term monetary and other costs including the potential for increasing erosion and adverse effects on natural protective features.***

The Build Alternatives would not involve modifications to existing protective structures.

***Policy 17: Non-structural measures to minimize damage to natural resources and property from flooding and erosion shall be used whenever possible.***

The Build Alternatives would not involve modifications to existing protective structures.

General Policy

***Policy 18: To safeguard the vital economic, social and environmental interests of the state and of its citizens, proposed major actions in the coastal area must give full consideration to those interests, and to the safeguards which the state has established to protect valuable coastal resource areas.***

The intent of the Build Alternatives are to enhance the economic, social and environmental conditions of City of Buffalo by the redeveloping an underutilized area of the downtown

waterfront. The Build Alternatives would greatly enhance, promote and draw residents and visitors to the Buffalo River by providing new year-round opportunities for the public use and enjoyment.

### Public Access Policies

***Policy 19: Protect, maintain, and increase the level and types of access to public water-related recreation resources and facilities.***

The Build Alternatives constitute a real estate development project using the existing City street grid. The Build Alternatives would provide improved access and connections to the existing public waterfront areas through the introduction of new public connections from upland attractions to existing waterfront amenities and improved pedestrian and bicycle access.

***Policy 20: Access to the publicly-owned foreshore and to lands immediately adjacent to the foreshore or the water's edge that are publicly-owned shall be provided and it shall be provided in a manner compatible with adjoining uses.***

The Build Alternatives would enhance access to publicly owned waterfront lands. Additionally, design guidelines being prepared as part of the Project would ensure new development would be compatible with adjoining uses.

### Recreation Policies

***Policy 21: Water-dependent and water-enhanced recreation will be encouraged and facilitated, and will be given priority over non-water-related use along the coast.***

The Build Alternatives would maintain and enhance water-related uses along the water's edge. The public esplanade would provide continuous public access along the Buffalo River shoreline connecting to existing waterfront trails. New retail, cultural, residential and commercial uses would be separated from the water's edge by existing and proposed public open spaces.

***Policy 22: Development, when located adjacent to the shore, will provide for water-related recreation, whenever such use is compatible with reasonably anticipated demand for such activities, and is compatible with the primary purpose of the development.***

The Build Alternatives would maintain and enhance passive water-related recreation opportunities adjacent to the Buffalo River.

### Historic and Scenic Resources Policies

***Policy 23: Protect, enhance and restore structures, districts, areas or sites that are of significance in the history, architecture, archaeology or culture of the state, its communities, or the nation.***

A Letter of Resolution, between the State Historic Preservation Office, City of Buffalo and Empire State Development Corporation, executed as part of the Erie Canal Redevelopment Project remains in effect for the portion of the Erie Canal Harbor within the CZMP boundary. An additional Letter of Resolution would be executed to protect historic and archeological resources in the balance of the Project Area outside of the CZMP boundary.

P***olicy 24: Prevent impairment of scenic resources of statewide significance.***

No designated scenic resources of statewide significance are located within the project area.

***Policy 25: Protect, restore or enhance natural and man-made resources which are not identified as being of statewide significance, but which contribute to the overall scenic quality of the coastal area.***

The Project Area primarily consists of vacant parcels and surface parking lots. To varying degrees, each of the Build Alternatives would significantly enhance the scenic quality of the Project Area and adjoining areas.

Agricultural Lands Policy

***Policy 26: Conserve and protect agricultural lands in the state's coastal area.***

The Project Area is located in an urban downtown area. Therefore, this policy does not apply.

Energy and Ice Management Policies

***Policy 27: Decisions on the siting and construction of major energy facilities in the coastal area will be based on public energy needs, compatibility of such facilities with the environment, and the facility's need for a shorefront location.***

None of the Build Alternatives would involve the siting of an energy facility. Therefore, this policy does not apply.

***Policy 28:*** **Ice management practices shall not interfere with the production of hydroelectric power, damage signific*ant fish and wildlife and their habitats, or increase shoreline erosion or flooding.***

None of the Build Alternatives involve ice management practices. Therefore, this policy does not apply.

***Policy 29: Encourage the development of energy resources on the outer continental shelf, in Lake Erie and in other water bodies, and ensure the environmental safety of such activities.***

None of the Build Alternatives would involve energy resource development. Therefore, this policy does not apply.

Water and Air Resources Policies

***Policy 30: Municipal, industrial, and commercial discharge of pollutants, including but not limited to, toxic and hazardous substances, into coastal waters will conform to state and national water quality standards.***

A SWPPP would be prepared for review and approval by the regulated MS-4. Project storm water would be treated using best practices identified in the *New York State Storm Water Management Design Manual*, NYSDEC, August 2003.

***Policy 31: State coastal area policies and management objectives of approved local waterfront revitalization programs will be considered while reviewing coastal water classifications and while modifying water quality standards; however, those waters already overburdened with contaminants will be recognized as being a development constraint.***

Implementation of the Build Alternatives would not affect the water classification or water quality standards of the Buffalo River. The City of Buffalo Draft Local Waterfront Revitalization Plan (LWRP) has not been formally adopted at this time.

***Policy 32: Encourage the use of alternative or innovative sanitary waste systems in small communities where the costs of conventional facilities are unreasonably high, given the size of the existing tax base of these communities.***

The Project Area is located within an urbanized area served by an existing municipal sanitary waste system.

***Policy 33: Best management practices will be used to ensure the control of stormwater runoff and combined sewer overflows draining into coastal waters.***

Best management practices would be utilized during construction and operation of each of the Build Alternatives to ensure appropriate collection, treatment and discharge of storm water runoff. Best management practices would be identified in the Project SWPPP.

***Policy 34: Discharge of waste materials into coastal waters from vessels subject to state jurisdiction will be limited so as to protect significant fish and wildlife habitats, recreational areas and water supply areas.***

The seasonal boat slips would employ green marina best management practices to the extent practical to protect water and wildlife resources.

***Policy 35: Dredging and filling in coastal waters and disposal of dredged material will be undertaken in a manner that meets existing state permit requirements, and protects significant fish and wildlife habitats, scenic resources, natural protective features, important agricultural lands, and wetlands.***

The Build Alternatives do not involve dredging or filling activities in coastal waters.

***Policy 36: Activities related to the shipment and storage of petroleum and other hazardous materials will be conducted in a manner that will prevent or at least minimize spills into coastal waters; all practicable efforts will be undertaken to expedite the cleanup of such discharges; and restitution for damages will be required when these spills occur.***

The Build Alternatives would not involve shipment or storage of petroleum or other hazardous materials.

***Policy 37: Best management practices will be utilized to minimize the non-point discharge of excess nutrients, organics and eroded soils into coastal waters.***

As part of the SWPPP for the Project, an erosion and sediment control plan would be prepared based on *New York State Standards and Specifications for Erosion and Sediment Control, August 2005.*

***Policy 38: The quality and quantity of surface water and groundwater supplies, will be conserved and protected, particularly where such waters constitute the primary or sole source of water supply.***

Groundwater is not used for public water supply in the City of Buffalo, and surface water resources used for public drinking water (e.g. Lake Erie) would not be affected by any of the Build Alternatives. In addition, all stormwater discharges during construction will be minimized through the implementation of a SWPPP for the project. Post-construction stormwater will be discharged to the City sewer system. All surface water resources undergo pretreatment prior to public consumption and thus any disturbance to the surface waters that could affect quality would be mitigated through the water treatment processes.

***Policy 39: The transport, storage, treatment and disposal of solid wastes, particularly hazardous wastes, within coastal areas will be conducted in such a manner so as to protect groundwater and surface water supplies, significant fish and wildlife habitats, recreation areas, important agricultural land, and scenic resources.***

For each of the Build Alternatives, the removal of soils from the site would require the identification, transport, and proper disposal of hazardous materials. Adherence to applicable federal, state, and local regulations pertaining to the proper disposal of hazardous wastes would prevent impacts to the water resources and adjacent recreational areas.

***Policy 40: Effluent discharged from major steam electric generating and industrial facilities into coastal waters will not be unduly injurious to fish and wildlife and shall conform to state water quality standards.***

The Build Alternatives would not involve any effluent discharge from generating or industrial facilities into the Buffalo River.

***Policy 41: Land use or development in the coastal area will not cause national or state air quality standards to be violated.***

None of the Build Alternatives would violate federal or state air quality standards. Therefore, each of the Build Alternatives would be consistent with this policy.

***Policy 42: Coastal management policies will be considered if the state reclassifies land areas pursuant to the prevention of significant deterioration regulations of the federal clean air act.***

This policy does not apply.

***Policy 43: Land use or development in the coastal area must not cause the generation of significant amounts of acid rain precursors: nitrates and sulfates.***

No significant change in regional emissions of nitrates or sulfates is anticipated to result from the Build Alternatives.

***Policy 44: Preserve and protect tidal and freshwater wetlands and preserve the benefits derived from these areas.***

The Project Area does not contain tidal or freshwater wetlands, therefore this policy does not apply.

## 7.8 Transportation [7]

### 7.8.1 No-Build Alternative

#### 7.8.1.1 No-Build Average Annual Daily Traffic (AADT)

Forecast Project Area population information from the GBNRTC indicates a growth rate of approximately 8% from the year 2000 to the year 2025. Using this rate as a basis, traffic volumes along the Project Area roadways are assumed to increase 0.5% per year from the period 2009 through the estimated time of completion (ETC) of the initial build out - year 2011, and ETC+20, which is the year 2031. Utilizing this forecasted traffic growth rate, projected No-Build AADTs were identified for the future year conditions. These forecasted volumes are presented in **Table 7.8-1**.

[7] See **Appendix G** for more detailed traffic analyses of the No-Build and Build Alternatives.

Table 7.8-1
No-Build Annual Average Daily Traffic (AADT) Counts

| Road | Segment | Existing AADT (2004-2007) | Forecast AADT ETC (2011) | Forecast AADT ETC+20 (2031) |
|---|---|---|---|---|
| Church Street | Delaware Ave. to Franklin St. | 10,000 | 10,200 | 11,300 |
| Elm/Oak Street | Swan St. to Division St. | 30,200 | 31,100 | 34,400 |
| Exchange Street | Pearl St. to Main St. | 3,200 | 3,300 | 3,600 |
| Lower Terrace | Pearl St. to Church St. | 1,800 | 1,840 | 2,000 |
| Marine Drive | Erie St. to Pearl St. Extension | 2,600 | 2,700 | 3,000 |
| Pearl St. Extension | Marine Dr. to Exchange St. | 2,250 | 2,300 | 2,500 |
| Perry Street | Main St. to Washington St. | 700 | 720 | 800 |
| Scott Street | Main St. to Washington St. | 2,400 | 2,460 | 2,700 |
| Main Street | South Park Ave. to Scott St. | 1,000 | 1,030 | 1,100 |
| Washington Street | Scott St. to Seneca St. | 8,100 | 8,400 | 9,300 |
| Route 5 Skyway | Fuhrmann Blvd. to Thruway | 40,100 | 41,100 | 45,400 |
| Thruway | Rt. 5 Skyway to Church St. | 90,800 | 94,000 | 103,900 |

Source: *GBNRTC, NYSDOT, PB*

### 7.8.1.2 No-Build Background Roadway Network and Traffic Assumptions

**2011 No-Build Alternative**

The year 2011 No-Build analysis includes any programmed background project improvements to the roadway network along with any planned development projects. The proposed No-Build activities associated with the clearing of the Aud Block, the sealing of the Donovan Building site and the restoration of the historical roadway network in the Erie Canal Harbor area would not be anticipated to impact the existing roadway network or the traffic operations through the Project Area. For the 2011 No-Build analysis, the Seneca Buffalo Creek Casino was assumed to be operational and all casino-related recommended traffic improvements incorporated into the analysis scenarios. A NYSDOT signal installation project at the Church Street and Bingham Street intersection is planned to be completed by 2011 and included in the analysis network. An initial portion of the Cars on Main Project was assumed to be completed (Phases 1 & 1B) including the opening of Main Street to passenger vehicle traffic from Scott Street through to Seneca Street. In addition, the conversion of Pearl Street to two-way traffic was assumed to be completed. No additional specific roadway improvements were assumed to be completed by the year 2011 for inclusion into the 2011 No-Build analysis.

No significant development projects other than the Seneca Buffalo Creek Casino and Canal Side projects are currently known within the Project Area. A few small development projects are currently under construction in the Project Area however, the traffic increases associated with these projects are assumed to be included in the yearly background traffic growth assumptions.

Non-casino background traffic growth of 0.5% per year was assumed in the Project Area. This yearly increase equates to an approximate 1% increase in traffic volumes from existing conditions to the year 2011.

The assumed roadway and development projects in the Project Area included in the 2011 No-Build Alternative are listed as follows:

- Conversion of Pearl Street to two-way traffic
- Cars On Main - Scott Street to Seneca Street
- Traffic Signal Installation at Church Street and Bingham Street intersection
- Seneca Buffalo Creek Casino

**2031 No-Build Alternative**

The year 2031 No-Build analysis includes any programmed background project improvements to the roadway network along with any planned development projects. The proposed No-Build activities associated with the clearing of the Aud Block, the mothballing of the Donovan Building site and the restoration of the historical roadway network in the Inner Harbor area would not be anticipated to impact the existing roadway network or the traffic operations through the Project Area. For the 2031 No-Build analysis, the projects identified for the 2011 No-Build analysis were included in the roadway analysis network. These include the Seneca Buffalo Creek Casino, the conversion of Pearl Street to two-way traffic and the NYSDOT signal installation project at the Church Street and Bingham Street intersection. In addition, the Cars on Main Project was assumed to be completed (Phases 1, 1B and 2). No additional specific roadway improvements were assumed to be completed by the year 2011 for inclusion into the 2011 No-Build analysis.

No significant development projects other than the Seneca Buffalo Creek Casino and Canal Side project are planned within the Project Area through to the year 2031. The small development projects identified for the 2011 No-Build Alternative that are currently under construction in the Project Area remained in the background 2031 analysis assumption. The traffic increases associated with these projects are assumed to be included in the yearly background traffic growth assumptions. Background traffic growth of 0.5% per year was assumed in the Project Area. This yearly increase equates to an approximate 11.6% increase in traffic volumes from existing conditions to the year 2011.

A summary of the assumed roadway and development projects in the Project Area included in the 2031 No-Build Alternative are listed as follows:

- Cars On Main - Entire Corridor
- Conversion of Pearl Street to two-way traffic
- Traffic Signal Installation at Church Street and Bingham Street intersection
- Seneca Buffalo Creek Casino

The inclusion of the proposed Michigan Avenue Replacement Bridge connection from the Inner Harbor area to the Outer Harbor was not included in the detailed traffic analysis. Due to the project's current timetable, no specific details or assumptions regarding a proposed crossing and the related traffic impacts are available. The initial corridors identified to be studied as part of the Michigan Avenue Replacement Bridge analysis include Erie Street, Main Street, Michigan Avenue and Ganson Street (south of the Project Area). The proposed Main Street crossing is located within the Project Area. The Canal Side analysis will analyze and identify any potential traffic related operational impacts to the Project Area intersections along this identified corridor. Any identified impacts to the traffic operations will be reviewed for potential mitigation measures. While the analysis will not include traffic-related details from the potential Michigan Avenue Replacement Bridge project, the findings and any related mitigation recommendations will be designed to support the use of all potential roadway corridor connections for the Michigan Avenue Replacement Bridge project.

#### 7.8.1.3 2011 No-Build Levels of Service

The opening year for the Canal Side project is estimated for the year 2011. As a result, a year 2011 No-Build intersection LOS analysis was conducted for the Project Area intersections. The 2011 No-Build analysis was conducted for four (4) scenarios; Weekday PM and Saturday Afternoon Non-Event Peak, and Weekday PM and Saturday PM Event Peak periods.

**2011 Levels of Service – Non- Event Conditions**

Year 2011 No-Build LOSs during the PM peak hour and Saturday afternoon peak hour non-event conditions for intersections in the Project Area are identified in **Table 7.8-2**. A summary of the intersection LOS by location for the non-event analysis periods are illustrated in **Figure 7.8-1**. As indicated, overall LOSs would be in the acceptable range from A to C at all Project Area intersections during both the weekday PM peak hour and Saturday afternoon peak hour non-event analysis periods in the year 2011. In addition, all approaches to intersections within the Project Area would operate at acceptable LOSs of A to D. No intersections or their approaches would operate in an over-capacity condition, LOS F.

At the signalized intersections, southbound movements on Franklin Street approaching Church Street and westbound movements on Swan Street approaching Elm Street would operate at a LOS D during the weekday PM peak hour. This operating condition would be similar to the existing conditions analysis. In addition to these intersections, the northbound approach to the signalized intersection of Washington Street and Scott Street and the westbound approach to the signalized intersection of Oak Street and Swan Street would have a LOS D in the weekday PM peak period. The assumption to install signals at the Bingham/Church intersection would result in improved operations; the northbound approach here would operate at LOS B during the weekday PM peak hour.

At the unsignalized intersections, no intersection approaches would operate at unacceptable LOSs during the weekday PM peak hour or Saturday afternoon peak hour.

Table 7.8-2
2011 No-Build Conditions – Non-Event
Intersection Levels of Service

| Intersection | PM Peak | Saturday | Control Type |
|---|---|---|---|
| Church Street & Bingham Street | B/10.0 | B/10.1 | Signal |
| NB | B | A | |
| Church St. & Elmwood Ave. | B/19.5 | B/18.3 | Signal |
| EB | C | C | |
| WB | C | B | |
| SB | B | B | |
| Church St. & Delaware Ave. | B/13.5 | B/12.6 | Signal |
| EB | A | A | |
| WB | A | A | |
| NB | C | C | |
| SB | C | C | |
| Church St. & Franklin St. | C/20.9 | B/19.3 | Signal |
| EB | B | B | |
| WB | B | B | |
| NB | C | C | |
| SB | D | D | |
| Church St. & Pearl St. | B/12.1 | B/11.7 | Signal |
| EB | A | A | |
| WB | A | A | |
| SB | C | C | |
| Church St. & Main St. | A/2.0 | A/2.0 | Signal w/LRT |
| EB | A | A | |
| WB | A | A | |
| Erie St. & Bingham St. | A/4.2 | A/3.6 | Unsignalized |
| Erie St. & Perry Blvd. | A/1.3 | A/1.1 | Unsignalized |
| Erie St. & Marine Drive | A/7.5 | A/7.4 | Unsignalized |
| Erie St. & Lakefront Blvd. | B/12.9 | A/6.9 | Unsignalized |
| Marine Dr. & Pearl St. Ext. | A/8.0 | A/7.4 | Unsignalized |
| Pearl St. Ext. & Perry Blvd. | A/6.7 | A/6.4 | Unsignalized |
| Pearl St. Ext. & L. Terrace | N/A | N/A | Unsignalized |
| Pearl St. & U. Terrace/ Exchange St. | A/8.3 | A/8.1 | Unsignalized |
| Pearl St. & Seneca St. | B/10.5 | B/10.4 | Signal |
| EB | A | A | |
| SB | B | B | |
| Main St./Knox Plaza & Scott St. | C/22.7 | B/18.7 | Signal w/LRT |
| EB | C | B | |
| WB | C | B | |
| NB | C | C | |
| Main St./Knox Plaza & Perry St. | A/7.4 | A/7.1 | Unsignalized |
| Main St. & Exchange St. | B/17.7 | B/19.3 | Signal w/LRT |
| EB | A | A | |
| WB | A | A | |
| Main St. & Seneca St. | B/10.1 | C/26.3 | Signal w/LRT |
| EB | A | A | |
| Main St. & Swan St. | A/2.2 | A/2.1 | Signal w/LRT |
| WB | A | A | |
| Washington St. & Swan Street | B/19.3 | B/13.4 | Signal |
| WB | B | A | |
| NB | C | C | |
| SB | B | B | |
| Washington St. & Seneca Street | A/9.7 | A/9.7 | Signal |
| EB | B | B | |
| NB | A | A | |
| SB | A | A | |

Table 7.8-2
2011 No-Build Conditions – Non-Event
Intersection Levels of Service

| Intersection | PM Peak | Saturday | Control Type |
|---|---|---|---|
| Washington St. & Exchange Street | B/15.8 | B/14.5 | Signal |
| EB | A | A | |
| WB | A | A | |
| NB | C | B | |
| SB | C | C | |
| Washington St. & Thruway Ramp | B/7.4 | A/1.0 | Unsignalized |
| SB | C | A | |
| Washington St. & Scott St. | C/23.3 | B/12.8 | Signal |
| EB | A | A | |
| WB | A | A | |
| NB | D | B | |
| SB | B | B | |
| Washington St. & Perry St. | A/13.2 | A/8.0 | Unsignalized |
| Michigan Ave. & South Park Avenue | B/10.9 | A/8.9 | Signal |
| EB | B | B | |
| WB | B | B | |
| NB | A | A | |
| SB | B | A | |
| Michigan Ave. & Perry St. | B/19.8 | A/9.7 | Signal |
| EB | B | B | |
| WB | B | B | |
| NB | B | B | |
| SB | C | A | |
| Michigan Ave. & Scott St. | C/49.7 | A/0.8 | Unsignalized |
| Michigan Ave. & Seneca St. | B/12.8 | B/10.9 | Signal |
| EB | A | A | |
| WB | A | A | |
| NB | C | B | |
| SB | B | B | |
| Michigan Ave. & Swan St. | B/10.6 | A/8.4 | Signal |
| EB | B | B | |
| WB | B | B | |
| NB | A | A | |
| SB | B | B | |
| Elm St. & Swan St. | B/13.2 | B/11.0 | Signal |
| WB | D | C | |
| NB | A | A | |
| Oak St. & Swan St. | B/16.3 | A/8.9 | Signal |
| EB | C | B | |
| WB | D | B | |
| SB | A | A | |

Source*: PB, 2009*

## 2011 Levels of Service - Event-Related Conditions

Year 2011 No-Build LOSs during the PM peak hour and Saturday afternoon peak hour during event conditions for intersections in the Project Area are identified in **Table 7.8-3**. A summary of the intersection LOS by location for the 2011 No-Build event analysis periods are illustrated in **Figure 7.8-2**. As indicated, overall LOSs would be in the acceptable range from A to C at all

Project Area intersections during both the No-Build weekday PM peak hour and Saturday afternoon peak hour with event analysis periods.

Approaches to unsignalized intersections within the Project Area would generally operate at acceptable LOSs of A to D, with the exception of the southbound Washington Street approach to the Thruway Ramp. The southbound approach on Washington Street to an unsignalized intersection at the Thruway entrance ramp also would operate at a LOS E. This mainly would be the result of the heavy northbound traffic during an event condition, which would limit the available gaps for southbound traffic to turn onto the ramp.

At the signalized intersections, the southbound movement on Franklin Street approaching Church Street and the westbound movement on Swan Street approaching Elm Street would operate at a LOS D during the weekday PM peak hour with event conditions. The northbound movement along Washington Street approaching Scott Street would operate at a LOS E during the weekday PM peak with event conditions. The westbound Swan Street approach to the Oak Street intersection would operate at a LOS F during the weekday PM peak with event conditions. The assumed signalized Bingham Street approach to the Church Street intersection would operate at a LOS B during the weekday PM peak period with event conditions, an improvement over the existing LOS F.

No intersections would operate at unacceptable overall LOSs during the Saturday afternoon peak hour with event conditions. The southbound approach on Franklin Street to Church Street would operate at a LOS D during the Saturday afternoon peak with event traffic conditions however, no additional intersection approaches would operate with an LOS more severe than "C".

Table 7.8-3
2011 No-Build Conditions – Event Conditions
Intersection Levels of Service

| Intersection | PM Peak | Saturday | Control Type |
|---|---|---|---|
| Church Street & Bingham Street | B/12.5 | B/10.1 | Signal |
| NB | B | C | |
| Church St. & Elmwood Ave. | C/20.1 | B/17.9 | Signal |
| EB | C | C | |
| WB | C | B | |
| SB | B | B | |
| Church St. & Delaware Ave. | B/14.6 | B/12.2 | Signal |
| EB | A | A | |
| WB | A | A | |
| NB | C | C | |
| SB | C | C | |
| Church St. & Franklin St. | C/21.1 | B/17.8 | Signal |
| EB | B | B | |
| WB | B | B | |
| NB | C | C | |
| SB | D | D | |
| Church St. & Pearl St. | B/12.9 | B/11.5 | Signal |
| EB | A | A | |
| WB | A | A | |
| SB | C | C | |

## Table 7.8-3
## 2011 No-Build Conditions – Event Conditions
## Intersection Levels of Service

| | | | |
|---|---|---|---|
| Church St. & Main St. | A/2.1 | A/2.0 | Signal w/LRT |
| EB | A | A | |
| WB | A | A | |
| Erie St. & Bingham St. | A/4.4 | A/3.7 | Unsignalized |
| Erie St. & Perry Blvd. | A/11.4 | A/1.2 | Unsignalized |
| Erie St. & Marine Drive | A/7.7 | A/7.5 | Unsignalized |
| Erie St. & Lakefront Blvd. | C/17.8 | A/7.3 | Unsignalized |
| Marine Dr. & Pearl St. Ext. | A/8.4 | A/7.4 | Unsignalized |
| Pearl St. Ext. & Perry Blvd. | A/6.9 | A/6.4 | Unsignalized |
| Pearl St. Ext. & L. Terrace | N/A | N/A | Unsignalized |
| Pearl St. & U. Terrace/ Exchange St. | A/8.8 | A/7.7 | Unsignalized |
| Pearl St. & Seneca St. | B/10.7 | B/10.3 | Signal |
| EB | A | A | |
| SB | B | B | |
| Main St./Knox Plaza & Scott St. | B/19.5 | B/18.8 | Signal w/LRT |
| EB | B | B | |
| WB | B | B | |
| NB | C | C | |
| Main St./Knox Plaza & Perry St. | A/7.6 | A/7.1 | Unsignalized |
| Main St. & Exchange St. | B/16.4 | B/16.0 | Signal w/LRT |
| EB | A | A | |
| WB | A | A | |
| Main St. & Seneca St. | C/26.0 | C/26.2 | Signal w/LRT |
| EB | A | A | |
| Main St. & Swan St. | A/2.3 | A/2.0 | Signal w/LRT |
| WB | A | A | |
| Washington St. & Swan Street | C/20.2 | B/13.5 | Signal |
| WB | B | B | |
| NB | C | C | |
| SB | B | B | |
| Washington St. & Seneca Street | B/10.2 | A/9.2 | Signal |
| EB | B | B | |
| NB | A | A | |
| SB | A | A | |
| Washington St. & Exchange Street | B/16.9 | B/13.4 | Signal |
| EB | A | A | |
| WB | B | A | |
| NB | C | B | |
| SB | C | B | |
| Washington St. & Thruway Ramp | C/18.1 | A/5.8 | Unsignalized |
| SB | E | A | |
| Washington St. & Scott St. | C/31.8 | B/15.9 | Signal/Officer Controlled |
| EB | A | A | |
| WB | A | A | |
| NB | E | B | |
| SB | C | B | |
| Washington St. & Perry St. | C/15.4 | A/7.6 | Unsignalized |
| Michigan Ave. & South Park Avenue | B/11.4 | A/9.1 | Signal/Officer Controlled |
| EB | B | B | |
| WB | B | B | |
| NB | A | A | |
| SB | B | A | |
| Michigan Ave. & Perry St. | C/24.7 | A/9.5 | Signal/Officer Controlled |

Table 7.8-3
2011 No-Build Conditions – Event Conditions
Intersection Levels of Service

| | | | |
|---|---|---|---|
| EB | C | B | |
| WB | B | B | |
| NB | C | B | |
| SB | C | A | |
| Michigan Ave. & Scott St. | C/102.5 | A/1.6 | Unsignalized /Officer Controlled |
| Michigan Ave. & Seneca St. | B/13.9 | B/12.2 | Signal |
| EB | A | A | |
| WB | A | A | |
| NB | C | B | |
| SB | C | C | |
| Michigan Ave. & Swan St. | B/12.5 | B/13.4 | Signal |
| EB | B | B | |
| WB | B | B | |
| NB | B | B | |
| SB | B | B | |
| Elm St. & Swan St. | B/18.2 | B/10.3 | Signal |
| WB | D | C | |
| NB | A | A | |
| Oak St. & Swan St. | B/17.8 | B/12.3 | Signal |
| EB | C | B | |
| WB | D | B | |
| SB | B | A | |

Source: *PB, 2009*

### 7.8.1.4 2031 No-Build Levels of Service

An ETC + 20, year 2031 No-Build intersection LOS analysis was conducted for the Project Area intersections. The 2031 No-Build LOS analysis was conducted for four scenarios; Weekday PM and Saturday Afternoon Non-Event Peak, and Weekday PM and Saturday PM Event Peak periods.

**2031 Levels of Service – Non-Event Conditions**
Year 2031 No-Build LOSs during the PM peak hour and Saturday afternoon peak hour non-event conditions for intersections in the Project Area are identified in **Table 7.8-4**. A summary of the intersection LOS by location for the non-event analysis periods are illustrated in **Figure 7.8-3**. As indicated, overall intersection LOSs are all found in the acceptable range from A to C during both the weekday PM peak hour and Saturday afternoon peak hour non-event analysis periods in the year 2031.

No signalized intersections or their approaches would operate in an over-capacity condition, LOS F. At the signalized intersections, southbound movements on Franklin Street approaching Church Street, westbound Swan Street approaching Elm Street and westbound movements on Swan Street approaching Oak Street would operate at an LOS D during the weekday PM peak hour. This operating condition would be similar to the 2011 No-Build conditions analysis. No intersection approaches, other than the southbound Franklin Street approach to Church Street, would operate over a LOS C during the Saturday afternoon peak hour. The assumption to

signalize the Bingham/Church Street intersection would result in operations at acceptable LOSs during both the weekday PM peak and the Saturday afternoon peak periods.

No unsignalized intersection approaches would operate at unacceptable levels of service during the weekday PM peak and Saturday afternoon peak hour analysis periods.

Table 7.8-4
2031 No-Build Conditions – Non Event
Intersection Levels of Service

| Intersection | PM Peak | Saturday | Control Type |
|---|---|---|---|
| Church Street & Bingham Street | B/13.1.9 | A/9.9 | Signal |
| NB | B | A | |
| Church St. & Elmwood Ave. | C/20.0 | B/18.6 | Signal |
| EB | C | C | |
| WB | C | B | |
| SB | B | B | |
| Church St. & Delaware Ave. | B/14.2 | B/12.8 | Signal |
| EB | A | A | |
| WB | A | A | |
| NB | C | C | |
| SB | C | C | |
| Church St. & Franklin St. | C/20.3 | B/18.7 | Signal |
| EB | B | B | |
| WB | B | B | |
| NB | C | C | |
| SB | D | D | |
| Church St. & Pearl St. | B/17.0 | B/14.5 | Signal |
| EB | A | A | |
| WB | A | A | |
| SB | C | C | |
| NB | C | B | |
| Church St. & Main St. | B/10.8 | B/11.6 | Signal w/LRT |
| EB | A | A | |
| WB | A | A | |
| Erie St. & Bingham St. | A/4.3 | A/3.6 | Unsignalized |
| Erie St. & Perry Blvd. | A/1.3 | A/1.1 | Unsignalized |
| Erie St. & Marine Drive | A/7.6 | A/7.5 | Unsignalized |
| Erie St. & Lakefront Blvd. | A/15.1 | A/7.0 | Unsignalized |
| Marine Dr. & Pearl St. Ext. | A/8.2 | A/7.4 | Unsignalized |
| Pearl St. Ext. & Perry Blvd. | A/6.8 | A/6.5 | Unsignalized |
| Pearl St. Ext. & L. Terrace | N/A | N/A | Unsignalized |
| Pearl St. & U. Terrace/ Exchange St. | A/8.6 | A/8.3 | Unsignalized |
| Pearl St. & Seneca St. | B/10.9 | B/10.5 | Signal |
| EB | A | A | |
| SB | B | B | |
| NB | B | B | |
| Main St./Knox Plaza & Scott St. | C/24.6 | C/25.2 | Signal w/LRT |
| EB | C | C | |
| WB | B | C | |
| NB | C | C | |
| Main St./Knox Plaza & Perry St. | A/7.5 | A/7.1 | Unsignalized |
| Main St. & Exchange St. | B/15.3 | B/16.6 | Signal w/LRT |
| EB | A | A | |
| WB | A | A | |
| Main St. & Seneca St. | B/14.4 | B/15.5 | Signal w/LRT |
| EB | A | A | |

Table 7.8-4
2031 No-Build Conditions – Non Event
Intersection Levels of Service

| Intersection | PM Peak | Saturday | Control Type |
|---|---|---|---|
| Main St. & Swan St. | B/13.5 | B/13.8 | Signal w/LRT |
| WB | A | A | |
| Washington St. & Swan Street | B/15.2 | B/13.5 | Signal |
| WB | B | A | |
| NB | C | C | |
| SB | B | B | |
| Washington St. & Seneca Street | A/10.0 | A/9.9 | Signal |
| EB | B | B | |
| NB | A | A | |
| SB | A | A | |
| Washington St. & Exchange Street | B/16.3 | B/14.9 | Signal |
| EB | A | A | |
| WB | A | A | |
| NB | C | B | |
| SB | C | C | |
| Washington St. & Thruway Ramp | B/11.1 | A/1.0 | Unsignalized |
| SB | D | A | |
| Washington St. & Scott St. | C/26.9 | B/13.2 | Signal |
| EB | A | A | |
| WB | A | A | |
| NB | D | B | |
| SB | C | B | |
| Washington St. & Perry St. | B/14.3 | A/8.3 | Unsignalized |
| Michigan Ave. & South Park Avenue | B/11.1 | A/8.9 | Signal |
| EB | B | B | |
| WB | B | B | |
| NB | A | A | |
| SB | B | A | |
| Michigan Ave. & Perry St. | C/22.2 | A/9.8 | Signal |
| EB | C | B | |
| WB | B | B | |
| NB | C | B | |
| SB | C | A | |
| Michigan Ave. & Scott St. | C/74.7 | A/0.8 | Unsignalized |
| Michigan Ave. & Seneca St. | B/13.3 | B/11.6 | Signal |
| EB | A | A | |
| WB | A | A | |
| NB | C | B | |
| SB | B | B | |
| Michigan Ave. & Swan St. | B/11.5 | A/8.6 | Signal |
| EB | B | B | |
| WB | B | B | |
| NB | B | A | |
| SB | B | B | |
| Elm St. & Swan St. | B/15.1 | B/11.5 | Signal |
| WB | D | C | |
| NB | A | A | |
| Oak St. & Swan St. | B/16.5 | A/9.8 | Signal |
| EB | C | B | |
| WB | D | C | |
| SB | B | A | |

Source*: PB, 2009*

**2031 Levels of Service - Event-Related Conditions**

Year 2031 No-Build LOSs during the PM peak hour and Saturday afternoon peak hour during event conditions for intersections in the Project Area are identified in **Table 7.8-5**. A summary of the intersection LOS by location for the 2031 No-Build event analysis periods are illustrated in **Figure 7.8-4**. As indicated, overall intersection LOSs would be in the acceptable range from A to C at a majority of the intersections during both the No-Build weekday PM peak hour and Saturday afternoon peak hour with event analysis periods.

During the weekday PM peak period with event conditions, approaches to unsignalized intersections within the Project Area would generally operate at acceptable LOSs of A to D, with the exception of the southbound Washington Street approach to the Thruway entrance ramp and the Scott Street approaches to Michigan Avenue. The unsignalized southbound approach of Washington Street to the intersection with the Thruway entrance ramp would operate at a LOS F due mainly to the heavy northbound traffic during an event condition, which would limit the available gaps for southbound traffic to turn onto the entrance ramp. The unsignalized intersection of Scott Street with Michigan Avenue would operate at an overall unacceptable LOS F. This poor operating condition would be a result of the unsignalized Scott Street approaches not having enough gaps occur in the Michigan Avenue cross traffic to allow for turning movements onto Michigan Avenue to be conducted.

At the signalized intersections during the weekday PM peak, the southbound movement on Franklin Street approaching Church Street and the westbound Swan Street approach to Elm Street would operate at an LOS of D during the weekday PM peak hour during event conditions. The northbound movement along Washington Street approaching Scott Street would operate at a LOS E and the southbound movement on Pearl Street approaching Church Street would operate at a LOS D during the weekday PM peak during event conditions. The westbound Swan Street approach to the Oak Street intersection would operate at a LOS E and the westbound Swan Street approach to Elm Street would operate at a LOS D during the weekday PM peak with event conditions. The assumed signalized intersection of Bingham Street with Church Street would operate with acceptable LOSs during the weekday PM peak during event conditions.

No intersections would operate at unacceptable overall LOSs during the Saturday afternoon peak hour during event conditions. The southbound approach of Franklin Street to Church Street would operate at a LOS D during the Saturday afternoon peak with event traffic conditions however; no additional intersection approaches would operate with LOS worse than a LOS C.

Table 7.8-5
2031 No-Build Conditions – Event Conditions
Intersection Levels of Service

| Intersection | PM Peak | Saturday | Control Type |
|---|---|---|---|
| Church Street & Bingham Street | B/15.8 | A/9.9 | Signal |
| NB | C | A | |
| Church St. & Elmwood Ave. | C/21.0 | B/18.2 | Signal |
| EB | C | C | |
| WB | C | B | |

Table 7.8-5
2031 No-Build Conditions – Event Conditions
Intersection Levels of Service

| Intersection | PM Peak | Saturday | Control Type |
|---|---|---|---|
| SB | C | B | |
| Church St. & Delaware Ave. | B/15.9 | B/12.4 | Signal |
| EB | B | A | |
| WB | B | A | |
| NB | C | C | |
| SB | C | C | |
| Church St. & Franklin St. | C/22.6 | B/18.1 | Signal |
| EB | B | B | |
| WB | C | B | |
| NB | C | C | |
| SB | D | D | |
| Church St. & Pearl St. | B/13.1 | B/13.6 | Signal |
| EB | A | A | |
| WB | A | A | |
| SB | D | C | |
| NB | C | B | |
| Church St. & Main St. | B/10.6 | B/12.1 | Signal w/LRT |
| EB | A | A | |
| WB | A | A | |
| Erie St. & Bingham St. | A/4.6 | A/3.7 | Unsignalized |
| Erie St. & Perry Blvd. | A/1.4 | A/1.2 | Unsignalized |
| Erie St. & Marine Drive | A/7.8 | A/7.6 | Unsignalized |
| Erie St. & Lakefront Blvd. | C/24.1 | A/7.4 | Unsignalized |
| Marine Dr. & Pearl St. Ext. | A/8.7 | A/7.5 | Unsignalized |
| Pearl St. Ext. & Perry Blvd. | A/7.1 | A/6.4 | Unsignalized |
| Pearl St. Ext. & L. Terrace | N/A | N/A | Unsignalized |
| Pearl St. & U. Terrace/ Exchange St. | A/9.1 | A/7.9 | Unsignalized |
| Pearl St. & Seneca St. | B/11.3 | B/10.4 | Signal |
| EB | A | A | |
| SB | B | B | |
| NB | B | B | |
| Main St./Knox Plaza & Scott St. | C/25.3 | C/25.4 | Signal w/LRT |
| EB | A | C | |
| WB | A | C | |
| NB | B | C | |
| Main St./Knox Plaza & Perry St. | A/7.7 | A/7.2 | Unsignalized |
| Main St. & Exchange St. | B/14.5 | B/17.3 | Signal w/LRT |
| EB | A | A | |
| WB | A | A | |
| Main St. & Seneca St. | B/13.7 | B/16.2 | Signal w/LRT |
| EB | A | A | |
| Main St. & Swan St. | B/13.0 | B/15.1 | Signal w/LRT |
| WB | A | A | |
| Washington St. & Swan Street | B/16.8 | B/13.7 | Signal |
| WB | B | B | |
| NB | B | C | |
| SB | B | B | |
| Washington St. & Seneca Street | B/10.5 | A/9.3 | Signal |
| EB | B/10.5 | B | |
| NB | A | A | |
| SB | A | A | |
| Washington St. & Exchange Street | B/17.6 | B/13.6 | Signal |
| EB | A | A | |
| WB | B | A | |

Table 7.8-5
2031 No-Build Conditions – Event Conditions
Intersection Levels of Service

| Intersection | PM Peak | Saturday | Control Type |
|---|---|---|---|
| NB | C | B | |
| SB | C | B | |
| Washington St. & Thruway Ramp | C/40.0 | A/6.0 | Unsignalized |
| SB | F | A | |
| Washington St. & Scott St. | D/40.8 | B/16.3 | Signal/Officer Controlled |
| EB | A | A | |
| WB | A | A | |
| NB | E | B | |
| SB | C | B | |
| Washington St. & Perry St. | C/17.3 | A/7.8 | Unsignalized |
| Michigan Ave. & South Park Avenue | B/11.9 | A/9.2 | Signal/Officer Controlled |
| EB | B | B | |
| WB | B | B | |
| NB | A | A | |
| SB | B | A | |
| Michigan Ave. & Perry St. | C/26.3 | A/9.8 | Signal/Officer Controlled |
| EB | C | B | |
| WB | C | B | |
| NB | D | B | |
| SB | C | A | |
| Michigan Ave. & Scott St. | F/err* | A/1.8 | Unsignalized /Officer Controlled |
| Michigan Ave. & Seneca St. | B/14.7 | B/13.0 | Signal |
| EB | A | A | |
| WB | A | A | |
| NB | C | B | |
| SB | C | C | |
| Michigan Ave. & Swan St. | B/13.9 | B/18.8 | Signal |
| EB | B | B | |
| WB | B | B | |
| NB | B | C | |
| SB | B | B | |
| Elm St. & Swan St. | C/24.6 | B/10.7 | Signal |
| WB | E | C | |
| NB | A | A | |
| Oak St. & Swan St. | C/20.4 | B/13.1 | Signal |
| EB | C | B | |
| WB | D | C | |
| SB | B | A | |

Source*: PB, 2009*
** "err" indicates a delay that is not quantifiable.*

### 7.8.2 Build Alternatives

#### 7.8.2.1 Roadway Enhancements

The Project would involve no new roadway construction or significant street alterations within the Project Area. Minor realignment of Pearl Street adjacent to the Aud parcel may occur to

recreate the historic configuration of the roadway. Any roadway work along Pearl Street would be minor in scope and not result in any long-term right-of-way or operational impacts. In addition, potential curb reconstruction at the Perry Boulevard with Pearl Street intersection may be conducted to increase the pedestrian safety at this location. No additional roadway work is currently planned as part of the Project.

A portion of the proposed Project is organized around new roadways being constructed by the City of Buffalo as part of the Erie Canal Harbor Project. These new roadways are to be located within the existing roadway network and Project Area, and include the following new streets:

- Prime Street;
- Hanover Street; and
- Lloyd Street.

These streets would be comprised of a 50- to 55-foot right-of-way with sidewalks, cobblestone paving, and street trees. Given their characteristics and alignments, these new roadways would be local in nature and would not likely carry significant volumes of traffic.

#### 7.8.2.2 Parking Enhancements

Surface parking and structured parking facilities are proposed as part of the Low-, Preferred and High-Density Alternatives. Access driveways to the parking facilities would be located along existing roadways and would create new traffic ingress and egress movements from adjacent streets. Parking facility driveways would operate as unsignalized intersections. However, the proposed Aud Block driveway exit onto Main Street would require signalization for exiting traffic turning left (north) across the NFTA Metro Rail track bed. The Aud Block driveway exit would not require signalization if designed to operate as a right-in and right-out only. This design configuration would eliminate the conflict of traffic turning across the Metro Rail track bed while allowing vehicle access from Main Street. A location summary of the proposed parking garage access driveways is noted as follows:

- Webster Block – Two access driveways along Washington Street;
- The Commercial Slip Garage is proposed to have two driveways for public traffic access to the structure, one from Perry Boulevard and one from Marine Drive. The Perry Boulevard entrance will provide direct connections to the regional highway system for a majority of the traffic, especially vehicles orientated to the I-190 and Skyway. The driveway access along Marine Drive will attract vehicle trips from the city roadway network approach and from vehicles traveling through the Project Area roadway network. The connection of the Marine Drive driveway point to the Commercial Slip Garage will require vehicles to enter from the Marine Drive loop roadway around the Marine Drive Apartments. This local roadway currently operates as a one-way loop from the south west around the apartment complex intersecting the primary Marine Drive roadway on the north west of the site. Vehicles exiting the Commercial Slip Garage towards the Marine Drive loop roadway would currently

be required to turn right and loop around the apartment complex prior to accessing the primary Marine Drive;

- Aud Block – One access driveway along Main Street (signalized), one access driveway along Lower Terrace; and
- Donovan Block – Two access driveways along Washington Street.

The Commercial Slip Parking Garage is proposed to have two driveways for public traffic access to the structure. It is anticipated that a majority of the vehicles utilizing the Commercial Slip Parking Garage would approach and depart from the access along Perry Boulevard. This would be a result of Perry Boulevard providing more direct connections to the regional highway system for a majority of the traffic, especially vehicles orientated to the Thruway and Skyway. The driveway access along Marine Drive would be considered to be more of a secondary access point that would attract vehicle trips from the city roadway network approach and from vehicles traveling through the Project Area roadway network. The connection of the Marine Drive driveway point to the Commercial Slip Garage would require vehicles to enter from the Marine Drive loop roadway around the Marine Drive Apartments. This local roadway currently operates as a one-way loop from the south west around the apartment complex intersecting the primary Marine Drive roadway on the north west of the site. Vehicles exiting the Commercial Slip Parking Garage towards the Marine Drive loop roadway would be required to turn right and loop around the apartment complex prior to accessing the primary Marine Drive.

#### 7.8.2.3 Build Alternatives Site Traffic Generation

The Project includes three potential build alternatives: Preferred, Low- and High-Density. In addition, the Project development would be staged such that the completed opening year (2011) development parcels would be less than those planned for the full build out condition in the year 2017. As a result, a number of trip generation scenarios were developed and the resultant generated traffic identified for distribution onto the roadway network. Project-generated traffic combined with the future No-Build background traffic form the basis for the traffic operations analysis for the Build Alternatives. The future traffic volume information was compiled for the following conditions with the noted assumptions:

- Year 2011: partial build out of the Preferred Alternative;
- Year 2017: full build out of Canal Side development parcels for Preferred, Low- and High-Density Alternatives;
- Base traffic as identified for the 2011 No-Build and 2031 No-Build Alternatives;
- Roadway network conditions as identified for the No-Build Alternatives along with proposed Project improvements;
- Future background land use and development as identified for the No-Build Alternatives;
- Site traffic generation based on ITE Trip Generation rates, related studies and parcel information as provided; and

- Site traffic distribution based on current flow patterns, probable traffic destinations, routings and engineering judgment.

To determine trip generation of the Build Alternatives, projected development land-use types were compared to corresponding ITE land use categories, relevant traffic studies and specific site parcel information to determine future generated traffic volumes. A summary of the utilized land use categories and associated trip generation rates used as part of the Project trip generation analysis is shown in **Table 7.8.6.**

Table 7.8-6
Trip Generation By Land Use Categories

| Land Use Code* | Land Use | Parameter | Range | Weekday PM Peak Hour | Saturday PM Peak Hour |
|---|---|---|---|---|---|
| 232 | High-rise Residential | Trips/Unit | 0.34 – 0.49 | 0.37 | 0.35 |
| 310 | Hotel | Trips/Room | 0.25 – 1.25 | 0.76 | 0.87 |
| 710 | General Office | Trips/1000 Gross SF (GSF) | 1.08 – 3.4 | 1.87 | 0.64 |
| 820 | Shopping Center | Trips/1000 GSF | | 5.10 | 6.91 |
| 831 | Quality Restaurant | Trips/Seat | 2.42 – 13.32 | 6.05 | 11.79 |
| 835 | Drinking Place | Trips/1000 GSF | 3.73 - 29.98 | 6.05 | 11.79 |
| N/A | Naval Museum** | Trips/1000 GSF | 2.5 | 2.5 | 2.5 |
| N/A | Destination Retail*** | Person Trips/1000 GSF | 3.1 – 9.2 | 6.8 | 9.2 |

** Land use codes used in ITE Trip Generation Manual, 7th Edition (where applicable)*
*** Parsons Brinckerhoff, 1999*
**** Institute of Traffic Engineers, Destination Retail Surveys by AKRF, Inc. Queens Place (NY) May 2004, Bass Pro Shops, 2006*

Project Area traffic volumes were then calculated using the identified trip generation factors for the proposed development parcels as proposed in the various Build Alternatives. A modal split of 80% auto; 12% Metro Rail; 3% Bus and 5% Pedestrian/Bicycle was assumed for those land uses where person trip, versus vehicle trip, information was only available. A pass-by percentage of 20% was assumed for the shopping center related trips. Auto occupancy of 2.05 was assumed for person-based trips. To support the traffic analysis specific to the proposed structure and surface parking lot locations associated with the Project, a 10% on-street parking reduction was utilized.

A summary of the projected trips associated with the Project for the Preferred, Low- and High-Density Alternatives are shown in **Table 7.8-7**. As indicated, depending upon the Build Alternative, in the year 2011 total development would range from 409,600 square feet to 1,046,100 square feet and total vehicle trips would range from 1,080 to 2,503 during the weekday PM peak period and range from 1,559 to 2,657 during the Saturday afternoon peak. By the year 2017, total development would range from 603,600 square feet to 1,669,600 square feet and total vehicle trips would range from 2,525 to 4,468 during the weekday PM peak and range from 2,900 to 4,830 during the Saturday afternoon peak.

Table 7.8-7
Proposed Canal Side Build Alternatives
Trip Generation Calculations

| Build Scenario | Parcel Development | | | | | | | Total Vehicle Trips | |
|---|---|---|---|---|---|---|---|---|---|
| | Retail (sf) | Restaurant (sf) | Office (sf) | Residential (Units) | Hotel (Rooms) | Cultural/ Museum (sf) | Total Development Area (sf) | Weekday PM Peak | Saturday PM Peak |
| Year 2011 | | | | | | | | | |
| Preferred Alternative** | 183,300 | 122,800 | 310,000 | 65 | 150 | 20,000 | 771,500 | 2,221 | 2,405 |
| Low-Density | 163,300 | 56,300 | 140,000 | 0 | 90 | 20,000 | 409,600 | 1,080 | 1,559 |
| High-Density | 183,300 | 122,800 | 360,000 | 185 | 380 | 20,000 | 1,046,100 | 2,503 | 2,657 |
| Year 2017 | | | | | | | | | |
| Preferred Alternative** | 287,250 | 183,750 | 443,600 | 215 | 250 | 20,000 | 1,245,000 | 3,877 | 4,504 |
| Low-Density | 229,625 | 96,825 | 187,750 | 45 | 90 | 20,000 | 603,200 | 2,525 | 2,900 |
| High-Density | 287,250 | 184,750 | 493,600 | 455 | 480 | 20,000 | 1,669,600 | 4,468 | 4,830 |

* *Derived from EEK Development Parcel Program (April 29, 2009 and May 6, 2009)*
** *Includes Options Still Under Consideration in Individual Summary and Trip Generation*

#### 7.8.2.4 Build Alternatives Site Traffic Trip Distribution

Projected Canal Side generated vehicle trips for all Build Alternatives were distributed onto the roadway network based on existing traffic patterns, regional trip distribution, and access to regional highways based on the locations of the proposed parking garages. Generalized distribution assumptions for the site generated traffic included the following:

- 25% approach/depart from the south via the Thruway,
- 25% approach/depart from the north via the Thruway,
- 20% approach/depart from the east via Route 33,
- 15% approach/depart from the southwest via Route 5, and
- 15% approach/depart from city streets.

#### 7.8.2.5 Build Alternatives Traffic Volumes

Forecast link volumes were identified for the Project Area roadways combining the No-Build base traffic volumes overlaid with the Project generated traffic for all Build Alternatives. Forecast traffic link volumes were identified for the year 2011 and year 2031 conditions under the event scenario as a worst case condition. A comparison of the roadway link volumes from existing conditions through the No-Build and High-Density Alternative is presented in Table 7.8-8. As indicated, traffic volumes would increase through the existing, 2011 and 2031 time frames. This would be a result of the background traffic growth along with the roadway network project improvements as detailed in the No-Build Alternatives discussion (see Chapter 7.8.1). The High-Density Alternative is forecast to add a significant amount of peak hour traffic to a number of the Project Area roadway segments. Increases on roadways such as Perry Boulevard and Washington Street would be significant due in part to the parking garage access points planned to be located along these roadways. Roadway link traffic volumes during the Saturday peak period would tend to be significantly less than those forecast for the weekday PM peak period.

## Table 7.8-8
## Canal Side Roadway Link Volume Comparison

| Roadway | Segment | Existing | | 2011 No-Build | | 2031 No-Build | | 2031 Preferred Alternative - HIGH Density | |
|---|---|---|---|---|---|---|---|---|---|
| | | Weekday Peak | Saturday Peak | Weekday Peak | Saturday Peak | Weekday Peak | Saturday Peak | Weekday Peak | Saturday Peak |
| Marine Drive | Erie to Pearl | 205 | 173 | 210 | 204 | 233 | 209 | 387 | 353 |
| Erie St. | Lower Terrace to Bingham/Perry | 446 | 98 | 462 | 111 | 513 | 122 | 563 | 614 |
| Erie St. | Bingham/Perry to Lakefront | 681 | 161 | 687 | 162 | 763 | 180 | 914 | 280 |
| Erie St. | Lakefront to Marine | 167 | 202 | 244 | 204 | 272 | 226 | 426 | 385 |
| Bingham Street | Erie to Church | 902 | 128 | 911 | 129 | 1010 | 143 | 1362 | 1212 |
| Perry Blvd. | Pearl to Erie | 287 | 153 | 290 | 154 | 326 | 171 | 1610 | 1496 |
| Pearl Street | Seneca to Upper Terrace | 289 | 155 | 292 | 157 | 420 | 225 | 1176 | 1046 |
| Pearl Street | Upper Terrace to Perry | 157 | 84 | 158 | 84 | 174 | 92 | 1312 | 1155 |
| Pearl Street | Perry to Scott | 298 | 156 | 302 | 156 | 334 | 175 | 828 | 660 |
| Main Street | Exchange to Scott | 0 | 0 | 0 | 0 | 280 | 280 | 565 | 544 |
| Main Street | Scott to Perry | 202 | 134 | 211 | 134 | 346 | 262 | 503 | 442 |
| Washington Street | Seneca to Exchange | 893 | 280 | 1009 | 538 | 1120 | 598 | 1895 | 1412 |
| Washington Street | Exchange to Thruway Ramp | 1103 | 558 | 1358 | 591 | 1487 | 656 | 2177 | 1364 |
| Washington Street | Thruway Ramp to Scott | 933 | 480 | 1200 | 512 | 1297 | 571 | 2120 | 1360 |
| Washington Street | Scott to Perry | 427 | 204 | 839 | 234 | 899 | 261 | 1287 | 544 |
| Scott Street | Pearl to Main | 450 | 238 | 454 | 239 | 504 | 267 | 1273 | 1050 |
| Scott Street | Main to Washington | 273 | 178 | 276 | 180 | 305 | 199 | 1295 | 1192 |
| Exchange Street | Pearl to Main | 312 | 166 | 316 | 166 | 350 | 185 | 1680 | 1044 |
| Exchange Street | Main to Washington | 367 | 195 | 370 | 197 | 411 | 218 | 1061 | 969 |
| Perry Street | Main to Washington | 51 | 45 | 51 | 55 | 58 | 58 | 114 | 110 |

Source*: PB, 2009*

### 7.8.2.6 2011 Build Alternatives Levels of Service

An opening year 2011 Build Alternative intersection LOS analysis was conducted for the Project Area intersections was conducted for the three proposed Build Alternatives. For each proposed scenario, a 2011 LOS analysis was conducted for four time period conditions; Weekday PM and Saturday Afternoon Non-Event Peak, and Weekday PM and Saturday PM Event Peak periods.

Incorporated into the intersection analysis is the proposed parking garage structure driveway intersections with each adjacent Project Area roadway. For the Webster and Donovan parking garages, the driveway analysis was conducted for an assumed signal point of access. While the Project plans indicate the inclusion of two driveway access points for these two structures, the analysis was conducted for a single access point to present a worst case operations scenario.

**Preferred Alternative Levels of Service – Event and Non-Event Conditions**
Year 2011 Preferred Alternative LOSs during the PM peak hour and Saturday afternoon peak hour event and non-event conditions for intersections in the Project Area are identified in **Table 7.8-9**. A summary of the intersection LOS by location for the non-event analysis periods are illustrated in **Figure 7.8-5**. A summary of the intersection LOS by location for the event analysis periods are illustrated in **Figure 7.8-6**.

During the Saturday afternoon peak, overall LOSs would be in the acceptable range from A to C at all Project Area intersections during the Saturday afternoon peak hour analysis periods under both the non-event and event conditions in the year 2011. In addition, all approaches to signalized and unsignalized intersections within the Project Area also would operate at an acceptable LOS range between A to C.

During the weekday PM peak hour overall LOSs would be in the acceptable range from A to D at all Project Area intersections with the exception of the Washington Street with Scott Street intersection. The heavy turning movement traffic at the Washington Street with Scott Street intersection would result in an overall LOS E during non-event conditions and a LOS F during event conditions. At the Washington Street intersection with the Thruway entrance, the heavy traffic northbound along Washington Street would reduce the number of gaps for southbound traffic desiring to turn onto the ramp. The southbound movement at this intersection would operate at a LOS F during both the non-event and event conditions.

Parking garage driveway intersections with adjacent roadways would operate at acceptable LOSs during both the weekday PM peak and Saturday peak periods under both event and non-event conditions.

Table 7.8-9
2011 Preferred Alternative
Intersection Levels of Service

| Intersection | Non-Event | | Event | | Control Type |
|---|---|---|---|---|---|
| | PM Peak | Saturday | PM Peak | Saturday | |
| Church Street & Bingham Street | B/14.5 | B/10.8 | B/19.9 | A/6.8 | Signal |
| NB | B | A | B | A | |
| Church St. & Elmwood Ave. | C/20.4 | B/18.7 | C/21.1 | B/18.9 | Signal |
| EB | C | C | C | C | |
| WB | C | B | C | B | |
| SB | B | B | B | B | |
| Church St. & Delaware Ave. | B/14.3 | B/12.6 | B/15.4 | B/12.6 | Signal |
| EB | A | A | A | A | |
| WB | B | A | B | A | |
| NB | C | C | C | C | |
| SB | C | C | C | C | |
| Church St. & Franklin St. | B/15.9 | B/14.8 | B/16.7 | B/13.9 | Signal |
| EB | B | B | B | A | |
| WB | B | B | B | B | |
| NB | C | B | C | B | |
| SB | C | C | C | C | |
| Church St. & Pearl St. | B/14.8 | B/14.9 | B/14.0 | B/13.6 | Signal |
| EB | C | A | C | C | |
| WB | C | A | C | C | |
| SB | A | C | A | A | |
| NB | A | C | A | A | |
| Church St. & Main St. | A/7.5 | A/2.0 | A/7.7 | A/7.1 | Signal w/LRT |
| EB | A | A | A | A | |
| WB | A | A | A | A | |
| Erie St. & Bingham St. | C/9.3 | A/6.5 | C/12.8 | A/6.6 | Unsignalized |
| Erie St. & Perry Blvd. | A/9.1 | A/8.0 | B/10.6 | A/8.0 | Unsignalized |
| Erie St. & Marine Drive | A/8.3 | A/8.2 | A/8.6 | A/8.3 | Unsignalized |
| Erie St. & Lakefront Blvd. | A/13.9 | A/7.1 | A/20.2 | A/7.4 | Unsignalized |
| Marine Dr. & Pearl St. Ext. | B/12.4 | A/9.6 | A/14.1 | A/10.0 | Unsignalized |
| Pearl St. Ext. & Perry Blvd. | C/12.6 | B/9.1 | C/17.4 | B/8.2 | Unsignalized |
| Pearl St. Ext. & L. Terrace | N/A | N/A | N/A | N/A | Unsignalized |
| Pearl St. & U. Terrace/ Exchange St. | A/51.6 | A/74.6 | A/76.1 | A/42.6 | Unsignalized |
| Pearl St. & Seneca St. | B/11.9 | B/10.8 | B/11.2 | B/11.6 | Signal |
| EB | A | A | B | A | |
| SB | B | B | B | B | |
| NB | B | B | B | B | |
| Main St./Knox Plaza & Scott St. | C/27.7 | C/27.0 | C/34.7 | C/25.7 | Signal w/LRT |
| EB | D | C | D | C | |
| WB | C | C | C | C | |
| NB | B | C | B | B | |
| Main St./Knox Plaza & Perry St. | A/7.8 | A/7.6 | A/8.0 | A/7.7 | Unsignalized |
| Main St. & Exchange St. | A/8.3 | B/14.4 | A/8.3 | A/8.1 | Signal w/LRT |
| EB | A | A | A | A | |
| WB | A | A | A | A | |
| Main St. & Seneca St. | A/7.6 | B/14.3 | B/10.1 | A/6.8 | Signal w/LRT |
| EB | A | A | A | A | |
| Main St. & Swan St. | A/8.4 | A/2.2 | A/8.8 | A/7.7 | Signal w/LRT |
| WB | A | A | A | A | |
| Washington St. & Swan Street | B/16.4 | B/13.2 | B/17.3 | B/13.7 | Signal |

# Table 7.8-9
## 2011 Preferred Alternative
## Intersection Levels of Service

| Intersection | Non-Event | | Event | | Control Type |
|---|---|---|---|---|---|
| | PM Peak | Saturday | PM Peak | Saturday | |
| WB | B | B | B | B | |
| NB | B | B | B | B | |
| SB | B | B | B | B | |
| Washington St. & Seneca Street | B/10.2 | B/10.2 | B/10.3 | A/8.9 | Signal |
| EB | B | B | B | B | |
| NB | A | A | A | A | |
| SB | A | A | A | A | |
| Washington St. & Exchange Street | A/8.8 | B/14.4 | B/10.9 | A/7.2 | Signal |
| EB | A | B | A | A | |
| WB | A | B | B | A | |
| NB | A | B | A | A | |
| SB | B | B | B | A | |
| Washington St. & Thruway Ramp | C/26.1 | A/1.7 | D/74.5 | A/5.3 | Unsignalized |
| SB | F | A | F | B | |
| Washington St. & Scott St. | E/57.7 | B/15.8 | F/127.2 | B/13.2 | Signal |
| EB | E | C | F | B | |
| WB | C | B | D | B | |
| NB | F | B | F | B | |
| SB | A | A | A | A | |
| Washington St. & Perry St. | B/14.4 | A/8.2 | C/17.2 | A/7.8 | Unsignalized |
| Michigan Ave. & South Park Avenue | B/11.0 | A/8.9 | B/11.5 | A/9.2 | Signal |
| EB | B | B | B | B | |
| WB | B | B | B | B | |
| NB | A | A | A | A | |
| SB | B | A | B | A | |
| Michigan Ave. & Perry St. | C/20.5 | B/10.1 | C/23.0 | A/9.8 | Signal |
| EB | C | B | C | B | |
| WB | B | B | C | B | |
| NB | B | B | C | A | |
| SB | C | A | C | A | |
| Michigan Ave. & Scott St. | C/82.4 | A/2.0 | D/Err* | A/4.3 | Unsignalized |
| Michigan Ave. & Seneca St. | B/12.8 | B/10.8 | B/13.0 | B/11.4 | Signal |
| EB | A | A | A | A | |
| WB | A | A | A | A | |
| NB | B | B | B | B | |
| SB | B | B | B | B | |
| Michigan Ave. & Swan St. | B/10.1 | A/8.5 | B/11.9 | B/13.5 | Signal |
| EB | B | B | B | B | |
| WB | B | B | B | B | |
| NB | A | A | B | B | |
| SB | B | B | B | B | |
| Elm St. & Swan St. | B/12.9 | B/10.4 | B/17.7 | A/9.9 | Signal |
| WB | D | C | D | C | |
| NB | A | A | A | A | |
| Oak St. & Swan St. | B/16.2 | A/8.4 | B/18.3 | B/11.2 | Signal |
| EB | C | B | C | B | |
| WB | D | B | D | B | |
| SB | A | A | B | A | |
| Perry Blvd. & Commercial Slip | B/22.2 | C/41.1 | C/49.1 | B/24.1 | Unsignalized |

Table 7.8-9
2011 Preferred Alternative
Intersection Levels of Service

| Intersection | Non-Event | | Event | | Control Type |
|---|---|---|---|---|---|
| | PM Peak | Saturday | PM Peak | Saturday | |
| Commercial Slip & Marine Dr. | A/3.2 | A/2.7 | A/3.2 | A/2.1 | Unsignalized |
| Aud Lot & Main St. | A/9.5 | C/26.7 | C/28.6 | C/26.6 | Signal w/LRT |
| Webster Lot & Washington St. | A/29.0 | A/5.4 | A/43.2 | A/5.7 | Unsignalized |
| Donovan Lot & Washington St. | B/2.5 | A/2.1 | B/2.9 | A/2.1 | Unsignalized |
| Aud Lot & Exchange St. | C/28.4 | A/6.4 | A/7.8 | A/6.9 | Unsignalized |

Source*: PB, 2009*
** "Err" indicates a delay that is not quantifiable.*

As identified, intersection operating conditions would be at or over capacity at the signalized Washington Street/Scott Street intersection and at the Washington Street/Thruway Southbound entrance ramp intersection and the unsignalized intersection of Michigan Avenue/Scott Street during the weekday peak analysis period. Operational improvements at these locations were investigated to mitigate the traffic impacts at these intersections.

At the signalized Washington Street/Scott Street intersection, the incorporation of an eastbound advance signal phase along with the prohibition of parking along a 100' section of the east curb of Washington Street on the northbound approach to create a second northbound thru lane will be further investigated. Analysis of the inclusion of these improvements appeared to improve the LOS at of the intersection.

At the Washington Street/ Thruway Southbound entrance ramp intersection, the addition of a dedicated southbound left turn lane or the installation of a traffic signal was analyzed; neither is anticipated to significantly reduce vehicle delay and improve the operation of the intersection. The potential for geometric expansion at this intersection is limited due to the topography and adjacent land use and nearby structures. However, potential conversion of the second northbound lane along Washington Street into a channelized dedicated right turn lane appears to indicate potential improvement to the overall operating condition at the intersection.

At the Michigan Avenue/Scott Street intersection, analysis of the installation of a traffic signal appears to reduce the Scott Street approaching traffic delays and would improve the overall operating conditions through the intersection.

**High-Density Alternative Levels of Service – Event and Non-Event Conditions**
Year 2011 High-Density Alternative LOSs during the PM peak hour and Saturday afternoon peak hour event and non-event conditions for intersections in the Project Area are identified in **Table 7.8-10**.

During the Saturday afternoon peak, overall LOSs would be in the acceptable range from A to C at all Project Area intersections during the Saturday afternoon peak hour analysis periods under both the non-event and event conditions in the year 2011. These operating conditions would be similar to those under the 2011 Preferred Alternative analysis. In addition, all approaches to signalized and unsignalized intersections within the Project Area would operate at an acceptable LOSs ranging between A to C, with the exception of the eastbound approach of Scott Street at the Main Street intersection. The eastbound Scott Street approach would operate at a LOS D during the Saturday afternoon peak period in both the event and non-event conditions in 2011. The multi-phased signal operation at this location due to the Metro Rail interface along with the heavier site generated traffic would reduce the operating conditions at this intersection and the Scott Street approach.

During the weekday PM peak hour, overall LOSs would be in the acceptable range from A to D at all Project Area intersections with the exception of the Washington Street/Scott Street intersection. The heavy turning movement traffic at this intersection would result in an overall LOS E during non- event conditions and a LOS F during event conditions. At the Washington Street intersection with the Thruway entrance ramp, the heavy traffic northbound along Washington Street would reduce the number of gaps for southbound traffic desiring to turn onto the ramp. The southbound movement at this intersection would operate at a LOS F during both the non-event and event conditions. While overall delays and a few LOS values would be increased, these operating conditions would be similar to those anticipated under the 2011 Preferred Alternative analysis.

Parking garage structure driveway intersections with adjacent roadways would operate at acceptable LOSs during both the weekday PM peak and Saturday peak periods under both event and non-event conditions with the exception of the Donovan lot driveway with Washington Street during the weekday PM peak period. The heavy traffic flows along Washington during both event and non-event conditions would reduce the available gaps in traffic for vehicles exiting the parking garage to turn onto Washington Street.

Table 7.8-10
2011 High-Density Alternative
Intersection Levels of Service

| Intersection | Non-Event | | Event | | Control Type |
|---|---|---|---|---|---|
| | PM Peak | Saturday | PM Peak | Saturday | |
| Church Street & Bingham Street | B/14.7 | A/6.9 | C/20.0 | A/7.0 | Signal |
| NB | B | A | C | A | |
| Church St. & Elmwood Ave. | C/20.6 | B/19.4 | C/21.3 | B/19.0 | Signal |
| EB | C | C | C | C | |
| WB | C | C | C | C | |
| SB | B | B | B | B | |
| Church St. & Delaware Ave. | B/14.4 | B/13.0 | B/15.3 | B/12.5 | Signal |
| EB | A | A | A | A | |
| WB | B | A | B | A | |
| NB | C | C | C | C | |
| SB | C | C | C | C | |
| Church St. & Franklin St. | B/16.0 | B/14.9 | B/17.0 | B/14.0 | Signal |

Table 7.8-10
2011 High-Density Alternative
Intersection Levels of Service

| Intersection | Non-Event | | Event | | Control Type |
|---|---|---|---|---|---|
| | PM Peak | Saturday | PM Peak | Saturday | |
| EB | B | B | B | A | |
| WB | B | B | B | B | |
| NB | C | B | C | B | |
| SB | C | C | C | C | |
| Church St. & Pearl St. | B/14.7 | B/13.8 | B/13.3 | B/13.5 | Signal |
| EB | C | C | C | C | |
| WB | C | C | C | C | |
| SB | A | A | A | A | |
| NB | A | A | A | A | |
| Church St. & Main St. | A/7.4 | A/7.2 | A/7.0 | A/7.1 | Signal w/LRT |
| EB | A | A | A | A | |
| WB | A | A | A | A | |
| Erie St. & Bingham St. | C/8.6 | A/6.3 | C/11.0 | A/6.8 | Unsignalized |
| Erie St. & Perry Blvd. | A/8.0 | A/7.4 | A/8.2 | A/7.2 | Unsignalized |
| Erie St. & Marine Drive | A/8.4 | A/8.3 | A/8.7 | A/8.4 | Unsignalized |
| Erie St. & Lakefront Blvd. | B/14.0 | A/7.1 | C/20.5 | A/7.4 | Unsignalized |
| Marine Dr. & Pearl St. Ext. | C/18.7 | B/11.9 | C/23.4 | A/12.6 | Unsignalized |
| Pearl St. Ext. & Perry Blvd. | B/11.0 | B/8.2 | C/13.8 | B/7.6 | Unsignalized |
| Pearl St. Ext. & L. Terrace | N/A | N/A | N/A | N/A | Unsignalized |
| Pearl St. & U. Terrace/ Exchange St. | A/48.8 | A/67.4 | A/72.9 | A/38.8 | Unsignalized |
| Pearl St. & Seneca St. | B/11.9 | B/11.0 | B/12.2 | B/10.8 | Signal |
| EB | A | A | B | A | |
| SB | B | B | B | B | |
| NB | B | B | B | B | |
| Main St./Knox Plaza & Scott St. | D/39.5 | C/28.5 | C/32.1 | C/32.1 | Signal w/LRT |
| EB | E | D | D | D | |
| WB | C | C | C | C | |
| NB | B | B | B | C | |
| Main St./Knox Plaza & Perry St. | A/7.7 | A/7.5 | A/7.9 | A/7.5 | Unsignalized |
| Main St. & Exchange St. | A/8.0 | A/7.9 | A/8.4 | A/8.4 | Signal w/LRT |
| EB | A | A | A | A | |
| WB | A | A | A | A | |
| Main St. & Seneca St. | A/7.5 | A/7.0 | A/8.0 | A/6.8 | Signal w/LRT |
| EB | A | A | A | A | |
| Main St. & Swan St. | A/8.4 | A/8.2 | A/8.5 | A/7.7 | Signal w/LRT |
| WB | A | A | A | A | |
| Washington St. & Swan Street | B/16.9 | B/13.4 | B/18.1 | B/14.1 | Signal |
| WB | B | B | B | B | |
| NB | B | B | B | B | |
| SB | B | B | B | B | |
| Washington St. & Seneca Street | A/10.0 | A/9.6 | B/10.5 | A/9.0 | Signal |
| EB | B | B | B | B | |
| NB | A | A | A | A | |
| SB | A | A | A | A | |
| Washington St. & Exchange Street | B/11.0 | B/10.1 | B/12.0 | A/8.4 | Signal |
| EB | A | A | A | A | |
| WB | A | A | B | A | |
| NB | B | B | B | B | |

Table 7.8-10
2011 High-Density Alternative
Intersection Levels of Service

| Intersection | Non-Event | | Event | | Control Type |
|---|---|---|---|---|---|
| | PM Peak | Saturday | PM Peak | Saturday | |
| SB | B | B | B | B | |
| Washington St. & Thruway Ramp | D/53.7 | A/1.3 | E/116.2 | A/5.5 | Unsignalized |
| SB | F | A | F | B | |
| Washington St. & Scott St. | F/84.3 | B/13.8 | F/151.7 | B/17.8 | Signal |
| EB | F | B | F | C | |
| WB | B | A | C | B | |
| NB | F | B | F | C | |
| SB | A | A | B | B | |
| Washington St. & Perry St. | C/15.2 | A/8.4 | A/18.4 | A/8.0 | Unsignalized |
| Michigan Ave. & South Park Avenue | B/11.0 | A/8.9 | B/11.6 | A/9.1 | Signal |
| EB | B | B | B | B | |
| WB | B | B | B | B | |
| NB | A | A | A | A | |
| SB | B | A | B | A | |
| Michigan Ave. & Perry St. | C/20.5 | B/10.3 | C/23.0 | A/9.9 | Signal |
| EB | C | B | C | B | |
| WB | B | B | C | B | |
| NB | B | B | C | A | |
| SB | C | A | C | A | |
| Michigan Ave. & Scott St. | C/92.3 | A/2.1 | D/Err* | A/5.0 | Unsignalized |
| Michigan Ave. & Seneca St. | B/12.7 | B/11.5 | B/12.7 | B/11.7 | Signal |
| EB | A | A | A | A | |
| WB | A | A | A | A | |
| NB | B | B | B | B | |
| SB | B | B | B | B | |
| Michigan Ave. & Swan St. | B/10.3 | A/9.3 | B/11.9 | B/13.5 | Signal |
| EB | B | B | B | B | |
| WB | B | B | B | B | |
| NB | A | A | B | B | |
| SB | B | B | B | B | |
| Elm St. & Swan St. | B/12.6 | B/10.4 | B/17.4 | A/9.7 | Signal |
| WB | D | C | D | C | |
| NB | A | A | A | A | |
| Oak St. & Swan St. | B/16.4 | A/9.3 | B/18.2 | A/11.3 | Signal |
| EB | C | B | C | B | |
| WB | D | B | D | B | |
| SB | A | A | B | A | |
| Perry Blvd. & Commercial Slip | A/4.1 | B/12.3 | A/4.2 | A/4.2 | Unsignalized |
| Commercial Slip & Marine Dr. | A/1.9 | A/1.3 | A/1.3 | A/1.6 | Unsignalized |
| Aud Lot & Main St. | A/9.3 | A/8.7 | A/10.0 | C/25.6 | Signal w/LRT |
| Webster Lot & Washington St. | A/9.8 | A/6.3 | B/63.7 | A/6.1 | Unsignalized |
| Donovan Lot & Washington St. | E/1747.7 | B/95.9 | F/1570.9 | B/85.5 | Unsignalized |
| Aud Lot & Exchange St. | A/7.2 | A/7.3 | A/7.2 | A/6.7 | Unsignalized |

Source*: PB, 2009*
** "Err" indicates delay that is not quantifiable.*

**Low-Density Alternative Levels of Service – Event and Non-Event Conditions**
Year 2011 Low-Density Alternative LOSs during the PM peak hour and Saturday afternoon peak hour event and non-event conditions for intersections in the Project Area are identified in **Table 7.8-11**.

During the Saturday afternoon peak, overall LOSs would be in the acceptable range from A to C at all Project Area intersections during the Saturday afternoon peak hour analysis periods under both the non-event and event conditions in the year 2011. These operating conditions would be similar to those found under the 2011 Preferred Alternative analysis. In addition, all approaches to signalized and unsignalized intersections within the Project Area would operate at an acceptable LOS range between A to C.

During the weekday PM peak hour overall LOSs would be in the acceptable range from A to D at all Project Area intersections with the exception of Washington Street with Scott Street, while indicating an overall LOS D during event conditions, would experience a LOS F for the southbound traffic movement. This would be a result of a reduced number of gaps for the heavy turning movements to turn onto the Thruway entrance ramp against the heavy northbound traffic along Washington Street under event conditions. Under non-event conditions, the southbound traffic movement along Washington Street would operate at a LOS D. Under the Low-Density Alternative, overall delays would be less, and LOS values would be similar or improved as compared to those under the 2011 Preferred Alternative.

Parking garage driveway intersections with adjacent roadways would operate at acceptable LOSs during both the weekday PM peak and Saturday peak periods under both event and non-event conditions under the Low-Density Alternative.

Table 7.8-11
2011 Low-Density Alternative
Intersection Levels of Service

| Intersection | Non-Event | | Event | | Control Type |
|---|---|---|---|---|---|
| | PM Peak | Saturday | PM Peak | Saturday | |
| Church Street & Bingham Street | B/11.6 | A/6.8 | B/14.9 | A/6.9 | Signal |
| NB | B | A | B | A | |
| Church St. & Elmwood Ave. | C/20.1 | B/19.1 | C/20.8 | B/18.6 | Signal |
| EB | C | C | C | C | |
| WB | C | C | C | B | |
| SB | B | B | B | B | |
| Church St. & Delaware Ave. | B/14.3 | B/13.0 | B/15.4 | B/12.6 | Signal |
| EB | A | A | A | A | |
| WB | B | A | B | A | |
| NB | C | C | C | C | |
| SB | C | C | C | C | |
| Church St. & Franklin St. | B/15.6 | B/14.5 | B/16.5 | B/13.6 | Signal |
| EB | B | B | B | A | |
| WB | B | B | B | B | |
| NB | B | B | C | B | |
| SB | C | C | C | C | |
| Church St. & Pearl St. | B/15.2 | B/14.5 | B/14.7 | B/14.3 | Signal |

Table 7.8-11
2011 Low-Density Alternative
Intersection Levels of Service

| Intersection | Non-Event | | Event | | Control Type |
|---|---|---|---|---|---|
| | PM Peak | Saturday | PM Peak | Saturday | |
| EB | C | C | C | C | |
| WB | C | C | C | C | |
| SB | A | A | A | A | |
| NB | A | A | A | A | |
| Church St. & Main St. | A/7.4 | A/7.2 | A/7.5 | A/7.1 | Signal w/LRT |
| EB | A | A | A | A | |
| WB | A | A | A | A | |
| Erie St. & Bingham St. | B/6.3 | A/5.3 | B/7.1 | A/5.3 | Unsignalized |
| Erie St. & Perry Blvd. | A/5.1 | A/6.0 | A/5.3 | A/5.6 | Unsignalized |
| Erie St. & Marine Drive | A/8.2 | A/8.1 | A/8.5 | A/8.2 | Unsignalized |
| Erie St. & Lakefront Blvd. | A/13.9 | A/7.1 | C/19.8 | A/7.5 | Unsignalized |
| Marine Dr. & Pearl St. Ext. | A/9.8 | A/8.6 | B/10.5 | A/8.8 | Unsignalized |
| Pearl St. Ext. & Perry Blvd. | A/7.4 | A/6.1 | A/8.4 | A/5.8 | Unsignalized |
| Pearl St. Ext. & L. Terrace | N/A | N/A | N/A | N/A | Unsignalized |
| Pearl St. & U. Terrace/ Exchange St. | A/14.8 | A/16.6 | A/18.6 | A/13.4 | Unsignalized |
| Pearl St. & Seneca St. | B/11.4 | B/11.2 | B/11.7 | B/11.1 | Signal |
| EB | A | A | B | A | |
| SB | B | B | B | B | |
| NB | B | B | B | B | |
| Main St./Knox Plaza & Scott St. | C/22.7 | C/20.9 | C/25.8 | C/21.7 | Signal w/LRT |
| EB | C | C | D | C | |
| WB | B | B | B | B | |
| NB | B | B | B | B | |
| Main St./Knox Plaza & Perry St. | A/7.7 | A/7.4 | A/7.9 | A/7.5 | Unsignalized |
| Main St. & Exchange St. | A/7.8 | A/7.8 | A/8.2 | A/7.7 | Signal w/LRT |
| EB | A | A | A | A | |
| WB | A | A | A | A | |
| Main St. & Seneca St. | A/7.5 | A/6.9 | B/14.1 | A/6.9 | Signal w/LRT |
| EB | A | A | A | A | |
| Main St. & Swan St. | A/8.3 | A/8.1 | A/8.7 | A/7.7 | Signal w/LRT |
| WB | A | A | A | A | |
| Washington St. & Swan Street | B/15.7 | B/12.5 | B/16.5 | B/13.2 | Signal |
| WB | B | B | B | B | |
| NB | B | B | B | B | |
| SB | B | B | B | B | |
| Washington St. & Seneca Street | A/9.7 | A/9.5 | B/10.2 | A/8.9 | Signal |
| EB | B | B | B | B | |
| NB | A | A | A | A | |
| SB | A | A | A | A | |
| Washington St. & Exchange Street | A/8.5 | A/8.0 | A/9.4 | A/7.2 | Signal |
| EB | A | A | A | A | |
| WB | A | A | B | A | |
| NB | A | A | A | A | |
| SB | B | B | B | A | |
| Washington St. & Thruway Ramp | B/11.0 | A/1.6 | D/43.5 | A/5.2 | Unsignalized |
| SB | D | A | F | A | |
| Washington St. & Scott St. | B/14.0 | B/10.0 | B/16.2 | B/11.0 | Signal |

Table 7.8-11
2011 Low-Density Alternative
Intersection Levels of Service

| Intersection | Non-Event | | Event | | Control Type |
|---|---|---|---|---|---|
| | PM Peak | Saturday | PM Peak | Saturday | |
| EB | C | B | C | B | |
| WB | B | A | B | A | |
| NB | B | B | B | B | |
| SB | A | A | A | A | |
| Washington St. & Perry St. | A/13.7 | A/8.1 | C/16.3 | A/7.8 | Unsignalized |
| Michigan Ave.St. & South Park Avenue | B/11.0 | A/8.9 | B/11.5 | A/9.2 | Signal |
| EB | B | B | B | B | |
| WB | B | B | B | B | |
| NB | A | A | A | A | |
| SB | B | A | B | A | |
| Michigan Ave.St. & Perry St. | C/20.4 | B/10.0 | C/22.9 | A/9.7 | Signal |
| EB | C | B | C | B | |
| WB | B | B | C | B | |
| NB | B | B | C | A | |
| SB | C | A | C | A | |
| Michigan Ave.St. & Scott St. | C/71.7 | A/1.6 | D/Err* | A/3.1 | Unsignalized |
| Michigan Ave.St. & Seneca St. | B/12.6 | B/11.0 | B/12.8 | B/11.2 | Signal |
| EB | A | A | A | A | |
| WB | A | A | A | A | |
| NB | B | B | B | B | |
| SB | B | B | B | B | |
| Michigan Ave.St. & Swan St. | A/9.9 | A/8.3 | B/11.7 | B/13.1 | Signal |
| EB | B | B | B | B | |
| WB | B | B | B | B | |
| NB | A | A | B | B | |
| SB | B | B | B | B | |
| Elm St. & Swan St. | B/13.0 | B/10.7 | B/17.9 | B/10.0 | Signal |
| WB | D | C | D | C | |
| NB | A | A | A | A | |
| Oak St. & Swan St. | B/16.3 | A/8.9 | B/18.1 | B/12.1 | Signal |
| EB | C | B | C | B | |
| WB | D | B | D | C | |
| SB | A | A | B | A | |
| Perry Blvd. & Commercial Slip | A/7.2 | A/6.9 | A/7.2 | A/5.8 | Unsignalized |
| Commercial Slip & Marine Dr. | A/2.6 | A/1.8 | A/2.6 | A/1.8 | Unsignalized |
| Aud Lot & Main St. | A/8.7 | A/5.2 | A/9.0 | A/7.6 | Signal w/LRT |
| Webster Lot & Washington St. | A/3.0 | A/4.2 | A/9.2 | A/4.2 | Unsignalized |
| Donovan Lot & Washington St. | A/0.9 | A/1.3 | A/0.9 | A/1.2 | Unsignalized |
| Aud Lot & Exchange St. | A/6.7 | A/6.7 | A/6.9 | A/6.5 | Unsignalized |

*Source: PB 2009*
** "Err" indicates a delay that is not quantifiable.*

### 7.8.2.7 2031 Build Alternative Levels of Service

A full build year 2031 Build Alternative intersection LOS analysis was conducted for Project Area intersections under each of the three proposed Build Alternatives. Full build out of the proposed parking garage capacities and completion of all development are assumed as part of the

2031 analysis. For each proposed scenario, a 2031 LOS analysis was conducted for four time period conditions; Weekday PM and Saturday Afternoon Non-Event Peak, and Weekday PM and Saturday PM Event Peak periods.

Similar to the 2011 build analysis, the intersection analysis for the year 2031 Build Alternatives also involved the proposed parking garage driveway intersections with the adjacent roadways. For the Webster and Donovan parking garages, the driveway analysis was conducted for an assumed signal point of access. The proposed site plan indicates the inclusion of two driveway access points for these two structures, thus the analysis was conducted for a single access point to present a worst case operations scenario.

**Preferred Alternative Levels of Service – Event and Non-Event Conditions**

Year 2031 Preferred Alternative LOSs during the PM peak hour and Saturday afternoon peak hour event and non-event conditions for intersections in the Project Area are identified in **Table 7.8-12**. A summary of the intersection LOS by location for the non-event analysis periods are illustrated in **Figure 7.8-7**. A summary of the intersection LOS by location for the event analysis periods are illustrated in **Figure 7.8-8**.

During the Saturday afternoon peak, overall LOSs would be in the acceptable range from A to D at most Project Area intersections during the Saturday afternoon peak hour analysis periods under both the non-event and event conditions in the year 2031. At the unsignalized intersections of Erie Street/Bingham Street and Erie Street/Perry Boulevard LOSs of E and F would occur under both the event and non-event conditions. The unsignalized intersection of Pearl Street with Perry Boulevard would also to operate at over-capacity conditions during both the event and non-event conditions during the Saturday peak period. At all other locations, approaches to signalized and unsignalized intersections within the Project Area would operate at acceptable LOSs.

During the weekday PM peak hour, overall LOSs at most Project Area intersections would operate in an acceptable range from A to D. The intersection of Washington Street/Scott Street would operate at a LOS F during event conditions. This poor operating condition would be due to the heavy turning movement traffic at the Washington Street/Scott Street intersection. At the Church Street/Bingham Street intersection, the heavy Bingham Street approach would operate at a LOS F during the weekday peak hour period during an event condition. This approach would operate at a LOS D during the weekday PM peak hour during non-event conditions. At the Washington Street intersection with the Thruway entrance ramp, the heavy traffic northbound along Washington Street would reduce the number of gaps for southbound traffic desiring to turn onto the ramp. The southbound movement at this intersection would operate at a LOS D during both the non-event and event conditions. The unsignalized Michigan Avenue intersection with Scott Street would operate at a LOS E during event conditions. At the unsignalized intersections of Erie Street with Bingham Street and Erie Street with Perry Boulevard, LOSs of E and F would occur under both the event and non-event conditions. The unsignalized intersection of Pearl Street with Perry Boulevard also would operate at over-capacity conditions during both the event and non-event conditions during the weekday PM peak period.

Parking garage driveway intersections with adjacent roadways would operate at acceptable LOSs during both the weekday PM peak and Saturday peak periods under both event and non-event conditions, with the exception of the Commercial Slip Parking Garage driveway with Perry Boulevard. This unsignalized intersection would operate at an over-capacity condition during both weekday PM peak and Saturday peak under both event and non-event conditions.

Table 7.8-12
2031 Preferred Alternative
Intersection Levels of Service

| Intersection | Non-Event | | Event | | Control Type |
|---|---|---|---|---|---|
| | PM Peak | Saturday | PM Peak | Saturday | |
| Church St. & Bingham Street | D/48.7 | A/8.5 | E/77.8 | A/8.8 | Signal |
| NB | D | A | F | A | |
| Church St. & Elmwood Ave. | C/21.4 | C/20.3 | C/22.0 | B/19.9 | Signal |
| EB | C | C | C | C | |
| WB | C | C | C | C | |
| SB | B | B | C | B | |
| Church St. & Delaware Ave. | B/15.0 | B/13.3 | B/16.2 | B/12.8 | Signal |
| EB | A | A | B | A | |
| WB | B | A | B | A | |
| NB | C | C | C | C | |
| SB | C | C | C | C | |
| Church St. & Franklin Ave. | B/16.8 | B/15.7 | C/23.3 | B/15.2 | Signal |
| EB | B | B | B | B | |
| WB | B | B | C | B | |
| NB | C | C | C | C | |
| SB | C | C | D | C | |
| Church St. & Pearl St. | B/13.9 | B/12.0 | B/17.6 | B/11.5 | Signal |
| EB | C | C | C | C | |
| WB | C | C | C | C | |
| SB | A | A | A | A | |
| NB | A | A | A | A | |
| Church St. & Main St. | A/8.1 | A/8.0 | A/7.7 | A/7.7 | Signal w/LRT |
| EB | A | A | A | A | |
| WB | A | A | A | A | |
| Erie St. & Bingham St. | G/Err | F/Err | F/Err | F/Err | Unsignalized |
| Erie St. & Perry Blvd. | E/131.9 | E/82.1 | F/153.2 | E/94.0 | Unsignalized |
| Erie St. & Marine Drive | A/8.4 | A/8.3 | A/8.7 | A/8.5 | Unsignalized |
| Erie St. & Lakefront Blvd. | C/16.5 | A/7.2 | A/28.3 | A/7.6 | Unsignalized |
| Marine Dr. & Pearl St. Ext. | A/20.3 | B/11.7 | A/15.9 | A/12.5 | Unsignalized |
| Pearl St. Ext. & Perry Blvd. | H/239.3 | H/2666.3 | H/298.9 | H/2605.1 | Unsignalized |
| Pearl St. Ext. & L. Terrace | N/A | N/A | N/A | N/A | Unsignalized |
| Pearl St. & U. Terrace/ Exchange St. | C/Err | C/Err | C/Err | C/Err | Unsignalized |
| Pearl St. & Seneca St. | B/13.2 | B/13.1 | B/11.9 | D/40.6 | Signal |
| EB | B | A | A | A | |
| SB | B | B | B | D | |
| NB | B | B | B | B | |
| Main St./Knox Plaza & Scott St. | C/30.7 | D/35.7 | C/29.5 | C/34.8 | Signal w/LRT |
| EB | D | D | D | D | |
| WB | B | C | B | B | |
| NB | C | C | C | C | |
| Main St./Knox Plaza & Perry St. | A/8.4 | A/8.2 | A/8.5 | A/8.3 | Unsignalized |
| Main St. & Exchange St. | A/7.5 | A/7.7 | A/8.3 | A/7.5 | Signal w/LRT |
| EB | A | A | A | A | |

Table 7.8-12
2031 Preferred Alternative
Intersection Levels of Service

| Intersection | Non-Event | | Event | | Control Type |
|---|---|---|---|---|---|
| | PM Peak | Saturday | PM Peak | Saturday | |
| WB | A | A | A | A | |
| Main St. & Seneca St. | A/8.0 | A/8.1 | A/8.2 | A/8.0 | Signal w/LRT |
| EB | A | A | A | A | |
| Main St. & Swan St. | A/8.4 | A/8.3 | A/8.8 | A/8.0 | Signal w/LRT |
| WB | A | A | A | A | |
| Washington St. & Swan Street | B/17.9 | B/13.7 | C/24.6 | B/15.3 | Signal |
| WB | B | B | C | B | |
| NB | B | B | B | B | |
| SB | B | B | B | B | |
| Washington St. & Seneca Street | B/10.3 | B/10.0 | B/10.9 | A/9.3 | Signal |
| EB | B | B | B | B | |
| NB | A | A | A | A | |
| SB | A | A | A | A | |
| Washington St. & Exchange Street | B/10.7 | B/10.6 | B/12.9 | B/10.3 | Signal |
| EB | A | A | B | B | |
| WB | B | B | B | A | |
| NB | A | A | A | A | |
| SB | B | B | B | B | |
| Washington St. & Thruway Ramp | D/49.6 | A/1.6 | E/117.2 | A/6.1 | Unsignalized |
| SB | F | A | F | A | |
| Washington St. & Scott St. | E/57.6 | B/15.3 | F/153.3 | C/20.0 | Signal |
| EB | F | B | F | C | |
| WB | B | A | B | B | |
| NB | E | B | E | C | |
| SB | B | A | B | B | |
| Washington St. & Perry St. | C/15.6 | A/8.7 | A/19.6 | A/8.2 | Unsignalized |
| Michigan Ave. & South Park Avenue | B/11.2 | A/9.0 | B/12.0 | A/9.3 | Signal |
| EB | B | B | B | B | |
| WB | B | B | B | B | |
| NB | A | A | A | A | |
| SB | B | A | B | A | |
| Michigan Ave. & Perry St. | C/21.4 | B/10.8 | C/30.5 | B/11.0 | Signal |
| EB | C | B | D | B | |
| WB | C | B | C | B | |
| NB | C | B | C | B | |
| SB | B | A | C | A | |
| Michigan Ave. & Scott St. | C/114.0 | A/2.0 | E/Err | A/1.9 | Unsignalized |
| Michigan Ave. & Seneca St. | B/12.6 | B/11.5 | B/13.4 | B/12.6 | Signal |
| EB | A | A | A | A | |
| WB | A | A | A | A | |
| NB | B | B | B | B | |
| SB | B | B | B | B | |
| Michigan Ave. & Swan St. | B/10.9 | A/8.5 | B/13.2 | B/16.9 | Signal |
| EB | B | B | B | C | |
| WB | B | B | B | C | |
| NB | A | A | B | B | |
| SB | B | B | B | B | |
| Elm St. & Swan St. | B/14.7 | B/11.2 | C/24.0 | B/10.3 | Signal |
| WB | D | C | E | C | |
| NB | A | A | A | A | |

Table 7.8-12
2031 Preferred Alternative
Intersection Levels of Service

| Intersection | Non-Event | | Event | | Control Type |
|---|---|---|---|---|---|
| | PM Peak | Saturday | PM Peak | Saturday | |
| Oak St. & Swan St. | B/17.6 | A/9.1 | C/23.4 | B/11.3 | Signal |
| EB | C | B | C | B | |
| WB | D | C | D | C | |
| SB | B | A | B | A | |
| Perry Blvd. & Commercial Slip | H/4400.4 | H/4166.7 | F/Err | F/Err | Unsignalized |
| Commercial Slip & Marine Dr. | A/6.0 | A/5.8 | A/5.9 | A/5.4 | Unsignalized |
| Aud Lot & Main St. | A/8.1 | A/8.3 | C/22.2 | A/8.4 | Signal w/LRT |
| Webster Lot & Washington St. | A/3.5 | A/5.4 | A/4.6 | A/5.5 | Unsignalized |
| Donovan Lot & Washington St. | B/2.7 | A/1.9 | A/2.4 | A/1.9 | Unsignalized |
| Aud Lot & Exchange St. | A/7.7 | A/7.9 | A/8.5 | C/24.2 | Unsignalized |

Source*: PB, 2009*

As identified, intersection operating conditions would be at or over capacity at the signalized Washington Street/Scott Street intersection and the Bingham Street approach to Church Street. Intersection operating conditions would be at or over-capacity at the unsignalized intersections of Washington Street/Thruway entrance ramp, Michigan Avenue/Scott Street; Erie Street intersections with Bingham Street and Perry Boulevard; Pearl Street/Perry Boulevard; and Pearl Street/Exchange Street during the peak analysis periods. Operational improvements at these locations would be investigated to mitigate the traffic impacts at these intersections.

**High-Density Scenario Levels of Service – Event and Non-Event Conditions**
Year 2031 High-Density Alternative LOSs during the PM peak hour and Saturday afternoon peak hour event and non-event conditions for intersections in the Project Area are identified in **Table 7.8-13**.

During the Saturday afternoon peak, overall LOSs would be in the acceptable range from A to D at most Project Area intersections during the Saturday afternoon peak hour analysis periods under both the non-event and event conditions in the year 2031. At the unsignalized intersections of Erie Street/Bingham Street and Erie Street/Perry Boulevard, LOSs of E and F would occur under both the event and non-event conditions. The unsignalized intersection of Pearl Street/Perry Boulevard would also operate at over-capacity conditions during both the event and non-event conditions during the Saturday peak period. The eastbound and northbound approaches to the Washington Street/Scott Street intersection would operate at a LOS E during event conditions. At all other locations, approaches to signalized and unsignalized intersections within the Project Area would operate at an acceptable LOS range between A to D.

During the weekday PM peak hour overall levels of service most Project Area intersections would operate in an acceptable range from A to D. The intersection of Washington Street/Scott Street would operate at a LOS F during both the event and non-event conditions. This poor operating condition would be a result of heavy turning movement traffic at the Washington Street/Scott Street intersection. At the Church Street intersection with Bingham Street, the heavy

Bingham Street approach would operate at a LOS F during the weekday peak hour period during event conditions and a LOS E during non-event conditions. At the Washington Street intersection with the Thruway entrance ramp, the heavy traffic northbound along Washington Street would reduce the number of gaps for southbound traffic desiring to turn onto the ramp. The southbound movement at this intersection would operate at a LOS F during both the non-event and event conditions. The Michigan Avenue intersection with Scott Street would operate at a LOS E during event conditions and a LOS D during non-event conditions. At the unsignalized intersections of Erie Street with Bingham Street and Erie Street with Perry Boulevard, LOS of E and F would occur under both the event and non-event conditions. The unsignalized intersection of Pearl Street with Perry Boulevard also would operate at over-capacity conditions during both the event and non-event conditions during the weekday PM peak period.

Parking garage driveway intersections with adjacent roadways would operate at acceptable LOSs during both the weekday PM peak and Saturday peak periods under both event and non-event conditions, with the exception of the Commercial Slip Parking Garage driveway with Perry Boulevard and the Donovan Garage driveway with Washington Street. At the Commercial Slip driveway intersection with Washington Street, the unsignalized intersection would operate at over-capacity conditions during both weekday PM peak and Saturday peak under both event and non-event conditions. The Donovan Garage driveway intersection with Washington Street would operate at over-capacity conditions under event and non-event conditions.

Table 7.8-13
2031 High-Density Alternative
Intersection Levels of Service

| Intersection | Non-Event | | Event | | Control Type |
|---|---|---|---|---|---|
| | PM Peak | Saturday | PM Peak | Saturday | |
| Church Street & Bingham Street | E/60.8 | A/9.0 | F/96.1 | A/9.2 | Signal |
| NB | E | A | F | A | |
| Church St. & Elmwood Ave. | C/21.7 | C/20.4 | C/22.3 | B/20.0 | Signal |
| EB | C | C | C | C | |
| WB | C | C | C | C | |
| SB | B | B | C | B | |
| Church St. & Delaware Ave. | B/15.1 | B/13.3 | B/17.0 | B/12.8 | Signal |
| EB | B | A | B | A | |
| WB | B | B | B | A | |
| NB | C | C | C | C | |
| SB | C | C | C | C | |
| Church St. & Franklin Ave. | B/17.1 | B/15.9 | B/17.8 | B/15.4 | Signal |
| EB | B | B | B | B | |
| WB | B | B | B | B | |
| NB | C | C | C | C | |
| SB | C | C | C | C | |
| Church St. & Pearl St. | B/13.8 | B/11.9 | B/17.5 | B/11.4 | Signal |
| EB | C | C | C | C | |
| WB | C | C | C | C | |
| SB | B | A | A | A | |
| NB | B | A | A | A | |
| Church St. & Main St./LRT | A/8.1 | A/8.0 | A/7.7 | A/7.7 | Signal w/LRT |
| EB | A | A | A | A | |

Table 7.8-13
2031 High-Density Alternative
Intersection Levels of Service

| Intersection | Non-Event | | Event | | Control Type |
|---|---|---|---|---|---|
| | PM Peak | Saturday | PM Peak | Saturday | |
| WB | A | A | A | A | |
| Erie St. & Bingham St. | H/err | F/Err | F/Err | F/Err | Unsignalized |
| Erie St. & Perry Blvd. | F/152.6 | E/81.4 | F/175.0 | E/80.8 | Unsignalized |
| Erie St. & Marine Drive | A/8.6 | A/8.4 | A/8.9 | A/8.6 | Unsignalized |
| Erie St. & Lakefront Blvd. | C/16.9 | A/7.2 | D/29.3 | A/7.5 | Unsignalized |
| Marine Dr. & Pearl St. Ext. | C/53.9 | C/15.6 | C/49.3 | C/17.3 | Unsignalized |
| Pearl St. Ext. & Perry Blvd. | F/2900.7 | H/2639.2 | F/3003.9 | F/2576.7 | Unsignalized |
| Pearl St. Ext. & L. Terrace | N/A | N/A | N/A | N/A | Unsignalized |
| Pearl St. & U. Terrace/ Exchange St. | C/err | C/Err | F/Err | F/Err | Unsignalized |
| Pearl St. & Seneca St. | B/13.2 | B/13.1 | B/12.2 | B/11.5 | Signal |
| EB | B | A | A | A | |
| SB | B | B | B | B | |
| NB | B | B | B | B | |
| Main St./Knox Plaza & Scott St. | D/52.6 | D/37.3 | C/32.14 | D/37.1 | Signal w/LRT |
| EB | E | D | D | D | |
| WB | D | C | B | C | |
| NB | C | C | C | C | |
| Main St./Knox Plaza & Perry St. | A/8.5 | A/8.1 | A/8.5 | A/8.2 | Unsignalized |
| Main St. & Exchange St. | A/7.3 | A/7.6 | A/7.4 | A/8.5 | Signal w/LRT |
| EB | A | A | A | A | |
| WB | A | A | A | A | |
| Main St. & Seneca St. | A/8.1 | A/8.1 | A/8.2 | A/8.0 | Signal w/LRT |
| EB | A | A | A | A | |
| Main St. & Swan St. | A/8.5 | A/8.3 | A/9.6 | A/8.0 | Signal w/LRT |
| WB | | A | B | A | |
| Washington St. & Swan Street | B/19.2 | B/14.2 | C/25.2 | B/15.5 | Signal |
| WB | B | B | C | B | |
| NB | B | B | C | B | |
| SB | B | B | C | B | |
| Washington St. & Seneca Street | B/10.7 | B/10.2 | B/11.3 | A/9.5 | Signal |
| EB | B | B | B | B | |
| NB | A | A | A | A | |
| SB | B | A | B | A | |
| Washington St. & Exchange Street | B/19.9 | B/13.6 | B/16.5 | B/10.5 | Signal |
| EB | A | B | C | A | |
| WB | B | B | C | A | |
| NB | C | A | B | B | |
| SB | C | B | B | B | |
| Washington St. & Thruway Ramp | E/104.3 | A/1.3 | F/191.9 | B/7.4 | Unsignalized |
| SB | F | A | F | C | |
| Washington St. & Scott St. | F/150.2 | C/20.2 | F/182.8 | D/42.1 | Signal |
| EB | F | C | F | E | |
| WB | B | A | C | B | |
| NB | F | C | F | E | |
| SB | B | B | B | B | |
| Washington St. & Perry St. | C/17.5 | A/8.9 | C/22.2 | A/8.3 | Unsignalized |
| Michigan Ave. & South Park Avenue | B/11.2 | A/9.0 | B/11.9 | A/9.3 | Signal |

Table 7.8-13
2031 High-Density Alternative
Intersection Levels of Service

| Intersection | Non-Event | | Event | | Control Type |
|---|---|---|---|---|---|
| | PM Peak | Saturday | PM Peak | Saturday | |
| EB | B | B | B | B | |
| WB | B | B | B | B | |
| NB | A | A | A | A | |
| SB | B | A | B | A | |
| Michigan Ave. & Perry St. | C/21.4 | B/10.9 | C/28.1 | B/10.5 | Signal |
| EB | C | B | D | B | |
| WB | C | B | C | B | |
| NB | C | B | C | B | |
| SB | B | A | C | A | |
| Michigan Ave. & Scott St. | D/err | A/2.1 | E/Err | B/6.5 | Unsignalized |
| Michigan Ave. & Seneca St. | B/12.7 | B/11.9 | B/13.8 | B/12.9 | Signal |
| EB | A | A | A | A | |
| WB | A | A | A | A | |
| NB | B | B | B | B | |
| SB | B | B | B | C | |
| Michigan Ave. & Swan St. | B/11.1 | A/8.8 | B/13.4 | B/17.0 | Signal |
| EB | B | B | B | C | |
| WB | B | B | B | C | |
| NB | A | A | B | B | |
| SB | B | B | B | B | |
| Elm St. & Swan St. | B/14.4 | B/10.9 | C/23.5 | B/10.1 | Signal |
| WB | D | C | E | C | |
| NB | A | A | A | A | |
| Oak St. & Swan St. | B/17.7 | A/8.8 | C/23.6 | B/11.3 | Signal |
| EB | C | B | C | B | |
| WB | D | C | D | C | |
| SB | B | A | B | A | |
| Perry Blvd. & Commercial Slip | H/4059.6 | H/3914.6 | F/3694.2 | F/3096.3 | Unsignalized |
| Commercial Slip & Marine Dr. | A/5.6 | A/5.4 | A/4.9 | A/4.9 | Unsignalized |
| Aud Lot & Main St. | A/8.1 | A/8.3 | A/8.2 | D/35.1 | Signal w/LRT |
| Webster Lot & Washington St. | B/58.1 | A/6.3 | B/39.2 | A/6.1 | Unsignalized |
| Donovan Lot & Washington St. | F/1568 | C/118.9 | D/2086.5 | C/112.3 | Unsignalized |
| Aud Lot & Exchange St. | A/8.1 | A/9.1 | A/9.1 | A/6.4 | Unsignalized |

Source*: PB, 2009*

**Low-Density Alternative Levels of Service – Event and Non- Event Conditions**

Year 2031 Low-Density Alternative LOSs during the PM peak hour and Saturday afternoon peak hour event and non-event conditions for intersections in the Project Area are identified in **Table 7.8-14**.

During the Saturday afternoon peak, overall LOSs would be in the acceptable range from A to D at all Project Area intersections, with the exception of the Pearl Street and Perry Boulevard intersection, during the Saturday PM peak hour analysis periods under both the non-event and event conditions in the year 2031. No intersections would operate at a LOS F during the Saturday peak period under either non-event or event conditions. At the unsignalized intersection of Pearl Street with Perry Boulevard, the overall LOS would be E with over-capacity conditions during both the event and non-event conditions during the Saturday peak period. At

all the other locations, approaches to signalized and unsignalized intersections within the Project Area would operate at an acceptable LOS range between A to D.

During the weekday PM peak hour, overall LOSs at most Project Area intersections would be in an acceptable range from A to D. No intersections would operate at a LOS F condition under either the non-event or event conditions. At the Washington Street intersection with the Thruway entrance ramp, the heavy traffic northbound along Washington Street would reduce the number of gaps for southbound traffic desiring to turn onto the ramp. The southbound movement at this intersection would operate at a LOS F during both the non-event and event conditions. The Michigan Avenue intersection with Scott Street would operate at a LOS E during event conditions and a LOS C during non-event conditions. At the unsignalized intersections of Erie Street with Bingham Street and Erie Street with Perry Boulevard, LOSs of E would occur under both the event and non-event conditions. Under the Low-Density Alternative, overall delays would be less, and LOS values would be similar or improved compared to the operating conditions anticipated under the 2031 Preferred Alternative.

Parking garage driveway intersections with adjacent roadways would operate at acceptable LOSs during both the weekday PM peak and Saturday peak periods under both event and non-event conditions, with the exception of the Commercial Slip Parking Garage driveway with Perry Boulevard. At the Commercial Slip driveway intersection with Perry Boulevard, the unsignalized intersection would operate at an over-capacity condition during both weekday PM peak under both event and non-event conditions. The operating conditions at the parking garage driveway intersections under the Low-Density Alternative indicate similar and slightly better operating conditions compared to the 2031 Preferred Alternative.

Table 7.8-14
2031 Low-Density Alternative
Intersection Levels of Service

| Intersection | Non-Event | | Event | | Control Type |
|---|---|---|---|---|---|
| | PM Peak | Saturday | PM Peak | Saturday | |
| Church Street & Bingham Street | C/25.5 | A/6.9 | D/39.3 | A/7.0 | Signal |
| NB | C | A | D | A | |
| Church St. & Elmwood Ave. | C/21.0 | C/20.4 | C/21.9 | B/19.4 | Signal |
| EB | C | C | C | C | |
| WB | C | C | C | B | |
| SB | B | B | B | B | |
| Church St. & Delaware Ave. | B/14.9 | B/13.3 | B/16.5 | B | Signal |
| EB | A | A | B | A | |
| WB | B | A | B | A | |
| NB | C | C | C | C | |
| SB | C | C | C | C | |
| Church St. & Franklin St. | B/16.5 | B/15.2 | B/17.1 | B/14.7 | Signal |
| EB | B | B | B | B | |
| WB | B | B | B | B | |
| NB | C | C | C | B | |
| SB | C | C | C | C | |

# Table 7.8-14
## 2031 Low-Density Alternative
## Intersection Levels of Service

| Intersection | Non-Event | | Event | | Control Type |
|---|---|---|---|---|---|
| | PM Peak | Saturday | PM Peak | Saturday | |
| Church St. & Pearl St. | B/13.9 | B/13.8 | B/17.8 | B/13.5 | Signal |
| EB | C | C | C | C | |
| WB | C | C | C | C | |
| SB | A | A | A | A | |
| NB | A | A | A | A | |
| Church St. & Main St. | A/8.1 | A/7.4 | A/7.7 | A/7.5 | Signal w/LRT |
| EB | A | A | A | A | |
| WB | A | A | A | A | |
| Erie St. & Bingham St. | E/409.5 | C/10.1 | E/Err* | C/11.7 | Unsignalized |
| Erie St. & Perry Blvd. | C/33.5 | B/14.3 | C/46.1 | B/15.6 | Unsignalized |
| Erie St. & Marine Drive | A/8.3 | A/8.2 | A/8.7 | A/8.4 | Unsignalized |
| Erie St. & Lakefront Blvd. | A/16.4 | A/7.6 | D/28.0 | A/7.5 | Unsignalized |
| Marine Dr. & Pearl St. Ext. | A/11.2 | A/9.5 | B/12.5 | A/9.9 | Unsignalized |
| Pearl St. Ext. & Perry Blvd. | E/52.4 | E/55.3 | E/79.0 | E/43 | Unsignalized |
| Pearl St. Ext. & L. Terrace | N/A | N/A | N/A | N/A | Unsignalized |
| Pearl St. & U. Terrace/ Exchange St. | A/126.9 | A/Err* | A/203.8 | A/142.0 | Unsignalized |
| Pearl St. & Seneca St. | B/12.2 | B/16.4 | B/12.7 | B/11.9 | Signal |
| EB | B | A | A | A | |
| SB | B | B | B | B | |
| NB | B | B | B | B | |
| Main St./Knox Plaza & Scott St. | C/28.3 | C/25.6 | D/36.7 | C/27.1 | Signal w/LRT |
| EB | D | C | E | D | |
| WB | B | B | C | B | |
| NB | C | B | B | B | |
| Main St./Knox Plaza & Perry St. | A/8.1 | A/7.6 | A/8.3 | A/7.9 | Unsignalized |
| Main St. & Exchange St. | A/7.0 | A/7.6 | A/7.8 | A/7.6 | Signal w/LRT |
| EB | A | A | A | A | |
| WB | A | A | A | A | |
| Main St. & Seneca St. | A/7.9 | A/7.9 | A/8.1 | A/7.9 | Signal w/LRT |
| EB | A | A | A | A | |
| Main St. & Swan St. | A/8.3 | A/8.2 | A/8.7 | A/7.9 | Signal w/LRT |
| WB | A | A | A | A | |
| Washington St. & Swan Street | B/16.4 | B/12.9 | B/19.0 | B/14.1 | Signal |
| WB | B | B | B | B | |
| NB | B | B | B | B | |
| SB | B | B | B | B | |
| Washington St. & Seneca Street | B/10.1 | A/9.8 | B/10.7 | A/9.1 | Signal |
| EB | B | B | B | B | |
| NB | A | A | A | A | |
| SB | A | A | A | A | |
| Washington St. & Exchange Street | A/9.7 | A/9.2 | B/11.9 | A/8.1 | Signal |
| EB | A | A | B | A | |
| WB | B | A | B | A | |
| NB | A | A | A | A | |
| SB | B | B | B | B | |
| Washington St. & Thruway Ramp | C/31.9 | A/1.4 | D/90.7 | A/5.6 | Unsignalized |
| SB | F | A | F | B | |

Table 7.8-14
2031 Low-Density Alternative
Intersection Levels of Service

| Intersection | Non-Event | | Event | | Control Type |
|---|---|---|---|---|---|
| | PM Peak | Saturday | PM Peak | Saturday | |
| Washington St. & Scott St. | B/19.5 | B/11.2 | C/24.9 | B/12.7 | Signal |
| EB | C | B | D | B | |
| WB | B | A | B | B | |
| NB | B | B | C | B | |
| SB | A | A | A | A | |
| Washington St. & Perry St. | A/15.2 | A/8.5 | C/18.9 | A/8.0 | Unsignalized |
| Michigan Ave.St. & South Park Avenue | B/11.2 | A/9.0 | B/12.0 | A/9.3 | Signal |
| EB | B | B | B | B | |
| WB | B | B | B | B | |
| NB | A | A | A | A | |
| SB | B | A | B | A | |
| Michigan Ave.St. & Perry St. | C/21.1 | B/10.5 | C/27.2 | B/10.2 | Signal |
| EB | C | B | C | B | |
| WB | C | B | C | B | |
| NB | C | B | C | B | |
| SB | B | A | C | A | |
| Michigan Ave.St. & Scott St. | C/102.1 | A/1.6 | E/Err* | B/9.6 | Unsignalized |
| Michigan Ave.St. & Seneca St. | B/13.0 | B/11.1 | B/13.3 | B/12.3 | Signal |
| EB | A | A | A | A | |
| WB | A | A | A | A | |
| NB | B | B | B | B | |
| SB | B | B | B | B | |
| Michigan Ave.St. & Swan St. | B/10.8 | A/8.8 | B/13.0 | B/16.2 | Signal |
| EB | B | B | B | C | |
| WB | B | B | B | C | |
| NB | A | A | B | B | |
| SB | B | B | B | B | |
| Elm St. & Swan St. | B/14.8 | B/11.3 | C/24.1 | B/10.4 | Signal |
| WB | D | C | E | C | |
| NB | A | A | A | A | |
| Oak St. & Swan St. | B/17.2 | A/9.3 | C/22.1 | B/12.3 | Signal |
| EB | C | B | C | B | |
| WB | D | C | E | C | |
| SB | B | A | B | A | |
| Perry Blvd. & Commercial Slip | F/4327.0 | F/4104.9 | F/4269.8 | F/4219.9 | Unsignalized |
| Commercial Slip & Marine Dr. | A/4.9 | A/4.6 | A/4.9 | A/4.6 | Unsignalized |
| Aud Lot & Main St. | A/8.5 | A/4.5 | A/7.8 | A/7.9 | Signal w/LRT |
| Webster Lot & Washington St. | A/3.1 | A/4.2 | A/3.3 | A/4.4 | Unsignalized |
| Donovan Lot & Washington St. | A/0.9 | A/1.1 | A/1.0 | A/1.0 | Unsignalized |
| Aud Lot & Exchange St. | A/6.6 | A/7.0 | A/6.4 | A/6.6 | Unsignalized |

Source*: PB, 2009*
** "Err" indicates a delay that is not quantifiable.*

The Michigan Avenue intersection with Scott Street would operate at a LOS E during event conditions and a LOS D during non-event conditions. At the unsignalized intersections of Erie Street with Bingham Street and Erie Street with Perry Boulevard, LOSs of E and F would occur under both the event and non-event conditions. The unsignalized intersection of Pearl Street

with Perry Boulevard would also operate at over-capacity conditions during both the event and non-event conditions during the weekday PM peak period.

Parking garage driveway intersections with adjacent roadways would operate at acceptable LOSs during both the weekday PM peak and Saturday peak periods under both event and non-event conditions, with the exception of the Commercial Slip Parking Garage driveway with Perry Boulevard and the Donovan Garage driveway with Washington Street. At the Commercial Slip driveway intersection with Perry Boulevard, the unsignalized intersection would operate at an over-capacity condition during both weekday PM peak and Saturday peak under both event and non-event conditions. The Donovan Garage driveway intersection with Washington Street would operate at over-capacity conditions under event and non-event conditions.

#### 7.8.2.8 Proposed Mitigation Measures

Traffic impacts associated with the Preferred Alternative would be generally minor through the year 2011, especially under the non-event condition. Future conditions analysis through to the year 2031 indicate increased traffic impacts associated with both background traffic growth and the full build-out of the Preferred Alternative. Future year 2031 analysis, however, indicates traffic-related impacts to a limited number of intersections. The improvements identified and included in the analysis represent identified mitigation measures to offset any potential impact of the Project-generated traffic on the operations along Project Area roadways and intersections under the Build Alternatives.

Identified roadway network and operation improvements included as part of the Project to assist traffic operations within the Project Area and mitigate any potential impacts associated with the presence of the additional Project-generated traffic onto the roadway network would include the following items:

- Conversion of a portion of the Marine Drive loop roadway to two-way operation allowing direct access from the Commercial Slip garage driveway to Marine Drive without impacting the residential loop roadway traffic and/or possible reversal of roadway traffic direction on the residential loop;
- Police oversight of Donovan Parking Garage driveways during event conditions to allow traffic to exit onto Washington Street from the garage driveway;
- Inclusion of an eastbound left turn advance signal phase for Scott Street and incorporation of a second northbound through lane along Washington Street by banning parking along 100’ of the curb to improve the operating condition of the Washington Street with Scott Street intersection;
- Conversion of the second northbound lane along Washington Street into a channeled right turn lane at the Thruway Southbound entrance ramp intersection to improve the operating condition of the Washington Street with Thruway Southbound Ramp intersection; and
- The installation of a traffic signal at the Michigan Avenue with Scott Street intersection to reduce delay and improve the operating levels of service at this intersection.

Identified mitigation measures were analyzed to identify the operational improvements that would result with their inclusion into the Project. The analysis focused on the Preferred Alternative under non-event conditions. A summary of the analysis results are identified in **Table 7.8-15**.

Table 7.8-15
2031 Preferred Alternative
Mitigation Measures
Intersection Levels of Service

| Intersection | Existing Operation | | Mitigation Operations | | Proposed Mitigation Measure |
|---|---|---|---|---|---|
| | Non-Event PM Peak | Control Type | Non-Event PM Peak | Control Type | |
| Erie St. & Bingham St. | F/Err* | Unsignalized | F/110.5 | Signal | Reconfigure and combine operations with Perry Blvd. |
| Erie St. & Perry Blvd. | E/131.9 | Unsignalized | - | | |
| Pearl St. Ext. & Perry Blvd. | F/239.2 | Unsignalized | D/46.4 | Signal | Signalize Intersection |
| Washington St. & Thruway Ramp | D/49.6 | Unsignalized | E/5.0 | Unsignalized | Channelize NB right turn lane |
| SB | F | | B | | |
| Washington St. & Scott St. | E/57.6 | Signal | C/25.4 | Signal | Add EB advance phase and 2nd NB lane |
| EB | F | | C | | |
| WB | B | | C | | |
| NB | E | | C | | |
| SB | A | | C | | |
| Michigan Ave. & Scott St. | C/114.0 | Unsignalized | A/9.2 | Signal | Signalize Intersection |

Source*: PB, 2009*
** "Err" indicates a delay that is not quantifiable.*

At the existing unsignalized intersections of Erie Street with Perry Boulevard and Erie Street with Bingham Street, forecast operations would be at over-capacity conditions under the 2031 Preferred Alternative. A reconfiguration of the intersection and the installation of a traffic signal would improve overall operations, however the intersection would still operate at over-capacity conditions. Additional operational improvements may be necessary to mitigate the impacts of forecasted future traffic conditions.

At the unsignalized Pearl Street extension with Perry Boulevard intersection, the installation of a traffic signal would reduce the approaching traffic delays and improve the overall projected future operating conditions through the intersection.

At the signalized Washington Street with Scott Street intersection, the incorporation of an eastbound advance signal phase along with the prohibition of parking along a 100-foot section of the east curb of Washington Street on the northbound approach to create a second northbound thru lane will be investigated. The inclusion of these improvements would improve the LOS of the intersection.

At the Washington Street with Thruway Southbound entrance ramp intersection, the addition of a dedicated southbound left-turn lane or the installation of a traffic signal would not significantly reduce vehicle delay and improve the operation of the intersection. The potential for geometric expansion at this intersection is limited due to the topography and adjacent land use and nearby structures. However, converting the second northbound lane along Washington Street into a channelized dedicated right-turn lane would improve overall operating conditions at the intersection. This potential improvement would be further investigated through the design and analysis process.

At the Michigan Avenue with Scott Street intersection, the installation of a traffic signal would reduce the projected Scott Street approaching traffic delays and improve the overall operating conditions through the intersection.

ECHDC, in consultation with the City, would implement the above Washington Street with Scott Street intersection signalization improvements and the Washington Street parking prohibition concurrent with Initial Canal Side Build Phase improvements. ECHDC and the City would establish a program to monitor traffic flow at the Washington Street with Thruway Southbound Ramp intersection during the Market-Based Phase and determine when and if improvement would be required. Additionally, a program would be established to monitor traffic at the Michigan Avenue with Scott Street intersection when 75 percent of the full Project program has been built out.

#### 7.8.2.9 Pedestrian Access

The Canal Side Project, from the initial phase through complete build out, has been designed first and foremost from the perspective of the pedestrian experience under all Build Alternatives. The Project would maintain existing sidewalks within public right-of-ways, and would create new sidewalks/walkways along the new streets of the Erie Canal Harbor parcels. The Project would also create a network of spaces and paths that would be exclusive to pedestrians providing access across the Project Area to: the main water feature in the Donovan and Aud Blocks, as well as the Prime Slip which would be active with ground level retail uses; the Skyway Plaza which would utilize the area beneath the Skyway as an open air venue; and an extension of the Central Wharf Green which would be open the entire length of the river within the Project Area to pedestrians. These components combined with the improved streets would constitute an entire district that would possess a world-class pedestrian experience that could be enjoyed throughout the year.

#### 7.8.2.10 Bicycle Access

Maintaining existing bicycling routes and creating new routes is important to Canal Side's goal of extending the City's existing networks to its waterfront. Accordingly, the City of Buffalo's "Complete Streets" program would be implemented to the greatest extent possible. Existing bike lanes on Marine Drive would be maintained, and new bike lanes along Pearl Street would be introduced. Elsewhere in the Project Area, bicycle lanes shared access, and bicycle racks would be provided wherever possible.

## 7.9 Hazardous Waste / Contaminated Materials Assessment

### 7.9.1 No-Build Alternatives

The No-Build Alternative would not result in any adverse impacts to the Project Area, as soil and fill conditions within the Project Area would not change.

### 7.9.2 Build Alternatives

Construction and operation of Project components would not expose workers, residents, and visitors to significant levels of hazardous materials. However, relevant pathways for exposure of humans and aquatic organisms to potential Project Area contamination were identified and analyzed. This analysis included a review of existing publicly-available studies within the Project Area to determine what contaminants may have been released into the environment through historic uses. An evaluation of the mechanisms for exposure to contaminants by humans and organisms was also conducted as part of the analysis.

#### 7.9.2.1 Contaminant Sources

Detailed information about the history of properties in the Project Area was obtained from other environmental studies, including:

- Buffalo Inner Harbor Soil Characterization Study, 1994
- Final Site Investigation, Buffalo Inner Harbor Development Project, 1998
- Draft Hazardous Waste/Contaminated Materials Screening Report, Inner Harbor and Waterfront Development Transportation Infrastructure Facility, 2003;
- Phase II Environmental Site Assessment, Webster Block Property, August 2000;
- Summary of Test Pit Investigation Findings, Webster Block Property, Buffalo, New York, July 2001;
- Environmental Record Site Preparation Activities at 125 & 140 Main Street, Buffalo, New York, December 2007;
- Phase I Environmental Site Assessment for the Buffalo Memorial Auditorium, 130 Main Street, Buffalo, New York, August 2006;
- Uniform Hazardous Waste Manifest Nos. 001709959, 001059843, and 001059841, Buffalo Memorial Auditorium, 140 Main Street, Buffalo, New York 14203, October 2, 2008;
- Draft Phase II Environmental Site Assessment Report of the General William J. Donovan State Office Building, 125 Main Street, Buffalo, New York, November 2007; and
- Tank Closure report, Donovan Building, 125 Main Street, Buffalo, New York, LCS File No. 08B2364.26, NYSDEC Spill No. 080672, December 9, 2008.

Information about the history of the Project Area shows that the Erie Canal, Hamburg Drain, and Former Commercial Slip all passed through the area in the 1800s. A large railroad depot was

north of the Project Area, and the numerous businesses were established to take advantage of the easy access to transportation. Early in the 1900's, the waterways in the area were fully filled with soils and possibly refuse from unknown locations until the ground surface was level with surrounding properties. After the waterways in the area were filled, new businesses, office buildings, and an auditorium were built, and the emergence of the automobile as a primary mode of transportation resulted in the establishment of service stations in the area. Each of these activities created new potential sources of contamination.

The 2006 Phase I Environmental Site Assessment for the Buffalo Memorial Auditorium discusses that property and the surrounding area. An abbreviated summary of some of the known uses of nearby properties and suspected and known contamination is shown below in **Table 7.9-1**. Included on the list are sites that have been administratively closed by the NYSDEC, and other potential contaminant sources outside of the area planned for development. Sites that have been administratively closed frequently contain residual contaminants, and off-site contaminants often migrate into studies areas, even sometimes from great distances.

Table 7.9-1
Summary of Known Contaminants in the Project Area

| Potential Source | Potential Contaminant |
|---|---|
| Donovan State Office Building<br>125 Main St. | Heating oil, diesel and gasoline tanks |
| Railroad Depot<br>241 Main St. | Fuel tanks, heating oil tanks, heavy metals from coal storage facilities, chlorinated solvents from maintenance shops, miscellaneous petroleum substances |
| Fill Soil in Erie Canal, Hamburg Drain, and Commercial Slip | Petroleum compounds, PCB-containing materials, asbestos containing materials, and heavy metals in backfill material |
| Service Stations<br>163 Main Street<br>Main Street and Exchange Street | Petroleum substances, chlorinated solvents from degreasing solvents, lead from gasoline |
| Memorial Auditorium<br>420 Main St. | Former heating oil tanks, PCBs from former transformers |
| The Buffalo News<br>Scott and Washington Streets | Former fuel oil and gasoline tanks, former spills |
| Kurk Fuel Oil Co.<br>125 Main Street | Fuel oil and other petroleum substances |
| Inner Harbor Project<br>Marine Street | Contaminated soil and groundwater discovered while excavating the Erie Canal |
| Buffalo Inner Harbor<br>Main and Scott Streets | Oil contamination discovered in 1984. |
| Tank in Main Street<br>Main Street between Perry and Scott | Abandoned tanks found in the road. Tanks removed along with contaminated soils. |
| Webster Block | Two underground storage tanks discovered during soil testing below parking lot. |
| Marine Drive Apartments<br>205 Marine Drive | Fuel oil tanks |
| Erie Basin Marina<br>Erie Street | Diesel and gasoline tanks |
| Ransom Medicine Mfg<br>137 Main St. | Pharmaceutical chemicals, solvents |
| Lehigh Valley Railroad Terminal<br>Main & Scott Streets | Possible fuel tanks, heating oil tanks, |
| Junkyard, soap factory, metal shops, other miscellaneous small industrial facilities | Heavy metals, caustic soda, petroleum-based compounds |

Source: *ECHDC, 2006, Survey*

A review of past activities within the Project Area suggests that soils and groundwater may have been impacted with petroleum substances, chlorinated solvents, heavy metals, and poly-chlorinated biphenyls (PCBs). Due to the widespread use and possible co-mingling of these chemicals, it may be difficult to identify any specific contaminant sources.

#### 7.9.2.2 Potential Environmental Impact of Contaminants

Past studies in the Project Area indicate the possible presence of contaminated soils. Each of the Build Alternatives would involve activities, which, if not conducted properly, could release contaminants and affect the environment. An analysis of potential impacts follows.

**Removal of Structures**

The Build Alternatives would result in the removal of structures including utility infrastructure, parking lots, streets and other paved areas. These activities would expose previously covered soil, and increase the potential for storm water infiltration in the exposed areas. Environmental impacts created by pavement removal could include the following:

- Individuals could come in direct contact with contaminated soil during and after the removal of structures.
- Contaminated soil could be could be washed from piles during storm events and enter storm sewers and waterways, thereby impacting aquatic species.
- Contaminated soil could become airborne and inhaled by workers and visitors on the exposed site and in the surrounding area.
- The infiltration of surface waters through soil could transport contaminants into underlying water bearing zones, where they would be transported into surrounding water bodies.
- Infiltration of surface water could raise the water table locally and affect the movement of groundwater both below the Project Area and in surrounding areas. Depending on the location where the water table is affected, this could accelerate or hinder the movement of possible contaminants into surface water bodies.

**Excavation of Soils**

When soils are excavated from within the Project Area they must either be relocated, or transported off-site for disposal. If the excavated soils are contaminated, these actions could change the environmental conditions of not only the location excavated, but also the location where the soils are ultimately placed. The relocation and installation of utilities, including storm and sanitary sewers, natural gas pipelines, water mains, and electrical, telephone, and communication cables could also create risks.

- Stockpiled contaminated soil alongside buildings could be could be washed from piles during storm events and enter storm sewers and waterways, thereby impacting aquatic species.

- During excavation of contaminated soil, contaminants volatilizing from soil or in airborne dust could be inhaled by workers and visitors on the site and in the surrounding area.
- Stockpiled contaminated soil could be transported to a new location thereby creating new environmental risks at the disposal point.
- Building construction workers could be exposed to contaminated soil while excavating soil, installing building footings, or installing or repairing utilities

**Landscaping**

The Build Alternatives would involve extensive landscaping. Although some soil with higher fertility will likely be brought into the area and placed above existing soil, it is anticipated that many of the larger trees and plants will be planted in the deeper existing soils within the Project Area. It is also anticipated that landscaping will include the installation and operation of irrigation systems. Environmental risks posed by these activities could include the following.

- Workers preparing landscaped areas for planting and installing plants both during the initial construction and throughout the life of the facilities may come in direct contact with potentially contaminated soils.
- The preparation of soils for planting or the stockpiling of soils could generate dust which could contain contaminants.
- Stockpiled contaminated soil could be washed from piles during storm events and enter storm sewers and waterways, and impacting aquatic species.
- Workers installing and maintaining irrigation systems may come in direct contact with potentially contaminated soils.
- Irrigation of planted areas could increase the transport of contaminants from soil into underlying groundwater, which ultimately flows into nearby surface water bodies.
- Visitors in the area could be exposed to contaminants while walking, sitting or laying on contaminated surficial soils.

**Construction and Use of Subsurface Structures Including Shallow and Deep Water Features**

Plans for the Build Alternatives call for the construction of both shallow water features, and potentially a fish aquarium with a depth as much is 20 feet. In addition, the construction of specific structures in each of the Build Alternatives may require substantial amounts of excavation. Digging and excavating activities create digging and could create environmental risks beyond those associated with the surrounding landscaping.

- Workers digging below surface may come in direct contact with potentially contaminated soils.
- Workers maintaining the structures once built may come in contact with potentially contaminated soils.

- Excess contaminated soils generated while digging could be transported to a new location thereby creating new environmental risks at the disposal point.
- Unless the water feature is properly lined, aquatic organisms could be exposed to potential contaminants leaching from soil or contained in suspended sediment.
- Workers installing and maintaining piping systems may come in direct contact with potentially contaminated soils.
- Leakage through the water feature base could increase the transport of contaminants from soil into underlying groundwater, which ultimately flows into nearby surface water bodies.
- Occupants, workers, or visitors in an adequately vented below grade structures could be exposed to contaminants able to volatilize and enter through cracks in concrete walls and floors and mix with indoor air (vapor intrusion).

#### 7.9.2.3 Mitigation

The above environmental risks can be readily managed through the development of detailed soils management plans that would mitigate the risks associated with potentially contaminated soils. These soils management plans may include the following general and area-specific measures:

**General Measures**

- Due to the age of the government database reports reviewed, a new database report would be prepared to discover whether additional environmental conditions on the site or in the surrounding area exist.
- NYSDEC, City of Buffalo, and other available original documentation would be reviewed to more specifically identify the known and potential contaminants in the area.
- Soil and groundwater samples from other potential sources of contamination and several regional groundwater samples would be collected and analyzed.
- Using water levels measured in temporary monitoring wells, the direction of groundwater flow in the area would be identified.
- Using the analytic data from soil and groundwater samples, a report describing the more regional environmental impact and hydrogeology of the Canal Side Project area would be prepared.
- As detailed plans for the Project are prepared, assess potential environmental impacts related to the Project if thresholds established in existing reports are exceeded.
- Health and safety protocols would be developed for all likely construction and maintenance activities within the boundaries of the Project Area.

**Area-Specific Measures**

In addition to the general activities discussed above, each of the various segments of the Project has unique potential environmental issues. The best way to address these environmental issues depends on how the property will ultimately be used. The testing and remediation should

become an integral part of the final planning and design process, taking into account the way contaminants might migrate, and how exposure to contaminants might occur. General recommendations for further testing and possible remediation for each area have been made based on Project Area information publicly available to date.

**Erie Canal Harbor Area**
The Erie Canal Harbor Area is being redeveloped to house a complex including a waterfront hotel, Skyway Plaza, a parking garage and a historic district with offices, retail businesses and restaurants. Reconstruction of the Commercial Slip on the western edge of the area has been completed, and reconstruction of the Prime Slip is planned.

Based on knowledge about the environmental conditions in the area, the following recommendations are made:

- Where development in the area involves removal of structures, excavation of soil, construction of subsurface structures or underground utilities construction, and landscaping, soil and potentially groundwater would be sampled and tested for the presence of contaminants, in particular SVOCs and heavy metals.
- Contaminated soil identified in the area would be properly managed or remediated to reduce the potential health effects that could result from exposure and possible deleterious impact to the environment.
- If contaminants will remain in soil or groundwater after site redevelopment, site-specific plans to manage the potential health and environmental risks associated with the contaminants would be prepared.

**Donovan Block**
The Donovan Block is planned to have a new mixed–use complex, potentially containing office, retail, residential and parking facilities. The existing Donovan State Office Building could be demolished, and portions of the Erie Canal would be excavated to create a new water feature. Based on knowledge about the environmental conditions in the area, the following recommendations are made:

- A Soil management Plan (SMP) would be developed for the site. This SMP should identify the nature and extent of the contamination, potential risks associated with the soil/fill materials, and procedures for handling, transporting and disposing of soil/fill during any redevelopment activities such that workers and/or future site users are adequately protected.

**Webster Block**
The Webster Block would be redeveloped for mixed retail stores and restaurants, a new hotel, and a four-level parking garage. Based on knowledge about the environmental conditions in the area, the following recommendations are made:

- The underground storage tanks which may remain on the site would be properly removed and disposed. Highly contaminated soil in this area should also be excavated and disposed off-site.
- Groundwater below the site would be tested for the presence of hydrocarbon contaminants, and the plume of contamination, if present, should be delineated.
- If contaminants concentrations in soil or groundwater related to underground storage tank leakage are above regulatory cleanup concentrations, a risk-based study taking into consideration the planned uses of the site would be conducted to evaluate the need for additional remediation.
- Where development in the area involves removal of structures, excavation of soil, construction of subsurface structures or underground utilities construction, or landscaping, soil and potentially groundwater would be sampled and tested for the presence of contaminants, in particular SVOCs and heavy metals.
- Contaminated soil identified in the area would be properly managed or remediated to reduce the potential health effects that could result from exposure, and possible deleterious impact to the environment.
- If contaminants will remain in soil or groundwater after site redevelopment, site-specific plans to manage the potential health and environmental risks associated with the contaminants would be prepared.

**Aud Block**

Plans for the Aud Block include the construction of a Bass Pro store, restaurants, retail shops, a three-level parking garage, and water features overlying the former Erie Canal. Based on knowledge about the environmental conditions in the area, the following recommendations are made:

- The area of the former loading dock that formerly contained the underground storage tanks would be tested for the presence of hydrocarbon contamination and PCBs.
- Soils at the location of the vault that formerly contained transformers would be tested for the presence of PCBs.
- Backfill soil and groundwater samples from area of the Site formerly occupied by the Hamburg Drain and Erie Canal should be collected and analyzed for likely contaminants.
- If contamination associated with the former uses of the property are found, the need for site remediation prior to redevelopment would be evaluated.
- Contaminated soil identified in the area would be properly managed or remediated to reduce the potential health effects that could result from exposure and possible deleterious impact to the environment.

- If contaminants will remain in soil or groundwater after site redevelopment, site-specific plans to manage the potential health and environmental risks associated with the contaminants would be prepared.

## 7.10 Public Safety

### 7.10.1 No-Build Alternative

The No-Build Alternative would not result in any changes to the Project Area, thus current safety conditions and issues would remain with regard to the elevated highways, transit facilities and surface parking lots, as discussed in Chapter 6.10.

### 7.10.2 Build Alternatives

The Build Alternatives would not result in any significant public safety impacts due to its location on the waterfront. Aside from the floating dock system, the Build Alternatives would not include any water-dependent uses or encroachment into the waterway. The floating docks, which would be controlled by Bass Pro, would be secured and segregated from the public transient boat slips to the north. Also, the Project would not encourage swimming within the Buffalo River or the consumption of fish from the Buffalo River or Lake Erie.

The Build Alternatives would not result in any adverse public health or safety impacts due to traffic generation. As discussed in Chapter 7.11, fire and emergency services would not be impacted by the Build Alternatives. Also, the air quality analysis in Chapter 7.14 determined that predicted carbon monoxide concentrations due to Project-generated traffic would not exceed applicable air quality standards. Therefore no public health impacts would result from Project-generated traffic.

In addition, the Build Alternatives would improve existing safety and security conditions for those parcels located under the elevated highway structures within the Project Area through the addition of increased lighting, pavement, and non-permanent small structures. Also, the Build Alternatives would generate substantial activity and foot traffic in these areas on a regular basis. However, the Build Alternatives would have the potential to result in modest adverse impacts to public safety. Specifically, the Build Alternatives propose public space (i.e., a Skyway Plaza) and associated structures to be built under the elevated highway structures (i.e., the Skyway and the Thruway). Concerns regarding public safety include fallen debris and snow removal associated with these structures potentially impacting pedestrians in the Project Area below. The likelihood of these events occurring, and necessary steps to ensure the safety of the public, such as screening above the plaza area, would be assessed and evaluated with the owners of the elevated highway structures, the NYSTA (Thruway ) and the NYSDOT (Skyway), to determine appropriate measures for safety compliance, permit and property acquisition requirements. Safety issues during construction activities are discussed in Chapter 7.17. Although the likelihood of adverse impacts on public safety is minimal and no mitigating efforts are required, the ESHDC would continue discussions with NYSDOT and NYSTA to develop mitigation measures if necessary, such as addition of safety-related infrastructure or changes in standard

operating procedures for maintenance activities on certain parts of the elevated highways above the Project Area.

## 7.11 Community Services

### 7.11.1 No-Build Alternative

The No-Build Alternative would have no impact on existing community services.

### 7.11.2 Build Alternatives

Community services directly impacted by the Build Alternatives are presented below. Given the scope of the Project, those facilities and services not directly affected (e.g., public school system, religious institutions, etc.) are not included in this analysis.

#### Police Protection

No significant new demand for law enforcement patrols or traffic/safety services would be generated by the Build Alternatives. In addition, any Project-related events would be regulated through the City's existing event permitting processes, which address typical event-related issues such as crowd and traffic control. Accordingly, law enforcement patrols or traffic/safety services for Project Area traffic during events at facilities outside of the Project Area such as the HSBC Arena would also be regulated through the City's existing event permitting processes. These outside events would not generate significant additional demand for police protection within the Project Area, as most traffic for those events would flow outside of the Project Area in existing traffic patterns. Therefore, the Build Alternatives would not have an adverse impact on police protection services. However, ECHDC would continue to consult with the City of Buffalo Police Department, as necessary, through the duration of Project design and construction to address any concerns that may arise.

#### Fire Protection

All new buildings associated with the Build Alternatives would be designed with appropriate fire suppression equipment and fire-rated construction materials, in accordance with the *Building Code of New York State* requirements. In addition, existing fire stations are near the Project Area, and the area is adequately covered by existing fire staff and resources (Captain Morganti, May 12, 2009). Thus, the Build Alternatives would not adversely impact fire protection services. ECHDC would continue to consult with the Buffalo Fire Department, as necessary, through the duration of Project design and construction to address any concern that may arise.

#### Emergency Medical Services

Emergency medical services in the vicinity of the Project Area would be adequate to support proposed uses and activities of the Build Alternatives. Consultation with Rural/Metro Medical Services concluded, "…plans for the proposed Canal Side project…would not have a negative impact on the services provided by Rural/Metro Medical Services as the primary EMS responders in the City of Buffalo" (Smith, June 1, 2009). As a result, the Build Alternatives would not have a significant impact on the emergency medical services currently provided by Rural/Metro Medical Services within the City of Buffalo. ECHDC would continue to consult

with Rural/Metro Medical Services, as necessary, through the duration of Project design and construction to address any concern that may arise.

### Solid Waste Management

The primary volumes of waste generated would occur during the construction phase of the Build Alternatives, and would involve construction debris and excavated soils. Both of these waste streams would be handled as part of the construction contract for the Project. During Project operations, solid waste would most likely be handled by private contractors, which is the method typically used for waste management by commercial development in the City. Therefore, City responsibility for Project-related solid waste would be limited primarily to the Project's residential components and public areas. These waste streams could be sufficiently handled with existing City resources. In addition, ECHDC developed a Sustainability Report for the Project which suggests strategies for reducing waste streams for both Project construction and operation (see **Appendix F**). Therefore, the Build Alternatives would create significant adverse impacts on solid waste management.

## 7.12 Open Space and Recreation

### 7.12.1 No-Build Alternative

The No-Build Alternative would not adversely impact open space and/or recreational opportunities in or adjacent to the Project Area, such as the Central Wharf Green, Transit Plaza and the Naval Park and/or the Erie Basin Marina, although the portions of the Project Area that are visible to these recreational areas will continue to detract from the recreational experience.

### 7.12.2 Build Alternatives

The Build Alternatives would expand, link and enhance open space and recreational opportunities in and adjacent to the Project Area (see **Figure 7.12-1**). Such expanded and enhanced open space and recreational opportunities would include the following.

- The Canal Side Common, located on top of Canal Side Hall, would be used to provide unique outdoor recreational opportunities such as educational classes and outdoor skills workshops. These opportunities could potentially include outdoor cooking seminars, women in the outdoors, archery classes, kids' seminars of all types, and turkey calling classes. The Canal Side Common would be connected to Canal Side walkways linking this open space venue with the Central Wharf Green and Commercial Slip.
- Water features (e.g., canals) providing year-round water uses such as ice skating, paddle boating, fishing classes, and demonstrations, would be lined with expansive towpaths, benches and lighting proving a unique setting for outdoor cafés and retail shops.
- An extended Central Wharf Green would stretch to South Park Avenue connecting the Project Area to the Buffalo River trail system. Lands committed to the Central Wharf Green would be slightly reduced under the Preferred and High-Density Alternatives due to the construction of a hotel along the Wharf, however continuous access along the river edge would be provided.

- The Prime Slip canal, as an interpretive water feature, would link the Central Wharf Green with the Winter Garden expanding pedestrian opportunities for exploring the Project Area. This water feature would complement existing interpretive elements at the Erie Canal Harbor.
- The Skyway Plaza in the space underneath the Skyway dedicated to seasonal events, artistic expression and seasonal retail kiosks.
- Sidewalks and bicycle lanes will connect into existing systems linking the Project Area to other city- and region-wide resources.
- Additional seasonal floating dock space would be provided adjacent to the Central Wharf Green for Bass Pro boat sales and demonstrations.

In addition to the expansion and enhancement of public open space and recreational opportunities, the Build Alternatives would draw additional new and repeat visitors to the area to make use of these recreational facilities and other area offerings.

## 7.13 Utilities

### 7.13.1 No-Build Alternative

The No-Build Alternative would not have any impact upon utilities in the vicinity of the Project Area.

### 7.13.2 Build Alternatives

#### 7.13.2.1 Water Supply

The Build Alternatives would result in increased demands on the City's water supply system, but would not adversely impact the water supply system's overall capacity of 160 million gallons per day (MGD). The City currently utilizes roughly 75 MGD. Therefore, the water supply system has approximately 85 MGD excess capacity available. The water consumption demands for the Build Alternatives are as follows: the Preferred Alternative is 137,000 gallons per day; the Low-Density Alternative is 75,000 gallons per day; and the High-Density Alternative is 193,000 gallons per day (Hapke, 2009). In addition, new 12" waterlines are being constructed along Marine Drive and Commercial Slip that will provide ample flow for the Project (see **Appendix H** for calculations). In addition, ECHDC would coordinate with the City Department of Public Works as the Project nears implementation to ensure sufficient water delivery to the Project Area.

#### 7.13.2.2 Sewer Facilities

The Build Alternatives would result in increased demands on the City's sanitary sewer system, but would not adversely impact the BSA's overall system capacity. The BSA's sewer system has a capacity of 180 MGD, but currently utilizes roughly 160 MGD. Therefore, the BSA's sewer system has approximately 20 MGD excess capacity available.

The BSA's south intercept sewer traverses the Project Area. The 36" sewer has average daily flow capacity of 12 million gallons. The current average daily flow ranges between 1 and 2 million gallons. A 12" sanitary sewer carries waste flows across the Donovan and Aud Blocks to the south intercept sewer.

Project sanitary sewer demand estimates assume that sanitary flows would be generally equal to daily water usage estimates (McGhee, 2009) as noted in Chapter 7.13.2.1. Therefore, sufficient capacity exists in the BSA system to accept Project sanitary sewer flows.

In terms of storm water, the Project Area is already developed, and is largely comprised of impervious surfaces. Storm water management would not greatly differ between all Build Alternatives. Building lot coverage would be similar under each Build Alternative. Also, Project open space designs are consistent for all Build Alternatives in providing water features (i.e., canals) and plantings that would capture rainfall and snowmelt. However, the Low-Density Alternative would not include the construction of a boutique hotel along the Central Wharf Green. As a result, this Alternative would provide slightly less impervious surface within the Project Area and storm water infiltration would be slightly improved along the Central Wharf Green.

Several separate storm sewers exist within the Project Area, including those being constructed as part of the Erie Canal Harbor Project Phase II Infrastructure improvements. In addition, ECHDC has prepared a Sustainability Program that would include concepts for the reducing storm water volumes through concepts such as reducing the amount of impervious surfaces and possibly collecting and reusing storm water (see Chapter 7.6.3.2).

Thus, the Build Alternatives would not significantly impact storm water discharges to the sewer system. A more detailed analysis of this issue is presented in Section 7.6.3. Nevertheless, ECHDC would coordinate with the BSA during the Project design phase to determine if conveyance system (e.g., size and capacity of sanitary lines) are sufficient to accommodate Project Area demand, and to determine what, if any, improvements would be required to the conveyance system to satisfy peak Project discharge rates.

#### 7.13.2.3 Electricity

The Project would result in increased demands on the electrical system, but would not adversely impact National Grid's (the local electrical service provider) ability to deliver this service to the Project Area or to other areas of the City. As Project design progresses, ECHDC would coordinate with National Grid to ensure that specific needs for peak Project Area electricity demands are met.

#### 7.13.2.4 Natural Gas

The Project would result in increased demands on natural gas service, but would not adversely impact National Fuel's (the local natural gas service provider) ability to deliver this service to the Project Area or to other areas of the City, as adequate capacity and access to natural gas service

mains are available in the Project Area. As Project design progresses, ECHDC would coordinate with National Fuel to ensure that specific needs for peak project natural gas demands are met.

#### 7.13.2.5 Fiber Optics

The Project may result in increased demands on fiber optic infrastructure, but would not adversely impact the various fiber optic providers' ability to deliver this service to the Project Area or to other areas of the City, as adequate capacity and access to fiber optic mains/hubs are available near the Project Area. ECHDC would coordinate with the various fiber optic providers' as the Project nears implementation to ensure appropriate connections to the fiber optic system.

#### 7.13.2.6 Sustainability Guidelines

In conjunction with Project design, ECHDC has retained a sustainability consultant to evaluate and recommend sustainable strategies. A copy of the consultant's sustainability report is attached as **Appendix F**. Implementation of some of the sustainability strategies would reduce demand on water, sewer, electrical and natural gas utilities.

## 7.14 Air Quality

### 7.14.1 No-Build Alternative

The No-Build Alternative would not result in any impacts to air quality in the Project Area.

### 7.14.2 Build Alternatives

The Build Alternatives would not result in significant adverse impacts to the Project Area or its surrounds. Fundamentally, the Project is a real estate development project to establish a mix of residential, retail, office and cultural uses within the Project Area. None of these uses or any activities that would take place at the Project would result in the emission of any significant quantities of air pollutants that could harm human health or the environment.

However, as discussed in Chapter 7.8, the Project would generate greater levels of traffic in the Project Area. Increases in traffic would result in an increase of air pollutants from vehicles. To examine the potential impacts to air quality due to Project-generated traffic under the Build Alternatives, a microscale modeling analysis was conducted to estimate the levels of the most significant air pollutant thus results from vehicle emissions, carbon monoxide (CO), near analysis sites in the Project Area that would be anticipated from increased traffic associated with the Project. Evaluations were conducted for Existing (2009) conditions and predicted future conditions with and without the Project in years 2011 and 2031. The following section describes the methodology used in this analysis.

#### 7.14.2.1 Site Selection Criteria

Guidelines established by NYSDOT's *Environmental Procedures Manual* ("EPM") specify criteria that were used to determine whether detailed air quality analyses are required for a proposed project. NYSDOT's EPM specifies a process to select sites that includes first

screening the potentially affected sites, and then ranking them to determine those requiring detailed analysis. These guidelines include an LOS screening identifying project affected intersections with an LOS of D or greater, and then using the following capture criteria to rank and select sites for detailed analysis:

1) Ten percent or more reduction in source-receptor distances;
2) Ten percent or more increase in traffic volumes on the affected roadways;
3) Ten percent or more increase in vehicle emissions;
4) Any increase in the number of queued lanes; and
5) Twenty percent reduction in speeds, when the Build estimated average speed is 30 MPH or less.

The NYSDOT EPM also states that if a State Implementation Plan (SIP) intersection, which is an intersection, identified and analyzed in New York State's 1995 CO SIP attainment demonstration, is located within ½ mile of the project, the thresholds for all project-induced increases at these intersections are reduced by half from the criteria cited above (NYSDOT, 2001).

**Result of Applying Applicable Criteria**

In order to determine if a detailed CO microscale analysis was warranted and to select these analysis sites, traffic volumes, levels of service and vehicular speeds at the major signalized intersections were evaluated with and without the Project. They include locations adjacent to the major roadways that may be affected by the Build Alternatives creating the potential for exceeding air quality standards at nearby sensitive land uses. Since traffic estimates for this Project indicate that changes in traffic volumes and levels of service would be above the thresholds specified in the EPM Manual at several intersections in the Project Area, a detailed mobile sources analysis was conducted. Two intersection locations were identified where the capture criteria would be exceeded showing increases in both volumes and number of queued lanes under Build conditions. The two intersection sites that were selected for analysis are shown in **Table 7.14-1** and **Figure 7.14-1**.

Table 7.14-1
CO Microscale Analysis Sites

| Site Number | Site Location |
|---|---|
| 1 | Intersection of Pearl and Church Streets |
| 2 | Intersection of Washington and Scott Streets |

Source: PB, 2009.

### 7.14.2.2 Receptors

The locations at which pollutant concentrations are estimated are known as "receptors." Following guidelines established in USEPA's *Intersection Modeling Guidelines*, receptors were located where the maximum concentration would likely occur and where the general public

would likely have access. For this analysis, receptor locations were distributed along sidewalks to which the general public has access on a more-or-less continuous basis. Multiple receptor locations were considered near each analysis site.

The exact placement of these receptors was determined on a site-by-site basis based on traffic conditions (e.g., high volumes and low speeds), roadway geometry (including the potential cumulative impacts from emissions generated on several roadway links), the location of queued traffic (based on existing and projected volume-to-capacity (V/C) ratios), and the location of existing and future sensitive land uses.

#### 7.14.2.3 Analysis Year

Analyses were conducted for 2009 Existing conditions and two future analysis years, the Project's estimated time of completion (2011) and the Project's design year (2031).

#### 7.14.2.4 Traffic Data

Traffic data for the air quality analysis were derived from traffic counts and other information developed as part of the traffic study analysis (see Chapter 7.8). The weekday AM and PM peak and the Saturday PM peak traffic periods with an event were considered for this analysis. These are the periods when the maximum changes in pollutant concentrations would be expected based on overall traffic volumes and anticipated changes in traffic patterns resulting from the Build Alternatives (Preferred, Low -Density and High -Density Options). The CO microscale analysis was conducted for the weekday PM peak traffic period under the High-Density Alternative in both future analysis years 2011 and 2031, since this represents a worse-case condition with the highest overall background and Project-generated volumes.

#### 7.14.2.5 Vehicle Emissions

Carbon monoxide emission factors were obtained from the NYSDOT website using *the Mobile 6 General Fleet Emission Factor and Calculation Program*. This program is based on MOBILE 6.2.03 (EPA420-R-03-010) emission factor algorithm model using specific data for Erie County.

#### 7.14.2.6 Dispersion Analysis

Mobile source dispersion models are the basic analytical tools used to estimate pollutant concentrations from the emissions generated by motor vehicles as expected under given conditions of traffic, roadway geometry, and meteorology. CAL3QHC Version 2 is a line-source dispersion model that predicts pollutant concentrations near congested intersection and heavily traveled roadways. CAL3QHC input variables include free flow and calculated idle emission factors, roadway geometries, traffic volumes, site characteristics, background pollutant concentrations, signal timing, and meteorological conditions. CAL3QHC predicts inert pollutant concentrations, averaged over a one-hour period near roadways. This model was used to predict concentrations at affected Project Area intersections.

CAL3QHC predicts peak one-hour pollutant concentrations using assumed meteorology and peak-period traffic conditions. Different emission rates occur when vehicles are stopped (idling), accelerating, decelerating, and moving at different average speeds. CAL3QHC simplifies these different emission rates into the following two components:

- Emissions when vehicles are stopped (idling) during the red phase of a signalized intersection; and
- Emissions when vehicles are in motion during the green phase of a signalized intersection.

The analyses followed USEPA's *Intersection Modeling Guidelines* (EPA-454/R-92-005) for CO modeling methodology and receptor placement. All major roadway segments (links) within approximately 1,000 feet of each analysis site (i.e., congested intersection) were considered. A mixing height of 1,000 meters and a surface roughness factor of 180 centimeters were included in all calculations.

A conservative analysis, which assumes that peak period vehicular emissions, traffic volumes, and intersection operating parameters occur every hour of each analysis year, was utilized. The use of peak hour baseline and Project-generated conditions would result in conservative predictions of pollutant levels and Project impacts.

#### 7.14.2.7 Background Values

In estimating total pollution concentrations with and without the Proposed Project, it is necessary to include consideration of the background pollutant levels for the Project Area. The background level is the component of the total concentration not accounted for through the microscale modeling analysis. Applicable background concentrations were added to the modeling results to obtain total pollutant concentrations at each receptor site for each analysis year. The CO background values, which are based on the most recent ambient monitoring data, were provided from Table 8 in the *NYSDOT EPM Air Quality Manual* (NYSDOT, 2001). Background concentrations in future analysis Years 2011 and 2031 were determined by considering the decreases in vehicular emissions due to federally-mandated emission control programs and vehicle turnover and the increases in background volumes. These values were calculated using the rollback method provided in Chapter 1.1, section 10.C.viii of the EPM. The background values used in the following analyses are provided in **Table 7.14-2**.

Table 7.14-2
Pollutant Background Concentrations (PPM)

| Pollutant | Averaging Time | 2009 | 2011 | 2031 |
|---|---|---|---|---|
| CO | 1-hour | 1.8 | 1.7 | 1.6 |
| | 8-hour | 1.2 | 1.2 | 1.1 |

Source*: NYSDOT Environmental Procedures Manual, January 2001*

### 7.14.2.8 Predicted Existing Air Pollutant Concentrations

Results of mobile source air quality modeling for Existing (2009) conditions are shown in **Table 7.14-3**. Values are the maximum pollutant concentrations predicted near each selected site under the timeframes that correspond to the NAAQS. Predicted existing carbon monoxide levels do not exceed the 1-hour or 8-hour CO standards. The highest estimated concentration occurs near the intersection of Church Street and Pearl Street (Analysis Site 1).

Table 7.14-3
Existing Conditions (2009)
Maximum 1-hour & 8-Hour CO Levels

| Site | Intersection | 1-hr CO Level (ppm) | 8-hr CO Level (ppm) |
|---|---|---|---|
| 1 | Intersection of Pearl St and Church St | 3.7 | 2.5 |
| 2 | Intersection of Washington St and Scott St | 2.9 | 2.0 |

Source*: PB, 2009.*
Notes**:**
1. All values include appropriate background concentration.
2. 1-hour CO background concentration = 1.8 ppm
3. 8-hour CO background concentration = 1.2 ppm

### 7.14.2.9 Predicted Future No Build and Build Results

Maximum predicted future CO concentrations from traffic generation at selected analysis sites for the future No-Build and Build Alternatives in 2011 and 2031 are shown in **Table 7.14-4**. Predicted CO levels, which are based on future No-Build and future Build traffic conditions, would not exceed the applicable 1-hour or 8-hour CO standards. Therefore, no significant CO impacts would occur, and mitigation measures would not be required.

Table 7.14-4
Future No-Build and Build Conditions (2011 & 2031)
Maximum 1-hr & 8-Hr CO Levels (ppm)

| Site | Intersection | No-Build | | | | Build | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 2011 | | 2031 | | 2011 | | 2031 | |
| | | 1-hr | 8-hr | 1-hr | 8-hr | 1-hr | 8-hr | 1-hr | 8-hr |
| 1 | Intersection of Pearl St and Church St | 3.5 | 2.4 | 3.0 | 2.0 | 3.9 | 2.7 | 3.5 | 2.4 |
| 2 | Intersection of Washington St and Scott St | 3.0 | 2.1 | 3.0 | 1.8 | 3.9 | 2.7 | 3.9 | 2.6 |

Source*: PB, 2009*
Notes:
1. All values include appropriate background concentration.
2. 2011 1-hour CO background concentration = 1.7 ppm
3. 2011 8-hour CO background concentration = 1.2 ppm
4. 2031 1-hour CO background concentration = 1.6 ppm
5. 2031 8-hour CO background concentration = 1.1 ppm

## 7.15 Noise

### 7.15.1 No-Build Alternative

The No-Build Alternative would not result in any impacts to noise levels in the Project Area.

### 7.15.2 Build Alternatives

The Build Alternatives would potentially result in impacts to noise levels within the Project Area because of the introduction of new development and activity to the Project Area. Generally, the Build Alternatives would not result in activities taking place at the Project Area that would generate noise out of character with the existing urban environment, which experiences background noise due to traffic on the Skyway and Thruway. However, adverse noise impacts could result from an influx of Project-related traffic to the Project Area as well as construction activities. Such adverse impacts due to traffic would be relatively minor and easily mitigated. The following is a description of anticipated higher noise levels due to traffic generation and construction activities, and mitigation measures to reduce their effect on the Project Area.

#### 7.15.2.1 Future Noise Levels without the Proposed Project

Utilizing the FHWA Traffic Noise Model (TNM version 2.5) future 2031 No-Build noise levels were estimated in the Project Area at the 8 representative noise measurement locations. The future No-Build noise level findings are presented in Table 7.15-1. Predicted future 2031 No-Build noise levels show little or no change from 2009 peak hour noise levels with noise level increases in the 1 to 3 decibel range. The largest noise level rise of 3 dBA projected to occur during the peak weekday PM time period would be at the museum of the Naval Park (Site R2) and the structured parking garage near the Commercial Slip Site (Site R3). Noise level increases of 3 decibels or less are below the level of perceptibility and result in “no appreciable effect” according to the NYSDEC criteria. Future No-Build noise levels at or above the NYSDOT 66

dBA impact threshold is predicted to occur at Sites R3, R4, R5 and R6. Currently, these properties consist mainly of surface parking lots and undeveloped land, and, therefore, are not considered noise sensitive under No-Build conditions. The selection of these locations for noise impact assessment is intended for their proposed use under future build design conditions.

Table 7.15-1
Summary of Peak Hour Future 2031
No Build Noise Level Estimates (Leq (1hr) dBA)

| Receptor | Existing Land Use | Time Period | 2009 Existing $L_{eq(1)\ dBA}$ | 2031 No Build $L_{eq(1)\ dBA}$ | $L_{eq(1)}$ Change dBA |
|---|---|---|---|---|---|
| R1 | Residential | Weekday PM | 65 | 65 | 0 |
| | | Saturday | 61 | 63 | 2 |
| R2 | Recreational | Weekday PM | 57 | 60 | 3 |
| | | Saturday | 53 | 55 | 2 |
| R3 | Surface Parking Lot | Weekday PM | 66 | 69 | 3 |
| | | Saturday | 65 | 66 | 1 |
| R4 | Vacant Structure Undergoing Demolition | Weekday PM | 64 | 66 | 2 |
| | | Saturday | 63 | 63 | 0 |
| R5 | Surface Parking Lot | Weekday PM | 65 | 66 | 1 |
| | | Saturday | 62 | 63 | 1 |
| R6 | Open Space | Weekday PM | 64 | 66 | 2 |
| | | Saturday | 60 | 61 | 1 |
| R7 | Surface Parking Lot | Weekday PM | 63 | 64 | 1 |
| | | Saturday | 62 | 63 | 2 |
| R8 | Open Space | Weekday PM | 63 | 64 | 1 |
| | | Saturday | 58 | 60 | 2 |

### 7.15.2.2 Future Noise Levels with the Proposed Project (High-Density Build Out)

Many of the noise measurement sites selected for noise impact assessment were selected because of their proposed use under the Canal Side design. In most cases these areas today consist primarily of non-noise sensitive uses comprising of vacant undeveloped land, parking lots and areas under demolition, as described in Chapter 6. Utilizing the FHWA Traffic Noise Model (TNM version 2.5) future 2031 Build noise levels for the proposed High-Density Alternative was determined in the Project Area at the 8 representative noise measurement locations depicted in **Figure 6.15-1**. The predicted future build noise level estimates are summarized in **Table 7.15-2**.

In general, predicted PM Weekday noise levels would be higher than the corresponding Mid-day Saturday levels. Noise levels above NYSDOT 66 dBA for Category "B" and 71 dBA for Category "C" land use activities would not occur at any of the eight representative locations. Noise levels above 66 dBA would occur at ground level of proposed commercial uses proposed for these buildings. Proposed residential portions of these new buildings would be limited to the

upper stories. As a result, none of these proposed or existing facilities consist of sensitive receptor sites where frequent human use would occur in the exterior spaces of these properties. Noise sensitivity, therefore, would be limited to the interior space of these properties. Interior noise levels were estimated assuming a standard 20 decibel noise reduction that often can be achieved under closed window conditions. Noise levels in the interior space of all 8 receptor sites shown in parenthesis in **Table 7.15-2** and in all cases would be below the NYSDOT 51 dBA impact approach threshold for Category "E" land use activities (refer back to **Table 6.15.4**).

Predicted future 2031 noise levels under the Build Alternatives are projected to increase by 1 to 5 dBA over equivalent peak hour existing levels. Noise level increases of 5 dBA are considered readily noticeable resulting in sporadic complaints. However, all predicted noise level increases over comparable existing peak hour levels would be below the NYSDOT and NYSDEC 6 dBA impact threshold requiring closer inspection and analysis, as previously indicated in **Table 6.15-3**. Noise level rises of 5 dBA are projected to occur at the museum of the Naval Park (Site R2), at Site R4 a proposed commercial zone, and Site R8 a proposed hotel near the waterfront. According to the NYSDEC impact criteria, noise level increases of 5 dBA are considered to have the "potential for adverse noise impact only in the cases where the most sensitive receptors are present". However, since there are no exterior receptor sites where such noise sensitivity exists, no further refinement in the noise analysis need to be considered.

Table 7.15-2
Summary of Peak Hour Future 2031
Build Noise Level Estimates (Leq (1hr) dBA)

| Receptor | Proposed Development Land Use | Time Period | 2009 Existing $L_{eq(1)\ dBA}$ | 2031 Build* $L_{eq(1)\ dBA}$ | $L_{eq(1)}$ Change dBA |
|---|---|---|---|---|---|
| R1 | Residential | Weekday PM | 65 | 60 (40) | -5 |
| | | Saturday | 61 | 59 (39) | -2 |
| R2 | Recreational | Weekday PM | 57 | 62 (42) | 5 |
| | | Saturday | 53 | 58 (38) | 5 |
| R3 | Mixed Use (Residential & Commercial) | Weekday PM | 66 | 68 (48) | 2 |
| | | Saturday | 65 | 67 (47) | 2 |
| R4 | Commercial (Retail, Restaurant) | Weekday PM | 64 | 69 (49) | 5 |
| | | Saturday | 63 | 65 (45) | 2 |
| R5 | Mixed Use (Residential, Office, Retail, Restaurant) | Weekday PM | 65 | 69 (49) | 4 |
| | | Saturday | 62 | 66 (46) | 4 |
| R6 | Mixed Use (Retail, Restaurant, Office) | Weekday PM | 64 | 65 (45) | 1 |
| | | Saturday | 60 | 62 (42) | 2 |
| R7 | Mixed Use (Residential, Hotel, Retail, Restaurant, Parking Garage) | Weekday PM | 63 | 66 (46) | 3 |
| | | Saturday | 62 | 65 (45) | 3 |
| R8 | Open Space & Hotel | Weekday PM | 63 | 67 (47) | 4 |
| | | Saturday | 58 | 63 (43) | 5 |

* Estimated interior noise levels are shown in parenthesis

### 7.15.2.3 Noise Mitigation and Window Wall Attenuation

The noise impact analysis findings showed that the maximum exterior noise level increase under the Build Alternatives would remain below the NYSDEC and NYSDOT 6 dBA increase threshold, thereby would result in no significant adverse noise impact within the development site. Furthermore, predicted peak hour noise levels at the 8 ground level receptor sites ranged from a fairly typical 53 to 69 dBA with the higher noise levels occurring adjacent to proposed commercial properties. However, due to the presence of the Skyway Bridge which bisects the Project Area, noise levels at the exterior facades of the upper stories of the proposed buildings facing the Skyway would be exposed to traffic noise that would be significantly higher than predicted ground level receptor sites. Consequently, sensitivity to noise would be largely confined to the upper story interior spaces of these proposed buildings where frequent human use and exposure to Skyway traffic noise would likely occur. As a result, special care must be given to ensure that interior noise levels at the upper stories of residential floors of proposed buildings facing the Skyway would not exceed acceptable interior limits.

Acceptable interior noise levels for residential and other noise sensitive buildings vary from state to state. Indeed, some cities have varying defined limits on acceptable interior noise levels for various types of land uses (i.e. commercial versus residential buildings). The City of Buffalo has a local noise ordinance (Chapter 293), which focuses on addressing noise causing public annoyance; however it does not contain any specific provisions establishing acceptable noise level limits in the interior space of buildings. Therefore, in lieu of local requirements, this analysis relies on the acceptable interior noise level limits set forth in the NYSDOT noise abatement criteria (NAC) for Category "E" land use activities (refer back to **Table 6.15-4**). The Category "E" land use activity includes residences, hotels, motels, schools, churches, hospitals, libraries, public meeting rooms, and auditoriums sets a maximum acceptable interior Leq (1-hour) noise level threshold of 51 dBA. Moreover, even though hotels and motels are commercial establishments, acceptable interior noise levels for these types of land uses are based on the fact that these are places where people sleep and nighttime sensitivity to noise in buildings where people sleep is of utmost importance. For non-sleeping commercial properties, such as office buildings and retail shops the limit is set 5 decibels higher or 56 dBA.

A TNM based noise analysis (independent of the noise predictions at the 8 ground based noise measurement sites) was completed to determine exterior noise levels at upper-story building facades. The analysis consisted of determining noise levels in the vertical profile along each of the proposed building facades of all proposed building under the High-Density Build Alternative. Exterior noise level estimates at each building façade was used to determine the appropriate window wall attenuation necessary to ensure that interior noise levels do not exceed the 51 dBA acceptable limit. At each building façade, noise receptor points were modeled at fixed heights of 5 feet, 24 feet (2nd Story) and 48 feet (4th Story) to establish a vertical profile of noise levels. The noise analysis findings indicate that exterior noise levels at 4th floor or higher building facades of all proposed buildings facing the Skyway would be exposed to noise ranging from 70 to 76 dBA depending on the distance between the building façade and the Skyway. Therefore, it is recommended that all windows of proposed building facades with a direct line-of-site to the

Skyway Bridge be manufacturer-rated to provide a minimum noise reduction of 25 dBA, thereby ensuring that interior noise levels at the nearest points to Skyway would not exceed 51 dBA with windows closed. Additionally, building facades not facing the Skyway must be manufacturer-rated to provide a minimum noise reduction of 20 dBA.

Generally, annoyance effects can be expected during construction at sites within 200 to 250 feet of the construction activity. Actual distances at which noise impacts occur would depend on a number of factors including the type and number of construction equipment and their usage factors. All construction activities would be conducted in full compliance with existing regulations, including any local day and hour construction limits. Local, state and federal requirements mandate that certain classification of construction equipment and motor vehicles be used to minimize adverse impacts. Thus, construction equipment would meet specific emission standards. Usually, noise levels associated with construction and equipment are identified for a referenced distance of 50 feet, as shown in **Table 7.15-3**. The total hourly energy average dBA noise level, $L_{eq}$ (1-hr), at a distance of 50 feet from the construction site boundary, usually is in the order of 80 to 85 dBA. Noise levels at receptors located at known distances from the construction site boundary can be conservatively estimated by assuming a 6 dBA drop-off per doubling of distance from each type of construction equipment and by combining the noise contributions from all of the construction equipment at the receptor site.

Increased noise from construction activities can be expected to be most audible typically during the first year when excavation and heavy daily truck traffic would occur. Therefore construction operations for some limited time periods would result in increased noise levels that may result in a perceptible increase ambient noise levels – especially at the nearest noise sensitive properties nearest the construction site boundary. However, because of its limited duration, these potential impacts would not constitute a significant impact.

Project specific construction noise abatement suggestions that could be utilized to minimize (to the greatest extent possible) the noise impact zone in areas outside the construction boundary include the following.

- Informing the public when work is going to be performed.
- Keeping telephone log of complaints.
- Limiting the number and duration of idling equipment on site.
- Providing mufflers or silencers to construction equipment operated by internal combustion engines and maintaining all construction equipment in good repair.
- Where possible, reducing noise from all stationary site equipment and facilities by utilizing suitable enclosures.
- When possible, minimizing the use of back-up alarms.
- When possible, scheduling truck loading, unloading operations in time intervals in order to minimize on site construction noise.

Overall, it is not anticipated that construction noise would have a significant adverse environmental impact.

Table 7.15-3
Typical Construction Equipment Noise Levels dBA

| Equipment | Typical Noise Level (dBA) 15 m (50 ft) from |
|---|---|
| Air Compressor | 81 |
| Backhoe | 80 |
| Ballast Equalizer | 82 |
| Ballast Tamper | 83 |
| Compactor | 82 |
| Concrete Mixer | 85 |
| Concrete Pump | 82 |
| Concrete Vibrator | 76 |
| Crane Derrick | 88 |
| Crane Mobile | 83 |
| Dozer | 85 |
| Generator | 81 |
| Grader | 85 |
| Impact Wrench | 85 |
| Jack Hammer | 88 |
| Loader | 85 |
| Paver | 89 |
| Pile Driver (Impact) | 101 |
| Pile Driver (Sonic) | 96 |
| Pneumatic Tool | 85 |
| Pump | 76 |
| Rail Saw | 90 |
| Rock Drill | 98 |
| Roller | 74 |
| Saw | 76 |
| Scarifier | 83 |
| Scraper | 89 |
| Shovel | 82 |
| Spike Driver | 77 |
| Tie Cutter | 84 |
| Tie Handler | 80 |
| Tie Inserter | 85 |
| Truck | 88 |

Source*: EPA Report, November 1974*

# 7.16 Physical and Ecological Resources

## 7.16.1 No-Build Alternative

The No-Build Alternative would have no new short or long-term impacts to physical and ecological resources.

## 7.16.2 Build Alternatives

### 7.16.2.1 Topography, Geology and Soils

None of the Build Alternatives would result in any significant long-term impacts to topography, geology, or soils of the Project Area. The temporary disturbance of soils that would occur due to construction of the Build Alternatives is discussed in Chapter 7.17.

### 7.16.2.2 Ecological-Terrestrial Resources

The Project Site is an existing urban environment in which terrestrial resources are limited to species tolerant of urban environments. The Build Alternatives would result in no significant impacts to vegetation or terrestrial wildlife habitat within the Project Area. The creation of new open space/landscaped areas and street trees would result in a net increase of vegetation within the Project Area and would provide potential habitat for various bird species acclimated to urban environments. A NYSDEC Natural Heritage Report on Rare Species and Ecological Communities (Salerno, 2009) reported the Peregrine Falcon (Falco pergrinnus) and the Four-flowered Loosestrife (Lysimachia quadriflora) as "Endangered" species in New York State within one mile of the Project Area. The Project Area is also located within one-mile of coastal habitat areas or habitats for certain species of concern.

Consultation with NYSDEC regarding the potential for adverse impacts to the Peregrine Falcon found that while Peregrin Falcons currently forage on the Lake Erie shoreline and have been reported in the Tifft Nature Preserve and Buffalo Harbor areas, they have not been reported in the immediate vicinity of the Project Area. Therefore, the Build alternatives would not have a negative impact on the Peregrin Falcon to forage or raise their young in the area (Connie Adams, May, 14, 2009).

Given existing Project Area site conditions (e.g., paved lots and structures), the likelihood of the presence of the Four-Flowered Loosestrife is remote. Therefore the Build Alternatives would not adversely impact this resource.

Therefore, the Build Alternatives would not result in any adverse impacts to any federal- or state-listed species of concern.

### 7.16.2.3 Aquatic Resources

Direct impacts to the Buffalo River will be very limited (see Chapter 7.5.1), and none of the Build Alternatives would have a significant adverse impact on aquatic resources. While the NYSDEC Natural Heritage Report on Rare Species and Ecological Communities (Salerno, 2009)

has indicated the Lake Sturgeon (Acipenser fulvenscens), listed as a "Threatened" species in New York, to inhabit Lake Erie and Niagara River waters within one mile of the Project Area, the Build Alternatives would not have an impact on this and other fish species. This is due in part to significant habitat for fisheries not existing in the lower Buffalo River within the Project Area due to relatively poor water quality, dredging activities, and the absence of shallow, vegetated areas necessary to support spawning and rearing. Previous studies, including The Buffalo Inner Harbor Development Project Final Environmental Impact Statement (Parsons Brinckerhoff Quade & Douglas, Inc., 1999), evaluated aquatic resources in the Project Area and indicated a variety of fish species are found outside the navigation channel in upstream locations and tributaries of the Buffalo River. The seasonal floating dock system proposal along the east edge of the Buffalo River may provide minimal improvements for aquatic resources by providing shade where none currently exists.

## 7.17 Construction-Related Impacts

### 7.17.1 No-Build Alternative

The No-Build Alternative would result in no construction-related impacts.

### 7.17.2 Build Alternatives

A brief overview of construction-related activities associated with the Build Alternatives is presented below. This is a preliminary description that will likely be expanded as Project designs progress over the next several months.

- The Initial Build Phase would commence in February 2010 and be substantially completed by June 2011. The Initial Build Phase would include construction activities on the Aud Block, Donovan Block, Webster Block, and Commercial Slip Parking Garage site.
- The construction activities would be sequenced as follows:
  - Site work
  - Foundations
  - Steel work
  - Concrete flatwork
  - Exterior wall construction
  - Roofing
  - Interior finish work
  - Exterior site improvements
- Hours of operation for exterior construction would be limited to the hours of 7:00 am to 6:00 pm Monday thru Saturday, or as per the City of Buffalo Ordinances for noise. Interior construction would be limited to Monday thru Saturday from 7:00 am to 11:00 pm. Parking for construction-related personnel will be located within 1,000 feet of the Project Area.

- The 383 on-site surface parking spaces currently used by Marine Drive residents would be temporarily displaced during construction of the Commercial Slip Parking Garage. Temporary parking spaces are currently being identified within a 1,000-foot-radius of the Marine Drive parking lot, including approximately 60 spaces on development Parcel C1 that would be available during construction (see **Figure 7.17-1)**.
- Construction equipment would include the following, as required: forklifts, waste dumpsters, excavators, loaders, backhoes, bulldozers (D9), dump trucks, delivery vans, man-lifts, scaffolding, air compressors, generators, pneumatic tools, concrete pumps, pile driving/caisson equipment, paving equipment, and air-lifts.
- Delivery hours and temporary street closures would conform to procedures and restrictions outlined in the City of Buffalo Ordinances.
- Initial Build Phase construction staging for the Donovan North Block (D1) and the Webster Block (W1) would occur on Donovan South Block (D2). Staging for Parcel A1 would occur on parcels T2.2 and T3. Staging for Parcels A2, A3, and D3 would occur on Parcels E3 and E4. Staging for Parcels C2.1, C2.2 and C2.3 would occur on Parcels C2.2 and C2.3. Parcels E8 and E9 would also be supplemental staging for all development parcels.
- Market-Based Phase construction staging would occur beneath the Skyway on Parcels E8 and E9.

Potential construction-related impacts associated with the Build Alternatives would include site preparation (e.g., grading) which may increase sediment loadings in site runoff; disposal of contaminated soils/fill materials, and potential exposure to on-site workers; and temporary impacts to air quality and ambient noise levels. In addition, construction workers may also be exposed to hazardous situations typically associated with construction activities. However, as described below, the Build Alternatives would not result in any significant impacts during construction phases with the application of appropriate construction techniques, compliance with local and federal regulations, inspection and monitoring associated with permitting processes, and mitigation measures as discussed below.

#### 7.17.2.1 Soils

As discussed in Chapter 6.9, documentation for prior projects within the Project Area indicated the need for soils management programs to address the handling and disposal of landside excavation and soil disturbance activities. These documents also indicated the possible presence of contaminated soils on sites in the Project Area. Summaries of the documentary research and on-site testing that has been conducted on the Erie Canal Harbor, Donovan Block, Webster Block, Memorial Auditorium, and Marine Drive Focus Areas are provided in Chapter 6.9. Construction-related activities would result in disturbance of contaminated soils typical to industrial areas in the City of Buffalo. These soils contain primarily SVOCs and carcinogenic polyaromatic hydrocarbons (PAHs). Soils containing lead were found adjacent to the waterfront in the central portion of the Erie Canal Harbor site (Parsons Brinckerhoff Quade & Douglas, 1999). However, testing indicated the area to not be highly leachable. Recommended measures

to minimize environmental risk associated with potentially contaminated soils can be found in Chapter 7.9.

#### 7.17.2.2 Site Runoff

For each of the Build Alternatives, all contractors would be required to address erosion and sediment control procedures to prevent runoff from contaminated areas into adjacent non-contaminated areas. A SWPPP, including soil erosion and sediment controls, consistent with the most recent SPDES guidance would also be developed, and may include:

- Use of sedimentation/erosion control measures, such as silt curtains and hay bales;
- Measures for surface protection of exposed soils; and
- Plans for re-vegetation of disturbed areas.

Likewise, all contractors would be required to develop a Site Safety and Health Plan in accordance with EPA, Occupational Safety and Health Administration (OSHA), National Institute of Occupational Safety and Health (NIOSH), and American Council of Government Industrial Hygienists (ACGIH) standards. All requirements would be adhered to during construction of the Project.

#### 7.17.2.3 Air Quality

Construction-related impacts from the Build Alternatives on air quality would be limited to short-term increases in fugitive dust and mobile source emissions. Short-term elevated mobile source emissions (e.g., CO from motor vehicles) may result from the disruption of traffic during peak travel periods. Every effort will be made to minimize traffic disruption during the construction of the Project. Construction-related fugitive dust is airborne particulate matter generated by haul, concrete and delivery trucks and earth-moving vehicles traveling within the Project Area. Fugitive dust is typically made up of relatively large particles that are re-suspended by vehicle movement, and material blown from uncovered haul trucks. These particles, given their relatively large size, tend to settle within 20 to 30 feet of their source and should not impact adjacent neighborhoods.

The following are typical mitigation measures that would be taken to minimize the potential negative effect that these and other sources may have on air quality.

Site Preparation:

- Cover unpaved construction roads with crushed stone;
- Limit vehicular paths and stabilize temporary roads;
- Use watering trucks to minimize dust;
- Minimize land disturbance;
- Cover trucks when hauling soil;

- Use windbreaks to prevent any accidental dust pollution; and
- Stabilize dirt piles that are not removed immediately.

Construction:
- Minimize unnecessary vehicular activities;
- Cover haul trucks when transferring materials; and
- Use dust suppressants on non-paved travel paths.

Post-Construction:
- Remove unused material; and
- Revegetate disturbed land which remains undeveloped.

#### 7.17.2.4 Noise

Construction-related activities would have short-term noise impacts within and immediately adjacent to the Project Area. Impacts to community noise levels during construction would result from noise associated with construction equipment, and construction-related vehicles traveling to and from the Project Area. The degree to which these noise sources will have an impact on community noise levels depends upon the noise characteristics of the equipment and construction activities, the construction schedule, and the distance from sensitive receptors. Noise levels would be highest during the early phases of construction, when excavation and heavy daily truck traffic would occur. The contractor would be required to comply with Chapter 293-4(1) of the City of Buffalo Noise Code, and EPA emission standards for construction equipment. These regulations require:

- Construction material be handled and transported in such a manner as not to create unnecessary noise;
- Except under very special circumstances, construction activities be limited to weekdays, between the hours of 7 am and 9 pm; and
- Certain classifications of construction equipment and motor vehicles meet specified noise emission standards.

Increases in noise levels from delivery trucks and other construction vehicles would not be significant.

#### 7.17.2.5 Coordination with Operations and Maintenance of the Skyway

All construction activities would be coordinated with NYSDOT and NYSTA to ensure the continued integrity and access to Skyway and Thruway piers. All NYSDOT and NYSTA

Temporary Occupancy/Use and Highway Work Permits would be secured, as required, in advance of any occupancy of NYSDOT or NYSTA lands and start of construction activities.

#### 7.17.2.6 Utilities

All necessary utilities, including water, sanitary/storm sewer, and electrical service, to buildings in and adjacent to the Project Area would be maintained during construction. In the event of planned temporary disruptions, ECHDC will require contractors to provide advance notification to building owners and tenants of the date and duration of planned service disruptions. Therefore, no adverse impacts to utilities would result from construction activities.

#### 7.17.2.7 Worker Safety

During construction activities associated with the Build Alternatives, construction personnel are likely to encounter a number of physical hazards that are typically associated with construction work including uneven footing, exposed construction material, open excavations, risk of fall from partially constructed structures, etc. There are also traffic hazards associated with work in roadway rights-of-way. The Project will minimize risk to construction personnel by fully complying with applicable Occupational, Safety and Health Administration, NYSDOT, New York State Labor Law and City of Buffalo requirements. The public will be protected from exposure to such dangers through the use of secure construction sites with authorized access only.

#### 7.17.2.8 Short-term Parking Displacement

Marine Drive residents parking on the Commercial Slip Parking Garage site will be temporarily displaced during garage construction. ECHDC would consult with both the Marine Drive Apartment residents and BMHA management to identify temporary solutions for the provision of convenient, safe parking.

It is expected that temporary parking at one or several locations would be chosen. Short-term temporary parking for residents has been identified across Erie Street at the Waterfront Village Complex parking lots, owned by the City of Buffalo Urban Renewal Agency. This location is being reviewed given the adjacency of the lot as well as the off-peak availability. Other locations would be in privately-owned lots along Perry Boulevard, Pearl Street, and possibly along the reconstructed Cobblestone Streets under the Skyway. Special provisions for disabled/handicapped parkers will also be identified.

#### 7.17.2.9 Construction-related Impact Mitigation

- ECHDC would establish a “hot line” for the receipt of complaints regarding construction activities. Hot line information would be distributed to area property owners and tenants in advance of Initial Build Phase I construction and would also be available on the ECHDC website. Complaints received would be investigated and corrective actions devised and

implemented, as necessary. A monthly summary of complaints and corrective actions would be filed as information item for the ECHDC Board.

- ECHDC would develop regular public information releases regarding planned construction activities/schedule for the purpose of informing the public about anticipated short-term Project Area disruptions. This information would also be made available on the ECDHC website. This information may be conveyed by ECHDC staff through regularly scheduled community meetings.

# 8 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The irreversible and irretrievable commitments of resources required for construction and operation of the Build Alternatives would include construction materials, energy (construction and operation phases), labor, capital, and land. ECHDC would undertake efforts to minimize impacts, as feasible and practical, through the implementation of a Project-specific Sustainability Program and compliance with New York State Executive Order 111. ECHDC has retained a sustainability consultant to work in tandem with the Project design team so that sustainable design features are considered early in Project design (see **Appendix F**).

The Build Alternatives would require a long-term commitment of land in the Project Area for uses identified and approved as part of this Project. Other potential uses would be precluded from the Project Area during the life-cycle of the Project. However, future reclamation of land could result in alternate uses within the Project Area in the future. Therefore, the use of land would not result in the irreversible or irretrievable commitment of land resources.

The commitment of public and private funds is based on the premise that residents in the immediate area, region, and state would benefit by increased sales tax revenue, growth in land values surrounding the Project Area, increased property tax revenue, other revenues directly or indirectly generated by new development, and other intangible quality of life benefits to the city such the provision of improved access to the waterfront. Therefore, the initial financial investment in the Build Alternatives represents long-term, rather than irreversible or irretrievable commitments of resources.

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# 9 UNAVOIDABLE ADVERSE EFFECTS

The Build Alternatives are generally consistent with local and regional plans and policies for redeveloping the downtown Buffalo waterfront, and would result in significant short- and long-term benefits. However, some unavoidable adverse impacts would result from implementation the Build Alternatives. The unavoidable adverse impacts are similar for each Build Alternative, but may vary in degree of impact.

## 9.1 Short-Term Unavoidable Impacts

Construction-phase impacts would include localized and temporary impacts to sound levels, air quality, traffic, on- and off-street parking, pedestrian and bicycle facilities, and access to attractions and event venues (e.g., Naval Park, Commercial Slip, HSBC Arena). Short-term noise impacts associated with construction-related vehicles would be regulated by local and State regulations and standards. Air quality impacts would be limited to short-term increases in fugitive dust and mobile source emissions from construction equipment. Measures to maintain vehicular, bicycle and pedestrian traffic and circulation to attractions and venues, as well as through the Project Area, during construction, will be developed by ECHDC in conjunction with the construction phasing plan. Planned disruptions will be posted to the ECHDC website in advance of the start of construction activities.

## 9.2 Long-Term Unavoidable Impacts

Overall, the Build Alternatives would have significant, positive long-term impacts. Importantly, the Build Alternatives would create an active, urban downtown community connecting the traditional downtown area with the waterfront. Vacant and underutilized lands would be redeveloped with a mix of residential, commercial and cultural uses. In addition, attractive public spaces and water features would be created for residents and visitors to enjoy year-round. However, with just about any form of sizable urban development will come minor long-term impacts, such as increased vehicular traffic, noise and air quality resulting from denser development patterns. In particular, the anticipated increase of vehicular traffic in the Project Area would potentially have increase traffic volumes (see Chapter 7.8) and elevate air quality impacts at key intersections associated with ground-level concentrations of carbon monoxide (CO) related to vehicular exhaust (see Chapter 7.14). Some existing viewsheds would also be obstructed due to the placement of new structures in the Project Area (see Chapter 7.2).

Impacts to the following utilities were previously described: gas, electric, fiber optics, public water, and sanitary/storm sewers (see Chapter 7.13). Impacts of the Project to utilities would also be associated with the relationship of new underground facilities to existing infrastructure on the Project site, particularly the Skyway and the Thruway. Long-term energy related impacts are discussed in Chapter 12.

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# 10 GROWTH-INDUCING ASPECTS

SEQRA requires that a DGEIS contain an evaluation of the growth-inducing aspects of a project. This refers to the likelihood that the proposed action may trigger further development by attracting significant increases in local population through the creation or relocation of employment and the support facilities that may be necessary to serve that population or by expanding the development potential of a local area by increasing the capacity of public infrastructure.

The Project would provide significant investment and potential growth within the City of Buffalo through the revitalization of an underutilized area along the downtown waterfront. In particular, the Project would include the construction of a substantial mixed use neighborhood including residential, office, lodging, cultural and recreational opportunities. This, in turn, would expand the City's employment base. Thus, investment within the Project Area could also stimulate some additional private investment and economic growth outside the Project Area in the surrounding downtown area, in the Cobblestone District to the east and possibly across the Buffalo River.

Despite this expansion in the City's employment base and the possibility for some additional growth beyond the Project Area, the growth-inducing aspects of the Project are somewhat limited. First, the Project does not include any significant increase in the capacity of public infrastructure in the area. Thus, this type of growth-inducing impact is not applicable to the Project. More importantly though, as noted in Chapter 6.5, the City of Buffalo has lost significant population since 1990. For instance, the population dropped by over 10 percent between 1990 and 2000 with a loss of over 35,000 residents. This trend of population loss continues to present day. Thus, even though the Project would create new employment opportunities and may lead to additional investment outside of the Project Area, any resulting increase in population within the City of Buffalo would be more than offset by recent population losses in the City and would not result in adverse impacts that the City's existing infrastructure cannot support.

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# 11 EFFECTS ON SOLID WASTE MANAGEMENT

The Project Area is largely comprised of vacant parcels of land, and, therefore, would have little impact on solid waste. Primary waste associated with the Build Alternatives would be construction and demolition (C&D) debris resulting from the construction of the various elements that comprise the Build Alternatives. While the existing Donovan Building may be renovated and reused as part of the Project, the possibility still exists that the structure could be razed, should plans and/or market conditions change. Accordingly, any related site clearing and debris removal from razing the building, should it occur, would be evaluated separate from this document. In a similar manner, the effects on solid waste management for the demolition of the Memorial Auditorium have been addressed under a separate environmental document, and, therefore, are not included as part of this DGEIS.

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# 12 EFFECTS ON THE USE AND CONSERVATION OF ENERGY RESOURCES

## 12.1 No-Build Alternative

The No-Build Alternative would not result in any impacts on the use and conservation of energy resources.

## 12.2 Build Alternatives

The construction and operation of the Project would have both short-term and long-term impacts on the use and conservation of energy resources. In the short-term, construction of all Build Alternatives would require the use of nonrenewable energy resources including: gasoline, diesel fuel, and electricity (see Chapter 7.17.2 for an analysis of construction-related impacts associated with the Build Alternatives). In addition to construction-related energy use by equipment including such things as forklifts, waste dumpers, excavators, loaders, backhoes, bulldozers, dump trucks, delivery vans, generators, concrete pumps, pile driving/caisson equipment, and paving equipment, the indirect use of energy would also occur as a result of construction workers commuting to and from the construction site.

The long-term impacts of each Build Alternative on energy resources would differ in magnitude for each of the Build Alternatives with the Low-Density Alternative having the least impact and the High-Density Alternative having the greatest impact. In general terms, Project size is directly proportional to energy consumption. Impacts on the use and conservation of energy would result from traffic generated by the Project, consumption of energy from day-to-day Project operations, such as building heating, cooling, and lighting, and energy consumption for the operation of unique Project components such as the canals and aquarium.

The Project would result in a dense mix of uses being located in the Project Area where currently the land is vacant and underutilized. This concentration of development would result in a hub of activity on the downtown waterfront and the introduction of a more sustained flow of traffic to the Project Area, outside of events at HSBC Arena and Coca-Cola Park.

As discussed in Chapter 7.8.2.3, traffic generation differs between each Build Alternative. As shown in **Table 7.8-7**, in the year 2011 total development would range from 409,600 square feet to 1,046,100 square feet and total vehicle trips would range from 1,080 to 2,503 during the weekday PM peak period and range from 1,559 to 2,657 during the Saturday afternoon peak. By the year 2017, total development would range from 603,600 square feet to 1,669,600 square feet and total vehicle trips would range from 2,525 to 4,468 during the weekday PM peak and range from 2,900 to 4,830 during the Saturday afternoon peak. Accordingly, the High-Density Alternative would result in the greatest impact to fuel consumption from traffic generation.

Each Build Alternative would also include water features which would be used year-round for activities such as boating, fishing and ice skating. As people may be in contact with the water, the design intent would be to treat the water to swimming pool quality standards, therefore

energy would be consumed in the process of filtering and disinfecting the water. Also, electricity would be consumed for underwater lighting and the use of a chiller system to create ice rinks lining the canals. Lastly, the 20 foot deep aquarium would consume energy because the water would be filtered, ozonated, aerated and passed through biofiltration to ensure a healthy environment for the fish. The water in the aquarium would also require energy for heating or cooling based on the season and needs of the fish.

## 12.3 Mitigation Measures

To mitigate these short-term and long-term impacts, ECHDC is exploring various sustainable design principles to mitigate Project energy consumption. Additionally, ECHDC seeks to implement the State's progressive energy conservation policies, articulated in Executive Order 111 ("EO 111"). EO 111 requires state agencies and public benefit corporations to achieve a reduction in energy consumption by all buildings they own, lease or operate of 35 percent by 2010 relative to 1990 levels. Certain structures in the Project would be owned and operated by ECHDC; therefore they would be subject to the requirements of EO 111. Also, Executive Order 4 requires State agencies to procure sustainable materials such as recycled/recyclable materials and implement policies to reduce waste, conserve water, and utilize renewable energy sources, to the extent practical.

In an effort to incorporate sustainable design principles and reduce consumption of non-renewable energy resources, ECHDC engaged Atelier Ten to review and suggest sustainability strategies for the Project. Atelier Ten are collaborative partners in the design and engineering of environmentally friendly buildings since 1990. From bases in the United Kingdom and the United States, Atelier Ten undertakes projects around the world, ranging in scale from primary schools to National Art Museums, and from individual buildings to entire neighborhoods.

The primary purpose for the sustainability principles is to establish key performance areas for a sustainable approach to development at Canal Side. ECHDC's objective in using these strategies is to respond to public interest in "low impact development" and to achieve energy goals set by the State. Fundamentally, this approach can encourage environmental sustainability and provide a comfortable environment and enjoyable experience at Canal Side. The Report, Sustainability at Canal Side (see **Appendix F**) outlines seven general sustainability categories:

- Access and Connectivity
- Energy
- Indoor Environmental Quality
- Water Management
- Outdoor Environment and Site Construction
- Material Resources and Waste Reduction/Recycling
- Operation and Maintenance

Within each category, suggested strategies have been outlined to provide ideas on how environmental initiatives could be integrated in the design of the Project. Key environmental issues and sustainable opportunities for the Project's long-term impact on the use and conservation of energy resources would involve access and connectivity, energy, water, and the outdoor environment. Best management practices would include some of the following:

- Multiple convenient transportation options such as walking, bicycling, and public transit services would be integrated into the Project design to provide alternatives to single occupancy travel to the Project Area.
- Additional energy conservation measures for lighting and efficient building system design would be considered in final design of the Project.
- Given the proximity of the Buffalo River and Lake Erie, careful consideration to water quality issues and concerns should be important to ensure that the health of the river and lake would not be compromised. Best management practices in the reduction of impervious surfaces would be employed to help reduce, slow, and infiltrate storm water on-site.
- Best management practices in the removal of snow would be considered to prevent chemicals from entering watersheds and water sources.
- Green marina design practices would be discussed and considered in consultation with the City of Buffalo, the USACE, and the Coast Guard prior to the construction of the temporary boat slips along the Buffalo Harbor.
- The outdoor recreation areas would offer both environmental and economic benefits while actively improving a number of pressing environmental issues including storm water runoff, urban heat island effect, localized air pollution, light trespass, biodiversity, and noise. Street trees would provide effective shade for pedestrians and reduce traffic noise vehicle pollution.

Energy impacts from construction activities could be mitigated through best practices such as minimizing idling of construction equipment and utilizing ultra-low sulfur diesel. Energy consumption from transport of construction materials to the Project Area would be reduced through the use of materials manufactured locally or regionally. The emerging standard for a regional material is anything extracted and manufactured within 500 miles of the Project Area.

Energy consumption from traffic generation during Project operation would be mitigated through integration of multiple convenient transportation options such as walking, bicycling, and public transit services into the Project Area to provide alternatives to single occupancy vehicle transport to the Project Area. There are multiple convenient alternatives to vehicular travel to get to and around the Project Area, including the Metro Rail and Metro Bus and a nearby bicycle route along Scott Street. To encourage use of sustainable modes of transportation, the Project would emphasize clear way-finding, promote pedestrian connectivity throughout the Project Area, and provide secured bicycle racks at major entrances to all buildings. The Project would also promote efficient vehicular movement and parking through two-way streets and several strategically located parking garages.

The Project Area is currently tied to the City's existing utility grid. To mitigate energy consumption from building operations, the Project could implement efficient heating and cooling systems, building orientation, façade materials, roofing materials, shading from trees, use of natural daylight and natural ventilation. To maximize energy efficiency, Project buildings could be designed to take advantage of the local climate and reduce external loads by optimizing the building orientation and passive heating and cooling of the building, where possible. The Project could also utilize high efficiency building systems to reduce heating and cooling needs and incorporate Energy Star appliances. Heat recovery and air side economizers, which use cool outside air to cool an indoor space, could be included where applicable to ensure overall energy efficiency and visitors' comfort. Employing building control systems for both the lighting and building systems could further reduce the loads for conditioning. Additional energy conservation measures for lighting and efficient building system design would be considered in final design of the Project.

# 13 THRESHOLDS FOR FUTURE ACTIONS

## 13.1 Introduction

Agencies may prepare a GEIS when there is a need to assess a wide variety of impacts at a more conceptual level on a larger geographic area, often including cumulative impacts, rather than project-specific or site-specific EISs. By addressing cumulative impacts and adopting mitigation measures and thresholds for future development and actions upfront, the use of a GEIS at the planning stage can establish a framework that fully addresses potential environmental impacts and substantially reduces SEQRA documentation requirements as new construction actually comes on-line.

The Project is based upon a conceptual development plan involving both well-defined elements (e.g., Bass Pro, Canal Side Hall, the Donovan Block, the Webster Block, the canals) and certain less-defined components that would be designed and developed in the future such as the Erie Canal Harbor parcels and the Commercial Slip parcel. The DGEIS has evaluated site specific impacts associated with the well defined elements of the Project and cumulative, secondary long-term impacts associated with the less defined Project components.

As Project plans move forward, Project changes may occur as the conceptual development plan is developed into final design proposals for the well defined elements, but more likely, for the less defined components. Such changes may specifically include proposed changes to the contemplated development program including increases or decreases in total Project square footages devoted to a specific use (i.e., residential).

This chapter outlines the conditions or criteria and procedures to be followed in evaluating Future Project Plans pursuant to SEQRA.

## 13.2 Procedures

Final designs for less-defined Project components as well as any proposed changes to the more well-defined elements (hereinafter referred to as "Future Project Plans.") will require further evaluation pursuant to SEQRA. ESDC, as Lead Agency, will be responsible for performing an environmental review on Future Project Plans and must consider Future Project Plans proposal in relation to (i) the Final GEIS ("FGEIS") which will be issued for the Project and (ii) the Final Findings Statement which will be issued for the Project.

Upon submittal of Future Project Plans to ESDC, the agency must determine if the environmental impacts associated with such Future Project Plans have been adequately addressed in the FGEIS and SEQRA Findings Statement(s), taking into account whether the proposal exceeds any of the thresholds outlined in Chapter 13.3 below. Such a determination must be made before any Future Project Plans are approved.

In the event that ESDC determines that:

(1) the Future Project Plans would be carried out in conformance with the conditions and thresholds established in Chapter 13.3 below, then no further SEQRA compliance would be required;

(2) the Future Project Plans would be carried out in conformance with the conditions and thresholds established in Chapter 13.3 below, but are not addressed or are not adequately addressed in the Findings Statement for the FGEIS, then an amended findings statement must be prepared;

(3) the Future Project Plans are not addressed or are not adequately addressed in the FGEIS for the Project, but the proposal does not exceed any of the thresholds established in Chapter 13.3 below, or the proposal does exceed a threshold(s) established in Chapter 13.3 below, but would not result in any significant adverse environmental impacts, then a negative declaration must be prepared; or,

(4) the Future Project Plans are not addressed or are not adequately addressed in the FGEIS for the Project and/or the proposal would exceed one of the thresholds established in Chapter 13.3 below and may have one or more significant adverse environmental impacts, then a supplement to the FGEIS must be prepared.

Note: Pursuant to SEQRA regulations governing generic environmental impact statements, the issuance of a conditioned negative declaration is not authorized.

## 13.3 Thresholds

Future Project Plans which exceed any one of the following conditions or thresholds shall not be considered to have been addressed by this DGEIS and must be evaluated by ESDC to determine whether additional environmental review (e.g., a Supplemental Generic Environmental Impact Statement) will be necessary:

- Project programming changes establishing development patterns exceeding the upper limits defined by the High-Density Alternative (e.g., square footages by use, increases in residential units or hotel rooms and/or increases in number of parking spaces);
- Introduction of land uses into the Project Area that were not identified in Project programming and assessed in this DGEIS;
- Modification to or revision the Design Guidelines and/or review procedures (e.g., building materials, required design features);
- Permanent modification/alterations to Buffalo River shoreline protection (i.e., sheet piles);
- Installation of permanent features in the Buffalo River;
- Installation of marine support facilities (e.g., fuel storage/pumps, pump out stations);
- Accelerated construction schedules requiring 24/7 and/or weekend construction;

- Street network modifications that would permanently reduce lane capacity within the Project Area;
- Modifications to Project programming that would increase impervious surfaces and the potential for storm water runoff;
- Project programming that would directly impact architectural and archaeological resources listed on the S/NRHP that cannot be adequately mitigated;
- Modification/alteration to the former street pattern constructed as part of the Erie Canal Harbor Development Project (i.e., Hanover, Prime, and Lloyd Streets) from that approved by FTA in 2009; and
- Improvements in the vicinity of the Skyway and the Thruway structures that have the potential to impact the structural integrity of either structure.

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# 14 CUMULATIVE IMPACTS

A cumulative impact is an impact on the environment that could result from incremental impacts of a proposed action when added to other past, present, or reasonably foreseeable future actions by other entities separate from the proposed action. Cumulative impacts can result from individually minor but collectively significant actions that take place over time.

The proposed Project, in addition to the collective independent actions in the vicinity of the Project Area, will help achieve the goal of revitalizing the downtown waterfront. Several independent actions/projects are currently in various stages of planning and implementation is expected in the reasonably foreseeable future. The independent projects listed below have been identified and defined in Chapter 3.3.2.

- Cars on Main Street Project;
- Removal of the Skyway;
- Michigan Avenue Bridge Replacement Project;
- Erie Canal Harbor Master Plan Historic Streets; and
- BSA's Floatables Control Facility.

Other projects not identified in previous chapters, but located in the near vicinity of the Project Area that may contribute to incremental consequences with the construction of the Canal Side Project include the following:

- City of Buffalo's Re-alignment of Erie Street – As part of the City's Waterfront Corridor Initiative, an extension and realignment of the segment of Erie Street from the Erie Basin Marina to West Swan Street has been recently evaluated. An extension of Erie Street to Main Street would become a crucial link from interior downtown Buffalo and the Metro Rail System to the waterfront. The proposed Project would support the Erie Street extension by providing continuity in the circulation pattern and serving as a point of destination for multi-modal travel from the downtown business district to the Buffalo River and Lake Erie Waterfront (Wendell Duchscherer Architects and Engineers, 2005).
- Extension/connection of Marine Drive to the Erie Street-Lakefront Boulevard intersection – Still in the concept stage, this project would likely improve the traffic circulation pattern and operations immediately to the west of the Project Area.
- Pearl Street – The conversion of Pearl Street to two-way traffic to the immediate north of the Project Area is currently in the early planning stages. This change in traffic circulation, improving access and safety particularly at the Pearl Street and Seneca Street intersection, would likely have positive effects on both downtown traffic and the Project Area.
- Erie Basin Marina/Waterfront Village area – A proposed hotel adjacent to Erie Basin Marina is currently in early planning stages. Similar to the Proposed Project, this project would

support the City goals to promote increased activity and economic development along the waterfront.

- The Cobblestone Historic District – the Cobblestone Historic District is located east of the Project Area and immediately adjacent to the HSBC Arena. Future projects proposed for this area involving exterior construction, reconstruction, demolition, or redevelopment work would be required to meet the local preservation standards set forth by the City of Buffalo.
- The Seneca Buffalo Creek Casino – The proposed casino, including a parking facility to accommodate 2,500 vehicles, would be located approximately 1/3 of a mile east of the Project Area. A traffic analysis completed in 2006 included the combined traffic impacts of the proposed casino, and the proposed Bass Pro store and Inner Harbor development included in the Project Area. Proposed traffic operation improvements within the vicinity of the casino site would achieve acceptable levels of service during normal peak hours. In addition, access patterns to the casino site will largely use the Michigan Avenue corridor rather than streets in the vicinity of the Project Area. Construction of the casino originally scheduled for completion at the end of 2008 has been indefinitely delayed (City of Buffalo, 2006).
- Adaptive reuse of the NFTA's Delaware Lackawanna & Western terminal building – The rehabilitation and reuse of the terminal building is currently in the concept stage. Various proposals for the creative reuse of the structure, including the future home of the Buffalo and Erie County Historical Society, have been considered for this site. Future reuse of the terminal would likely support the various uses proposed within the Project Area.

Minor to moderately adverse impacts typically occur in mature urban areas as a result of the combined impacts from new development and future projects. These impacts include intermittent land use and traffic issues (i.e., proximity of adjoining uses, scale of development, incompatibilities of new and old/existing land uses, intersection traffic, parking demand, urban design/visual impacts, etc.), dislocation of persons or existing businesses, and potential conflicts between operators of new establishments and current residents/businesses. There is a potential for adverse cumulative impacts resulting from development that is visually incompatible with the overall historic elements and pedestrian scale of structures and facilities already in the area, however these types of impacts would be mitigated through the use of design standards to regulate development.

Although these types of cumulative impacts are often unavoidable, the anticipated slow to moderate pace of development of these future projects (given significant actions necessary to fund and implement them) would allow for a concerted effort to mitigate potential future adverse impacts. No significant impacts would result from the addition of the Project to previous documented and recently planned development projects.

Cumulatively, it is reasonable to anticipate that the implementation of these projects along with the Project would result in an overall positive long-term impact on the redevelopment of downtown Buffalo. The combined impact of these projects will ultimately change the character of the currently underutilized waterfront to a vibrant urban mix of uses and streetscape consistent with the economic development goals of the City and the region. Public access, including

automobile, public transit, and pedestrian circulation along the waterfront would be greatly enhanced through new economic activity and the creation of public space within the Project Area and other downtown waterfront projects.

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