CHAPTER 21: MITIGATION

A. INTRODUCTION

According to the *CEQR Technical Manual*, where significant adverse impacts are identified, mitigation to reduce or eliminate the impacts to the fullest extent practicable is developed and evaluated. In addition, in the absence of a commitment to mitigation or when no feasible mitigation measures can be identified, a reasoned elaboration as to why mitigation is not practicable should be put forth, and the potential for unmitigated or unmitigatable significant adverse impacts must be disclosed.

Measures to mitigate adverse impacts have been evaluated by the lead agency in consultation with expert and involved agencies between the Draft Environmental Impact Statement (DEIS) and Final Environmental Impact Statement (FEIS). Therefore, the FEIS includes more complete information and commitments on all practicable mitigation measures to be implemented with the Proposed Actions.

B. PRINCIPAL CONCLUSIONS

COMMUNITY FACILITIES

CHILD CARE FACILITIES

To avoid the significant adverse impact on child care, the Proposed Actions would need to create a total of 72 new publicly funded child care slots. Alternatively, the number of affordable dwelling units that could be developed on the identified Projected Developed Sites would have to be reduced to 210 affordable units from 1,061 affordable units—an approximately 80 percent reduction (851 fewer affordable units).

Potential mitigation measures for significant adverse impacts to child care centers were developed in consultation with the New York City Administration for Children's Services (ACS), DOE and SCA. The projected increase in demand for child care slots in the With-Action Condition could be offset by private day care facilities and day care centers outside of the Child Care Study Area, which are not included in this analysis; some parents may choose day care providers that are closer to their workplace rather than their home. While the CEQR analysis is limited to ACS-contracted child care facilities per the 2014 *CEQR Technical Manual*, DOE also contracts with childcare providers to provide additional publicly-funded early education opportunities that are available to all residents, regardless of family income. Since 2014, the City has made significant investments to provide free, full-day, high-quality early childhood education through Pre-K for All and 3-K for All, as part of a broader effort to create a continuum of high-quality early care and education programs for New York City children from birth to five years old. Furthermore, all programs previously managed by ACS will shift to management by DOE, enabling consistent high-quality standards under a single agency by the second half of 2019.

There are an additional ten DOE-operated or DOE-contracted sites in the study area that are available to all residents, regardless of family income, that are not included in the CEQR analysis.

In addition, the SCA plans to construct eight new 3K centers on Staten Island that would add an additional 965 slots childcare capacity, at least two of which would be located within the study area, anticipated to open by 2020. ACS will also monitor the demand and need for additional publicly funded day care services in the area and identify the appropriate measures to meet demand for additional slots.

While these measures could offset or would serve to at least partially mitigate the identified impact, in the event that the significant adverse impact on publicly funded child care facilities is not completely eliminated, an unavoidable significant impact would result.

PUBLIC SCHOOLS

To avoid the identified significant adverse elementary school impact in Sub-district 4 of Community School District (CSD) 31, the number of incremental dwelling units that could be developed in the sub-district would have to be reduced to 1,720, generating 482 elementary school students, as compared to No-Action conditions. This would represent a decrease of 837 DU (33 percent) in CSD 31, Sub-district 4. An increase of 482 elementary school students within Sub-district 1 of CSD 31, would increase the No-Action utilization rates in the sub-district by less than five percentage points and would be below the *CEQR Technical Manual* threshold and, thus, not a significant adverse impact.

To avoid the potential for a significant adverse impact on elementary schools in CSD 31, Sub-district 4, the Proposed Actions would need to add approximately 175 new elementary school seats increasing capacity. If additional school construction is warranted, and funding is available, it will be identified in the Five-Year Capital Plan that covers the period in which the capacity need would occur. If the Bay Street Corridor Rezoning application is approved, a parcel within the Stapleton Waterfront Phase III development, which has been identified, will serve as the site for a new primary or pre-kindergarten through 8th grade school construction by the SCA. This action would take place in a future Five-Year Capital Plan, as the development associated with the Proposed Actions proceeds and should the need arise. This mitigation would be supplemented through administrative actions that the DOE would undertake to mitigate the shortfall in school seats, such as adjusting catchment areas and/or reorganizing grade levels within schools. DOE would continue to monitor trends in demand for school seats in the area. The DOE responses to identified demand could take place in stages an include administrative actions and/or enlargement of existing schools, followed by the later construction or lease of new school facilities at an appropriate time. In the current 2020-2024 Five Year Capital Plan, 1,776 elementary/intermediate school seats have been funded to address exiting school seat needs in CSD 31, Sub-district 4. SCA is in the process of identifying appropriate sites to locate and construct these funded school seats.

New York City Department of City Planning (DCP), as lead agency, will continue to explore these mitigation measures with the SCA/ DOE. If these mitigation measures cannot be implemented, the impact will be identified as unavoidable.

OPEN SPACE

To avoid the significant adverse indirect impacts on total and active open space resources in the 0.5-mile Residential Study Area, the total amount of open space created in the With-Action Condition

would need to increase by approximately 6.15 acres (1.55 acres more than the 4.6 acres provided in the With-Action), including 2.37 acres of active open space. Alternatively, the number of dwelling units that could be developed on the Projected Development Sites would have to be *reduced* to 1,601 dwelling units from 2,569 dwelling units—an approximately 38 percent decrease (968 fewer dwelling units).

Measures considered to mitigate the Proposed Actions' significant adverse open space impact include: developing a new recreation center at the Lyons Pool site; making improvements to existing parks to allow for expanded programming and enhanced usability; making New York City public school playgrounds accessible to the community after school hours through the Schoolyards to Playgrounds program; and public realm improvements in the vicinity of the intersection of Victory Boulevard and Bay Street. These potential mitigation measures were explored in coordination with the lead agency, DPR, DOE, DOT and EDC between the DEIS and the FEIS.

Based on these discussions, the following mitigation measure has been identified for implementation:

- Public realm and pedestrian improvements at underutilized street space located at the intersection of Victory Boulevard and Bay Street: These improvements will provide an enhanced pedestrian realm at a critical gateway to the Bay Street Corridor. They will consist of amenities such as benches, lighting, trees and planting to encourage pedestrian activity, support access to public transit, and improve the streetscape. The proposed public realm improvements are anticipated to total at least 0.13 acres.

Other measures have been identified that could substantially enhance and/or increase the amount of open space resources for the additional population introduced by the Proposed Actions. If funded and implemented, these measures could further mitigate the significant adverse open space impact.

Although these additional measures could substantially enhance and increase the usability of open space resources and partially mitigate the significant adverse open space impact in the With-Action Condition, capital and expense of funding to build and maintain additional open space or park facilities has not been identified at this point in time. Consequently, the Proposed Actions' significant adverse indirect open space impact would not be completely eliminated and, as a result, an unavoidable significant adverse open space impacts would occur. However, the City will continue to explore avenues to implement the measures identified along with other opportunities to create new publicly-accessible open space resources, improve existing open spaces, and/or provide additional programming within existing open spaces.

HISTORIC AND CULTURAL RESOURCES

As discussed in Chapter 7, "Historic and Cultural Resources," the construction activity at Projected Development Site 5 under the With-Action Condition has the potential to result in significant adverse archaeological impacts associated with prehistoric resources and nineteenth- to early twentieth-century waterfront features.

A Phase 1A study of Projected Development Site 5 was completed in May 2017 (Appendix E). The Phase 1A study concluded that the archaeological area of potential effects (APE) has a moderate to

high sensitivity for prehistoric resources on the western margin in the limited area of fast land, and a moderate to high sensitivity for nineteenth- to early-twentieth-century waterfront features (docks or piers) in the remainder of the southern archaeological-APE. The northern, narrow portion of the archaeological-APE was identified as having no to low sensitivity for shoreline features. The Phase IA recommended archaeological testing in advance of any future ground disturbing developments within the two areas of archaeological sensitivity to determine the absence or presence of potential buried resources. However, as Projected Development Site 5 is owned by a private entity, there is no mechanism in place to require a developer to conduct archaeological testing or require the preservation or documentation of archaeological resources, should they exist. Therefore, a significant adverse effect related to archaeological resources may occur on Projected Development Site 5. Because there is no mechanism to avoid or mitigate potential impacts to archaeological resources at the privately-owned Projected Development Site 5, the significant adverse impact would be unavoidable.

TRANSPORTATION

TRAFFIC

As described in Chapter 14, "Transportation," the Proposed Actions would result in significant adverse traffic impacts at 31 study area intersections during one or more analyzed peak hours; specifically, 36 lane groups at 24 intersections during the Weekday AM peak hour, 43 lane groups at 21 intersections during the Weekday MD peak hour, 59 lane groups at 26 intersections during the Weekday PM peak hour, and 37 lane groups at 20 intersections during the Saturday MD peak hour. Implementation of traffic engineering improvements such as signal timing changes or modifications to curbside parking regulations would provide mitigation for several of the anticipated traffic impacts. Implementation of the recommended traffic engineering improvements is subject to review and approval by New York City Department of Transportation (DOT) and will be based on the findings of a traffic monitoring program (TMP) developed by DCP in collaboration with DOT. If, prior to implementation, DOT determines that an identified mitigation measure is infeasible, an alternative and equivalent mitigation measure will be considered. However, if no other alternative mitigation measures can be identified, those impacts would be unmitigated.

Table 21-1 shows that significant adverse impacts would be fully mitigated at all but 10 lane groups at 6 intersections during the Weekday AM peak hour, 24 lane groups at 11 intersections during the Weekday MD peak hour, 46 lane groups at 21 intersections during the Weekday PM peak hour, and 14 lane groups at 9 intersections during the Saturday MD peak hour.

Table 21-1: Summary of Lane Groups/Intersections with Partially Mitigated and/or Unmitigated Significant Adverse Traffic Impacts

	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
Impacted Lane Groups	10	24	46	14
Impacted Intersections	6	11	21	9

Tables 21-2 and 21-3 provide a more detailed summary of the intersections that would have significant adverse traffic impacts and indicates whether the impacts would be fully mitigated for the

signalized and unsignalized intersections, respectively. In total, impacts to one or more approach movements would remain unmitigated in one or more peak hours at 21 intersections.

Table 21-2: Signalized Intersections with Partially Mitigated and/or Unmitigated Significant Adverse Traffic Impacts

Signalized Intersection	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
Richmond Terrace and Franklin Avenue				
Richmond Terrace and Jersey Street			X	
Richmond Terrace and Westervelt Avenue				
Hamilton Avenue and Richmond Terrace				
Wall Street and Richmond Terrace				
Richmond Terrace and Ferry Terminal (bus)		X	X	X
Richmond Terrace and Ferry Terminal (parking lot)		X	X	X
Bay Street and Slosson Terrace				
Victory Boulevard and Bay Street/St. Marks Place			X	
Victory Boulevard and Bay Street		X	X	X
Bay Street and Hannah Street	X			
Front Street and Hannah Street				
Bay Street and Swan Street/Van Duzer Street			X	
Bay Street and Grant Street	X	X	X	X
Van Duzer Street and Clinton Street				
Bay Street and Clinton Street				
Bay Street and Baltic Street		X	X	X
Bay Street and Wave Street			X	
Front Street and Wave Street				
Front Street and Prospect Street				
Van Duzer Street and Beach Street				
Bay Street and Water Street		X	X	X
Bay Street and Canal Street			X	
Front Street and Canal Street				
Bay Street and Broad Street			X	
Richmond Terrace and Clove Road				
Victory Boulevard and Cebra Avenue	X	X	X	
Victory Boulevard and Jersey Street		X	X	X
Victory Boulevard and Forest Avenue			X	
Broad Street and Canal Street				
Broad Street and Van Duzer Street				
Broad Street and Targee Street				
Vanderbilt Avenue and Tompkins Avenue	X	X	X	
Bay Street and Vanderbilt Avenue			X	
Bay Street and Edgewater Drive				
Bay Street and Hylan Boulevard	X	X	X	X
Bay Street and School Road			X	

Table 21-3: Unsignalized Intersections with Partially Mitigated and/or Unmitigated Significant Adverse Traffic Impacts

Unsignalized Intersection	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
Hamilton Avenue and Stuyvesant Place				
Wall Street and Stuyvesant Place				
Front Street and Hannah Street[1]				
Van Duzer Street and St Julian Place				
Bay Street and St Julian Place				
Bay Street and Grant Street[2]				
Bay Street and Baltic Street[2]				
Bay Street and William Street	X	X	X	X
Bay Street and Congress Street			X	
Bay Street and Wave Street[1]				
Front Street and Wave Street[1]				
Front Street and Prospect Street[1]				
Bay Street and Water Street[1]				
Front Street and Canal Street[1]				
Jersey Street and Brook Street				
Pike Street and Brook Street				
Pike Street and Victory Boulevard				
Hudson Street and Cedar Street				
Broad Street and Cedar Street				

Notes: 1 - Intersection becomes signalized in No-Action Condition. 2 - Intersection becomes signalized with mitigation.

TRANSIT (BUS)

The Proposed Actions would result in a capacity shortfall on all bus routes serving the study area during the Weekday AM and PM peak hours. These significant adverse bus transit impacts could be fully mitigated by the addition of two to six additional standard buses to each direction of each route during both peak hours. The general policy of NYCT is to provide additional bus service where demand warrants, taking into account financial and operational constraints.

PEDESTRIAN

Incremental demand from the Proposed Actions would result in significant adverse pedestrian impacts at a total of 11 sidewalks and 5 crosswalks during one or more peak hours. Mitigation measures recommended to address significant adverse traffic impacts would result in significant adverse pedestrian impacts at an additional two crosswalks in one or more peak hours.

Recommended mitigation measures to address the pedestrian impacts are discussed below. Implementation of these measures would be subject to review and approval by DOT. If, prior to implementation, DOT determines that an identified mitigation measure is infeasible, an alternative

and equivalent mitigation measure will be identified. However, if no other alternative mitigation measures can be identified, those impacts would be unmitigated.

Sidewalks

Eleven of the 28 analyzed sidewalks are expected to be significantly adversely impacted by the Proposed Actions. Due to constrained right-of-way, mitigation measures to address the potential significant adverse pedestrian impacts for all significantly impacted sidewalks are not feasible. Therefore, these sidewalks could not be mitigated and the impacts are considered significant and unavoidable.

Crosswalks

With the implementation of mitigation measures recommended to address significant adverse traffic impacts, a total of seven of the 20 analyzed crosswalks would be significantly adversely impacted by the Proposed Actions. Crosswalk widening between 0.6 feet and 10.3 feet would fully mitigate all seven impacted crosswalks.

CONSTRUCTION

HISTORIC AND CULTURAL RESOURCES

As described in Chapter 7, "Historic and Cultural Resources," development under the Proposed Actions— specifically, on Projected Development Site 20 and Potential Development Site Q—could result in inadvertent construction-related damage to two NYCL- and/or S/NR-eligible historic resources, as they are located within 90 feet of one or more of the aforementioned projected and potential development sites. The two eligible resources – S/NR-eligible 292 Van Duzer Street and the S/NR-eligible and NYCL-eligible Stapleton Branch of the New York City Public Library – would not be redeveloped under the No-Action condition. If these eligible resources are designated in the future prior to the initiation of construction, the protective measures of New York City Department of Buildings (DOB) Technical Policy and Procedure Notice (TPPN) #10/88 would apply and indirect significant adverse impact from construction would be avoided. Should they remain undesignated, however, the additional protective measures of TPPN #10/88 would not apply, and the potential for significant adverse construction-related impacts would not be mitigated.

NOISE

As described in Chapter 20, "Construction," the Proposed Actions would have the potential to result in significant adverse construction noise impacts throughout the Project Area and at sensitive receptors in the vicinity of the Project Area. Because the analysis is based on a conceptual site plan and construction schedule, it is possible that the actual construction may be of less magnitude, or that construction on multiple Projected Development Sites might not overlap, in which case construction noise would be less intense than the analysis predicts.

Between the DEIS and FEIS, possible mitigation measures to address the identified potential construction noise impacts were explored. It was found that there are no reasonable means to ensure measures be employed that would mitigate, partially or fully, the significant adverse construction

noise impacts; therefore, the significant adverse construction noise impacts identified in Chapter 20, "Construction," would be unavoidable.

C. COMMUNITY FACILITIES

CHILD CARE SERVICES

Under the Proposed Actions, approximately 1,061 new low- to moderate-income units would be developed by 2030, which would generate approximately 95 children under the age of six who would be eligible for publicly funded child care programs based on the *CEQR Technical Manual* child care multipliers. With the additional children, in the With-Action Condition, there would be a deficit of 98 slots in the 1.5-mile Child Care Study Area by 2030 (125.59 percent utilization), and the utilization rate of the existing child care facilities would increase by approximately 24.80 percentage points over the No-Action Condition (100.78 percent utilization).

To avoid the significant adverse impact on child care, the Proposed Actions would need to create a total of 72 new publicly funded child care slots. Alternatively, the number of affordable dwelling units that could be developed on the identified Projected Developed Sites would have to be reduced to 210 affordable units from 1,061 affordable units—an approximately 80 percent reduction (851 fewer affordable units).

The projected increase in demand for child care slots in the With-Action Condition could be offset by private day care facilities and day care centers outside of the Child Care Study Area, which are not included in this analysis; some parents may choose day care providers that are closer to their workplace rather than their home. While the CEQR analysis is limited to ACS-contracted child care facilities per the 2014 *CEQR Technical Manual*, DOE also contracts with childcare providers to provide additional publicly-funded early education opportunities that are available to all residents, regardless of family income. Since 2014, the City has made significant investments to provide free, full-day, high-quality early childhood education through Pre-K for All and 3-K for All, as part of a broader effort to create a continuum of high-quality early care and education programs for New York City children from birth to five years old. Furthermore, all programs previously managed by ACS will shift to management by DOE, enabling consistent high-quality standards under a single agency by the second half of 2019.

As shown in Table 21-4. there are an additional ten DOE-operated or DOE-contracted sites in the study area that are available to all residents, regardless of family income, that are not included in the CEQR analysis.

In addition, the SCA plans to construct eight new 3K centers on Staten Island that would add an additional 965 slots childcare capacity, at least two of which would be located within the study area, anticipated to open by 2020.

Table 21-4: Additional DOE-Operated and Contracted Child Care Facilities in Study Area

Name	Address	Borough	Zip	3K seats in 2019-20	Pre-K seats in 2019-20	Included in CEQR?
The Richmond Pre-K Center at 120 Stuyvesant Place	120 Stuyvesant Pl.	Staten Island	10301	45	54	No
Alwayz1.2.3 Early Learning Center	80 Bay St.	Staten Island	10301	15	0	No
Saint Peter - Saint Paul School	129 Clinton Ave.	Staten Island	10301	30	60	No
Children's Harbor Montessori School	1000 Richmond Ter.	Staten Island	10301	0	27	No
Jewish Community Center of Staten Island	485 Victory Blvd.	Staten Island	10301	30	54	No
Yeled V'Yalda Silver Lake I Head Start	10 Gregg Pl.	Staten Island	10301	23	36	No
Sacred Heart School	301 North Burgher Ave.	Staten Island	10310	0	54	No
Hugs & Kiddies of Staten Island	140 Harvest Ave.	Staten Island	10310	12	16	No
Yeled V'Yalda Silver Lake Head Start II	20 Park Hill Cir.	Staten Island	10304	45	58	No
Most Terrific Child	555 Tompkins Ave.	Staten Island	10305	15	15	No
			Total	***429***	***592***	

ACS will monitor the demand and need for additional publicly funded day care services in the area and identify the appropriate measures to meet demand for additional slots. While these measures and the factors described above could offset or would serve to at least partially mitigate the identified impact, in the event that the significant adverse impact on publicly funded child care facilities is not completely eliminated, an unavoidable significant adverse impact would result.

PUBLIC SCHOOLS

The Proposed Actions are anticipated to result in a significant adverse impact to public elementary schools. The Project Area falls within the boundaries of CSD 31, Sub-district 4. The Proposed Actions would introduce approximately 1,331 total students, including approximately 716 elementary school students over the No-Action Condition. The elementary school utilization rate would increase from 129 percent in the No-Action Condition to 136 percent in the With-Action Condition (a 7.0-percentage-point increase), with a deficit of 3,911 elementary school seats. According to *CEQR Technical Manual* guidance, a significant adverse impact may result if a proposed action would result in (i) a utilization rate equal to or greater than 100 percent, and (ii) an increase in the collective utilization rate of equal to or greater than 5 percentage points between the No-Action and With-Action conditions. Therefore, the Proposed Actions are anticipated to result in a significant adverse impact to elementary schools in CSD 31, Sub-district 4, when the 838 residential unit is constructed which is expected to occur in 2024.

While the DEIS did not identify a significant adverse impact related to public schools, it was noted that new data was anticipated, which could potentially change the DEIS conclusions. As mentioned in Chapter 4 of the FEIS, "Community Facilities," shortly before the issuance of the DEIS, new data from the School Construction Authority (SCA) was released related to projected public school ratios, enrollment projections, and projected new housing starts. Based on the re-analyzed indirect effects

on public elementary schools, the Proposed Actions would potentially result in a significant adverse impact to public elementary schools in CSD 31, Sub-district 4.

To avoid the identified significant adverse elementary school impact in Sub-district 4 of CSD 31, the number of incremental dwelling units that could be developed in the sub-district would have to be reduced to 1,720, generating 482 elementary school students, as compared to No-Action conditions. This would represent a decrease of 837 DU (33 percent) in CSD 31, Sub-district 4. An increase of 482 elementary school students within Sub-district 1 of CSD 31, would increase the No-Action utilization rates in the sub-district by less than five percentage points and would be below the *CEQR Technical Manual* threshold and, thus, not a significant adverse impact.

To avoid the potential for a significant adverse impact on elementary schools in CSD 31, Sub-district 4, the Proposed Actions would need to add approximately 175 new elementary school seats increasing capacity. If additional school construction is warranted, and funding is available, it will be identified in the Five-Year Capital Plan that covers the period in which the capacity need would occur. If the Bay Street Corridor Rezoning application is approved, a parcel within the Stapleton Waterfront Phase III development, which has been identified, will serve as the site for a new primary or pre-kindergarten through 8th grade school construction by the SCA. This action would take place in a future Five-Year Capital Plan, as the development associated with the Proposed Actions proceeds and should the need arise.

The Proposed A-Text Application (N190114(A) ZRR, and C190179(A) HAR), provides a waiver of community facility floor area in the Special Stapleton Waterfront District on Sites A or B1 for 100,000 sf of school use, which could facilitate this mitigation. This mitigation would be supplemented through administrative actions that the DOE would undertake to mitigate the shortfall in school seats, such as adjusting catchment areas and/or reorganizing grade levels within schools. DOE would continue to monitor trends in demand for school seats in the area. The DOE responses to identified demand could take place in stages an include administrative actions and/or enlargement of existing schools, followed by the later construction or lease of new school facilities at an appropriate time. In the current 2020-2024 Five Year Capital Plan, 1,776 elementary/intermediate school seats have been funded to address exiting school seat needs in CSD 31, Sub-district 4. SCA is in the process of identifying appropriate sites to locate and construct these funded school seats.

To mitigate the identified elementary school impacts resulting from the Proposed Actions, enrollment in CSD 31, Sub-district 4 will be monitored. If a need for additional capacity is identified, DOE will evaluate the appropriate timing and mix of measures, identified above, to address increased school enrollment. In coordination with the New York City School Construction Authority (SCA), if additional school construction is warranted, and if funding is available, it will be identified in the Five-Year Capital Plan that covers the period in which the capacity need would occur (refer to the SCA's letter to the City Planning Commission Chair dated April 9, 2019, provided in Appendix K, "Agency Correspondence"). If feasible mitigation measures cannot be identified to fully mitigate the impact, the impact will be identified as unavoidable.

D. OPEN SPACE

As discussed in Chapter 5, "Open Space," the Proposed Actions would result in a significant adverse indirect impact to the total and active open space resources in the 0.5-mile Residential Study Area. The Proposed Actions would lead to a reduction in total and active open space ratios and exacerbate the extent to which the current active and total open space ratios in the Residential Study Area fall below City guidelines.

To avoid this significant adverse indirect impact, the total amount of open space created in the With-Action Condition would need to increase by approximately 6.15 acres, including 2.37 acres of active open space. Alternatively, the number of dwelling units that could be developed on the Projected Development Sites would have to be *reduced* to 1,601 dwelling units from 2,569 dwelling units—an approximately 38 percent decrease (968 fewer dwelling units).

Measures considered to mitigate the Proposed Actions' significant adverse open space impact include: developing a new recreation center at the Lyons Pool site; making improvements to existing parks to allow for expanded programming and enhanced usability; making New York City public school playgrounds accessible to the community after school hours through the Schoolyards to Playgrounds program; and public realm improvements in the vicinity of the intersection of Victory Boulevard and Bay Street. These potential mitigation measures were explored in coordination with the lead agency, DPR, DOE, DOT and EDC between the DEIS and the FEIS.

Based on these discussions, the following mitigation measure has been identified for implementation:

- Public realm and pedestrian improvements at underutilized street space located at the intersection of Victory Boulevard and Bay Street: These improvements will provide an enhanced pedestrian realm at a critical gateway to the Bay Street Corridor. They will consist of amenities such as benches, lighting, trees and planting to encourage pedestrian activity, support access to public transit, and improve the streetscape. The proposed public realm improvements are anticipated to total at least 0.13 acres.

Other measures have been identified that could substantially enhance and/or increase the amount of open space resources for the additional population introduced by the Proposed Actions. If funded and implemented, these measures could further mitigate the significant adverse open space impact.

- Development of a new recreation center at the Lyons Pool site, as identified by NYC Parks in the recently completed North Shore Staten Island Recreation Center Feasibility Study: If implemented, this facility would provide a significant complement of active recreational amenities and could add approximately 1 acre of new active recreation.
- Creating a publicly accessible playground at a school proposed to be located at the Stapleton Waterfront site: As described in Chapter 22 of this FEIS, an Alternative to the Proposed Actions has been submitted which would waive from floor area calculations up to 100,000 sf for a school use at Stapleton Waterfront Phase III. If this Alternative is adopted, construction of a new school on Site A is anticipated to include an at-grade playground that would be open to the public during non-school hours. This would provide new active open space to the community in close proximity to an area where significant residential development is projected at Stapleton Waterfront.

- Improvements to study area open space resources: Improvements to sites, such as converting Village Hall at Tappen Park to park use and/or enhancing park components at existing parks, could help to qualitatively improve open space for current and future residents. The scope of improvements to study area open space resources would be contingent upon available funds and the deficiencies or needs specific to the open space resource.

Although these additional measures could substantially enhance and increase the usability of open space resources and partially mitigate the significant adverse open space impact in the With-Action Condition, capital and expense of funding to build and maintain additional open space or park facilities has not been identified at this point in time. Consequently, the Proposed Actions' significant adverse indirect open space impact would not be completely eliminated and, as a result, an unavoidable significant adverse open space impacts would occur avenues to implement the measures identified along with other opportunities to create new publicly-accessible open space resources, improve existing open spaces, and/or provide additional programming within existing open spaces.

E. HISTORIC AND CULTURAL RESOURCES

As discussed in Chapter 7, "Historic and Cultural Resources," the construction activity at Projected Development Site 5 under the With-Action Condition has the potential to result in significant adverse archaeological impacts associated with prehistoric resources and nineteenth- to early twentieth-century waterfront features.

A Phase 1A study of Potential Development Site 5 was completed in May 2017 (Appendix E). The Phase 1A study concluded that the archaeological area of potential effects (APE) has a moderate to high sensitivity for prehistoric resources on the western margin in the limited area of fast land, and a moderate to high sensitivity for nineteenth- to early-twentieth-century waterfront features (docks or piers) in the remainder of the southern archaeological-APE. The northern, narrow portion of the archaeological-APE was identified as having no to low sensitivity for shoreline features. The Phase IA recommended archaeological testing in advance of any future ground disturbing developments within the two areas of archaeological sensitivity to determine the absence or presence of potential buried resources.

However, as Projected Development Site 5 is owned by a private entity, there is no mechanism in place to require a developer to conduct archaeological testing or require the preservation or documentation of archaeological resources, should they exist. Therefore, a significant adverse effect related to archaeological resources may occur on Projected Development Site 5. Because there is no mechanism to avoid or mitigate potential impacts to archaeological resources at the privately-owned Projected Development Site 5, the significant adverse impact would be unavoidable.

F. TRANSPORTATION

As described in Chapter 14, "Transportation," a number of elements in the study area would experience significant adverse traffic, transit, and pedestrian impacts as a result of the Proposed Actions under the reasonable worst-case development scenario. The transportation analyses provide a conservative assessment of the With-Action condition. The discussion below outlines readily implementable mitigation measures that would fully or partially mitigate the identified impacts. The

implementation of these measures would be conducted in coordination with the DOT as development proceeds.

As detailed in the "Operational Analysis Methodology" section of Chapter 14, the operation of an intersection is defined in terms of control delay per vehicle and the corresponding level-of-service (LOS) and volume-to-capacity (v/c) ratio. The criteria used for defining significant adverse impacts are based on a sliding scale for various LOS and delay measures. A significant adverse impact is considered to be fully mitigated when the projected delay for an intersection lane group or movement under the With-Action condition is brought back to within an acceptable range of its No-Action condition level or to marginally acceptable mid-LOS D (45.0 seconds for signalized intersections and 30.0 seconds for unsignalized intersections). In some cases, viable mitigation measures for a particular movement could result in additional delay or LOS deterioration for other movements. Such increases in delay and deterioration in LOS do not constitute a significant adverse impact as long as the mid-LOS D threshold is not exceeded, or the increase in delay does not exceed the limits of the sliding scale mentioned above.

PROPOSED SCHEDULE FOR TRAFFIC AND PEDESTRIAN MITIGATION MEASURES

Subject to the approval of DOT, the mitigation measures summarized in Table 21-5 and Table 21-20 would be implemented to mitigate the significant adverse traffic and pedestrian impacts resulting from full build-out of the Proposed Actions in 2030. However, as the development of the Proposed Actions would be expected to occur over an approximately 11-year period, it is possible that some of the significant adverse traffic and pedestrian impacts could occur prior to full build-out. In collaboration, DCP as lead agency and DOT have developed a Traffic Monitoring Program (TMP) that would be implemented if the Proposed Actions are approved, to verify the need and effectiveness of the proposed mitigation measures.

Construction and Operation

As new development under the Proposed Actions would be expected to take place over an approximate 11-year timeframe (through the year 2030), transportation monitoring will be performed as a multi-tiered process. The TMP's construction monitoring phase would begin before the construction of the first three sites projected as a result of the Proposed Actions, i.e., Projected Development Sites 3, 9 and 22. These sites were chosen because they are anticipated to begin construction soon after the Proposed Actions are approved. The data collection and analyses of the construction phase of the TMP will focus on construction peak hours and whether portions of the mitigation proposed for the full project build out would be warranted for installation during the construction of these three sites.

The City will begin to implement the operational portion of the TMP once either (1) buildings on Projected Development Sites 3, 9 and 22 are built and occupied; or (2) a net increase of approximately 500,000 square feet (sf) of total new development on projected or potential development sites is reached within the proposed rezoning area, whichever occurs first. DCP would track when new developments come online and would be responsible for identifying when the need to begin the operational TMP will be triggered. This phase of the TMP would begin with travel demand surveys, which would provide the most up-to-date representation of site-generated trips and travel behavior within the proposed rezoning area and to compare these findings with the assumptions studied in

Chapter 14, "Transportation" of the FEIS, to determine the extent to which future volume projections presented in the FEIS may occur.

If the new travel demand surveys indicate that the FEIS projections of trip generation rates and modal splits are accurate or greater than projected in the FEIS, a Level 1 and Level 2 CEQR screening assessment would be conducted, detailing the trip generation resulting from the developed projected/potential sites, as well as vehicular and pedestrian network assignments. This analysis would also incorporate an updated vehicular and pedestrian safety assessment. DOT will then determine whether subsequent steps should involve field data collection (traffic and pedestrian counts, field inventories and observations, etc.) and analysis focusing on traffic and pedestrian conditions at affected locations/elements, as well as signal warrant studies, to determine whether proposed mitigation measures (including any new traffic signals) are warranted and/or whether additional or new measures should be considered. If the results of the analysis confirm the mitigation measures identified in the FEIS (or identify alternative mitigation measures that may be more appropriate), these mitigation measures would be discussed by DOT and DCP.

If new travel demand surveys indicate that the FEIS projections are overestimated (i.e., the projected traffic and pedestrian volumes are less than the FEIS projections), the next verification would take place after another 500,000 sf of total new development on projected or potential development sites is reached within the proposed rezoning area. The scope of subsequent monitoring phases would be determined by DCP and DOT based on the results of previous phases. Upon mutual agreement by DOT and DCP, it may be determined that a different threshold for determining future monitoring may be more appropriate.

TRAFFIC

As described in Chapter 14, "Transportation," the Proposed Actions would result in significant adverse traffic impacts at 31 study area intersections during one or more analyzed peak hours, with 24, 21, 26, and 20 impacted intersections during the Weekday AM, MD, PM, and Saturday MD peak hours, respectively.

As demonstrated below, some of these impacts could be mitigated through the implementation of traffic engineering improvements, including:

- Installation of new traffic signals;
- Modification of traffic signal phasing, timing, and/or offsets;
- Elimination of on-street parking within 100 feet of intersections to add a limited travel lane, known as "daylighting";
- Channelization, changes to lane markings, and the addition of new turn bays to make more efficient use of available street widths; and
- Implementing turn restrictions.

The types of mitigation measures proposed herein are standard measures that are routinely identified by the City and considered feasible for implementation. Table 21-5 summarizes the recommended mitigation measures for each of the intersections with significant adverse traffic impacts during the Weekday AM, MD, PM, and Saturday MD peak hours. Implementation of the recommended traffic engineering improvements is subject to review and approval by DOT and will

be based on the results of a traffic monitoring program (TMP), developed by DCP, in coordination with DOT. DCP, as lead agency, has explored further mitigation measures and developed the initial scope of work for the TMP. If, prior to implementation, DOT determines that an identified mitigation measure is infeasible, an alternative and equivalent mitigation measure will be considered. However, if no other alternative mitigation measures can be identified, those impacts would be unmitigated.

FULLY MITIGATED SIGNIFICANT ADVERSE TRAFFIC IMPACTS

The potential significant adverse traffic impacts at the following study locations would be fully mitigated through the reallocation of green time. The specific signal timing changes for each study intersection are outlined in Table 21-5.

- Richmond Terrace and Hamilton Avenue (Intersection 5 on Figure 14-6)
- Front Street and Hannah Street (Intersection 14 on Figure 14-6)
- Van Duzer Street and Beach Street (Intersection 27 on Figure 14-6)
- Bay Street and Edgewater Drive (Intersection 47 on Figure 14-6)

The potential significant adverse traffic impacts at the following study locations would be fully mitigated through the reallocation of green time and modified offsets. Changing intersection offsets affects how traffic flows between adjacent intersections along a corridor and can be effective at reducing queue delay. The specific signal timing and offset changes for each study intersection are outlined in Table 21-5.

- Richmond Terrace and Franklin Avenue (Intersection 1 on Figure 14-6)
    - A potential significant adverse traffic impact is not expected at this intersection during the Weekday MD peak hour; however, due to proposed signal timing changes at Richmond Terrace and Jersey Street, it is recommended that the offset and signal timing at this intersection be modified to avoid the potential for a new significant adverse impact.
- Richmond Terrace and Westervelt Avenue (Intersection 3 on Figure 14-6)
    - Proposed signal timing changes at Richmond Terrace and Jersey Street would resolve the potential significant adverse traffic impact expected at this intersection during the Weekday AM and MD peak hours; therefore, no additional mitigation measures are recommended.
- Bay Street and Slosson Terrace (Intersection 10 on Figure 14-6)
- Bay Street and Clinton Street (Intersection 20 on Figure 14-6)
- Broad Street and Targee Street (Intersection 43 on Figure 14-6)

Table 21-5: Proposed Traffic Mitigation Table

	Intersection		Weekday AM Peak Hour												Weekday MD Peak Hour												Weekday PM Peak Hour												Saturday MD Peak Hour											
1	Richmond Terrace and Franklin Avenue	Impacts	Movement	No-Action		With-Action			Mitigated			Movement	No-Action		With-Action			Mitigated			Movement	No-Action		With-Action			Mitigated			Movement	No-Action		With-Action			Mitigated															
			WB LT	37.3	D	80.3	F	+	42.5	D		WB LT	11.8	B	35.5	D		37.5	D		WB LT	81.4	F	253.0	F	+	73.8	E																								
		Mitigation Description	Shift 2 seconds from NB phase to EB / WB phase. Change offset from 56 seconds to 28 seconds.									Shift 1 second from NB phase to EB / WB phase. Change offset from 60 seconds to 51 seconds.									Shift 7 seconds from NB phase to EB / WB phase.																										
		Signal Timing Mitigation	No-Action/With-Action					Mitigated				No-Action/With-Action					Mitigated				No-Action/With-Action					Mitigated																								
				G	A	R			G	A	R		G	A	R			G	A	R		G	A	R			G	A	R																				
			EB / WB	79.0	3.0	2.0	EB / WB	81.0	3.0	2.0		EB / WB	79.0	3.0	2.0	EB / WB	80.0	3.0	2.0		WB / EB	79.0	3.0	2.0	EB / WB	86.0	3.0	2.0																								
			NB	31.0	3.0	2.0	NB	29.0	3.0	2.0		NB	31.0	3.0	2.0	NB	30.0	3.0	2.0		NB	31.0	3.0	2.0	NB	24.0	3.0	2.0																								
			Offset		56	sec	Offset		28	sec		Offset		60	sec	Offset		51	sec		Offset		60	sec	Offset		60	sec																								
			Cycle Length		120	sec	Cycle Length		120	sec		Cycle Length		120	sec	Cycle Length		120	sec		Cycle Length		120	sec	Cycle Length		120	sec																								
2	Richmond Terrace and Jersey Street	Impacts	Movement	No-Action		With-Action			Mitigated			Movement	No-Action		With-Action			Mitigated			Movement	No-Action		With-Action			Mitigated			Movement	No-Action		With-Action			Mitigated															
			EB L	87.4	F	208.5	F	+	68.7	E											EB L	39.2	D	48.3	D	+	33.9	C																								
			WB LT	68.6	E	110.7	F	+				WB LT	227.7	F	337.5	F	+				WB LT	163.2	F	353.4	F	+				WB LT	78.1	E	113.9	F	+																		
			WB R	7.7	A	9.0	A					WB R	8.5	A	8.3	A					WB R	11.1	B	9.8	A					WB R	9.9	A	12.4	B																		
			WB L						9.9	A		WB L						17.8	B		WB L						18.6	B			WB L						13.8	B												
			WB TR						37.9	D		WB TR						42.8	D		WB TR						77.6	E	+		WB TR						44.4	D												
		Mitigation Description	Re-stripe WB approach as one 10' L lane and one 11' TR lane for 100'. Shift 4 seconds from NB / SB phase to EB / WB phase. Shift 1 second from NB / SB to EBL lead phase. Change offset from 97 seconds to 83 seconds.									Re-stripe WB approach as one 10' L lane and one 11' TR lane for 100'. Shift 6 seconds from NB / SB phase to EB / WB phase. Shift 1 second from EBL lead phase to EB / WB phase. Change offset from 34 seconds to 113 seconds.									Partial mitigation: re-stripe WB approach as one 10' L lane and one 11' TR lane for 100'. Shift 2 seconds from NB / SB phase to EB / WB phase. Change offset from 34 seconds to 31 seconds.									Re-stripe WB approach as one 10' L lane and one 11' TR lane for 100'.																								
		Signal Timing Mitigation	No-Action/With-Action					Mitigated				No-Action/With-Action					Mitigated				No-Action/With-Action					Mitigated				No-Action/With-Action					Mitigated															
				G	A	R			G	A	R		G	A	R			G	A	R		G	A	R			G	A	R		G	A	R			G	A	R											
			EBL	10.0	3.0	2.0	EBL	11.0	3.0	2.0		EBL	9.0	3.0	2.0	EBL	8.0	3.0	2.0		EBL	8.0	3.0	2.0	EBL	8.0	3.0	2.0		EBL	10.0	3.0	2.0		EBL	10.0	3.0	2.0										
			EB / WB	65.0	3.0	2.0	EB / WB	69.0	3.0	2.0		EB / WB	64.0	3.0	2.0	EB / WB	71.0	3.0	2.0		EB / WB	67.0	3.0	2.0	EB / WB	69.0	3.0	2.0		EB / WB	40.0	3.0	2.0		EB / WB	40.0	3.0	2.0										
			NB / SB	30.0	3.0	2.0	NB / SB	25.0	3.0	2.0		NB / SB	32.0	3.0	2.0	NB / SB	26.0	3.0	2.0		NB / SB	30.0	3.0	2.0	NB / SB	28.0	3.0	2.0		NB / SB	25.0	3.0	2.0		NB / SB	25.0	3.0	2.0										
			Offset		97	sec	Offset		83	sec		Offset		34	sec	Offset		113	sec		Offset		34	sec	Offset		31	sec		Offset		60	sec		Offset		60	sec										
			Cycle Length		120	sec	Cycle Length		120	sec		Cycle Length		120	sec	Cycle Length		120	sec		Cycle Length		120	sec	Cycle Length		120	sec		Cycle Length		90	sec		Cycle Length		90	sec										
3	Richmond Terrace and Westervelt Avenue	Impacts																			EB TR	25.8	C	47.9	D	+	32.2	C																								
			WB LT	47.0	D	88.8	F	+	43.2	D		WB LT	71.4	E	80.8	F	+	31.1	C		WB LT	78.1	E	101.3	F	+	80.5	F																								
		Mitigation Description	Mitigation measures at nearby intersections resolved the potential impact.									Mitigation measures at nearby intersections resolved the potential impact.									Shift 2 seconds from NB phase to EB / WB phase. Change offset from 23 seconds to 51 seconds.																										
		Signal Timing Mitigation	No-Action/With-Action					Mitigated				No-Action/With-Action					Mitigated				No-Action/With-Action					Mitigated																								
				G	A	R			G	A	R		G	A	R			G	A	R		G	A	R			G	A	R																				
			EB / WB	73.0	3.0	2.0	EB / WB	73.0	3.0	2.0		EB / WB	73.0	3.0	2.0	EB / WB	73.0	3.0	2.0		EB / WB	73.0	3.0	2.0	EB / WB	75.0	3.0	2.0																								
			NB	37.0	3.0	2.0	NB	37.0	3.0	2.0		NB	37.0	3.0	2.0	NB	37.0	3.0	2.0		NB	37.0	3.0	2.0	NB	35.0	3.0	2.0																								
			Offset		93	sec	Offset		93	sec		Offset		23	sec	Offset		23	sec		Offset		23	sec	Offset		51	sec																								
			Cycle Length		120	sec	Cycle Length		120	sec		Cycle Length		120	sec	Cycle Length		120	sec		Cycle Length		120	sec	Cycle Length		120	sec																								

Table 21-5: Proposed Traffic Mitigation Table (con't)

5 — Hamilton Avenue and Richmond Terrace

Intersection	Weekday AM Peak Hour	Weekday MD Peak Hour	Weekday PM Peak Hour	Saturday MD Peak Hour
Impacts				NB LT: 31.4 C / 53.2 D + / 43.6 D
Mitigation Description				Shift 1 second from the pedestrian phase to NB / SB phase.
Signal Timing Mitigation				No-Action/With-Action: NB / SB G 45.0 A 3.0 R 2.0; All Peds G 35.0 A 3.0 R 2.0; Offset 60 sec; Cycle Length 90 sec. Mitigated: NB / SB G 46.0 A 3.0 R 2.0; All Peds G 34.0 A 3.0 R 2.0; Offset 60 sec; Cycle Length 90 sec.

8 — Richmond Terrace and Ferry Terminal (bus)

Intersection	Weekday AM Peak Hour	Weekday MD Peak Hour	Weekday PM Peak Hour	Saturday MD Peak Hour
Impacts		WB L: 134.0 F / 139.4 F + / 139.4 F +; SB T: 65.2 E / 82.4 F + / 82.4 F +	NB T: 75.4 E / 80.1 F + / 80.1 F +; SB T: 80.1 F / 87.1 F + / 87.1 F +	SB T: 27.3 C / 46.0 D + / 46.1 D +
Mitigation Description	Shift 1 second from WB phase to NB / SB phase to mitigate impact at intersection #9.	Unmitigable	Unmitigable	Unmitigable
Signal Timing Mitigation	No-Action/With-Action: WB G 27.0 A 3.0 R 2.0; All Peds G 23.0 A 3.0 R 2.0; NB / SB G 55.0 A 3.0 R 2.0; Offset 21 sec; Cycle Length 120 sec. Mitigated: WB G 26.0 A 3.0 R 2.0; All Peds G 23.0 A 3.0 R 2.0; NB / SB G 56.0 A 3.0 R 2.0; Offset 21 sec; Cycle Length 120 sec.	No-Action/With-Action: WB G 10.0 A 3.0 R 2.0; All Peds G 23.0 A 3.0 R 2.0; NB / SB G 42.0 A 3.0 R 2.0; Offset 45 sec; Cycle Length 90 sec. Mitigated: WB G 10.0 A 3.0 R 2.0; All Peds G 23.0 A 3.0 R 2.0; NB / SB G 42.0 A 3.0 R 2.0; Offset 45 sec; Cycle Length 90 sec.	No-Action/With-Action: WB G 27.0 A 3.0 R 2.0; All Peds G 23.0 A 3.0 R 2.0; NB / SB G 55.0 A 3.0 R 2.0; Offset 95 sec; Cycle Length 120 sec. Mitigated: WB G 27.0 A 3.0 R 2.0; All Peds G 23.0 A 3.0 R 2.0; NB / SB G 55.0 A 3.0 R 2.0; Offset 95 sec; Cycle Length 120 sec.	No-Action/With-Action: WB G 10.0 A 3.0 R 2.0; All Peds G 23.0 A 3.0 R 2.0; NB / SB G 42.0 A 3.0 R 2.0; Offset 45 sec; Cycle Length 90 sec. Mitigated: WB G 10.0 A 3.0 R 2.0; All Peds G 23.0 A 3.0 R 2.0; NB / SB G 42.0 A 3.0 R 2.0; Offset 45 sec; Cycle Length 90 sec.

9 — Richmond Terrace and Ferry Terminal (parking lot)

Intersection	Weekday AM Peak Hour	Weekday MD Peak Hour	Weekday PM Peak Hour	Saturday MD Peak Hour
Impacts	NB T: 39.0 D / 51.5 D + / 34.2 C	NB T: 64.6 E / 91.1 F + / 92.2 F +; SB TR: 69.4 E / 93.8 F + / 93.8 F +	NB T: 208.0 F / 260.0 F + / 261.1 F +; SB TR: 55.7 E / 64.5 E + / 64.5 E +	NB T: 70.9 E / 77.3 E + / 77.3 E +; SB TR: 130.3 F / 158.4 F + / 158.4 F +
Mitigation Description	Shift 1 second from SB / WB R phase and 1 second from WB / NB R phase to NB / SB R phase.	Unmitigable	Unmitigable	Unmitigable
Signal Timing Mitigation	No-Action/With-Action: WB / NB R G 27.0 A 3.0 R 2.0; All Peds G 23.0 A 3.0 R 2.0; SB / WB R G 24.0 A 3.0 R 2.0; NB / SB R G 26.0 A 3.0 R 2.0; Offset 21 sec; Cycle Length 120 sec. Mitigated: WB / NB R G 26.0 A 3.0 R 2.0; All Peds G 23.0 A 3.0 R 2.0; SB / WB R G 23.0 A 3.0 R 2.0; NB / SB R G 28.0 A 3.0 R 2.0; Offset 21 sec; Cycle Length 120 sec.	No-Action/With-Action: WB / NB R G 10.0 A 3.0 R 2.0; All Peds G 23.0 A 3.0 R 2.0; SB / WB R G 8.0 A 3.0 R 2.0; NB / SB R G 29.0 A 3.0 R 2.0; Offset 45 sec; Cycle Length 90 sec. Mitigated: WB / NB R G 10.0 A 3.0 R 2.0; All Peds G 23.0 A 3.0 R 2.0; SB / WB R G 8.0 A 3.0 R 2.0; NB / SB R G 29.0 A 3.0 R 2.0; Offset 45 sec; Cycle Length 90 sec.	No-Action/With-Action: WB / NB R G 27.0 A 3.0 R 2.0; All Peds G 23.0 A 3.0 R 2.0; SB / WB R G 21.0 A 3.0 R 2.0; NB / SB R G 29.0 A 3.0 R 2.0; Offset 95 sec; Cycle Length 120 sec. Mitigated: WB / NB R G 27.0 A 3.0 R 2.0; All Peds G 23.0 A 3.0 R 2.0; SB / WB R G 21.0 A 3.0 R 2.0; NB / SB R G 29.0 A 3.0 R 2.0; Offset 95 sec; Cycle Length 120 sec.	No-Action/With-Action: WB / NB R G 10.0 A 3.0 R 2.0; All Peds G 23.0 A 3.0 R 2.0; SB / WB R G 9.0 A 3.0 R 2.0; NB / SB R G 28.0 A 3.0 R 2.0; Offset 45 sec; Cycle Length 90 sec. Mitigated: WB / NB R G 10.0 A 3.0 R 2.0; All Peds G 23.0 A 3.0 R 2.0; SB / WB R G 9.0 A 3.0 R 2.0; NB / SB R G 28.0 A 3.0 R 2.0; Offset 45 sec; Cycle Length 90 sec.

Table 21-5: Proposed Traffic Mitigation Table (con't)

	Intersection		Weekday AM Peak Hour								Weekday MD Peak Hour							
			Movement	No-Action		With-Action		Mitigated			Movement	No-Action		With-Action		Mitigated		
10	Bay Street and Slosson Terrace	Impacts	NB L	30.0	C	89.9	F +	42.2	D		NB L	31.2	C	50.0	D +	32.4	C	
											SB TR	103.1	F	122.1	F +	95.2	F	
		Mitigation Description	Shift 11 seconds from NB / SB phase to the NB L lead phase.								Shift 2 seconds from EB phase to NB / SB phase. Shift 1 second from EB phase to NB L lead phase.							
		Signal Timing Mitigation	No-Action/With-Action				Mitigated				No-Action/With-Action				Mitigated			
				G	A	R		G	A	R		G	A	R		G	A	R
			EB	34.0	3.0	2.0	EB	34.0	3.0	2.0	EB	27.0	3.0	2.0	EB	24.0	3.0	2.0
			NB L	12.0	3.0	2.0	NB L	23.0	3.0	2.0	NB L	8.0	3.0	2.0	NB L	9.0	3.0	2.0
			NB / SB	59.0	3.0	2.0	NB / SB	48.0	3.0	2.0	NB / SB	40.0	3.0	2.0	NB / SB	42.0	3.0	2.0
			Offset		98	sec	Offset		98	sec	Offset		65	sec	Offset		65	sec
			Cycle Length		120	sec	Cycle Length		120	sec	Cycle Length		90	sec	Cycle Length		90	sec
11	Victory Boulevard and Bay Street/St. Marks Place	Impacts																
		Mitigation Description	Change offset from 13 seconds to 3 seconds as part of mitigation for intersection #12.															
		Signal Timing Mitigation	No-Action/With-Action				Mitigated											
				G	A	R		G	A	R								
			EB / WB	74.0	3.0	2.0	EB / WB	74.0	3.0	2.0								
			LPI	5.0	2.0	0.0	LPI	5.0	2.0	0								
			SB	29.0	3.0	2.0	SB	29.0	3.0	2.0								
			Offset		13	sec	Offset		3	sec								
			Cycle Length		120	sec	Cycle Length		120	sec								
12	Victory Boulevard and Bay Street	Impacts	EB L	31.3	C	49.9	D +	41.3	D		EB L	31.5	C	60.2	E +	104.3	F +	
											EB LT	30.6	C	41.1	D	67.0	E +	
											WB LTR	26.7	C	228.6	F +	381.3	F +	
			NB L	32.8	C	97.3	F +	44.6	D		NB L	829.5	F	1204.3	F +	323.1	F	
											SB LT	41.9	D	126.2	F +	143.9	F +	
											SB R	93.8	F	90.4	F	159.3	F +	
		Mitigation Description	Re-allocate 23 seconds from NB / SB phase to create a leading NB left-turn phase and shift 2 seconds from NB / SB phase to EB / WB phase. Change offset from 100 seconds to 0 seconds.								Partial mitigation: Re-allocate 7 seconds from NB / SB phase and 4 seconds from EB / WB phase to create a leading NB left-turn phase. Change the offset from 45 seconds to 4 seconds.							
		Signal Timing Mitigation	No-Action/With-Action				Mitigated				No-Action/With-Action				Mitigated			
				G	A	R		G	A	R		G	A	R		G	A	R
			EB / WB	35.0	3.0	2.0	EB / WB	37.0	3.0	2.0	EB / WB	29.0	3.0	2.0	EB / WB	25.0	3.0	2.0
			LPI	5.0	2.0	0.0	LPI	5.0	2.0	0	LPI	5.0	2.0	0	LPI	5.0	2.0	0
			NB L				NB L	18.0	3.0	2.0	NB L				NB L	6.0	3.0	2.0
			NB / SB	68.0	3.0	2.0	NB / SB	43.0	3.0	2.0	NB / SB	44.0	3.0	2.0	NB / SB	37.0	3.0	2.0
			Offset		100	sec	Offset		0	sec	Offset		45	sec	Offset		4	sec
			Cycle Length		120	sec	Cycle Length		120	sec	Cycle Length		90	sec	Cycle Length		90	sec

	Intersection		Weekday PM Peak Hour								Saturday MD Peak Hour							
			Movement	No-Action		With-Action		Mitigated			Movement	No-Action		With-Action		Mitigated		
10	Bay Street and Slosson Terrace	Impacts																
			NB T	46.1	D	64.1	E +	33.0	C									
			SB TR	95.5	F	125.6	F +	97.9	F		SB TR	142.3	F	162.7	F +	135.3	F	
		Mitigation Description	Shift 3 seconds from the NB L lead phase to NB / SB phase. Change offset from 48 to 52 seconds.								Shift 2 seconds from EB phase to NB / SB phase.							
		Signal Timing Mitigation	No-Action/With-Action				Mitigated				No-Action/With-Action				Mitigated			
				G	A	R		G	A	R		G	A	R		G	A	R
			EB	34.0	3.0	2.0	EB	34.0	3.0	2.0	EB	27.0	3.0	2.0	EB	25.0	3.0	2.0
			NB L	12.0	3.0	2.0	NB L	9.0	3.0	2.0	NB L	8.0	3.0	2.0	NB L	8.0	3.0	2.0
			NB / SB	59.0	3.0	2.0	NB / SB	62.0	3.0	2.0	NB / SB	40.0	3.0	2.0	NB / SB	42.0	3.0	2.0
			Offset		48	sec	Offset		52	sec	Offset		65	sec	Offset		65	sec
			Cycle Length		120	sec	Cycle Length		120	sec	Cycle Length		90	sec	Cycle Length		90	sec
11	Victory Boulevard and Bay Street/St. Marks Place	Impacts	WB T	37.6	D	62.5	E +	59.7	E +									
			SB R	84.4	F	98.1	F +	98.1	F +									
		Mitigation Description	Unmitigable.															
		Signal Timing Mitigation	No-Action/With-Action				Mitigated											
				G	A	R		G	A	R								
			EB / WB	74.0	3.0	2.0	EB / WB	74.0	3.0	2.0								
			LPI	5.0	2.0	0	LPI	5.0	2.0	0								
			SB	29.0	3.0	2.0	SB	29.0	3.0	2.0								
			Offset		60	sec	Offset		60	sec								
			Cycle Length		120	sec	Cycle Length		120	sec								
12	Victory Boulevard and Bay Street	Impacts	EB L	72.0	E	83.1	F +	85.0	F +									
			EB LT	72.9	E	95.2	F +	91.3	F +									
			WB LTR	57.8	E	756.6	F +	573.1	F +		WB LTR	24.2	C	49.2	D +	37.3	D	
			NB L	577.1	F	1255.3	F +	522.7	F		NB L	1,171.5	F	1,549.4	F +	377.0	F	
			SB LT	14.1	B	55.4	E +	183.6	F +		SB LT	43.6	D	72.4	E +	231.9	F +	
		Mitigation Description	Partial mitigation: Re-allocate 11 seconds from NB / SB phase to create a leading NB left-turn phase and shift 4 seconds from NB / SB phase to EB / WB phase. Change the offset from 48 seconds to 80 seconds.								Partial mitigation: Re-allocate 11 seconds from NB / SB phase to create a leading NB left-turn phase and shift 2 seconds from NB / SB phase to EB / WB phase. Change the offset from 45 seconds to 0 second.							
		Signal Timing Mitigation	No-Action/With-Action				Mitigated				No-Action/With-Action				Mitigated			
				G	A	R		G	A	R		G	A	R		G	A	R
			EB / WB	35.0	3.0	2.0	EB / WB	39.0	3.0	2.0	EB / WB	29.0	3.0	2.0	EB / WB	31.0	3.0	2.0
			LPI	5.0	2.0	0	LPI	5.0	2.0	0	LPI	5.0	2.0	0	LPI	5.0	2.0	0
			NB L				NB L	6.0	3.0	2.0	NB L				NB L	6.0	3.0	2.0
			NB / SB	68.0	3.0	2.0	NB / SB	53.0	3.0	2.0	NB / SB	44.0	3.0	2.0	NB / SB	31.0	3.0	2.0
			Offset		48	sec	Offset		80	sec	Offset		45	sec	Offset		0	sec
			Cycle Length		120	sec	Cycle Length		120	sec	Cycle Length		90	sec	Cycle Length		90	sec

Table 21-5: Proposed Traffic Mitigation Table (con't)

	Intersection		Weekday AM Peak Hour												Weekday MD Peak Hour											
13	Bay Street and Hannah Street	Impacts	Movement	No-Action		With-Action			Mitigated		Movement	No-Action		With-Action			Mitigated									
			WB LTR	56.7	E	117.1	F	+	58.7	E																
			NB LTR	82.4	F	158.2	F	+			NB LTR	394.1	F	488.8	F	+										
			NB L						41.8	D	NB L						66.8	E								
			NB TR						98.5	F	+	NB TR						92.9	F								
			SB L	284.4	F	798.1	F	+	255.8	F	SB L	1,675.8	F	2255.1	F	+	653.3	F								
		Mitigation Description	Partial mitigation: Reconfigure south leg of the intersection - NB approach: add a permanent curb extension, one 5' bike lane, two 11' TR lanes, one 11' L lane (75' turn bay) and eliminate parking to Swan Street (125', approximately 6 parking spaces) - SB direction: modify DOT proposed pavement markings and create permanent curb extension. Re-allocate 15 seconds from NB / SB phase to create a lagging NB / SB left-turn phase. Shift 8 second from NB / SB phase to EB / WB phase. Change offset from 101 seconds to 108 seconds.								Reconfigure south leg of the intersection - NB approach: add a permanent curb extension, one 5' bike lane, two 11' TR lanes, one 11' L lane (75' turn bay) and eliminate parking to Swan Street (125', approximately 6 parking spaces) - SB direction: modify DOT proposed pavement markings and create permanent curb extension. Re-allocate 10 seconds from NB / SB phase and 1 second from EB / WB phase to create a lagging NB / SB left-turn phase. Change offset from 53 seconds to 50 seconds.														
		Signal Timing Mitigation	No-Action/With-Action					Mitigated							No-Action/With-Action					Mitigated						
				G	A	R			G	A	R			G	A	R			G	A	R					
			EB / WB	37.0	3.0	2.0		EB / WB	45.0	3.0	2.0		EB / WB	35.0	3.0	2.0		EB / WB	34.0	3.0	2.0					
			NB / SB	73.0	3.0	2.0		NB / SB	50.0	3.0	2.0		NB / SB	45.0	3.0	2.0		NB / SB	35.0	3.0	2.0					
			NB L / SB L					NB L / SB L	10.0	3.0	2.0		NB L / SB L					NB L / SB L	6.0	3.0	2.0					
			Offset			101	sec	Offset			108	sec	Offset			53	sec	Offset			50	sec					
			Cycle Length			120	sec	Cycle Length			120	sec	Cycle Length			90	sec	Cycle Length			90	sec					

	Intersection		Weekday PM Peak Hour								Saturday MD Peak Hour							
13	Bay Street and Hannah Street	Impacts	Movement	No-Action		With-Action			Mitigated		Movement	No-Action		With-Action			Mitigated	
			WB LTR	58.9	E	122.3	F	+	55.5	E								
			NB LTR	118.7	F	208.7	F	+			NB LTR	217.9	F	290.2	F	+		
			NB L						42.8	D	NB L						28.4	C
			NB TR						89.5	F	NB TR						58.7	E
			SB L	711.6	F	1,404.1	F	+	667.8	F	SB L	1,064.7	F	1,760.5	F	+	529.8	F
		Mitigation Description	Reconfigure south leg of the intersection - NB approach: add a permanent curb extension, one 5' bike lane, two 11' TR lanes, one 11' L lane (75' turn bay) and eliminate parking to Swan Street (125', approximately 6 parking spaces) - SB direction: modify DOT proposed pavement markings and create permanent curb extension. Re-allocate 17 seconds from NB / SB phase to create a lagging NB / SB left-turn phase. Shift 8 second from NB / SB phase to EB / WB phase. Change offset from 15 seconds to 23 seconds.								Reconfigure south leg of the intersection - NB approach: add a permanent curb extension, one 5' bike lane, two 11' TR lanes, one 11' L lane (75' turn bay) and eliminate parking to Swan Street (125', approximately 6 parking spaces) - SB direction: modify DOT proposed pavement markings and create permanent curb extension. Re-allocate 9 seconds from NB / SB phase and 2 seconds from EB / WB phase to create a lagging NB / SB left-turn phase. Change offset from 53 seconds to 45 seconds.							
		Signal Timing Mitigation	No-Action/With-Action					Mitigated			No-Action/With-Action					Mitigated					
				G	A	R			G	A	R			G	A	R			G	A	R	
			EB / WB	37.0	3.0	2.0		EB / WB	45.0	3.0	2.0		EB / WB	35.0	3.0	2.0		EB / WB	33.0	3.0	2.0
			NB / SB	73.0	3.0	2.0		NB / SB	48.0	3.0	2.0		NB / SB	45.0	3.0	2.0		NB / SB	36.0	3.0	2.0
			NB L / SB L					NB L / SB L	12.0	3.0	2.0		NB L / SB L					NB L / SB L	6.0	3.0	2.0
			Offset			15	sec	Offset			23	sec	Offset			53	sec	Offset			45	sec
			Cycle Length			120	sec	Cycle Length			120	sec	Cycle Length			90	sec	Cycle Length			90	sec

	Intersection		Weekday AM Peak Hour												Weekday MD Peak Hour											
14	Front Street and Hannah Street	Impacts	Movement	No-Action		With-Action			Mitigated		Movement	No-Action		With-Action			Mitigated									
											NB LR	23.1	C	45.8	D	+	40.8	D								
		Mitigation Description									Shift 1 second from EB / WB phase to NB phase.															
		Signal Timing Mitigation									No-Action/With-Action					Mitigated										
												G	A	R			G	A	R							
											EB / WB	43.0	3.0	2.0		EB / WB	42.0	3.0	2.0							
											NB	37.0	3.0	2.0		NB	38.0	3.0	2.0							
											Offset			0	sec	Offset			0	sec						
											Cycle Length			90	sec	Cycle Length			90	sec						

	Intersection		Weekday PM Peak Hour								Saturday MD Peak Hour							
14	Front Street and Hannah Street	Impacts	Movement	No-Action		With-Action			Mitigated		Movement	No-Action		With-Action			Mitigated	
		Mitigation Description																
		Signal Timing Mitigation																

	Intersection		Weekday AM Peak Hour												Weekday MD Peak Hour											
15	Bay Street and Swan Street/Van Duzer Street	Impacts	Movement	No-Action		With-Action			Mitigated		Movement	No-Action		With-Action			Mitigated									
			EB L	125.1	F	128.3	F	+	119.2	F																
		Mitigation Description	Shift 6 seconds from NB / SB phase to EB / WB phase. Change offset from 95 seconds to 80 seconds.																							
		Signal Timing Mitigation	No-Action/With-Action					Mitigated																		
				G	A	R			G	A	R															
			EB / WB	37.0	3.0	2.0		EB / WB	43.0	3.0	2.0															
			NB / SB	73.0	3.0	2.0		NB / SB	67.0	3.0	2.0															
			Offset			95	sec	Offset			80	sec														
			Cycle Length			120.0	sec	Cycle Length			120.0	sec														

	Intersection		Weekday PM Peak Hour								Saturday MD Peak Hour							
15	Bay Street and Swan Street/Van Duzer Street	Impacts	Movement	No-Action		With-Action			Mitigated		Movement	No-Action		With-Action			Mitigated	
			EB L	70.6	E	114.9	F	+	115.7	F	+							
			EB LTR	65.9	E	115.4	F	+	116.1	F	+							
		Mitigation Description	Unmitigable															
		Signal Timing Mitigation	No-Action/With-Action					Mitigated										
				G	A	R			G	A	R							
			EB / WB	37.0	3.0	2.0		EB / WB	37.0	3.0	2.0							
			NB / SB	73.0	3.0	2.0		NB / SB	73.0	3.0	2.0							
			Offset			21	sec	Offset			21	sec						
			Cycle Length			120.0	sec	Cycle Length			120.0	sec						

Table 21-5: Proposed Traffic Mitigation Table (con't)

18 — Bay Street and Grant Street

Intersection	Weekday AM Peak Hour				Weekday MD Peak Hour				Weekday PM Peak Hour				Saturday MD Peak Hour			
Impacts	**Movement**	**No-Action**	**With-Action**	**Mitigated**	**Movement**	**No-Action**	**With-Action**	**Mitigated**	**Movement**	**No-Action**	**With-Action**	**Mitigated**	**Movement**	**No-Action**	**With-Action**	**Mitigated**
	EB LTR			42.8 D	EB LTR			28.5 C	EB LTR			40.8 D	EB LTR			29.8 C
	WB R			36.4 D	WB R			28.6 C	WB R			38.1 D	WB R			29.1 C
	NB TR			7.2 A	NB TR			5.7 A	NB TR			6.1 A	NB TR			10.8 B
	SB T			76.8 E +	SB T			272.7 F +	SB T			231.6 F +	SB T			233.0 F +
Mitigation Description	Partial mitigation: Signalize intersection. Signal warrant #4 is met.				Partial mitigation: Signalize intersection. Signal warrant #4 is met.				Partial mitigation: Signalize intersection. Signal warrant #4 is met.				Partial mitigation: Signalize intersection. Signal warrant #4 is met.			
Signal Timing Mitigation	**No-Action/With-Action**	**Mitigated**			**No-Action/With-Action**	**Mitigated**			**No-Action/With-Action**	**Mitigated**			**No-Action/With-Action**	**Mitigated**		
	Unsignalized		G A R		*Unsignalized*		G A R		*Unsignalized*		G A R		*Unsignalized*		G A R	
		EB / WB	28.0 3.0 2.0			EB / WB	22.0 3.0 2.0			EB / WB	29.0 3.0 2.0			EB / WB	22.0 3.0 2.0	
		NB / SB	82.0 3.0 2.0			NB / SB	58.0 3.0 2.0			NB / SB	81.0 3.0 2.0			NB / SB	58.0 3.0 2.0	
		Offset	99 sec			Offset	88 sec			Offset	23 sec			Offset	65 sec	
		Cycle Length	120 sec			Cycle Length	90 sec			Cycle Length	120 sec			Cycle Length	90 sec	

20 — Bay Street and Clinton Street

Intersection	Weekday AM Peak Hour				Weekday MD Peak Hour				Weekday PM Peak Hour				Saturday MD Peak Hour			
Impacts	**Movement**	**No-Action**	**With-Action**	**Mitigated**	**Movement**	**No-Action**	**With-Action**	**Mitigated**	**Movement**	**No-Action**	**With-Action**	**Mitigated**	**Movement**	**No-Action**	**With-Action**	**Mitigated**
									WB LTR	117.0 F	710.4 F +	84.3 F				
	SB TR	33.8 C	66.1 E +	31.2 C	SB TR	188.1 F	242.5 F +	177.9 F	SB TR	89.3 F	193.5 F +	79.3 E	SB TR	222.8 F	273.7 F +	218.2 F
Mitigation Description	Change offset from 76 seconds to 117 seconds. Shift 4 seconds from WB phase to NB / SB phase.				Shift 5 seconds from WB phase to NB / SB phase.				Change offset from 40 seconds to 17 seconds. Shift 15 seconds from WB phase to NB / SB phase.				Shift 4 seconds from WB phase to NB / SB phase.			
Signal Timing Mitigation	**No-Action/With-Action**			**Mitigated**	**No-Action/With-Action**			**Mitigated**	**No-Action/With-Action**			**Mitigated**	**No-Action/With-Action**			**Mitigated**
		G A R		G A R		G A R		G A R		G A R		G A R		G A R		G A R
	WB	37.0 3.0 2.0		WB 33.0 3.0 2.0	WB	31.0 3.0 2.0		WB 26.0 3.0 2.0	WB	37.0 3.0 2.0		WB 22.0 3.0 2.0	WB	31.0 3.0 2.0		WB 27.0 3.0 2.0
	NB / SB	73.0 3.0 2.0		NB / SB 77.0 3.0 2.0	NB / SB	49.0 3.0 2.0		NB / SB 54.0 3.0 2.0	NB / SB	73.0 3.0 2.0		NB / SB 88.0 3.0 2.0	NB / SB	49.0 3.0 2.0		NB / SB 53.0 3.0 2.0
	Offset	76 sec		Offset 117 sec	Offset	0 sec		Offset 0 sec	Offset	40 sec		Offset 17 sec	Offset	0 sec		Offset 0 sec
	Cycle Length	120 sec		Cycle Length 120 sec	Cycle Length	90 sec		Cycle Length 90 sec	Cycle Length	120 sec		Cycle Length 120 sec	Cycle Length	90 sec		Cycle Length 90 sec

21 — Bay Street and Baltic Street

Intersection	Weekday AM Peak Hour				Weekday MD Peak Hour				Weekday PM Peak Hour				Saturday MD Peak Hour			
Impacts	**Movement**	**No-Action**	**With-Action**	**Mitigated**	**Movement**	**No-Action**	**With-Action**	**Mitigated**	**Movement**	**No-Action**	**With-Action**	**Mitigated**	**Movement**	**No-Action**	**With-Action**	**Mitigated**
	EB LTR			38.7 D	EB LTR			39.6 D	EB LTR			44.2 D	EB LTR			38.7 D
	WB LTR			35.0 C	WB LTR			35.2 D	WB LTR			39.5 D	WB LTR			33.8 C
	NB TR			16.5 B	NB TR			12.9 B	NB TR			37.4 D	NB TR			7.9 A
	SB LT			30.2 C	SB LT			142.5 F +	SB LT			136.5 F +	SB LT			96.4 F +
Mitigation Description	Signalize intersection. Signal warrant #4 is met.				Signalize intersection. Signal warrant #4 is met.				Signalize intersection. Signal warrant #4 is met.				Signalize intersection. Signal warrant #4 is met.			
Signal Timing Mitigation	**No-Action/With-Action**	**Mitigated**			**No-Action/With-Action**	**Mitigated**			**No-Action/With-Action**	**Mitigated**			**No-Action/With-Action**	**Mitigated**		
	Unsignalized		G A R		*Unsignalized*		G A R		*Unsignalized*		G A R		*Unsignalized*		G A R	
		EB / WB	29.0 3.0 2.0			EB / WB	14.0 3.0 2.0			EB / WB	23.0 3.0 2.0			EB / WB	14.0 3.0 2.0	
		NB / SB	81.0 3.0 2.0			NB / SB	66.0 3.0 2.0			NB / SB	87.0 3.0 2.0			NB / SB	66.0 3.0 2.0	
		Offset	113 sec			Offset	3 sec			Offset	19 sec			Offset	3 sec	
		Cycle Length	120 sec			Cycle Length	90 sec			Cycle Length	120 sec			Cycle Length	90 sec	

Table 21-5: Proposed Traffic Mitigation Table (con't)

	Intersection		Weekday AM Peak Hour								Weekday MD Peak Hour							
22	Bay Street and William Street	Impacts	Movement	No-Action		With-Action			Mitigated		Movement	No-Action		With-Action			Mitigated	
			EB LR	48.6	E	138.8	F	+	353.7	F +	EB LR	Err	F	Err	F		Err	F
											NB LT	25.8	D	24.0	C		166.6	F +
		Mitigation Description	Unmitigable. Intersection operations degrade due to mitigation measures applied at adjacent intersections. Resulting impact is unmitigable.								Unmitigable. Intersection operations degrade due to mitigation measures applied at adjacent intersections. Resulting impact is unmitigable.							
		Signal Timing Mitigation	No-Action/With-Action					Mitigated			No-Action/With-Action					Mitigated		
			Unsignalized					*Unsignalized*			*Unsignalized*					*Unsignalized*		
23	Bay Street and Congress Street	Impacts	Movement	No-Action		With-Action			Mitigated		Movement	No-Action		With-Action			Mitigated	
		Mitigation Description																
		Signal Timing Mitigation																
24	Bay Street and Wave Street	Impacts	Movement	No-Action		With-Action			Mitigated		Movement	No-Action		With-Action			Mitigated	
											NB LT	204.3	F	279.3	F	+	104.1	F
			SB TR	23.5	C	77.8	E	+	17.2	B	SB TR	215.4	F	268.9	F	+	107.4	F
		Mitigation Description	Re-stripe WB approach as one 10' L lane (70' turn bay) and one 10' TR lane. Modify parking regulation on WB approach to "No Standing Anytime" for 95' from the stop bar (4 parking spaces will be removed). Change offset from 0 second to 9 seconds. Shift 11 seconds from WB phase to NB / SB phase.								Re-stripe WB approach as one 10' L lane (70' turn bay) and one 10' TR lane. Modify parking regulation on WB approach to "No Standing Anytime" for 95' from the stop bar (4 parking spaces will be removed). Shift 14 seconds from WB phase to NB / SB phase.							
		Signal Timing Mitigation	No-Action/With-Action					Mitigated			No-Action/With-Action					Mitigated		
				G	A	R			G	A R		G	A	R			G	A R
			WB	37.0	3.0	2.0		WB	26.0	3.0 2.0	WB	31.0	3.0	2.0		WB	17.0	3.0 2.0
			NB / SB	73.0	3.0	2.0		NB / SB	84.0	3.0 2.0	NB / SB	49.0	3.0	2.0		NB / SB	63.0	3.0 2.0
			Offset		0	sec		Offset		9 sec	Offset		0	sec		Offset		0 sec
			Cycle Length		120	sec		Cycle Length		120 sec	Cycle Length		90	sec		Cycle Length		90 sec

	Intersection		Weekday PM Peak Hour								Saturday MD Peak Hour							
22	Bay Street and William Street	Impacts	Movement	No-Action		With-Action			Mitigated		Movement	No-Action		With-Action			Mitigated	
			EB LR	Err	F	Err	F	+	Err	F +	EB LR	568.0	F	1,110.4	F		Err	F
			NB LT	13.8	B	91.8	F	+	298.8	F +	NB LT	6.5	A	11.6	B		69.8	F +
		Mitigation Description	Unmitigable. Intersection operations degrade due to mitigation measures applied at adjacent intersections. Resulting impacts are unmitigable.								Unmitigable. Intersection operations degrade due to mitigation measures applied at adjacent intersections. Resulting impacts are unmitigable.							
		Signal Timing Mitigation	No-Action/With-Action					Mitigated			No-Action/With-Action					Mitigated		
			Unsignalized					*Unsignalized*			*Unsignalized*					*Unsignalized*		
23	Bay Street and Congress Street	Impacts	Movement	No-Action		With-Action			Mitigated		Movement	No-Action		With-Action			Mitigated	
			NB LT	2.1	A	11.9	B		43.5	E +								
		Mitigation Description	Unmitigable. Intersection operations degrade due to mitigation measures applied at adjacent intersections. Resulting impact is unmitigable.															
		Signal Timing Mitigation	No-Action/With-Action					Mitigated										
			Unsignalized					*Unsignalized*										
24	Bay Street and Wave Street	Impacts	Movement	No-Action		With-Action			Mitigated		Movement	No-Action		With-Action			Mitigated	
			WB LTR	37.1	D	35.2	D											
			WB L						51.0	D +								
			WB TR						59.3	E +								
			NB LT	84.0	F	215.9	F	+	142.8	F +	NB LT	141.6	F	214.7	F	+	75.8	E
			SB L	17.7	B	99.4	F	+	10.8	B								
			SB TR	110.2	F	207.1	F	+	132.8	F +	SB TR	268.3	F	323.9	F	+	171.8	F
		Mitigation Description	Partial mitigation: Re-stripe WB approach as one 10' L lane (70' turn bay) and one 10' TR lane. Modify parking regulation on WB approach to "No Standing Anytime" for 95' from the stop bar (4 parking spaces will be removed). Shift 9 seconds from WB phase to NB / SB phase.								Re-stripe WB approach as one 10' L lane (70' turn bay) and one 10' TR lane. Modify parking regulation on WB approach to "No Standing Anytime" for 95' from the stop bar (4 parking spaces will be removed). Shift 12 seconds from WB phase to NB / SB phase.							
		Signal Timing Mitigation	No-Action/With-Action					Mitigated			No-Action/With-Action					Mitigated		
				G	A	R			G	A R		G	A	R			G	A R
			WB	30.0	3.0	2.0		WB	21.0	3.0 2.0	WB	31.0	3.0	2.0		WB	19.0	3.0 2.0
			NB / SB	80.0	3.0	2.0		NB / SB	89.0	3.0 2.0	NB / SB	49.0	3.0	2.0		NB / SB	61.0	3.0 2.0
			Offset		0	sec		Offset		0 sec	Offset		0	sec		Offset		0 sec
			Cycle Length		120	sec		Cycle Length		120 sec	Cycle Length		90	sec		Cycle Length		90 sec

Table 21-5: Proposed Traffic Mitigation Table(con't)

	Intersection		Weekday AM Peak Hour				Weekday MD Peak Hour				Weekday PM Peak Hour				Saturday MD Peak Hour			
25	Front Street and Wave Street	Impacts	Movement	No-Action	With-Action	Mitigated	Movement	No-Action	With-Action	Mitigated	Movement	No-Action	With-Action	Mitigated	Movement	No-Action	With-Action	Mitigated
											NB LT	7.3 A	59.5 E +	13.0 B				
		Mitigation Description	Increased proposed cycle length from 60 seconds to 90 seconds for consistency with proposed mitigation at adjacent intersections on Front Street.				Increased proposed cycle length from 60 seconds to 90 seconds for consistency with proposed mitigation at adjacent intersections on Front Street.				Increased proposed cycle length from 60 seconds to 90 seconds for consistency with proposed mitigation at adjacent intersections on Front Street.				Increased proposed cycle length from 60 seconds to 90 seconds for consistency with proposed mitigation at adjacent intersections on Front Street.			
		Signal Timing Mitigation	No-Action/With-Action			Mitigated	No-Action/With-Action			Mitigated	No-Action/With-Action			Mitigated	No-Action/With-Action			Mitigated
				G	A R			G	A R			G	A R			G	A R			G	A R
			EB	19.0	3.0 2.0	EB	29.0	3.0	2.0	EB	19.0	3.0	2.0	EB	28.0	3.0	2.0	EB	19.0	3.0	2.0	EB	21.0	3.0	2.0	EB	19.0	3.0	2.0	EB	26.0	3.0	2.0
			NB / SB	31.0	3.0 2.0	NB / SB	51.0	3.0	2.0	NB / SB	31.0	3.0	2.0	NB / SB	52.0	3.0	2.0	NB / SB	31.0	3.0	2.0	NB / SB	59.0	3.0	2.0	NB / SB	31.0	3.0	2.0	NB / SB	54.0	3.0	2.0
			Offset		0 sec	Offset			0 sec	Offset			0 sec	Offset			0 sec	Offset			0 sec	Offset			0 sec	Offset			0 sec	Offset			0 sec
			Cycle Length		60 sec	Cycle Length			90 sec	Cycle Length			60 sec	Cycle Length			90 sec	Cycle Length			60 sec	Cycle Length			90 sec	Cycle Length			60 sec	Cycle Length			90 sec
26	Front Street and Prospect Street	Impacts	Movement	No-Action	With-Action	Mitigated	Movement	No-Action	With-Action	Mitigated	Movement	No-Action	With-Action	Mitigated	Movement	No-Action	With-Action	Mitigated
			NB TR	41.6 D	70.6 E +	27.0 C	NB TR	72.5 E	141.8 F +	23.5 C	NB TR	194.0 F	322.2 F +	92.4 F	NB TR	80.4 F	150.2 F +	45.2 D
			SB LT	31.7 C	152.2 F +	29.9 C	SB LT	231.4 F	731.1 F +	35.1 D	SB LT	2,797.4 F	3902.7 F +	1,277.9 F	SB LT	410.8 F	1119.2 F +	271.8 F
		Mitigation Description	Increased proposed cycle length from 60 seconds to 90 seconds for consistency with proposed mitigation at adjacent intersections on Front Street.				Increased proposed cycle length from 60 seconds to 90 seconds for consistency with proposed mitigation at adjacent intersections on Front Street.				Increased proposed cycle length from 60 seconds to 90 seconds for consistency with proposed mitigation at adjacent intersections on Front Street.				Increased proposed cycle length from 60 seconds to 90 seconds for consistency with proposed mitigation at adjacent intersections on Front Street.			
		Signal Timing Mitigation	No-Action/With-Action			Mitigated	No-Action/With-Action			Mitigated	No-Action/With-Action			Mitigated	No-Action/With-Action			Mitigated
				G	A R			G	A R			G	A R			G	A R			G	A R
			EB	13.0	3.0 2.0	EB	16.0	3.0	2.0	EB	13.0	3.0	2.0	EB	15.0	3.0	2.0	EB	13.0	3.0	2.0	EB	18.0	3.0	2.0	EB	13.0	3.0	2.0	EB	20.0	3.0	2.0
			WB	13.0	3.0 2.0	WB	23.0	3.0	2.0	WB	13.0	3.0	2.0	WB	17.0	3.0	2.0	WB	13.0	3.0	2.0	WB	16.0	3.0	2.0	WB	13.0	3.0	2.0	WB	18.0	3.0	2.0
			NB / SB	19.0	3.0 2.0	NB / SB	36.0	3.0	2.0	NB / SB	19.0	3.0	2.0	NB / SB	43.0	3.0	2.0	NB / SB	19.0	3.0	2.0	NB / SB	41.0	3.0	2.0	NB / SB	19.0	3.0	2.0	NB / SB	37.0	3.0	2.0
			Offset		0 sec	Offset			0 sec	Offset			0 sec	Offset			0 sec	Offset			0 sec	Offset			0 sec	Offset			0 sec	Offset			0 sec
			Cycle Length		60 sec	Cycle Length			90 sec	Cycle Length			60 sec	Cycle Length			90 sec	Cycle Length			60 sec	Cycle Length			90 sec	Cycle Length			60 sec	Cycle Length			90 sec
27	Van Duzer Street and Beach Street	Impacts	Movement	No-Action	With-Action	Mitigated	Movement	No-Action	With-Action	Mitigated	Movement	No-Action	With-Action	Mitigated	Movement	No-Action	With-Action	Mitigated
			EB LT	57.7 E	62.5 E +	58.1 E					EB LT	49.3 D	80.1 F +	50.1 D				
		Mitigation Description	Shift 1 second from NB phase to EB / WB phase.								Shift 5 seconds from NB phase to EB / WB phase.							
		Signal Timing Mitigation	No-Action/With-Action			Mitigated					No-Action/With-Action			Mitigated				
				G	A R							G	A R					
			EB / WB	43.0	3.0 2.0	EB / WB	44.0	3.0	2.0		EB / WB	43.0	3.0 2.0	EB / WB	48.0	3.0	2.0	
			NB	67.0	3.0 2.0	NB	66.0	3.0	2.0		NB	67.0	3.0 2.0	NB	62.0	3.0	2.0	
			Offset		76 sec	Offset			76 sec		Offset		6 sec	Offset			6 sec	
			Cycle Length		120 sec	Cycle Length			120 sec		Cycle Length		120 sec	Cycle Length			120 sec	
28	Bay Street and Water Street	Impacts	Movement	No-Action	With-Action	Mitigated	Movement	No-Action	With-Action	Mitigated	Movement	No-Action	With-Action	Mitigated	Movement	No-Action	With-Action	Mitigated
			NB L	24.5 C	388.5 F +	23.1 C	NB L	348.4 F	373.4 F +	362.7 F +	NB L	921.0 F	971.4 F +	970.3 F +	NB L	359.2 F	383.0 F +	362.6 F +
			NB T	24.7 C	73.9 E +	7.0 A	NB T	63.8 E	120.2 F +	62.5 E	NB T	74.3 E	143.6 F +	135.5 F +	NB T	61.3 E	107.5 F +	63.4 E
			SB TR	67.8 E	80.7 F +	40.9 D	SB TR	204.5 F	252.9 F +	156.6 F	SB TR	174.3 F	277.2 F +	275.1 F +	SB TR	240.6 F	290.6 F +	211.8 F
		Mitigation Description	Shift 11 seconds from WB phase to NB / SB phase. Change offset from 0 seconds to 25 seconds.				Partial mitigation: Shift 8 seconds from WB phase to NB / SB phase. Change offset from 0 seconds to 81 seconds.				Unmitigable				Partial mitigation: Shift 6 seconds from WB phase to NB / SB phase. Change offset from 0 seconds to 83 seconds.			
		Signal Timing Mitigation	No-Action/With-Action			Mitigated	No-Action/With-Action			Mitigated	No-Action/With-Action			Mitigated	No-Action/With-Action			Mitigated
				G	A R			G	A R			G	A R			G	A R			G	A R
			WB	36.0	3.0 2.0	WB	25.0	3.0	2.0	WB	27.0	3.0	2.0	WB	19.0	3.0	2.0	WB	36.0	3.0	2.0	WB	36.0	3.0	2.0	WB	27.0	3.0	2.0	WB	21.0	3.0	2.0
			NB / SB	74.0	3.0 2.0	NB / SB	85.0	3.0	2.0	NB / SB	53.0	3.0	2.0	NB / SB	61.0	3.0	2.0	NB / SB	74.0	3.0	2.0	NB / SB	74.0	3.0	2.0	NB / SB	53.0	3.0	2.0	NB / SB	59.0	3.0	2.0
			Offset		0 sec	Offset			25 sec	Offset			0 sec	Offset			81 sec	Offset			0 sec	Offset			0 sec	Offset			0 sec	Offset			83 sec
			Cycle Length		120 sec	Cycle Length			120 sec	Cycle Length			90 sec	Cycle Length			90 sec	Cycle Length			120 sec	Cycle Length			120 sec	Cycle Length			90 sec	Cycle Length			90 sec

Table 21-5: Proposed Traffic Mitigation Table(con't)

	Intersection		Weekday AM Peak Hour								Weekday MD Peak Hour								Weekday PM Peak Hour								Saturday MD Peak Hour							
29	Bay Street and Canal Street	Impacts	Movement	No-Action		With-Action			Mitigated		Movement	No-Action		With-Action			Mitigated		Movement	No-Action		With-Action			Mitigated		Movement	No-Action		With-Action			Mitigated	
			NB TR	8.2	A	58.0	E	+	15.0	B	NB TR	119.4	F	196.5	F	+	75.5	E	NB TR	84.1	F	217.2	F	+	214.8	F	+	NB TR	97.7	F	179.2	F	+	72.3	E
											SB LT	1,052.7	F	1201.2	F	+	127.3	F	SB LT	1,303.9	F	1652.0	F	+	250.3	F		SB LT	1,167.3	F	1,309.0	F	+	162.6	F
		Mitigation Description	Prohibit SB left turns. (Note: mitigated condition includes detoured traffic due to turn prohibition)								Shift 10 seconds from EB / WB phase to NB / SB phase. Prohibit SB left turns. (Note: mitigated condition includes detoured traffic due to turn prohibition)								Partial mitigation: Change offset from 82 seconds to 99 seconds. Prohibit SB left turns. (Note: mitigated condition includes detoured traffic due to turn prohibition)								Shift 9 seconds from EB / WB phase to NB / SB phase. Prohibit SB left turns. (Note: mitigated condition includes detoured traffic due to turn prohibition)							
		Signal Timing Mitigation	No-Action/With-Action				Mitigated				No-Action/With-Action				Mitigated				No-Action/With-Action				Mitigated				No-Action/With-Action				Mitigated			
				G	A	R		G	A	R		G	A	R		G	A	R		G	A	R		G	A	R		G	A	R		G	A	R
			EB / WB	37.0	3.0	2.0	EB / WB	37.0	3.0	2.0	EB / WB	35.0	3.0	2.0	EB / WB	25.0	3.0	2.0	EB / WB	37.0	3.0	2.0	EB / WB	37.0	3.0	2.0	EB / WB	35.0	3.0	2.0	EB / WB	26.0	3.0	2.0
			NB / SB	73.0	3.0	2.0	NB / SB	73.0	3.0	2.0	NB / SB	45.0	3.0	2.0	NB / SB	55.0	3.0	2.0	NB / SB	73.0	3.0	2.0	NB / SB	73.0	3.0	2.0	NB / SB	45.0	3.0	2.0	NB / SB	54.0	3.0	2.0
			Offset		34	sec	Offset		34	sec	Offset		12	sec	Offset		12	sec	Offset		82	sec	Offset		99	sec	Offset		12	sec	Offset		12	sec
			Cycle Length		120	sec	Cycle Length		120	sec	Cycle Length		90	sec	Cycle Length		90	sec	Cycle Length		120	sec	Cycle Length		120	sec	Cycle Length		90	sec	Cycle Length		90	sec
30	Front Street and Canal Street	Impacts	Movement	No-Action		With-Action			Mitigated		Movement	No-Action		With-Action			Mitigated		Movement	No-Action		With-Action			Mitigated		Movement	No-Action		With-Action			Mitigated	
		Mitigation Description	Increased proposed cycle length from 60 seconds to 90 seconds for consistency with proposed mitigation at adjacent intersections on Front Street.								Increased proposed cycle length from 60 seconds to 90 seconds for consistency with proposed mitigation at adjacent intersections on Front Street.								Increased proposed cycle length from 60 seconds to 90 seconds for consistency with proposed mitigation at adjacent intersections on Front Street.								Increased proposed cycle length from 60 seconds to 90 seconds for consistency with proposed mitigation at adjacent intersections on Front Street.							
		Signal Timing Mitigation	No-Action/With-Action				Mitigated				No-Action/With-Action				Mitigated				No-Action/With-Action				Mitigated				No-Action/With-Action				Mitigated			
				G	A	R		G	A	R		G	A	R		G	A	R		G	A	R		G	A	R		G	A	R		G	A	R
			EB	19.0	3.0	2.0	EB	25.0	3.0	2.0	EB	19.0	3.0	2.0	EB	35.0	3.0	2.0	EB	19.0	3.0	2.0	EB	32.0	3.0	2.0	EB	19.0	3.0	2.0	EB	35.0	3.0	2.0
			NB / SB	31.0	3.0	2.0	NB / SB	55.0	3.0	2.0	NB / SB	31.0	3.0	2.0	NB / SB	45.0	3.0	2.0	NB / SB	31.0	3.0	2.0	NB / SB	48.0	3.0	2.0	NB / SB	31.0	3.0	2.0	NB / SB	45.0	3.0	2.0
			Offset		0	sec	Offset		0	sec	Offset		0	sec	Offset		0	sec	Offset		0	sec	Offset		0	sec	Offset		0	sec	Offset		0	sec
			Cycle Length		60	sec	Cycle Length		90	sec	Cycle Length		60	sec	Cycle Length		90	sec	Cycle Length		60	sec	Cycle Length		90	sec	Cycle Length		60	sec	Cycle Length		90	sec
31	Bay Street and Broad Street	Impacts	Movement	No-Action		With-Action			Mitigated		Movement	No-Action		With-Action			Mitigated		Movement	No-Action		With-Action			Mitigated		Movement	No-Action		With-Action			Mitigated	
																			EB LR	37.5	D	114.0	F	+										
																			EB L						43.8	D								
																			EB R						40.2	D								
			NB LT	18.9	B	69.0	E	+	33.5	C	NB LT	1,234.7	F	1,418.4	F	+	1,087.7	F	NB LT	1,091.2	F	1,867.4	F	+	1,632.7	F	+	NB LT	1,024.5	F	1,339.0	F	+	995.2	F
											SB T	136.3	F	186.7	F	+	102.6	F	SB T	62.0	E	133.8	F	+	87.7	F	+	SB T	180.6	F	229.5	F	+	128.4	F
		Mitigation Description	Re-stripe EB approach as one 14' L lane (100' turn bay) and one 11' TR lane. Extend " No Parking Anytime" regulation on EB approach by 75' (3 parking spaces will be removed). Shift 3 seconds from EB phase to NB / SB phase.								Re-stripe EB approach as one 14' L lane (100' turn bay) and one 11' TR lane. Extend " No Parking Anytime" regulation on EB approach by 75' (3 parking spaces will be removed). Shift 7 seconds from EB phase to NB / SB phase.								Partial mitigation: Re-stripe EB approach as one 14' L lane (100' turn bay) and one 11' TR lane. Extend " No Parking Anytime" regulation on EB approach by 75' (3 spaces will be removed). Shift 6 seconds from EB phase to NB / SB phase.								Re-stripe EB approach as one 14' L lane (100' turn bay) and one 11' TR lane. Extend " No Parking Anytime" regulation on EB approach by 75' (3 parking spaces will be removed). Shift 8 seconds from EB phase to NB / SB phase.							
		Signal Timing Mitigation	No-Action/With-Action				Mitigated				No-Action/With-Action				Mitigated				No-Action/With-Action				Mitigated				No-Action/With-Action				Mitigated			
				G	A	R		G	A	R		G	A	R		G	A	R		G	A	R		G	A	R		G	A	R		G	A	R
			LPI	2.0	3.0	2.0	LPI	2.0	3.0	2.0	LPI	2.0	3.0	2.0	LPI	2.0	3.0	2.0	LPI	2.0	3.0	2.0	LPI	2.0	3.0	2.0	LPI	2.0	3.0	2.0	LPI	2.0	3.0	2.0
			EB	33.0	3.0	2.0	EB	30.0	3.0	2.0	EB	27.0	3.0	2.0	EB	20.0	3.0	2.0	EB	33.0	3.0	2.0	EB	27.0	3.0	2.0	EB	27.0	3.0	2.0	EB	19.0	3.0	2.0
			NB / SB	70.0	3.0	2.0	NB / SB	73.0	3.0	2.0	NB / SB	46.0	3.0	2.0	NB / SB	53.0	3.0	2.0	NB / SB	70.0	3.0	2.0	NB / SB	76.0	3.0	2.0	NB / SB	46.0	3.0	2.0	NB / SB	54.0	3.0	2.0
			Offset		26	sec	Offset		26	sec	Offset		6	sec	Offset		6	sec	Offset		90	sec	Offset		90	sec	Offset		6	sec	Offset		6	sec
			Cycle Length		120	sec	Cycle Length		120	sec	Cycle Length		90	sec	Cycle Length		90	sec	Cycle Length		120	sec	Cycle Length		120	sec	Cycle Length		90	sec	Cycle Length		90	sec

Table 21-5: Proposed Traffic Mitigation Table (con't)

	Intersection		Weekday AM Peak Hour								Weekday MD Peak Hour								Weekday PM Peak Hour								Saturday MD Peak Hour							
35	Victory Boulevard and Cebra Avenue	Impacts	Movement	No-Action		With-Action			Mitigated		Movement	No-Action		With-Action			Mitigated		Movement	No-Action		With-Action			Mitigated		Movement	No-Action		With-Action			Mitigated	
			WB L	60.5	E	76.0	E	+	76.0	E	+	NB LTR	35.4	D	52.7	D	+	52.6	D	+	EB L	150.8	F	197.4	F	+	197.4	F	+	NB LTR	37.7	D	50.5	D	+	36.5	D
												SB LTR	105.3	F	181.5	F	+	181.5	F	+	WB TR	76.6	E	87.0	F	+	87.0	F	+	SB LTR	65.3	E	103.8	F	+	67.5	E
																					SB LT	47.0	D	113.6	F	+	113.6	F	+								
		Mitigation Description	Unmitigable								Unmitigable								Unmitigable								Shift 3 seconds from EB / WB phase to NB / SB phase.							
		Signal Timing Mitigation	No-Action/With-Action				Mitigated				No-Action/With-Action				Mitigated				No-Action/With-Action				Mitigated				No-Action/With-Action				Mitigated			
				G	A	R		G	A	R		G	A	R		G	A	R		G	A	R		G	A	R		G	A	R		G	A	R
			LPI	5.0	2.0	0.0	LPI	5.0	2.0	0	LPI	5.0	2.0	0	LPI	5.0	2.0	0	LPI	5.0	2.0	0	LPI	5.0	2.0	0	LPI	5.0	2.0	0	LPI	5.0	2.0	0
			EB / WB	31.0	3.0	2.0	EB / WB	31.0	3.0	2.0	EB / WB	26.0	3.0	2.0	EB / WB	26.0	3.0	2.0	EB / WB	29.0	3.0	2.0	EB / WB	29.0	3.0	2.0	EB / WB	26.0	3.0	2.0	EB / WB	23.0	3.0	2.0
			NB / SB	72.0	3.0	2.0	NB / SB	72.0	3.0	2.0	NB / SB	47.0	3.0	2.0	NB / SB	47.0	3.0	2.0	NB / SB	74.0	3.0	2.0	NB / SB	74.0	3.0	2.0	NB / SB	47.0	3.0	2.0	NB / SB	50.0	3.0	2.0
			Offset		112	sec	Offset		112	sec	Offset		0	sec	Offset		0	sec	Offset		57	sec	Offset		57	sec	Offset		0	sec	Offset		0	sec
			Cycle Length		120	sec	Cycle Length		120	sec	Cycle Length		90	sec	Cycle Length		90	sec	Cycle Length		120	sec	Cycle Length		120	sec	Cycle Length		90	sec	Cycle Length		90	sec
36	Victory Boulevard and Jersey Street	Impacts	Movement	No-Action		With-Action			Mitigated		Movement	No-Action		With-Action			Mitigated		Movement	No-Action		With-Action			Mitigated		Movement	No-Action		With-Action			Mitigated	
											EB L	43.6	D	235.8	F	+	235.8	F	+	EB L	66.3	E	807.5	F	+	807.5	F	+	EB L	36.0	D	91.7	F	+	96.8	F	+
											EB T	39.7	D	68.2	E	+	68.3	E	+									EB T	42.9	D	58.0	E	+	59.9	E	+
											WB T	70.0	E	103.6	F	+	103.9	F	+	WB T	79.3	E	93.0	F	+	92.7	F	+	WB T	50.2	D	64.2	E	+	64.2	E	+
			SB LR	40.9	D	50.2	D	+	44.3	D	SB LR	28.3	C	67.5	E	+	67.5	E	+	SB LR	43.3	D	70.5	E	+	70.5	E	+								
		Mitigation Description	Shift 3 seconds from EB / WB phase to SB phase.								Unmitigable								Unmitigable								Unmitigable							
		Signal Timing Mitigation	No-Action/With-Action				Mitigated				No-Action/With-Action				Mitigated				No-Action/With-Action				Mitigated				No-Action/With-Action				Mitigated			
				G	A	R		G	A	R		G	A	R		G	A	R		G	A	R		G	A	R		G	A	R		G	A	R
			EB / WB	76.0	3.0	2.0	EB / WB	73.0	3.0	2.0	EB / WB	49.0	3.0	2.0	EB / WB	49.0	3.0	2.0	EB / WB	77.0	3.0	2.0	EB / WB	77.0	3.0	2.0	EB / WB	49.0	3.0	2.0	EB / WB	49.0	3.0	2.0
			SB	34.0	3.0	2.0	SB	37.0	3.0	2.0	SB	31.0	3.0	2.0	SB	31.0	3.0	2.0	SB	33.0	3.0	2.0	SB	33.0	3.0	2.0	SB	31.0	3.0	2.0	SB	31.0	3.0	2.0
			Offset		103	sec	Offset		103	sec	Offset		0	sec	Offset		0	sec	Offset		33	sec	Offset		33	sec	Offset		0	sec	Offset		0	sec
			Cycle Length		120	sec	Cycle Length		120	sec	Cycle Length		90	sec	Cycle Length		90	sec	Cycle Length		120	sec	Cycle Length		120	sec	Cycle Length		90	sec	Cycle Length		90	sec
38	Victory Boulevard and Forest Avenue	Impacts	Movement	No-Action		With-Action			Mitigated		Movement	No-Action		With-Action			Mitigated		Movement	No-Action		With-Action			Mitigated		Movement	No-Action		With-Action			Mitigated	
											NB L	52.2	D	103.9	F	+	51.6	D		NB L	30.4	C	86.4	F	+	69.7	E	+	NB L	67.8	E	100.8	F	+	63.9	E	
											SB T	75.8	E	80.3	F	+	74.1	E		SB T	74.1	E	79.8	E	+	78.1	E	+	SB T	64.8	E	78.7	E	+	67.7	E	
		Mitigation Description									Shift 3 seconds from EB phase to NB / SB phase.								Partial mitigation: Shift 1 second from EB phase to NB / SB phase.								Shift 2 seconds from EB phase to NB / SB phase.							
		Signal Timing Mitigation									No-Action/With-Action				Mitigated				No-Action/With-Action				Mitigated				No-Action/With-Action				Mitigated			
												G	A	R		G	A	R		G	A	R		G	A	R		G	A	R		G	A	R
											LPI	5.0	2.0	0	LPI	5.0	2.0	0	LPI	5.0	2.0	0	LPI	5.0	2.0	0	LPI	5.0	2.0	0	LPI	5.0	2.0	0
											EB	27.0	3.0	2.0	EB	24.0	3.0	2.0	EB	29.0	3.0	2.0	EB	28.0	3.0	2.0	EB	27.0	3.0	2.0	EB	25.0	3.0	2.0
											NB / SB	46.0	3.0	2.0	NB / SB	49.0	3.0	2.0	NB / SB	74.0	3.0	2.0	NB / SB	75.0	3.0	2.0	NB / SB	46.0	3.0	2.0	NB / SB	48.0	3.0	2.0
											Offset		0	sec	Offset		0	sec	Offset		77	sec	Offset		77	sec	Offset		0	sec	Offset		0	sec
											Cycle Length		90	sec	Cycle Length		90	sec	Cycle Length		120	sec	Cycle Length		120	sec	Cycle Length		90	sec	Cycle Length		90	sec

Table 21-5: Proposed Traffic Mitigation Table (con't)

	Intersection		Weekday AM Peak Hour												Weekday MD Peak Hour												Weekday PM Peak Hour												Saturday MD Peak Hour											
43	Broad Street and Targee Street	Impacts	Movement	No-Action		With-Action			Mitigated																																									
			EB LT	47.4	D	53.7	D	+	29.3	C																																								
			NB LT	52.5	D	58.7	E	+	54.3	D																																								
		Mitigation Description	Change offset from 10 seconds to 92 seconds. Shift 1 second from EB / WB phase to NB phase.																																													
		Signal Timing Mitigation	No-Action/With-Action					Mitigated																																								
				G	A	R			G	A	R																																					
			EB / WB	43.0	3.0	2.0		EB / WB	42.0	3.0	2.0																																						
			NB	67.0	3.0	2.0		NB	68.0	3.0	2.0																																					
			Offset		10	sec		Offset		92	sec																																						
			Cycle Length		120	sec		Cycle Length		120	sec																																						
44	Vanderbilt Avenue and Tompkins Avenue	Impacts	Movement	No-Action		With-Action			Mitigated																																								
			EB LTR	40.4	D	49.9	D	+	49.9	D	+																																						
			NB LTR	177.2	F	220.2	F	+	220.2	F	+																																						
			SB LTR	99.8	F	113.7	F	+	113.7	F	+																																						
		Mitigation Description	Unmitigable																																													
		Signal Timing Mitigation	No-Action/With-Action					Mitigated																																								
				G	A	R			G	A	R																																					
			EB / WB	62.0	3.0	2.0		EB / WB	62.0	3.0	2.0																																						
			LPI	2.0	3.0	2.0		LPI	2.0	3.0	2.0																																						
			NB / SB	41.0	3.0	2.0		NB / SB	41.0	3.0	2.0																																						
			Offset		25	sec		Offset		25	sec																																						
			Cycle Length		120	sec		Cycle Length		120	sec																																						
45	Bay Street and Vanderbilt Avenue	Impacts	Movement	No-Action		With-Action			Mitigated																																								
			NB LT	13.9	B	46.8	D	+	38.4	D																																								
		Mitigation Description	Shift 1 second from EB phase to NB / SB phase.																																												
		Signal Timing Mitigation	No-Action/With-Action					Mitigated																																								
				G	A	R			G	A	R																																					
			EB	37.0	3.0	2.0		EB	36.0	3.0	2.0																																						
			NB / SB	73.0	3.0	2.0		NB / SB	74.0	3.0	2.0																																						
			Offset		1	sec		Offset		1	sec																																						
			Cycle Length		120	sec		Cycle Length		120	sec																																						

	Intersection		Weekday AM Peak Hour												Weekday MD Peak Hour												Weekday PM Peak Hour												Saturday MD Peak Hour											
43	Broad Street and Targee Street	Impacts	Movement	No-Action		With-Action			Mitigated																																									
			EB LT	47.4	D	53.7	D	+	29.3	C																																								
			NB LT	52.5	D	58.7	E	+	54.3	D																																								
		Mitigation Description	Change offset from 10 seconds to 92 seconds. Shift 1 second from EB / WB phase to NB phase.																																													
		Signal Timing Mitigation	No-Action/With-Action					Mitigated																																								
				G	A	R			G	A	R																																					
			EB / WB	43.0	3.0	2.0		EB / WB	42.0	3.0	2.0																																						
			NB	67.0	3.0	2.0		NB	68.0	3.0	2.0																																					
			Offset		10	sec		Offset		92	sec																																						
			Cycle Length		120	sec		Cycle Length		120	sec																																						
44	Vanderbilt Avenue and Tompkins Avenue	Impacts	Movement	No-Action		With-Action			Mitigated																																								
			EB LTR	40.4	D	49.9	D	+	49.9	D	+																																						
			NB LTR	177.2	F	220.2	F	+	220.2	F	+																																						
			SB LTR	99.8	F	113.7	F	+	113.7	F	+																																						
		Mitigation Description	Unmitigable																																													
		Signal Timing Mitigation	No-Action/With-Action					Mitigated																																								
				G	A	R			G	A	R																																					
			EB / WB	62.0	3.0	2.0		EB / WB	62.0	3.0	2.0																																						
			LPI	2.0	3.0	2.0		LPI	2.0	3.0	2.0																																						
			NB / SB	41.0	3.0	2.0		NB / SB	41.0	3.0	2.0																																						
			Offset		25	sec		Offset		25	sec																																						
			Cycle Length		120	sec		Cycle Length		120	sec																																						
45	Bay Street and Vanderbilt Avenue	Impacts	Movement	No-Action		With-Action			Mitigated																																								
			NB LT	13.9	B	46.8	D	+	38.4	D																																								
		Mitigation Description	Shift 1 second from EB phase to NB / SB phase.																																												
		Signal Timing Mitigation	No-Action/With-Action					Mitigated																																								
				G	A	R			G	A	R																																					
			EB	37.0	3.0	2.0		EB	36.0	3.0	2.0																																						
			NB / SB	73.0	3.0	2.0		NB / SB	74.0	3.0	2.0																																						
			Offset		1	sec		Offset		1	sec																																						
			Cycle Length		120	sec		Cycle Length		120	sec																																						

Table 21-5: Proposed Traffic Mitigation Table(con't)

	Intersection		Weekday AM Peak Hour					Weekday MD Peak Hour					Weekday PM Peak Hour					Saturday MD Peak Hour				
47	Bay Street and Edgewater Drive	Impacts	Movement	No-Action	With-Action	Mitigated		Movement	No-Action	With-Action	Mitigated		Movement	No-Action	With-Action	Mitigated		Movement	No-Action	With-Action	Mitigated	
																		SB T	36.9 D	55.5 E +	37.8 D	
		Mitigation Description																Shift 2 seconds from WB / NWB phase to NB / SB phase.				
		Signal Timing Mitigation																No-Action/With-Action			Mitigated	
																			G	A	R	G	A	R
																		WB / NWB	31.0	3.0	2.0	WB / NWB	29.0	3.0	2.0
																		NB / SB	49.0	3.0	2.0	NB / SB	51.0	3.0	2.0
																		Offset		45	sec	Offset		45	sec
																		Cycle Length		90	sec	Cycle Length		90	sec
48	Bay Street and Hylan Boulevard	Impacts	Movement	No-Action	With-Action	Mitigated		Movement	No-Action	With-Action	Mitigated		Movement	No-Action	With-Action	Mitigated		Movement	No-Action	With-Action	Mitigated	
								EB LTR	81.1 F	110.0 F +	110.0 F +		EB LTR	95.8 F	169.4 F +	169.4 F +		EB LTR	77.9 E	110.3 F +	110.3 F +	
			WB LTR	100.6 F	106.0 F +	106.0 F +							WB LTR	89.2 F	92.4 F +	92.4 F +						
			NB LTR	176.2 F	713.8 F +	716.3 F +		NB LTR	1,762.1 F	2463.6 F +	2,463.6 F +		NB LTR	1,326.7 F	1869.2 F +	1,867.8 F +		NB LTR	1,540.4 F	1,909.6 F +	1,909.6 F +	
			SB T	39.1 D	73.0 E +	72.9 E +		SB T	97.0 F	134.6 F +	134.7 F +		SB T	85.3 F	143.6 F +	143.0 F +		SB T	90.6 F	128.0 F +	128.3 F +	
		Mitigation Description	Unmitigable					Unmitigable					Unmitigable					Unmitigable				
		Signal Timing Mitigation	No-Action/With-Action			Mitigated		No-Action/With-Action			Mitigated		No-Action/With-Action			Mitigated		No-Action/With-Action			Mitigated	
				G	A R		G	A R		G	A R		G	A R		G	A R		G	A R		G	A R
			SBR / EBL	13.0	3.0 2.0	SBR / EBL	13.0	3.0 2.0	SBR / EBL	9.0	3.0 2.0	SBR / EBL	9.0	3.0 2.0	SBR / EBL	13.0	3.0 2.0	SBR / EBL	13.0	3.0 2.0	SBR / EBL	9.0	3.0 2.0
			EB / WB	31.0	3.0 2.0	EB / WB	31.0	3.0 2.0	EB / WB	22.0	3.0 2.0	EB / WB	22.0	3.0 2.0	EB / WB	31.0	3.0 2.0	EB / WB	31.0	3.0 2.0	EB / WB	22.0	3.0 2.0
			LPI	2.0	3.0 2.0	LPI	2.0	3.0 2.0	LPI	2.0	3.0 2.0	LPI	2.0	3.0 2.0	LPI	2.0	3.0 2.0	LPI	2.0	3.0 2.0	LPI	2.0	3.0 2.0
			NB / SB	54.0	3.0 2.0	NB / SB	54.0	3.0 2.0	NB / SB	37.0	3.0 2.0	NB / SB	37.0	3.0 2.0	NB / SB	54.0	3.0 2.0	NB / SB	54.0	3.0 2.0	NB / SB	37.0	3.0 2.0
			Offset		55 sec	Offset		55 sec	Offset		0 sec	Offset		0 sec	Offset		61 sec	Offset		61 sec	Offset		0 sec	Offset		0 sec
			Cycle Length		120 sec	Cycle Length		120 sec	Cycle Length		90 sec	Cycle Length		90 sec	Cycle Length		120 sec	Cycle Length		120 sec	Cycle Length		90 sec	Cycle Length		90 sec
49	Bay Street and School Road	Impacts	Movement	No-Action	With-Action	Mitigated		Movement	No-Action	With-Action	Mitigated		Movement	No-Action	With-Action	Mitigated		Movement	No-Action	With-Action	Mitigated	
			EB L	93.1 F	146.1 F +	91.4 F		EB L	195.2 F	252.6 F +	189.8 F		EB L	233.4 F	341.1 F +	306.5 F +		EB L	210.7 F	277.4 F +	197.3 F	
		Mitigation Description	Shift 6 seconds from NB / SB phase to EB / WB phase.					Shift 4 seconds from NB / SB phase to EB / WB phase.					Partial mitigation: Shift 3 seconds from NB / SB phase to EB / WB phase. Change offset from 116 seconds to 36 seconds.					Shift 5 seconds from NB / SB phase to EB / WB phase.				
		Signal Timing Mitigation	No-Action/With-Action			Mitigated		No-Action/With-Action			Mitigated		No-Action/With-Action			Mitigated		No-Action/With-Action			Mitigated	
				G	A R		G	A R		G	A R		G	A R		G	A R		G	A R		G	A R
			EB / WB	45.0	3.0 2.0	EB / WB	51.0	3.0 2.0	EB / WB	38.0	3.0 2.0	EB / WB	42.0	3.0 2.0	EB / WB	63.0	3.0 2.0	EB / WB	66.0	3.0 2.0	EB / WB	38.0	3.0 2.0	EB / WB	43.0	3.0 2.0
			NB / SB	65.0	3.0 2.0	NB / SB	59.0	3.0 2.0	NB / SB	42.0	3.0 2.0	NB / SB	38.0	3.0 2.0	NB / SB	47.0	3.0 2.0	NB / SB	44.0	3.0 2.0	NB / SB	42.0	3.0 2.0	NB / SB	37.0	3.0 2.0
			Offset		0 sec	Offset		0 sec	Offset		25 sec	Offset		25 sec	Offset		116 sec	Offset		36 sec	Offset		25 sec	Offset		25 sec
			Cycle Length		120 sec	Cycle Length		120 sec	Cycle Length		90 sec	Cycle Length		90 sec	Cycle Length		120 sec	Cycle Length		120 sec	Cycle Length		90 sec	Cycle Length		90 sec

The potential significant adverse traffic impacts at the following study locations would be fully mitigated through an increased cycle length. The specific cycle length and signal timing changes for each study intersection are outlined in Table 21-5.

- Front Street and Wave Street (Intersection 25 on Figure 14-6)
  - Potential significant adverse traffic impacts are not expected at this intersection during the Weekday AM, MD, or Saturday MD peak hours; however, increased cycle lengths are recommended for consistency with mitigation measures proposed at adjacent intersections on Front Street.
- Front Street and Prospect Street (Intersection 26 on Figure 14-6)
- Front Street and Canal Street (Intersection 30 on Figure 14-6)
  - Potential significant adverse traffic impacts are not expected at this intersection; however, increased cycle lengths are recommended for consistency with mitigation measures proposed at adjacent intersections on Front Street.

PARTIALLY MITIGATED SIGNIFICANT ADVERSE TRAFFIC IMPACTS

Mitigation measures implemented at the following study locations would partially mitigate significant adverse traffic impacts. The specific signal timing, offset modifications, cycle lengths, and geometric changes for each study intersection are outlined in Table 21-5.

- Richmond Terrace and Jersey Street (Intersection 2 on Figure 14-6)
  - Restriping the westbound approach as one 10-foot left-turn lane and one 11-foot through/right-turn lane for 100 feet, reallocating green time, and modifying offsets would mitigate the potential significant adverse traffic impacts at this intersection for the Weekday AM, MD, and Saturday MD peak hours.
  - Potential significant adverse traffic impacts during the Weekday PM peak hour would be partially mitigated. The implementation of the recommended mitigation measures would result in a new potential significant impact for the westbound through/right-turn lane group during the Weekday PM peak hour, which would be unmitigable.
- Richmond Terrace and Ferry Terminal (parking lot) (Intersection 9 on Figure 14-6)
  - Reallocating green time would mitigate the potential significant adverse traffic impact at this intersection for the Weekday AM peak hour.
  - Potential significant adverse traffic impacts during the Weekday MD, PM, and Saturday MD peak hours would be unmitigable.
- Victory Boulevard and Bay Street (Intersection 12 on Figure 14-6)
  - Proposed mitigation measures at this intersection include the reallocation of green time to allow for a leading northbound left-turn phase as well as modified offsets.
  - Potential significant adverse traffic impacts during the Weekday AM peak hour would be fully mitigated.
  - Potential significant adverse traffic impacts during the Weekday MD, PM, and Saturday MD peak hours would be partially mitigated. The implementation of the recommended mitigation measures would result in a new potential significant impact for the eastbound left-turn/through and southbound right-turn lane groups during the Weekday MD peak hour.

- Bay Street and Hannah Street (Intersection 13 on Figure 14-6)
    - Proposed mitigation measures at this intersection include the reallocation of green time, modified offsets, new protected turn phases, and the reconfiguration of the south leg of the intersection. The northbound direction would include a permanent curb extension and would be restriped as one 5-foot bicycle lane, two 11-foot through/right-turn lanes, and one-11 foot left-turn bay (75 feet long). This mitigation measure would include the removal of on-street parking on the east side of Bay Street between Swan Street and Hannah Street for a distance of approximately 125 feet (6 parking spaces). The west side of the south leg of the intersection would be modified to create a permanent curb extension, which was included as a recommendation in the *TIS*.
    - Potential significant adverse traffic impacts during the Weekday MD, PM, and Saturday MD peak hours would be fully mitigated.
    - Potential significant adverse traffic impacts during the Weekday AM peak hour would be partially mitigated.
- Bay Street and Swan Street/Van Duzer Street (Intersection 15 on Figure 14-6)
    - Reallocating green time and changing the offset would mitigate the potential significant adverse traffic impact at this intersection for the Weekday AM peak hour.
    - Potential significant adverse traffic impacts during the Weekday PM peak hour would be unmitigable.
- Bay Street and Grant Street (Intersection 18 on Figure 14-6)
    - The installation of a new traffic signal would partially mitigate the potential significant adverse traffic impact at this intersection during the Weekday AM peak hour. Signal warrant #4 (Pedestrian Warrant) would be met at this intersection during the Weekday MD, PM, and Saturday MD peak hours.
    - While the installation of a traffic signal would mitigate the potential significant impact for the side street approach during the AM peak hour and create an opportunity for pedestrians to safely cross Bay Street, it would result in additional delay for southbound traffic on Bay Street which would result in a new potential significant adverse traffic impact for the southbound approach during the Weekday AM, MD, PM, and Saturday MD peak hours.
- Bay Street and Baltic Street (Intersection 21 on Figure 14-6)
    - The installation of a new traffic signal is recommended at this intersection to facilitate pedestrian crossings. Signal warrant #4 (Pedestrian Warrant) is met at this intersection during the Weekday AM, MD, PM, and Saturday MD peak hours.
    - While the installation of a traffic signal would create an opportunity for pedestrians to safely cross Bay Street, it would result in additional delay for northbound and southbound traffic on Bay Street which would result in a new potential significant adverse traffic impact for the southbound approach during the Weekday MD, PM, and Saturday MD peak hours.
- Bay Street and Wave Street (Intersection 24 on Figure 14-6)
    - Restriping the westbound approach as one 10-foot left-turn lane (70 feet long) and one 10-foot through/right-turn lane, reallocating green time, modifying offsets, and eliminating parking on the north side of the west approach (4 parking

spaces) would mitigate the potential significant adverse traffic impacts at this intersection for the Weekday AM, MD, and Saturday MD peak hours.
    - Potential significant adverse traffic impacts during the Weekday PM peak hour would be partially mitigated.
- Bay Street and Water Street (Intersection 28 on Figure 14-6)
    - Reallocating green time and modifying offset would mitigate the potential significant adverse traffic impacts at this intersection for the Weekday AM peak hour.
    - Reallocating green time and modifying offset would partially mitigate the potential significant adverse traffic impacts at this intersection for the Weekday MD and Saturday MD peak hours.
    - Potential significant adverse traffic impacts during the Weekday PM peak hour would be unmitigable.
- Bay Street and Canal Street (Intersection 29 on Figure 14-6)
    - Proposed mitigation measures at this intersection include the prohibition of the southbound left-turn movement. Vehicles expected to make southbound left turns at this intersection would continue south on Bay Street, turn right onto Thompson Street, right onto Wright Street, and right onto Canal Street to reach their destination.
    - The analyses of the mitigated conditions at this intersection account for diverted traffic associated with the southbound left-turn prohibition.
    - Prohibiting the southbound left-turn movement would fully mitigate the potential significant adverse traffic impact at this intersection for the Weekday AM peak hour.
    - Prohibiting the southbound left-turn movement and reallocating green time would fully mitigate the potential significant adverse traffic impacts at this intersection for the Weekday MD and Saturday MD peak hours.
    - Prohibiting the southbound left-turn movement and changing the offset would partially mitigate the potential significant adverse traffic impacts at this intersection for the Weekday PM peak hour.
- Bay Street and Broad Street (Intersection 31 on Figure 14-6)
    - Restriping the eastbound approach as one 14-foot left-turn lane (100 feet long) and one 11-foot through/right-turn lane, reallocating green time, and eliminating 3 parking spaces on the south side of the east approach would fully mitigate the potential significant adverse traffic impacts at this intersection for the Weekday AM, MD, and Saturday MD peak hours and partially mitigate the potential significant adverse traffic impacts at this intersection for the Weekday PM peak hour.
- Victory Boulevard and Cebra Avenue (Intersection 35 on Figure 14-6)
    - Reallocating green time would fully mitigate the potential significant adverse traffic impacts at this intersection for the Saturday MD peak hour.
    - Potential significant adverse traffic impacts during the Weekday AM, MD, and PM peak hours would be unmitigable.
- Victory Boulevard and Jersey Street (Intersection 36 on Figure 14-6)
    - Reallocating green time would fully mitigate the potential significant adverse traffic impact at this intersection for the Weekday AM peak hour.

    - Potential significant adverse traffic impacts during the Weekday MD, PM, and Saturday MD peak hours would be unmitigable.
- Victory Boulevard and Forest Avenue (Intersection 38 on Figure 14-6)
    - Reallocating green time would fully mitigate the potential significant adverse traffic impacts at this intersection for the Weekday MD and Saturday MD peak hours.
    - Reallocating green time would partially mitigate the potential significant adverse traffic impacts at this intersection for the Weekday PM peak hour.
- Bay Street and Vanderbilt Avenue (Intersection 45 on Figure 14-6)
    - Reallocating green time would mitigate the potential significant adverse traffic impacts at this intersection for the Weekday AM, MD, and Saturday MD peak hours.
    - Reallocating green time would partially mitigate the potential significant adverse traffic impacts at this intersection for the Weekday PM peak hour.
- Bay Street and School Road (Intersection 49 on Figure 14-6)
    - Reallocating green time would mitigate the potential significant adverse traffic impacts at this intersection for the Weekday AM, MD, and Saturday MD peak hours.
    - Reallocating green time and changing the offset would partially mitigate the potential significant adverse traffic impacts at this intersection for the Weekday PM peak hour.

UNMITIGATABLE SIGNIFICANT ADVERSE TRAFFIC IMPACTS

Due to congested conditions on multiple approaches, constrained right-of-way, and/or low volumes that do not meet signal warrants, signal timing and/or geometric measures to mitigate the potential significant adverse impacts at the following study locations are not feasible. Therefore, these intersections could not be mitigated and the impacts are considered significant and unavoidable.

- Richmond Terrace and Ferry Terminal (bus) (Intersection 8 on Figure 14-6)
    - Potential significant adverse traffic impacts are not expected at this intersection during the Weekday AM peak hour; however, the proposed signal timing change is recommended to help resolve the potential significant adverse traffic impact expected at Richmond Terrace and Ferry Terminal (parking lot) during the Weekday AM peak hour.
- Victory Boulevard and Bay Street/St. Marks Place (Intersection 11 on Figure 14-6)
    - Potential significant adverse traffic impacts are not expected at this intersection during the Weekday AM peak hour; however, the modified offset is recommended to help resolve the potential significant adverse traffic impact expected at Victory Boulevard and Bay Street during the Weekday AM peak hour.
- Bay Street and William Street (Intersection 22 on Figure14-6)
    - The implementation of mitigation measures at adjacent intersections would result in new potential significant impacts for the northbound approach at this intersection during the Weekday MD and Saturday MD peaks hours, which would be unmitigable.
    - Potential significant adverse traffic impacts during the Weekday AM and PM peak hours would be unmitigable.

- Bay Street and Congress Street (Intersection 23 on Figure 14-6)
    - The implementation of mitigation measures at adjacent intersections would result in a new potential significant impact for the northbound approach at this intersection during the Weekday PM peak hour, which would be unmitigable.
- Vanderbilt Avenue and Tomkins Avenue (Intersection 44 on Figure 14-6)
- Bay Street and Hylan Boulevard (Intersection 48 on Figure 14-6)

Tables 21-6 through 21-13 show the v/c ratios, delays, and LOS for impacted lane groups at each intersection with implementation of these mitigation measures and compares them to No-Action and With-Action conditions for the Weekday AM, MD, PM, and Saturday MD peak hours. Tables 21-6 through 21-12 also show that significant adverse impacts would be fully mitigated at all but 11 lane groups at 6 intersections during the Weekday AM peak hour, 24 lane groups at 11 intersections during the Weekday MD peak hour, 44 lane groups at 20 intersections during the Weekday PM peak hour, and 14 lane groups at 9 intersections during the Saturday MD peak hour. In total, impacts to one or more approach movements would remain unmitigated in one or more peak hours at 21 intersections. Consequentially, these impacts would constitute unavoidable significant adverse traffic impacts as a result of the Proposed Actions (refer to Chapter 23, "Unavoidable Adverse Impacts").

Table 21-6: Signalized Level of Service Analysis – Weekday AM Peak Hour No-Action vs. With-Action vs. Mitigated Conditions

#	Intersection & Approach	No-Action Conditions					With-Action Conditions						With-Action With Mitigation Conditions				
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)
	Richmond Terrace and Franklin Avenue																
1	Eastbound	TR	0.77	9.2	A	332	TR	0.81	11.0	B	363		TR	0.79	19.0	B	473
	Westbound	LT	0.88	37.3	D	634	LT	1.09	80.3	F	640	+	LT	1.00	42.5	D	844
	Northbound	LR	0.25	37.1	D	112	LR	0.26	37.1	D	112		LR	0.27	39.0	D	115
		Intersection		22.7	C		Intersection		42.5	D			Intersection		30.4	C	
	Richmond Terrace and Jersey Street																
2	Eastbound	L	1.07	87.4	F	197	L	1.36	208.5	F	360	+	L	1.02	68.7	E	264
		TR	0.70	7.4	A	332	TR	0.75	8.6	A	432		TR	0.71	15.0	B	727
	Westbound	LT	1.06	68.6	E	941	LT	1.18	110.7	F	1051	+					
		R	0.00	7.7	A	1	R	0.00	9.0	A	1						
													L	0.10	9.9	A	12
													TR	0.94	37.9	D	860
	Northbound	L	0.09	35.6	D	37	L	0.09	35.6	D	37		L	0.11	39.9	D	40
		TR	0.26	38.3	D	102	TR	0.27	38.4	D	103		TR	0.32	43.5	D	109
	Southbound	L	0.01	34.0	C	11	L	0.01	34.0	C	11		L	0.02	38.0	D	11
		TR	0.08	35.3	D	43	TR	0.08	35.3	D	43		TR	0.10	39.5	D	45
		Intersection		45.9	D		Intersection		80.4	F			Intersection		33.6	C	
	Richmond Terrace and Westervelt Avenue																
3	Eastbound	TR	0.78	13.9	B	231	TR	0.83	17.0	B	279		TR	0.83	11.7	B	206
	Westbound	LT	0.71	47.0	D	636	LT	0.87	88.8	F	779	+	LT	0.87	43.2	D	779
	Northbound	LR	0.37	35.0	D	158	LR	0.37	35.0	D	158		LR	0.37	35.0	D	158
		Intersection		29.9	C		Intersection		49.6	D			Intersection		27.6	C	
	Hamilton Avenue and Richmond Terrace																
5	Northbound	LT	0.71	13.2	B	139	LT	0.81	19.3	B	147		LT	0.81	19.1	B	151
	Southbound	TR	0.39	9.0	A	87	TR	0.42	9.7	A	101		TR	0.42	9.2	A	101
		Intersection		11.2	B		Intersection		14.9	B			Intersection		14.6	B	
	Wall Street and Richmond Terrace																
7	Westbound	LTR	0.18	28.8	C	75	LTR	0.18	28.8	C	75		LTR	0.18	28.8	C	75
		L	0.23	29.9	C	71	L	0.23	29.9	C	71		L	0.23	29.9	C	71
	Northbound	T	0.48	11.7	B	134	T	0.54	12.9	B	223		T	0.54	11.8	B	141
		R	0.29	10.9	B	63	R	0.29	10.7	B	61		R	0.29	10.0	B	57
	Southbound	LTR	0.46	7.4	A	43	LTR	0.50	7.7	A	45		LTR	0.50	7.2	A	45
		Intersection		11.4	B		Intersection		12.0	B			Intersection		11.2	B	
	Richmond Terrace and Ferry Terminal (bus)																
8	Westbound	L	0.47	45.7	D	173	L	0.47	45.7	D	173		L	0.49	47.2	D	175
		R	0.41	45.5	D	108	R	0.41	45.5	D	108		R	0.42	46.9	D	109
	Northbound	T	0.41	13.2	B	80	T	0.47	18.0	B	80		T	0.46	13.5	B	83
	Southbound	T	0.63	85.6	F	478	T	0.67	88.0	F	512		T	0.66	88.5	F	512
		Intersection		50.2	D		Intersection		52.4	D			Intersection		50.9	D	
	Richmond Terrace and Ferry Terminal (parking lot)																
9	Westbound	L	0.74	55.7	E	315	L	0.74	55.7	E	315		L	0.77	58.7	E	336
		R	0.20	11.8	B	47	R	0.20	11.8	B	47		R	0.21	12.6	B	50
	Northbound	T	0.78	39.0	D	257	T	0.91	51.5	D	358	+	T	0.85	34.2	C	335
		R	0.35	16.1	B	209	R	0.35	16.5	B	233		R	0.34	19.6	B	278
		R	0.32	15.4	B	121	R	0.32	16.0	B	133		R	0.31	18.8	B	159
	Southbound	L	5.82	2211.1	F	573	L	5.70	2156.9	F	573		L	5.82	2210.1	F	574
		TR	0.55	2.6	A	5	TR	0.59	3.4	A	17		TR	0.59	3.4	A	18
		Intersection		285.6	F		Intersection		268.9	F			Intersection		271.4	F	
	Bay Street and Slosson Terrace																
10	Eastbound	LR	0.10	32.7	C	41	LR	0.13	33.3	C	52		LR	0.13	33.3	C	52
	Northbound	L	0.69	30.0	C	158	L	1.07	89.9	F	328	+	L	0.82	42.2	D	299
		T	0.66	14.1	B	254	T	0.72	14.9	B	315		T	0.72	21.0	C	365
	Southbound	TR	0.71	19.9	B	314	TR	0.74	22.2	C	467		TR	0.91	43.6	D	555
		Intersection		18.4	B		Intersection		27.5	C			Intersection		33.3	C	
	Victory Boulevard and Bay Street/St. Marks Place																
11	Eastbound	TR	0.35	6.2	A	56	TR	0.47	9.2	A	107		TR	0.47	12.6	B	151
		R	0.36	6.3	A	43	R	0.38	8.1	A	63		R	0.38	11.5	B	94
	Westbound	T	0.44	16.8	B	248	T	0.51	27.5	C	244		T	0.51	17.0	B	329
		L	0.07	4.9	A	11	L	0.08	5.0	A	11		L	0.08	4.8	A	12
	Southbound	LT	0.44	42.8	D	166	LT	0.45	43.0	D	169		LT	0.45	43.0	D	169
		R	0.35	41.9	D	115	R	0.35	42.2	D	116		R	0.35	42.2	D	116
		Intersection		16.6	B		Intersection		20.5	C			Intersection		18.7	B	

Table 21-6: Signalized Level of Service Analysis – Weekday AM Peak Hour
No-Action vs. With-Action vs. Mitigated Conditions (con't)

#	Intersection & Approach	No-Action Conditions					With-Action Conditions						With-Action With Mitigation Conditions					
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
12	**Victory Boulevard and Bay Street**																	
	Eastbound	L	0.58	31.3	C	197	L	0.82	49.9	D	328	+	L	0.77	41.3	D	312	
		LT	0.58	31.4	C	198	LT	0.77	43.5	D	320		LT	0.72	36.6	D	304	
	Westbound	LTR	0.09	31.8	C	45	LTR	0.40	39.2	D	115		LTR	0.37	36.4	D	111	
	Northbound	L	0.88	32.8	C	123	L	1.15	97.3	F	142	+	L	0.86	44.6	D	159	
		TR	0.67	17.6	B	243	TR	0.75	19.6	B	230		TR	0.78	15.0	B	234	
	Southbound	LT	0.53	7.1	A	43	LT	0.68	9.3	A	48		LT	1.02	40.1	D	416	
		R	0.36	7.0	A	30	R	0.38	7.1	A	32		R	0.63	11.2	B	24	
		Intersection		17.1	B		Intersection		28.0	C			Intersection		28.3	C		
13	**Bay Street and Hannah Street**																	
	Eastbound	LTR	0.09	30.2	C	57	LTR	0.09	30.2	C	57		LTR	0.07	24.6	C	51	
	Westbound	LTR	0.86	56.7	E	518	LTR	1.12	117.1	F	734	+	LTR	0.91	58.7	E	638	
	Northbound	LTR	1.09	82.4	F	352	LTR	1.28	158.2	F	830	+						
													L	0.63	41.8	D	98	
													TR	1.01	98.5	F	656	+
	Southbound	L	1.52	284.4	F	436	L	2.69	798.1	F	555	+	L	1.46	255.8	F	312	
		T	0.39	8.2	A	104	T	0.41	9.7	A	138		T	0.60	34.6	C	231	
		R	0.17	2.1	A	16	R	0.18	3.0	A	20		R	0.26	15.6	B	41	
		Intersection		71.8	E		Intersection		162.4	F			Intersection		82.6	F		
14	**Front Street and Hannah Street**																	
	Eastbound	TR	0.32	4.0	A	61	TR	0.36	3.9	A	63		TR	0.36	3.9	A	63	
	Westbound	LT	0.08	13.2	B	45	LT	0.09	13.2	B	45		LT	0.09	13.2	B	45	
	Northbound	LR	0.56	23.9	C	264	LR	0.77	32.1	C	381		LR	0.77	32.1	C	381	
		Intersection		15.0	B		Intersection		20.0	B			Intersection		20.0	B		
15	**Bay Street and Swan Street/Van Duzer Street**																	
	Eastbound	L	0.94	125.1	F	362	L	1.11	128.3	F	449	+	L	0.95	119.2	F	407	
		LTR	1.09	125.2	F	488	LTR	1.06	127.8	F	467		LTR	0.91	117.0	F	426	
	Westbound	LTR	0.03	30.0	C	11	LTR	0.03	30.0	C	11		LTR	0.02	25.3	C	10	
	Northbound	LTR	0.45	6.8	A	46	LTR	0.57	9.4	A	48		LTR	0.62	29.9	C	318	
	Southbound	LTR	0.45	11.2	B	111	LTR	0.48	10.7	B	105		LTR	0.52	18.9	B	155	
		Intersection		42.4	D		Intersection		41.5	D			Intersection		49.5	D		
18	**Bay Street and Grant Street**																	
	Eastbound	**Unsignalized**					**Unsignalized**						LTR	0.36	42.8	D	123	
	Westbound												R	0.05	36.4	D	26	
	Northbound												TR	0.41	7.2	A	125	
	Southbound												T	0.96	76.8	E	972	+
													Intersection		42.7	D		
19	**Van Duzer Street and Clinton Street**																	
	Westbound	TR	0.22	41.1	D	60	TR	0.28	43.9	D	75		TR	0.28	36.9	D	86	
	Northbound	LT	0.64	13.8	B	305	LT	0.67	14.8	B	333		LT	0.67	14.8	B	333	
		Intersection		16.5	B		Intersection		18.2	B			Intersection		17.4	B		
20	**Bay Street and Clinton Street**																	
	Westbound	LTR	0.11	30.6	C	59	LTR	0.12	31.1	C	59		LTR	0.14	33.9	C	63	
	Northbound	L	0.07	20.3	C	17	L	0.23	27.7	C	29		L	0.17	5.6	A	3	
		TR	0.41	24.6	C	305	TR	0.51	27.5	C	398		TR	0.48	5.3	A	47	
	Southbound	L	0.17	12.3	B	51	L	0.22	16.1	B	54		L	0.20	3.9	A	6	
		TR	0.84	33.8	C	563	TR	0.97	66.1	E	940	+	TR	0.92	31.2	C	356	
		Intersection		29.0	C		Intersection		45.8	D			Intersection		18.6	B		
21	**Bay Street and Baltic Street**																	
	Eastbound	**Unsignalized**					**Unsignalized**						LTR	0.19	38.7	D	61	
	Westbound												LTR	0.01	35.0	C	10	
	Northbound												TR	0.75	16.5	B	360	
	Southbound												LT	0.97	30.2	C	922	
													Intersection		24.1	C		
24	**Bay Street and Wave Street**																	
	Westbound	LTR	0.18	28.4	C	53	LTR	0.19	28.2	C	49							
													L	0.13	39.8	D	44	
													TR	0.19	41.3	D	60	
	Northbound	LT	0.54	18.7	B	264	LT	0.70	18.5	B	327		LT	0.60	13.2	B	380	
		R	0.11	14.0	B	43	R	0.13	12.0	B	34		R	0.11	7.7	A	37	
	Southbound	L	0.26	7.0	A	23	L	0.38	10.6	B	27		L	0.27	2.2	A	3	
		TR	0.85	23.5	C	807	TR	1.08	77.8	E	1021	+	TR	0.94	17.2	B	42	
		Intersection		20.8	C		Intersection		49.0	D			Intersection		15.6	B		
25	**Front Street and Wave Street**																	
	Eastbound	LR	0.30	19.3	B	68	LR	0.32	19.9	B	60		LR	0.32	26.3	C	78	
	Northbound	LT	0.66	5.0	A	29	LT	0.79	7.6	A	23		LT	0.72	8.8	A	108	
	Southbound	TR	0.40	10.7	B	116	TR	0.55	13.2	B	176		TR	0.51	14.4	B	223	
		Intersection		8.7	A		Intersection		11.0	B			Intersection		12.7	B		
26	**Front Street and Prospect Street**																	
	Eastbound	LTR	0.26	21.8	C	47	LTR	0.26	22.2	C	47		LTR	0.33	37.0	D	80	
	Westbound	LTR	0.83	45.1	D	227	LTR	0.84	45.7	D	228		LTR	0.71	40.7	D	255	
	Northbound	TR	0.77	41.6	D	218	TR	0.96	70.6	E	514	+	TR	0.76	27.0	C	249	
	Southbound	LT	0.83	31.7	C	301	LT	1.25	152.2	F	665	+	LT	0.84	29.9	C	429	
		Intersection		37.9	D		Intersection		93.2	F			Intersection		31.7	C		

Table 21-6: Signalized Level of Service Analysis – Weekday AM Peak Hour No-Action vs. With-Action vs. Mitigated Conditions (con't)

#	Intersection & Approach	No-Action Conditions					With-Action Conditions						With-Action With Mitigation Conditions					
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
	Van Duzer Street and Beach Street																	
27	Eastbound	LT	0.87	57.7	E	391	LT	0.90	62.5	E	413	+	LT	0.88	58.1	E	404	
	Westbound	TR	0.25	28.9	C	106	TR	0.26	29.1	C	110		TR	0.25	28.3	C	109	
	Northbound	L	0.32	15.5	B	172	L	0.33	15.7	B	178		L	0.34	16.3	B	182	
		TR	0.88	37.0	D	731	TR	0.91	41.6	D	783		TR	0.93	44.4	D	793	
		Intersection		37.2	D		Intersection		40.6	D			Intersection		41.0	D		
	Bay Street and Water Street																	
28	Westbound	LTR	0.20	32.9	C	85	LTR	0.21	33.0	C	85		LTR	0.31	44.8	D	98	
	Northbound	L	0.56	24.5	C	73	L	1.72	388.5	F	190	+	L	0.70	23.1	C	19	
		T	0.60	24.7	C	277	T	0.77	73.9	E	419	+	T	0.67	7.0	A	109	
	Southbound	TR	0.81	67.8	E	299	TR	1.04	80.7	F	862	+	TR	0.90	40.9	D	368	
		Intersection		47.0	D		Intersection		93.4	F			Intersection		27.3	C		
	Bay Street and Canal Street																	
29	Eastbound	L	0.34	38.1	D	112	L	0.37	39.3	D	119		L	0.37	37.8	D	119	
		TR	0.20	32.2	C	89	TR	0.20	32.3	C	89		TR	0.22	32.6	C	99	
	Westbound	LTR	0.18	29.8	C	49	LTR	0.31	33.9	C	68		LTR	0.31	36.2	D	91	
	Northbound	TR	0.61	8.2	A	81	TR	0.77	58.0	E	102	+	TR	0.77	15.0	B	204	
	Southbound	LT	0.71	71.9	E	694	LT	0.94	75.0	E	755		T	0.93	45.8	D	853	
		Intersection		40.6	D		Intersection		62.9	E			Intersection		32.1	C		
	Front Street and Canal Street																	
30	Eastbound	LR	0.39	24.1	C	79	LR	0.41	23.3	C	77		LR	0.47	32.3	C	120	
	Northbound	LT	0.42	11.0	B	122	LT	0.53	12.6	B	162		LT	0.44	11.2	B	181	
	Southbound	TR	0.55	10.9	B	92	TR	0.68	10.8	B	90		TR	0.58	5.3	A	93	
		Intersection		13.0	B		Intersection		13.1	B			Intersection		11.0	B		
	Bay Street and Broad Street																	
31	Eastbound	LR	0.34	41.0	D	186	LR	0.44	42.3	D	235							
													L	0.28	36.6	D	129	
													R	0.31	38.1	D	115	
	Northbound	LT	0.62	18.9	B	332	LT	1.04	69.0	E	691	+	LT	0.91	33.5	C	560	
	Southbound	T	0.71	11.0	B	221	T	0.92	39.2	D	404		T	0.88	26.2	C	287	
		R	0.12	6.9	A	35	R	0.18	11.8	B	52		R	0.18	10.3	B	48	
		Intersection		16.8	B		Intersection		48.1	D			Intersection		28.7	C		
	Richmond Terrace and Clove Road																	
32	Eastbound	LT	0.89	27.9	C	895	LT	0.93	33.7	C	962		LT	0.93	33.7	C	962	
		R	0.16	4.4	A	27	R	0.16	4.5	A	27		R	0.16	4.5	A	27	
	Westbound	L	0.56	25.1	C	56	L	0.68	42.0	D	87		L	0.68	42.0	D	87	
		TR	0.57	12.4	B	284	TR	0.66	15.3	B	390		TR	0.66	15.3	B	390	
	Northbound	LTR	0.44	38.4	D	193	LTR	0.47	39.2	D	208		LTR	0.47	39.2	D	208	
		Intersection		22.5	C		Intersection		26.8	C			Intersection		26.8	C		
	Victory Boulevard and Cebra Avenue																	
35	Eastbound	L	0.55	56.2	E	95	L	0.56	57.5	E	96		L	0.56	57.5	E	96	
		TR	0.82	60.2	E	304	TR	0.82	60.2	E	304		TR	0.82	60.2	E	304	
	Westbound	L	0.59	60.5	E	112	L	0.74	76.0	E	152	+	L	0.74	76.0	E	152	+
		TR	0.69	50.2	D	292	TR	0.71	51.3	D	300		TR	0.71	51.3	D	300	
	Northbound	LT	0.66	16.2	B	284	LT	0.76	19.8	B	421		LT	0.76	19.8	B	421	
		R	0.11	10.0	A	30	R	0.12	10.0	B	33		R	0.12	10.0	B	33	
	Southbound	LTR	0.68	19.7	B	473	LTR	0.93	42.2	D	649		LTR	0.93	41.2	D	650	
		Intersection		31.8	C	0	Intersection		38.9	D			Intersection		38.6	D		
	Victory Boulevard and Jersey Street																	
36	Eastbound	L	0.18	8.1	A	27	L	0.22	9.4	A	34		L	0.23	11.4	B	38	
		T	0.68	12.1	B	238	T	0.78	15.0	B	351		T	0.81	18.7	B	382	
	Westbound	T	0.50	21.2	C	303	T	0.55	20.4	C	325		T	0.57	24.7	C	334	
		R	0.10	13.3	B	47	R	0.16	12.9	B	61		R	0.17	16.7	B	74	
	Southbound	LR	0.47	40.9	D	172	LR	0.68	50.2	D	242	+	LR	0.61	44.3	D	232	
		Intersection		18.0	B		Intersection		20.8	C			Intersection		23.3	C		
	Victory Boulevard and Forest Avenue																	
38	Eastbound	LR	0.72	44.1	D	253	LR	0.75	45.6	D	268		LR	0.75	45.6	D	268	
	Northbound	L	0.24	14.5	B	74	L	0.27	15.0	B	76		L	0.27	15.0	B	76	
		T	0.58	74.4	E	373	T	0.66	75.8	E	454		T	0.66	75.8	E	454	
	Southbound	T	0.40	21.3	C	186	T	0.45	24.1	C	216		T	0.45	24.1	C	216	
		R	0.32	4.1	A	22	R	0.34	4.2	A	25		R	0.34	4.2	A	25	
		Intersection		41.0	D		Intersection		42.8	D			Intersection		42.8	D		

Table 21-6: Signalized Level of Service Analysis – Weekday AM Peak Hour No-Action vs. With-Action vs. Mitigated Conditions (con't)

#	Intersection & Approach	No-Action Conditions					With-Action Conditions						With-Action With Mitigation Conditions					
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
41	**Broad Street and Canal Street**																	
	Eastbound	L	0.24	12.3	B	97	L	0.26	12.4	B	91		L	0.26	10.3	B	91	
		TR	0.47	15.9	B	219	TR	0.52	16.2	B	235		TR	0.52	14.0	B	252	
	Westbound	LTR	0.16	16.9	B	86	LTR	0.22	16.1	B	102		LTR	0.25	17.0	B	111	
	Northbound	L	0.47	44.2	D	102	L	0.50	46.2	D	103		L	0.50	46.2	D	103	
		TR	0.54	41.2	D	199	TR	0.53	41.1	D	198		TR	0.53	41.1	D	198	
	Southbound	LT	0.39	37.2	D	161	LT	0.47	39.3	D	187		LT	0.47	39.3	D	187	
		Intersection		26.5	C		Intersection		26.4	C			Intersection		25.6	C		
42	**Broad Street and Van Duzer Street**																	
	Westbound	L	0.74	91.9	F	225	L	0.78	89.9	F	243		L	0.78	30.7	C	257	
	Southbound	L	0.27	6.4	A	122	L	0.29	8.3	A	143		L	0.29	8.3	A	143	
		T	0.50	8.8	A	301	T	0.53	11.5	B	356		T	0.53	11.5	B	356	
		Intersection		22.0	C		Intersection		26.7	C			Intersection		14.6	B		
43	**Broad Street and Targee Street**																	
	Eastbound	LT	0.55	47.4	D	336	LT	0.56	53.7	D	336	+	LT	0.57	29.3	C	279	
	Westbound	TR	0.36	41.7	D	193	TR	0.47	41.3	D	249		TR	0.48	38.5	D	267	
	Northbound	LT	0.98	52.5	D	834	LT	1.00	58.7	E	868	+	LT	0.99	54.3	D	858	
		R	0.45	18.5	B	188	R	0.51	20.1	C	225		R	0.50	19.3	B	220	
		Intersection		44.4	D		Intersection		48.2	D			Intersection		41.2	D		
44	**Vanderbilt Avenue and Tompkins Avenue**																	
	Eastbound	LTR	0.88	40.4	D	741	LTR	0.95	49.9	D	826	+	LTR	0.95	49.9	D	826	+
	Westbound	LTR	0.43	15.2	B	145	LTR	0.51	16.2	B	141		LTR	0.51	16.5	B	144	
	Northbound	LTR	1.26	177.2	F	476	LTR	1.37	220.2	F	529	+	LTR	1.37	220.2	F	529	+
	Southbound	LTR	1.08	99.8	F	587	LTR	1.12	113.7	F	618	+	LTR	1.12	113.7	F	618	+
		Intersection		79.8	E		Intersection		94.6	F			Intersection		94.6	F		
45	**Bay Street and Vanderbilt Avenue**																	
	Eastbound	L	0.44	24.7	C	96	L	0.63	27.7	C	141		L	0.64	28.7	C	144	
		R	0.44	24.9	C	89	R	0.44	25.4	C	82		R	0.45	26.2	C	84	
	Northbound	LT	0.74	13.9	B	235	LT	0.99	46.8	D	659	+	LT	0.96	38.4	D	644	
	Southbound	T	0.63	28.8	C	491	T	0.81	35.8	D	567		T	0.80	33.8	C	584	
		R	0.25	5.9	A	77	R	0.31	8.2	A	86		R	0.31	7.3	A	83	
		Intersection		20.2	C		Intersection		33.1	C			Intersection		30.0	C		
47	**Bay Street and Edgewater Drive**																	
	Westbound	LR	0.42	34.5	C	182	LR	0.51	36.2	D	224		LR	0.51	36.2	D	224	
	Northbound	TR	0.37	8.5	A	70	TR	0.45	9.3	A	62		TR	0.45	9.3	A	62	
	Southbound	T	0.69	12.3	B	361	T	0.85	23.4	C	533		T	0.85	23.4	C	556	
	Northwestbound	R	0.19	0.5	A	0	R	0.20	0.6	A	0		R	0.20	0.6	A	0	
		Intersection		14.9	B		Intersection		19.8	B			Intersection		19.8	B		
48	**Bay Street and Hylan Boulevard**																	
	Eastbound	LTR	0.73	29.8	C	208	LTR	0.86	41.0	D	505		LTR	0.86	41.0	D	505	
	Westbound	LTR	1.02	100.6	F	449	LTR	1.04	106.0	F	454	+	LTR	1.04	106.0	F	454	+
	Northbound	LTR	1.31	176.2	F	696	LTR	2.54	713.8	F	800	+	LTR	2.54	716.3	F	912	+
	Southbound	T	0.82	39.1	D	546	T	1.05	73.0	E	876	+	T	1.05	72.9	E	876	+
		R	0.26	10.0	A	67	R	0.37	11.8	B	90		R	0.37	11.8	B	90	
		Intersection		85.5	F		Intersection		249.5	F			Intersection		250.2	F		
49	**Bay Street and School Road**																	
	Eastbound	L	1.06	93.1	F	660	L	1.21	146.1	F	792	+	L	1.07	91.4	F	738	
		TR	0.14	13.3	B	48	TR	0.14	13.3	B	48		TR	0.13	11.3	B	43	
	Westbound	LTR	0.00	23.5	C	7	LTR	0.00	23.5	C	7		LTR	0.00	20.0	B	6	
	Northbound	LTR	0.09	13.6	B	47	LTR	0.09	13.6	B	47		LTR	0.10	16.7	B	52	
	Southbound	LTR	0.09	6.4	A	20	LTR	0.18	5.6	A	25		LTR	0.20	10.5	B	35	
		R	0.70	3.9	A	30	R	0.77	4.9	A	20		R	0.79	5.8	A	42	
		Intersection		37.9	D		Intersection		56.6	E			Intersection		37.8	D		

Notes: L = Left Turn, T = Through, R = Right Turn, DefL = Defacto Left Turn, LOS = Level of Service, "+" implies a significant adverse impact.

Table 21-7: Signalized Level of Service Analysis – Weekday MD Peak Hour No-Action vs. With-Action vs. Mitigated Conditions

Int #	Intersection & Approach	No-Action Conditions					With-Action Conditions						With-Action With Mitigation Conditions					
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
1	**Richmond Terrace and Franklin Avenue**																	
	Eastbound	TR	0.66	11.7	B	366	TR	0.71	13.2	B	404		TR	0.70	11.9	B	423	
	Westbound	LT	0.91	11.8	B	129	LT	1.04	35.5	D	116		LT	1.01	37.5	D	1014	
	Northbound	LR	0.19	36.2	D	81	LR	0.19	36.2	D	81		LR	0.20	37.1	D	82	
		Intersection		12.8	B		Intersection		25.5	C			Intersection		26.0	C		
2	**Richmond Terrace and Jersey Street**																	
	Eastbound	L	0.66	37.6	D	111	L	0.66	36.5	D	102		L	0.52	15.9	B	57	
		TR	0.78	27.1	C	558	TR	0.84	32.1	C	612		TR	0.78	37.1	D	822	
	Westbound	LT	1.44	227.7	F	1256	LT	1.69	337.5	F	1332	+						
		R	0.02	8.5	A	4	R	0.02	8.3	A	3							
													L	0.34	17.8	B	52	
													TR	0.91	42.8	D	653	
	Northbound	L	0.10	34.5	C	37	L	0.10	34.5	C	37		L	0.13	39.8	D	40	
		TR	0.18	35.4	D	83	TR	0.19	35.5	D	88		TR	0.23	41.0	D	94	
	Southbound	L	0.02	32.8	C	13	L	0.02	32.8	C	13		L	0.02	37.4	D	14	
		TR	0.33	37.8	D	131	TR	0.33	37.8	D	131		TR	0.40	44.3	D	141	
		Intersection		118.0	F		Intersection		169.4	F			Intersection		38.0	D		
3	**Richmond Terrace and Westervelt Avenue**																	
	Eastbound	TR	0.81	20.9	C	346	TR	0.87	24.6	C	633		TR	0.87	30.9	C	878	
	Westbound	LT	0.80	71.4	E	424	LT	0.91	80.8	F	863	+	LT	0.91	31.1	C	863	
	Northbound	LR	0.45	37.0	D	186	LR	0.45	37.0	D	187		LR	0.45	38.0	D	187	
		Intersection		44.9	D		Intersection		50.7	D			Intersection		31.8	C		
5	**Hamilton Avenue and Richmond Terrace**																	
	Northbound	LT	0.90	22.7	C	526	LT	0.98	33.9	C	589		LT	0.98	33.9	C	589	
	Southbound	TR	0.43	12.1	B	153	TR	0.46	13.0	B	172		TR	0.46	12.0	B	172	
		Intersection		18.3	B		Intersection		25.1	C			Intersection		24.7	C		
7	**Wall Street and Richmond Terrace**																	
	Westbound	LTR	0.86	66.0	E	376	LTR	0.86	66.5	E	376		LTR	0.86	66.5	E	376	
		L	0.98	93.5	F	350	L	0.98	95.3	F	350		L	0.98	95.3	F	350	
	Northbound	T	0.56	10.4	B	337	T	0.59	11.8	B	370		T	0.59	11.8	B	370	
		R	0.51	11.5	B	292	R	0.51	11.5	B	292		R	0.51	11.5	B	292	
	Southbound	LTR	0.59	14.6	B	95	LTR	0.65	15.5	B	101		LTR	0.65	17.1	B	101	
		Intersection		27.4	C		Intersection		27.8	C			Intersection		28.2	C		
8	**Richmond Terrace and Ferry Terminal (bus)**																	
	Westbound	L	0.98	134.0	F	165	L	0.98	139.4	F	165	+	L	0.98	139.4	F	165	+
		R	0.46	51.0	D	63	R	0.46	51.0	D	63		R	0.46	51.0	D	63	
	Northbound	T	0.66	19.0	B	57	T	0.70	34.1	C	57		T	0.70	33.8	C	57	
	Southbound	T	0.88	65.2	E	521	T	0.92	82.4	F	569	+	T	0.92	82.4	F	569	+
		Intersection		47.1	D		Intersection		62.0	E			Intersection		61.9	E		
9	**Richmond Terrace and Ferry Terminal (parking lot)**																	
	Westbound	L	0.53	48.4	D	95	L	0.53	48.4	D	95		L	0.53	48.4	D	95	
		R	0.11	15.8	B	19	R	0.11	16.6	B	19		R	0.11	16.6	B	19	
	Northbound	T	0.98	64.6	E	429	T	1.03	91.1	F	469	+	T	1.03	92.2	F	469	+
		R	0.18	17.0	B	58	R	0.18	16.7	B	58		R	0.18	16.9	B	58	
		R	0.20	17.5	B	32	R	0.20	17.2	B	32		R	0.20	17.3	B	32	
	Southbound	L	1.80	425.3	F	92	L	1.76	404.1	F	90		L	1.76	404.1	F	90	
		TR	1.11	69.4	E	882	TR	1.17	93.8	F	890	+	TR	1.17	93.8	F	890	+
		Intersection		74.0	E		Intersection		93.8	F			Intersection		94.3	F		
10	**Bay Street and Slosson Terrace**																	
	Eastbound	LR	0.17	24.7	C	56	LR	0.38	28.2	C	109		LR	0.43	31.7	C	115	
	Northbound	L	0.61	31.2	C	61	L	0.89	50.0	D	90	+	L	0.82	32.4	C	76	
		T	0.90	15.7	B	180	T	0.93	17.3	B	287		T	0.88	29.2	C	485	
	Southbound	TR	1.17	103.1	F	689	TR	1.21	122.1	F	724	+	TR	1.15	95.2	F	696	
		Intersection		59.8	E		Intersection		69.4	E			Intersection		60.8	E		
11	**Victory Boulevard and Bay Street/St. Marks Place**																	
	Eastbound	TR	0.42	18.5	B	188	TR	0.53	22.8	C	237		TR	0.53	22.8	C	237	
		R	0.45	18.6	B	167	R	0.51	20.2	C	184		R	0.51	20.2	C	184	
	Westbound	T	0.81	89.8	F	382	T	0.95	86.1	F	344		T	0.95	57.8	E	56	
		L	0.11	18.8	B	18	L	0.13	17.6	B	13		L	0.13	4.4	A	3	
	Southbound	LT	0.53	31.9	C	171	LT	0.54	32.3	C	174		LT	0.54	32.3	C	174	
		R	0.49	33.3	C	107	R	0.53	35.5	D	111		R	0.53	35.5	D	111	
		Intersection		50.2	D		Intersection		50.5	D			Intersection		38.5	D		

Table 21-7: Signalized Level of Service Analysis – Weekday MD Peak Hour No-Action vs. With-Action vs. Mitigated Conditions (con't)

Int #	Intersection & Approach	No-Action Conditions					With-Action Conditions						With-Action With Mitigation Conditions					
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
	Victory Boulevard and Bay Street																	
	Eastbound	L	0.62	31.5	C	186	L	0.90	60.2	E	272	+	L	1.05	104.3	F	306	+
		LT	0.61	30.6	C	144	LT	0.79	41.1	D	262		LT	0.91	67.0	E	298	+
	Westbound	LTR	0.35	26.7	C	93	LTR	1.40	228.6	F	401	+	LTR	1.75	381.3	F	434	+
12	Northbound	L	2.78	829.5	F	176	L	3.62	1204.3	F	164	+	L	1.67	323.1	F	160	
		TR	0.86	26.3	C	172	TR	0.89	26.2	C	162		TR	0.81	19.6	B	350	
	Southbound	LT	0.90	41.9	D	318	LT	1.20	126.2	F	348	+	LT	1.28	143.9	F	426	+
		R	0.90	93.8	F	225	R	1.05	90.4	F	245		R	1.31	159.3	F	322	+
		Intersection		98.4	F		Intersection		165.8	F			Intersection		135.6	F		
	Bay Street and Hannah Street																	
	Eastbound	LTR	0.07	17.8	B	35	LTR	0.07	17.9	B	35		LTR	0.07	18.5	B	36	
	Westbound	LTR	0.67	15.2	B	76	LTR	0.93	30.9	C	359		LTR	0.96	40.5	D	392	
	Northbound	LTR	1.82	394.1	F	799	LTR	2.04	488.8	F	853	+						
13													L	0.92	66.8	E	95	
													TR	1.15	92.9	F	609	
	Southbound	L	4.65	1675.8	F	429	L	5.97	2255.1	F	426	+	L	2.40	653.3	F	327	
		T	0.73	11.9	B	142	T	0.79	14.5	B	141		T	1.01	36.0	D	308	
		R	0.30	3.0	A	1	R	0.41	8.9	A	26		R	0.61	15.0	B	70	
		Intersection		321.1	F		Intersection		439.6	F			Intersection		122.5	F		
	Front Street and Hannah Street																	
	Eastbound	TR	0.38	10.2	B	0	TR	0.45	10.1	B	0		TR	0.45	11.6	B	4	
14	Westbound	LT	0.10	13.4	B	47	LT	0.10	13.4	B	47		LT	0.11	14.0	B	48	
	Northbound	LR	0.52	23.1	C	243	LR	0.88	45.8	D	424	+	LR	0.85	40.8	D	413	
		Intersection		16.2	B		Intersection		26.4	C			Intersection		24.9	C		
	Bay Street and Swan Street/Van Duzer Street																	
	Eastbound	L	0.61	31.9	C	185	L	0.68	36.2	D	220		L	0.68	37.6	D	220	
		LTR	0.60	31.6	C	177	LTR	0.67	35.8	D	210		LTR	0.67	37.1	D	210	
15	Westbound	LTR	0.00	17.5	B	5	LTR	0.00	17.5	B	5		LTR	0.00	17.5	B	5	
	Northbound	LTR	0.71	64.5	E	309	LTR	0.78	66.3	E	407		LTR	0.78	37.1	D	406	
	Southbound	LTR	0.83	17.3	B	146	LTR	0.90	19.9	B	183		LTR	0.90	14.0	B	77	
		Intersection		37.5	D		Intersection		40.2	D			Intersection		26.4	C		
	Bay Street and Grant Street																	
	Eastbound												LTR	0.15	28.5	C	46	
	Westbound												R	0.17	28.6	C	55	
18	Northbound	**Unsignalized**					**Unsignalized**						TR	0.51	5.7	A	70	
	Southbound												T	1.54	272.7	F	1359	+
													Intersection		153.3	F		
	Van Duzer Street and Clinton Street																	
19	Westbound	TR	0.36	34.4	C	62	TR	0.36	34.1	C	60		TR	0.36	34.2	C	64	
	Northbound	LT	0.50	9.3	A	152	LT	0.52	9.6	A	163		LT	0.52	9.6	A	163	
		Intersection		14.2	B		Intersection		14.3	B			Intersection		14.4	B		
	Bay Street and Clinton Street																	
	Westbound	LTR	0.29	23.7	C	89	LTR	0.29	23.7	C	89		LTR	0.37	29.2	C	99	
	Northbound	L	0.41	20.1	C	11	L	0.41	20.1	C	10		L	0.41	18.0	B	9	
20		TR	0.66	18.0	B	138	TR	0.73	18.7	B	136		TR	0.66	13.3	B	144	
	Southbound	L	0.35	7.9	A	12	L	0.42	10.5	B	12		L	0.34	8.8	A	7	
		TR	1.37	188.1	F	1236	TR	1.49	242.5	F	1310	+	TR	1.35	177.9	F	148	
		Intersection		101.7	F		Intersection		129.3	F			Intersection		95.3	F		
	Bay Street and Baltic Street																	
	Eastbound												LTR	0.21	39.6	D	32	
	Westbound												LTR	0.09	35.2	D	17	
21	Northbound	**Unsignalized**					**Unsignalized**						TR	0.89	12.9	B	144	
	Southbound												LT	1.28	142.5	F	61	+
													Intersection		82.0	F		
	Bay Street and Wave Street																	
	Westbound	LTR	0.31	25.4	C	77	LTR	0.30	25.0	C	78							
													L	0.35	40.3	D	46	
													TR	0.40	42.7	D	50	
24	Northbound	LT	1.38	204.3	F	826	LT	1.56	279.3	F	940	+	LT	1.17	104.1	F	864	
		R	0.13	13.6	B	26	R	0.13	13.3	B	25		R	0.09	4.9	A	14	
	Southbound	L	0.84	41.2	D	17	L	0.82	38.8	D	16		L	0.45	9.3	A	10	
		TR	1.43	215.4	F	658	TR	1.55	268.9	F	665	+	TR	1.20	107.4	F	250	
		Intersection		196.0	F		Intersection		255.4	F			Intersection		99.9	F		
	Front Street and Wave Street																	
	Eastbound	LR	0.28	18.7	B	47	LR	0.29	19.0	B	47		LR	0.30	23.9	C	69	
25	Northbound	LT	0.65	6.2	A	12	LT	0.79	9.9	A	11		LT	0.70	6.2	A	56	
	Southbound	TR	0.47	11.4	B	154	TR	0.58	13.2	B	203		TR	0.52	14.1	B	251	
		Intersection		9.4	A		Intersection		12.0	B			Intersection		10.9	B		
	Front Street and Prospect Street																	
	Eastbound	LTR	0.20	21.5	C	43	LTR	0.21	21.6	C	45		LTR	0.27	36.7	D	66	
26	Westbound	LTR	0.29	22.4	C	65	LTR	0.29	22.5	C	65		LTR	0.34	35.5	D	94	
	Northbound	TR	1.00	72.5	E	369	TR	1.22	141.8	F	466	+	TR	0.80	23.5	C	284	
	Southbound	LT	1.43	231.4	F	380	LT	2.56	731.1	F	517	+	LT	0.92	35.1	D	514	
		Intersection		133.2	F		Intersection		384.1	F			Intersection		30.0	C		

Table 21-7: Signalized Level of Service Analysis – Weekday MD Peak Hour No-Action vs. With-Action vs. Mitigated Conditions (con't)

Int #	Intersection & Approach	No-Action Conditions					With-Action Conditions						With-Action With Mitigation Conditions					
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
27	**Van Duzer Street and Beach Street**																	
	Eastbound	LT	0.77	41.3	D	215	LT	0.81	44.7	D	232		LT	0.81	44.7	D	232	
	Westbound	TR	0.35	24.8	C	105	TR	0.37	25.2	C	111		TR	0.37	25.2	C	111	
	Northbound	L	0.41	13.9	B	171	L	0.41	13.9	B	171		L	0.41	13.9	B	171	
		TR	0.69	21.0	C	326	TR	0.71	22.0	C	344		TR	0.71	22.0	C	344	
		Intersection		24.3	C		Intersection		25.6	C			Intersection		25.6	C		
28	**Bay Street and Water Street**																	
	Westbound	LTR	0.28	26.8	C	81	LTR	0.28	26.7	C	80		LTR	0.41	36.5	D	92	
	Northbound	L	1.72	348.4	F	89	L	1.77	373.4	F	82	+	L	1.75	362.7	F	94	+
		T	1.10	63.8	E	187	T	1.23	120.2	F	175	+	T	1.07	62.5	E	299	
	Southbound	TR	1.38	204.5	F	897	TR	1.49	252.9	F	996	+	TR	1.29	156.6	F	1060	
		Intersection		147.8	F		Intersection		195.7	F			Intersection		122.9	F		
29	**Bay Street and Canal Street**																	
	Eastbound	L	0.73	171.3	F	186	L	0.64	161.1	F	165		L	0.98	151.3	F	216	
		TR	0.24	20.9	C	73	TR	0.24	20.8	C	73		TR	0.41	32.3	C	109	
	Westbound	LTR	0.20	141.3	F	51	LTR	0.28	144.2	F	66		LTR	0.42	72.9	E	76	
	Northbound	TR	1.22	119.4	F	59	TR	1.39	196.5	F	71	+	TR	1.13	75.5	E	58	
	Southbound	LT	3.31	1052.7	F	618	LT	3.64	1201.2	F	642	+	T	1.24	127.3	F	632	
		Intersection		547.2	F		Intersection		643.7	F			Intersection		101.1	F		
30	**Front Street and Canal Street**																	
	Eastbound	LR	0.60	27.5	C	98	LR	0.67	31.3	C	113		LR	0.51	29.8	C	111	
	Northbound	LT	0.60	14.1	B	189	LT	0.69	16.9	B	240		LT	0.72	24.3	C	359	
	Southbound	TR	0.49	11.7	B	60	TR	0.60	13.5	B	48		TR	0.62	16.4	B	185	
		Intersection		15.4	B		Intersection		17.8	B			Intersection		21.9	C		
31	**Bay Street and Broad Street**																	
	Eastbound	LR	0.25	26.7	C	107	LR	0.32	25.6	C	140							
													L	0.36	32.0	C	130	
													R	0.13	29.7	C	43	
	Northbound	LT	3.71	1234.7	F	239	LT	4.11	1418.4	F	272	+	LT	3.38	1087.7	F	485	
	Southbound	T	1.25	136.3	F	114	T	1.36	186.7	F	119	+	T	1.18	102.6	F	266	
		R	0.20	14.3	B	15	R	0.25	14.5	B	19		R	0.21	10.6	B	36	
		Intersection		574.6	F		Intersection		666.5	F			Intersection		493.2	F		
32	**Richmond Terrace and Clove Road**																	
	Eastbound	LT	0.65	18.4	B	539	LT	0.69	20.1	C	571		LT	0.69	20.1	C	571	
		R	0.13	2.3	A	26	R	0.13	2.5	A	30		R	0.13	2.5	A	30	
	Westbound	L	0.35	21.1	C	98	L	0.42	24.2	C	117		L	0.42	24.2	C	117	
		TR	0.85	37.6	D	826	TR	0.89	40.7	D	898		TR	0.89	40.7	D	898	
	Northbound	LTR	0.47	39.4	D	202	LTR	0.50	40.2	D	215		LTR	0.50	40.2	D	215	
		Intersection		28.0	C		Intersection		30.2	C			Intersection		30.2	C		
35	**Victory Boulevard and Cebra Avenue**																	
	Eastbound	L	0.30	31.8	C	43	L	0.31	32.7	C	43		L	0.31	32.7	C	43	
		TR	0.76	42.7	D	240	TR	0.76	42.7	D	240		TR	0.76	42.7	D	240	
	Westbound	L	0.69	51.5	D	120	L	0.69	51.0	D	119		L	0.69	51.0	D	119	
		TR	0.73	40.2	D	262	TR	0.76	42.2	D	291		TR	0.76	42.2	D	291	
	Northbound	LTR	0.90	35.4	D	616	LTR	1.00	52.7	D	721	+	LTR	1.00	52.6	D	721	+
	Southbound	LTR	1.17	105.3	F	579	LTR	1.35	181.5	F	611	+	LTR	1.35	181.5	F	611	+
		Intersection		62.9	E		Intersection		97.3	F			Intersection		97.3	F		
36	**Victory Boulevard and Jersey Street**																	
	Eastbound	L	0.78	43.6	D	36	L	1.42	235.8	F	98	+	L	1.42	235.8	F	98	+
		T	0.98	39.7	D	485	T	1.08	68.2	E	493	+	T	1.08	68.3	E	493	+
	Westbound	T	1.05	70.0	E	700	T	1.14	103.6	F	796	+	T	1.14	103.9	F	796	+
		R	0.19	13.8	B	67	R	0.34	16.8	B	95		R	0.34	16.9	B	95	
	Southbound	LR	0.50	28.3	C	146	LR	0.93	67.5	E	263	+	LR	0.93	67.5	E	263	+
		Intersection		50.1	D		Intersection		88.2	F			Intersection		88.4	F		
38	**Victory Boulevard and Forest Avenue**																	
	Eastbound	LR	0.45	27.5	C	138	LR	0.48	27.9	C	146		LR	0.54	31.2	C	154	
	Northbound	L	0.78	52.2	D	171	L	0.99	103.9	F	192	+	L	0.79	51.6	D	171	
		T	0.69	22.1	C	366	T	0.76	25.1	C	424		T	0.71	21.0	C	391	
	Southbound	T	0.83	75.8	E	349	T	0.90	80.3	F	474	+	T	0.85	74.1	E	378	
		R	0.39	2.9	A	10	R	0.41	3.0	A	11		R	0.39	2.6	A	9	
		Intersection		39.2	D		Intersection		44.5	D			Intersection		38.9	D		

Table 21-7: Signalized Level of Service Analysis – Weekday MD Peak Hour No-Action vs. With-Action vs. Mitigated Conditions (con't)

Int #	Intersection & Approach	No-Action Conditions					With-Action Conditions						With-Action With Mitigation Conditions					
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
41	**Broad Street and Canal Street**																	
	Eastbound	L	0.31	10.4	B	65	L	0.31	11.4	B	73		L	0.31	11.4	B	73	
		TR	0.34	9.8	A	95	TR	0.39	11.3	B	136		TR	0.39	11.3	B	136	
	Westbound	LTR	0.30	20.0	C	144	LTR	0.34	22.0	C	173		LTR	0.38	22.0	C	176	
	Northbound	L	0.49	33.0	C	98	L	0.47	31.8	C	97		L	0.47	31.8	C	97	
		TR	0.63	33.6	C	211	TR	0.62	32.9	C	207		TR	0.62	32.9	C	207	
	Southbound	LT	0.37	26.2	C	136	LT	0.35	25.8	C	130		LT	0.35	25.8	C	130	
		Intersection		22.6	C		Intersection		22.5	C			Intersection		22.5	C		
42	**Broad Street and Van Duzer Street**																	
	Westbound	L	0.78	56.0	E	168	L	0.82	54.3	D	196		L	0.82	54.3	D	196	
	Southbound	L	0.18	8.9	A	76	L	0.19	9.5	A	76		L	0.19	9.5	A	76	
		T	0.60	14.3	B	314	T	0.64	16.0	B	327		T	0.64	16.0	B	327	
		Intersection		25.0	C		Intersection		26.3	C			Intersection		26.3	C		
43	**Broad Street and Targee Street**																	
	Eastbound	TR	0.33	29.8	C	155	TR	0.34	29.7	C	156		TR	0.34	29.7	C	156	
	Westbound	TR	0.58	29.9	C	227	TR	0.65	32.0	C	262		TR	0.65	31.9	C	262	
	Northbound	LT	0.77	24.7	C	355	LT	0.79	26.0	C	373		LT	0.79	26.0	C	373	
		R	0.40	14.3	B	113	R	0.48	15.8	B	139		R	0.48	15.8	B	139	
		Intersection		24.6	C		Intersection		25.8	C			Intersection		25.8	C		
44	**Vanderbilt Avenue and Tompkins Avenue**																	
	Eastbound	LTR	1.00	63.3	E	552	LTR	1.06	79.5	E	603	+	LTR	1.06	79.5	E	603	+
	Westbound	LTR	0.78	9.9	A	71	LTR	0.92	14.3	B	243		LTR	0.92	25.4	C	307	
	Northbound	LTR	1.25	162.3	F	463	LTR	1.29	177.3	F	489	+	LTR	1.29	177.3	F	489	+
	Southbound	LTR	0.99	69.1	E	497	LTR	0.98	67.3	E	489		LTR	0.98	67.3	E	489	
		Intersection		72.3	E		Intersection		79.9	E			Intersection		82.8	F		
45	**Bay Street and Vanderbilt Avenue**																	
	Eastbound	L	0.48	27.1	C	106	L	0.61	28.9	C	134		L	0.69	32.7	C	143	
		R	0.21	24.2	C	36	R	0.21	24.1	C	35		R	0.24	27.2	C	37	
	Northbound	LT	5.20	1912.8	F	1176	LT	8.44	3368.1	F	1266	+	LT	3.68	1225.0	F	1147	
	Southbound	T	1.20	105.3	F	458	T	1.25	128.1	F	366	+	T	1.14	80.3	F	360	
		R	0.37	1.5	A	10	R	0.46	1.8	A	12		R	0.42	1.4	A	11	
		Intersection		730.2	F		Intersection		1216.8	F			Intersection		458.4	F		
47	**Bay Street and Edgewater Drive**																	
	Westbound	LR	0.36	23.2	C	124	LR	0.42	24.1	C	150		LR	0.42	24.1	C	150	
	Northbound	TR	0.59	16.9	B	74	TR	0.67	17.6	B	73		TR	0.67	17.6	B	73	
	Southbound	T	0.96	28.7	C	328	T	1.00	33.6	C	326		T	1.00	34.1	C	372	
	Northwestbound	R	0.25	0.6	A	0	R	0.27	0.8	A	0		R	0.27	0.8	A	0	
		Intersection		20.8	C		Intersection		23.0	C			Intersection		23.2	C		
48	**Bay Street and Hylan Boulevard**																	
	Eastbound	LTR	1.03	81.1	F	534	LTR	1.12	110.0	F	594	+	LTR	1.12	110.0	F	594	+
	Westbound	LTR	0.90	66.8	E	300	LTR	0.92	69.9	E	302		LTR	0.92	69.9	E	302	
	Northbound	LTR	4.89	1762.1	F	751	LTR	6.45	2463.6	F	774	+	LTR	6.45	2463.6	F	849	+
	Southbound	T	1.12	97.0	F	572	T	1.21	134.6	F	642	+	T	1.21	134.7	F	642	+
		R	0.58	18.0	B	170	R	0.64	18.7	B	190		R	0.64	18.7	B	190	
		Intersection		587.6	F		Intersection		821.6	F			Intersection		821.6	F		
49	**Bay Street and School Road**																	
	Eastbound	L	1.35	195.2	F	786	L	1.48	252.6	F	881	+	L	1.34	189.8	F	846	
		TR	0.12	12.1	B	39	TR	0.12	12.1	B	39		TR	0.10	10.2	B	35	
	Westbound	LTR	0.01	15.2	B	8	LTR	0.01	15.2	B	8		LTR	0.01	13.0	B	7	
	Northbound	LTR	0.22	15.2	B	83	LTR	0.22	15.2	B	83		LTR	0.24	17.9	B	91	
	Southbound	LTR	0.08	16.7	B	23	LTR	0.08	17.0	B	21		LTR	0.09	17.7	B	22	
		R	0.71	6.7	A	325	R	0.71	7.0	A	325		R	0.71	7.0	A	325	
		Intersection		82.1	F		Intersection		107.0	F			Intersection		81.9	F		

Notes: L = Left Turn, T = Through, R = Right Turn, DefL = Defacto Left Turn, LOS = Level of Service, "+" implies a significant adverse impact.

Table 21-8: Signalized Level of Service Analysis – Weekday PM Peak Hour No-Action vs. With-Action vs. Mitigated Conditions

Int #	Intersection & Approach	No-Action Conditions					With-Action Conditions						With-Action With Mitigation Conditions					
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
1	**Richmond Terrace and Franklin Avenue**																	
	Eastbound	TR	0.75	28.8	C	738	TR	0.84	34.6	C	837		TR	0.77	21.6	C	713	
	Westbound	LT	1.14	81.4	F	278	LT	1.52	253.0	F	689	+	LT	1.12	73.8	E	1138	
	Northbound	LR	0.14	35.3	D	67	LR	0.14	35.4	D	68		LR	0.19	41.6	D	74	
		Intersection		56.4	E		Intersection		147.0	F			Intersection		49.0	D		
2	**Richmond Terrace and Jersey Street**																	
	Eastbound	L	0.72	39.2	D	106	L	0.81	48.3	D	92	+	L	0.71	33.9	C	87	
		TR	0.83	28.1	C	598	TR	0.93	36.8	D	956		TR	0.91	32.4	C	935	
	Westbound	LT	1.29	163.2	F	1186	LT	1.73	353.4	F	1134	+						
		R	0.01	11.1	B	4	R	0.01	9.8	A	3							
													L	0.38	18.6	B	39	
													TR	0.97	77.6	E	682	+
	Northbound	L	0.20	39.5	D	42	L	0.20	39.5	D	42		L	0.23	42.4	D	44	
		TR	0.19	37.0	D	88	TR	0.20	37.3	D	91		TR	0.21	39.0	D	93	
	Southbound	L	0.04	34.7	C	23	L	0.04	34.7	C	23		L	0.04	36.4	D	23	
		TR	0.68	49.9	D	255	TR	0.68	49.9	D	255		TR	0.72	54.4	D	261	
		Intersection		85.2	F		Intersection		165.5	F			Intersection		51.8	D		
3	**Richmond Terrace and Westervelt Avenue**																	
	Eastbound	TR	0.88	25.8	C	409	TR	0.98	47.9	D	456	+	TR	0.96	32.2	C	236	
	Westbound	LT	0.78	78.1	E	344	LT	1.10	101.3	F	935	+	LT	1.00	80.5	F	904	
	Northbound	LR	0.52	38.5	D	223	LR	0.52	38.5	D	223		LR	0.55	41.8	D	229	
		Intersection		47.6	D		Intersection		67.3	E			Intersection		52.2	D		
5	**Hamilton Avenue and Richmond Terrace**																	
	Northbound	LT	0.87	21.5	C	371	LT	0.99	36.3	D	612		LT	0.99	36.3	D	612	
	Southbound	TR	0.48	34.0	C	331	TR	0.54	33.6	C	366		TR	0.54	29.8	C	366	
		Intersection		26.8	C		Intersection		35.1	D			Intersection		33.5	C		
7	**Wall Street and Richmond Terrace**																	
	Westbound	LTR	0.66	185.5	F	312	LTR	0.66	185.5	F	312		LTR	0.66	185.5	F	312	
		L	0.62	175.4	F	273	L	0.62	177.9	F	273		L	0.62	177.9	F	273	
	Northbound	T	0.55	4.5	A	38	T	0.60	5.2	A	52		T	0.60	5.2	A	52	
		R	0.51	5.6	A	32	R	0.51	6.1	A	39		R	0.51	6.1	A	39	
	Southbound	LTR	0.61	8.3	A	73	LTR	0.71	11.7	B	93		LTR	0.71	11.7	B	93	
		Intersection		45.1	D		Intersection		44.1	D			Intersection		44.1	D		
8	**Richmond Terrace and Ferry Terminal (bus)**																	
	Westbound	L	0.67	57.7	E	174	L	0.67	57.7	E	174		L	0.67	57.7	E	174	
		R	0.34	44.1	D	84	R	0.34	44.1	D	84		R	0.34	44.1	D	84	
	Northbound	T	0.72	75.4	E	65	T	0.78	80.1	F	63	+	T	0.78	80.1	F	63	+
	Southbound	T	0.90	80.1	F	712	T	0.98	87.1	F	832	+	T	0.98	87.1	F	832	+
		Intersection		75.5	E		Intersection		81.0	F			Intersection		81.0	F		
9	**Richmond Terrace and Ferry Terminal (parking lot)**																	
	Westbound	L	0.77	58.0	E	286	L	0.77	58.0	E	286		L	0.77	58.0	E	286	
		R	0.16	13.2	B	40	R	0.16	13.2	B	40		R	0.16	13.2	B	40	
	Northbound	T	1.38	208.0	F	695	T	1.50	260.0	F	775	+	T	1.50	261.1	F	775	+
		R	0.26	2.1	A	12	R	0.26	3.2	A	22		R	0.26	3.4	A	22	
		R	0.30	3.2	A	6	R	0.30	4.5	A	11		R	0.30	4.6	A	11	
	Southbound	L	4.16	1457.1	F	350	L	4.16	1451.3	F	314		L	4.16	1451.3	F	314	
		TR	0.91	55.7	E	332	TR	1.00	64.5	E	1022	+	TR	1.00	64.5	E	1022	+
		Intersection		206.2	F		Intersection		222.4	F			Intersection		222.8	F		
10	**Bay Street and Slosson Terrace**																	
	Eastbound	LR	0.20	34.4	C	80	LR	0.60	44.6	D	218		LR	0.60	44.6	D	218	
	Northbound	L	0.57	32.6	C	89	L	0.59	30.8	C	82		L	0.72	36.8	D	80	
		T	0.86	46.1	D	381	T	0.90	64.1	E	402	+	T	0.90	33.0	C	525	
	Southbound	TR	1.13	95.5	F	928	TR	1.20	125.6	F	1023	+	TR	1.14	97.9	F	990	
		Intersection		69.9	E		Intersection		91.2	F			Intersection		65.1	E		
11	**Victory Boulevard and Bay Street/St. Marks Place**																	
	Eastbound	TR	0.39	12.6	B	157	TR	0.42	13.3	B	175		TR	0.42	13.3	B	175	
		R	0.33	11.9	B	105	R	0.42	13.2	B	133		R	0.42	13.2	B	133	
	Westbound	T	0.74	37.6	D	151	T	0.91	62.5	E	225	+	T	0.91	59.7	E	148	+
		L	0.08	3.2	A	3	L	0.08	5.0	A	4		L	0.08	6.5	A	5	
	Southbound	LT	0.56	46.6	D	209	LT	0.58	47.3	D	214		LT	0.58	48.6	D	214	
		R	0.91	84.4	F	263	R	0.97	98.1	F	275	+	R	0.97	98.1	F	275	+
		Intersection		34.9	C		Intersection		47.1	D			Intersection		46.0	D		

Table 21-8: Signalized Level of Service Analysis – Weekday PM Peak Hour No-Action vs. With-Action vs. Mitigated Conditions (con't)

Int #	Intersection & Approach	No-Action Conditions					With-Action Conditions						With-Action With Mitigation Conditions					
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
	Victory Boulevard and Bay Street																	
	Eastbound	L	0.84	72.0	E	320	L	0.90	83.1	F	351	+	L	0.84	85.0	F	331	+
		LT	0.84	72.9	E	325	LT	0.88	95.2	F	363	+	LT	0.82	91.3	F	343	+
	Westbound	LTR	0.75	57.8	E	204	LTR	2.61	756.6	F	863	+	LTR	2.19	573.1	F	828	+
12	Northbound	L	2.23	577.1	F	222	L	3.75	1255.3	F	246	+	L	2.10	522.7	F	352	
		TR	0.70	16.7	B	262	TR	0.73	17.8	B	204		TR	0.77	29.1	C	497	
	Southbound	LT	0.86	14.1	B	130	LT	1.08	55.4	E	172	+	LT	1.36	183.6	F	692	+
		R	0.76	11.9	B	70	R	0.89	27.9	C	108		R	1.16	92.5	F	457	+
		Intersection		60.2	E		Intersection		210.2	F			Intersection		193.2	F		
	Bay Street and Hannah Street																	
	Eastbound	LTR	0.11	30.5	C	64	LTR	0.11	30.7	C	64		LTR	0.09	25.0	C	57	
	Westbound	LTR	0.88	58.9	E	529	LTR	1.13	122.3	F	683	+	LTR	0.90	55.5	E	586	
	Northbound	LTR	1.18	118.7	F	740	LTR	1.39	208.7	F	866	+						
13													L	0.57	42.8	D	102	
													TR	0.94	89.5	F	618	
	Southbound	L	2.51	711.6	F	666	L	4.09	1404.1	F	698	+	L	2.43	667.8	F	501	
		T	0.55	24.3	C	374	T	0.66	22.3	C	331		T	1.01	44.4	D	403	
		R	0.29	7.6	A	67	R	0.38	10.8	B	69		R	0.62	17.4	B	96	
		Intersection		141.5	F		Intersection		281.9	F			Intersection		141.2	F		
	Front Street and Hannah Street																	
	Eastbound	TR	0.45	3.7	A	67	TR	0.55	4.0	A	72		TR	0.55	4.0	A	72	
14	Westbound	LT	0.10	13.3	B	47	LT	0.10	13.4	B	47		LT	0.10	13.4	B	47	
	Northbound	LR	0.61	25.2	C	289	LR	0.83	37.5	D	424		LR	0.83	37.5	D	424	
		Intersection		13.8	B		Intersection		18.4	B			Intersection		18.4	B		
	Bay Street and Swan Street/Van Duzer Street																	
	Eastbound	L	0.63	70.6	E	192	L	0.68	114.9	F	202	+	L	0.68	115.7	F	202	+
		LTR	0.61	65.9	E	215	LTR	0.67	115.4	F	228	+	LTR	0.67	116.1	F	228	+
15	Westbound	LTR	0.00	0.0	0.0	0	LTR	0.00	0.0	0.0	0		LTR	0.00	0.0	0.0	0	
	Northbound	LTR	0.55	20.5	C	262	LTR	0.61	21.9	C	318		LTR	0.61	15.4	B	200	
	Southbound	LTR	0.67	5.9	A	41	LTR	0.81	8.2	A	42		LTR	0.81	22.3	C	90	
		Intersection		20.8	C		Intersection		27.8	C			Intersection		32.6	C		
	Bay Street and Grant Street																	
	Eastbound												LTR	0.31	40.8	D	110	
18	Westbound												R	0.2	38.1	D	73	
	Northbound	**Unsignalized**					**Unsignalized**						TR	0.46	6.1	A	89	
	Southbound												T	1.45	231.6	F	1754	+
													Intersection		132.5	F		
	Van Duzer Street and Clinton Street																	
19	Westbound	TR	0.28	37.4	D	79	TR	0.32	38.3	D	86		TR	0.32	41.1	D	88	
	Northbound	LT	0.39	9.2	A	146	LT	0.40	9.3	A	150		LT	0.40	9.3	A	150	
		Intersection		15.1	B		Intersection		15.8	B			Intersection		16.5	B		
	Bay Street and Clinton Street																	
	Westbound	LTR	0.39	117.0	F	153	LTR	0.41	710.4	F	154	+	LTR	0.83	84.3	F	212	
	Northbound	L	0.33	11.4	B	5	L	0.40	10.2	B	5		L	0.41	12.0	B	2	
20		TR	0.53	5.7	A	113	TR	0.62	5.8	A	100		TR	0.52	3.9	A	42	
	Southbound	L	0.31	9.7	A	20	L	0.40	11.1	B	15		L	0.28	4.9	A	9	
		TR	1.14	89.3	F	1319	TR	1.38	193.5	F	1725	+	TR	1.15	79.3	E	160	
		Intersection		54.8	D		Intersection		144.6	F			Intersection		47.0	D		
	Bay Street and Baltic Street																	
	Eastbound												LTR	0.16	44.2	D	37	
21	Westbound												LTR	0.01	39.5	D	9	
	Northbound	**Unsignalized**					**Unsignalized**						TR	0.88	37.4	D	53	
	Southbound												LT	1.27	136.5	F	1202	+
													Intersection		92.6	F		
	Bay Street and Wave Street																	
	Westbound	LTR	0.40	37.1	D	74	LTR	0.41	35.2	D	54							
													L	0.29	51.0	D	55	+
													TR	0.46	59.3	E	83	+
24	Northbound	LT	1.11	84.0	F	944	LT	1.42	215.9	F	1267	+	LT	1.26	142.8	F	1183	+
		R	0.06	7.7	A	16	R	0.07	7.9	A	16		R	0.06	4.3	A	11	
	Southbound	L	0.30	17.7	B	28	L	1.08	99.4	F	33	+	L	0.44	10.8	B	15	
		TR	1.17	110.2	F	1011	TR	1.39	207.1	F	1029	+	TR	1.25	132.8	F	431	+
		Intersection		93.9	F		Intersection		201.0	F			Intersection		130.6	F		
	Front Street and Wave Street																	
	Eastbound	LR	0.22	16.0	B	41	LR	0.25	17.5	B	33		LR	0.38	36.2	D	66	
25	Northbound	LT	0.82	7.3	A	21	LT	1.09	59.5	E	20	+	LT	0.80	13.0	B	44	
	Southbound	TR	0.49	11.6	B	161	TR	0.64	14.4	B	233		TR	0.50	9.8	A	226	
		Intersection		9.6	A		Intersection		38.3	D			Intersection		12.8	B		
	Front Street and Prospect Street																	
	Eastbound	LTR	0.53	28.6	C	81	LTR	0.54	28.9	C	80		LTR	0.59	43.8	D	140	
26	Westbound	LTR	0.41	24.6	C	90	LTR	0.42	24.8	C	90		LTR	0.53	41.9	D	134	
	Northbound	TR	1.34	194.0	F	889	TR	1.64	322.2	F	1058	+	TR	1.12	92.4	F	661	
	Southbound	LT	7.14	2797.4	F	906	LT	9.60	3902.7	F	1149	+	LT	3.78	1277.9	F	849	
		Intersection		1048.1	F		Intersection		1588.3	F			Intersection		520.0	F		

Table 21-8: Signalized Level of Service Analysis – Weekday PM Peak Hour No-Action vs. With-Action vs. Mitigated Conditions (con't)

Int #	Intersection & Approach	No-Action Conditions					With-Action Conditions						With-Action With Mitigation Conditions					
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
	Van Duzer Street and Beach Street																	
27	Eastbound	LT	0.77	49.3	D	286	LT	0.97	80.1	F	394	+	LT	0.82	50.1	D	344	
	Westbound	TR	0.46	33.0	C	195	TR	0.47	33.4	C	202		TR	0.42	28.8	C	188	
	Northbound	L	0.42	17.1	B	208	L	0.43	17.2	B	211		L	0.46	20.7	C	233	
		TR	0.58	20.9	C	316	TR	0.59	21.3	C	326		TR	0.64	25.8	C	361	
		Intersection		27.9	C		Intersection		35.6	D			Intersection		30.5	C		
	Bay Street and Water Street																	
28	Westbound	LTR	0.28	79.6	E	109	LTR	0.28	74.9	E	109		LTR	0.28	49.5	D	109	
	Northbound	L	3.00	921.0	F	177	L	3.11	971.4	F	139	+	L	3.11	970.3	F	129	+
		T	1.01	74.3	E	737	T	1.25	143.6	F	761	+	T	1.25	135.5	F	762	+
	Southbound	TR	1.31	174.3	F	1338	TR	1.55	277.2	F	1611	+	TR	1.55	275.1	F	1705	+
		Intersection		176.8	F		Intersection		253.2	F			Intersection		248.0	F		
	Bay Street and Canal Street																	
29	Eastbound	L	0.89	82.7	F	268	L	0.88	79.9	E	263		L	0.88	80.9	F	263	
		TR	0.25	33.8	C	91	TR	0.25	33.8	C	91		TR	0.32	35.3	D	121	
	Westbound	LTR	0.25	40.6	D	66	LTR	0.34	43.5	D	76		LTR	0.34	38.3	D	85	
	Northbound	TR	1.13	84.1	F	140	TR	1.43	217.2	F	153	+	TR	1.43	214.8	F	99	+
	Southbound	LT	3.86	1303.9	F	1227	LT	4.64	1652.0	F	1266	+	T	1.50	250.3	F	296	
		Intersection		627.9	F		Intersection		841.9	F			Intersection		213.4	F		
	Front Street and Canal Street																	
30	Eastbound	LR	0.59	18.6	B	65	LR	0.70	21.2	C	71		LR	0.60	31.8	C	173	
	Northbound	LT	0.76	19.7	B	303	LT	0.88	28.9	C	414		LT	0.85	30.6	C	555	
	Southbound	TR	0.46	10.9	B	36	TR	0.61	11.9	B	36		TR	0.59	13.5	B	60	
		Intersection		16.5	B		Intersection		21.4	C			Intersection		24.4	C		
	Bay Street and Broad Street																	
31	Eastbound	LR	0.29	37.5	D	150	LR	0.42	114.0	F	210	+						
													L	0.44	43.8	D	192	
													R	0.14	40.2	D	58	
	Northbound	LT	3.39	1091.2	F	763	LT	5.12	1867.4	F	827	+	LT	4.59	1632.7	F	835	+
	Southbound	T	1.07	62.0	E	45	T	1.25	133.8	F	46	+	T	1.15	87.7	F	213	+
		R	0.17	0.8	A	0	R	0.24	1.0	A	0		R	0.22	3.5	A	8	
		Intersection		483.8	F		Intersection		845.5	F			Intersection		722.4	F		
	Richmond Terrace and Clove Road																	
32	Eastbound	LT	0.74	17.1	B	647	LT	0.83	22.8	C	778		LT	0.83	22.8	C	778	
		R	0.17	3.1	A	27	R	0.17	3.6	A	32		R	0.17	3.6	A	32	
	Westbound	L	0.43	14.3	B	85	L	0.64	29.1	C	157		L	0.64	29.1	C	157	
		TR	0.75	19.3	B	708	TR	0.81	22.6	C	791		TR	0.81	22.6	C	791	
	Northbound	LTR	0.35	36.2	D	157	LTR	0.36	36.5	D	165		LTR	0.36	36.5	D	165	
		Intersection		18.3	B		Intersection		22.8	C			Intersection		22.8	C		
	Victory Boulevard and Cebra Avenue																	
35	Eastbound	L	0.99	150.8	F	129	L	1.13	197.4	F	137	+	L	1.13	197.4	F	137	+
		TR	0.72	54.2	D	252	TR	0.72	54.2	D	252		TR	0.72	54.2	D	252	
	Westbound	L	0.70	68.4	E	160	L	0.73	72.2	E	170		L	0.73	72.2	E	170	
		TR	0.93	76.6	E	407	TR	0.98	87.0	F	434	+	TR	0.98	87.0	F	434	+
	Northbound	LTR	0.91	40.8	D	851	LTR	1.34	191.0	F	1180	+	LTR	1.34	191.2	F	1180	+
	Southbound	LT	1.05	47.0	D	1036	LT	1.22	113.6	F	1089	+	LT	1.22	113.6	F	1089	+
		R	0.04	3.7	A	4	R	0.04	3.6	A	4		R	0.04	3.6	A	4	
		Intersection		52.8	D		Intersection		127.5	F			Intersection		127.5	F		
	Victory Boulevard and Jersey Street																	
36	Eastbound	L	0.94	66.3	E	63	L	2.74	807.5	F	125	+	L	2.74	807.5	F	125	+
		T	0.90	27.6	C	445	T	0.96	27.9	C	299		T	0.96	27.8	C	299	
	Westbound	T	0.91	79.3	E	986	T	1.04	93.0	F	1208	+	T	1.04	92.7	F	1208	+
		R	0.10	7.4	A	40	R	0.18	8.2	A	68		R	0.18	8.3	A	68	
	Southbound	LR	0.53	43.3	D	176	LR	0.87	70.5	E	284	+	LR	0.87	70.5	E	284	+
		Intersection		54.6	D		Intersection		103.2	F			Intersection		103.1	F		
	Victory Boulevard and Forest Avenue																	
38	Eastbound	LR	0.51	42.2	D	181	LR	0.55	43.1	D	195		LR	0.57	44.3	D	197	
	Northbound	L	0.59	30.4	C	131	L	0.91	86.4	F	197	+	L	0.84	69.7	E	190	+
		T	0.52	16.1	B	324	T	0.58	17.4	B	373		T	0.57	16.7	B	364	
	Southbound	T	0.82	74.1	E	453	T	0.92	79.8	E	664	+	T	0.90	78.1	E	634	+
		R	0.37	7.0	A	61	R	0.42	8.2	A	81		R	0.41	7.7	A	76	
		Intersection		41.8	D		Intersection		47.2	D			Intersection		45.8	D		

Table 21-8: Signalized Level of Service Analysis – Weekday PM Peak Hour No-Action vs. With-Action vs. Mitigated Conditions (con't)

Int #	Intersection & Approach	No-Action Conditions					With-Action Conditions						With-Action With Mitigation Conditions					
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
41	**Broad Street and Canal Street**																	
	Eastbound	L	0.22	8.3	A	50	L	0.24	12.6	B	76		L	0.24	12.6	B	76	
		TR	0.22	7.8	A	70	TR	0.29	12.0	B	137		TR	0.29	12.0	B	137	
	Westbound	LTR	0.27	16.7	B	113	LTR	0.37	17.5	B	150		LTR	0.42	19.5	B	172	
	Northbound	L	0.44	43.1	D	101	L	0.43	42.8	D	101		L	0.43	42.8	D	101	
		TR	0.61	44.0	D	223	TR	0.65	45.6	D	237		TR	0.65	45.6	D	237	
	Southbound	LT	0.45	38.4	D	177	LT	0.44	38.3	D	175		LT	0.44	38.3	D	175	
		Intersection		27.4	C		Intersection		27.5	C			Intersection		27.9	C		
42	**Broad Street and Van Duzer Street**																	
	Westbound	L	0.75	77.9	E	175	L	0.80	66.9	E	179		L	0.80	67.1	E	180	
	Southbound	L	0.12	6.0	A	55	L	0.13	7.8	A	64		L	0.13	7.8	A	64	
		T	0.44	8.5	A	284	T	0.48	11.4	B	351		T	0.48	11.4	B	351	
		Intersection		25.0	C		Intersection		26.7	C			Intersection		26.8	C		
43	**Broad Street and Targee Street**																	
	Eastbound	LT	0.22	44.9	D	163	LT	0.23	44.5	D	162		LT	0.23	44.5	D	162	
	Westbound	TR	0.39	28.7	C	192	TR	0.50	35.1	D	270		TR	0.50	37.5	D	273	
	Northbound	LT	0.65	22.8	C	403	LT	0.65	23.1	C	412		LT	0.65	23.1	C	412	
		R	0.26	15.0	B	96	R	0.38	17.0	B	144		R	0.38	17.0	B	144	
		Intersection		25.3	C		Intersection		26.8	C			Intersection		27.4	C		
44	**Vanderbilt Avenue and Tompkins Avenue**																	
	Eastbound	LTR	0.74	31.8	C	433	LTR	0.85	40.0	D	587		LTR	0.85	40.0	D	587	
	Westbound	LTR	0.74	37.2	D	384	LTR	0.94	50.7	D	488	+	LTR	0.94	50.3	D	499	+
	Northbound	LTR	0.99	79.9	E	485	LTR	1.02	87.8	F	517	+	LTR	1.02	87.8	F	517	+
	Southbound	LTR	0.65	39.0	D	337	LTR	0.65	38.8	D	333		LTR	0.65	38.8	D	333	
		Intersection		45.9	D		Intersection		53.7	D			Intersection		53.6	D		
45	**Bay Street and Vanderbilt Avenue**																	
	Eastbound	L	0.58	39.1	D	236	L	0.76	41.9	D	295		L	0.78	43.8	D	301	
		R	0.21	30.2	C	63	R	0.21	27.4	C	54		R	0.22	28.3	C	55	
	Northbound	LT	2.07	508.0	F	1327	LT	3.17	997.9	F	1667	+	LT	2.95	901.9	F	1645	+
	Southbound	T	0.91	9.7	A	110	T	1.00	23.1	C	101		T	0.99	22.6	C	147	
		R	0.34	2.2	A	10	R	0.45	2.5	A	12		R	0.44	4.2	A	31	
		Intersection		197.5	F		Intersection		384.6	F			Intersection		349.2	F		
47	**Bay Street and Edgewater Drive**																	
	Westbound	LR	0.40	34.1	C	174	LR	0.51	36.2	D	227		LR	0.51	36.2	D	227	
	Northbound	TR	0.56	8.5	A	54	TR	0.70	9.7	A	56		TR	0.70	9.7	A	56	
	Southbound	T	0.77	12.1	B	178	T	0.84	13.5	B	171		T	0.84	14.0	B	182	
	Northwestbound	R	0.59	12.9	B	111	R	0.63	18.4	B	160		R	0.63	18.4	B	160	
		Intersection		14.0	B		Intersection		16.2	B			Intersection		16.3	B		
48	**Bay Street and Hylan Boulevard**																	
	Eastbound	LTR	1.09	95.8	F	734	LTR	1.28	169.4	F	899	+	LTR	1.28	169.4	F	899	+
	Westbound	LTR	0.98	89.2	F	441	LTR	0.99	92.4	F	444	+	LTR	0.99	92.4	F	444	+
	Northbound	LTR	3.91	1326.7	F	946	LTR	5.13	1869.2	F	981	+	LTR	5.13	1867.8	F	890	+
	Southbound	T	1.08	85.3	F	964	T	1.23	143.6	F	1166	+	T	1.23	143.0	F	1166	+
		R	0.51	15.4	B	188	R	0.61	17.6	B	241		R	0.61	17.4	B	241	
		Intersection		471.8	F		Intersection		687.2	F			Intersection		686.5	F		
49	**Bay Street and School Road**																	
	Eastbound	L	1.44	233.4	F	1331	L	1.69	341.1	F	1621	+	L	1.61	306.5	F	1594	+
		TR	0.11	2.0	A	17	TR	0.11	2.0	A	17		TR	0.11	1.8	A	16	
	Westbound	LTR	0.01	13.8	B	7	LTR	0.01	13.8	B	7		LTR	0.01	12.2	B	7	
	Northbound	LTR	0.16	24.7	C	86	LTR	0.17	24.9	C	86		LTR	0.19	27.1	C	91	
	Southbound	LTR	0.32	30.3	C	82	LTR	0.50	32.8	C	113		LTR	0.54	15.7	B	95	
		R	1.00	29.6	C	190	R	1.03	38.9	D	166		R	1.05	43.9	D	418	
		Intersection		125.7	F		Intersection		185.1	F			Intersection		168.0	F		

Notes: L = Left Turn, T = Through, R = Right Turn, DefL = Defacto Left Turn, LOS = Level of Service, "+" implies a significant adverse impact.

Table 21-9: Signalized Level of Service Analysis – Saturday MD Peak Hour No-Action vs. With-Action vs. Mitigated Conditions

		No-Action Conditions					With-Action Conditions						With-Action With Mitigation Conditions					
Int #	Intersection & Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
1	**Richmond Terrace and Franklin Avenue**																	
	Eastbound	TR	0.71	18.4	B	506	TR	0.76	20.6	C	552		TR	0.76	20.6	C	552	
	Westbound	LT	0.86	18.0	B	382	LT	1.02	32.3	C	479		LT	1.02	44.6	D	602	
	Northbound	LR	0.11	22.8	C	48	LR	0.11	22.9	C	49		LR	0.11	22.9	C	49	
		Intersection		18.4	B		Intersection		26.4	C			Intersection		32.4	C		
2	**Richmond Terrace and Jersey Street**																	
	Eastbound	L	0.58	33.7	C	77	L	0.58	32.9	C	70		L	0.58	32.9	C	70	
		TR	0.75	6.9	A	52	TR	0.81	9.5	A	60		TR	0.81	9.5	A	60	
	Westbound	LT	1.10	78.1	E	687	LT	1.19	113.9	F	670	+						
		R	0.03	9.9	A	6	R	0.03	12.4	B	5							
													L	0.23	13.8	B	14	
													TR	1.00	44.4	D	565	
	Northbound	L	0.21	27.7	C	49	L	0.21	27.7	C	49		L	0.21	27.7	C	49	
		TR	0.24	27.1	C	73	TR	0.25	27.3	C	75		TR	0.25	27.3	C	75	
	Southbound	L	0.03	24.1	C	16	L	0.03	24.1	C	16		L	0.03	24.1	C	16	
		TR	0.44	30.4	C	139	TR	0.44	30.4	C	139		TR	0.44	30.4	C	139	
		Intersection		39.3	D		Intersection		53.7	D			Intersection		27.2	C		
3	**Richmond Terrace and Westervelt Avenue**																	
	Eastbound	TR	0.79	16.2	B	270	TR	0.87	21.2	C	609		TR	0.87	21.2	C	609	
	Westbound	LT	0.74	19.2	B	495	LT	0.89	31.6	C	613		LT	0.89	41.4	D	612	
	Northbound	LR	0.21	21.4	C	89	LR	0.22	21.5	C	90		LR	0.22	21.5	C	90	
		Intersection		17.9	B		Intersection		25.8	C			Intersection		30.1	C		
5	**Hamilton Avenue and Richmond Terrace**																	
	Northbound	LT	0.95	31.4	C	376	LT	1.03	53.2	D	425	+	LT	1.00	43.6	D	415	
	Southbound	TR	0.53	24.8	C	244	TR	0.57	25.2	C	266		TR	0.56	24.6	C	263	
		Intersection		28.5	C		Intersection		40.7	D			Intersection		35.1	D		
7	**Wall Street and Richmond Terrace**																	
	Westbound	LTR	0.80	94.2	F	383	LTR	0.80	94.2	F	383		LTR	0.80	94.2	F	383	
		L	0.80	93.1	F	304	L	0.80	93.1	F	304		L	0.80	93.1	F	304	
	Northbound	T	0.50	5.5	A	133	T	0.54	6.8	A	190		T	0.54	6.8	A	190	
		R	0.80	23.9	C	424	R	0.80	24.6	C	424		R	0.80	24.6	C	424	
	Southbound	LTR	0.67	60.0	E	73	LTR	0.75	62.2	E	171		LTR	0.75	62.4	E	88	
		Intersection		49.0	D		Intersection		49.5	D			Intersection		49.6	D		
8	**Richmond Terrace and Ferry Terminal (bus)**																	
	Westbound	L	1.24	195.9	F	206	L	1.24	195.9	F	206		L	1.24	195.9	F	206	
		R	0.44	48.3	D	63	R	0.44	48.3	D	63		R	0.44	48.3	D	63	
	Northbound	T	0.67	25.0	C	48	T	0.71	42.6	D	48		T	0.71	42.6	D	48	
	Southbound	T	0.77	27.3	C	193	T	0.81	46.0	D	208	+	T	0.81	46.1	D	208	+
		Intersection		37.2	D		Intersection		53.4	D			Intersection		53.5	D		
9	**Richmond Terrace and Ferry Terminal (parking lot)**																	
	Westbound	L	0.64	54.3	D	111	L	0.64	54.3	D	111		L	0.64	54.3	D	111	
		R	0.13	15.5	B	23	R	0.13	16.3	B	23		R	0.13	16.3	B	23	
	Northbound	T	1.03	70.9	E	398	T	1.09	77.3	E	440	+	T	1.09	77.3	E	440	+
		R	0.21	2.5	A	5	R	0.21	2.8	A	6		R	0.21	2.8	A	6	
		R	0.29	3.2	A	3	R	0.29	3.5	A	3		R	0.29	3.5	A	3	
	Southbound	L	1.71	386.7	F	147	L	1.69	374.4	F	138		L	1.69	374.4	F	138	
		TR	1.24	130.3	F	1108	TR	1.31	158.4	F	1194	+	TR	1.31	158.4	F	1194	+
		Intersection		102.5	F		Intersection		116.8	F			Intersection		116.8	F		
10	**Bay Street and Slosson Terrace**																	
	Eastbound	LR	0.09	23.6	C	35	LR	0.14	24.3	C	49		LR	0.16	26.0	C	50	
	Northbound	L	0.34	14.3	B	25	L	0.39	16.1	B	27		L	0.39	16.3	B	43	
		T	0.81	13.4	B	188	T	0.84	14.0	B	198		T	0.81	25.5	C	486	
	Southbound	TR	1.26	142.3	F	822	TR	1.30	162.7	F	865	+	TR	1.24	135.3	F	842	
		Intersection		82.1	F		Intersection		92.6	F			Intersection		83.2	F		
11	**Victory Boulevard and Bay Street/St. Marks Place**																	
	Eastbound	TR	0.48	13.7	B	206	TR	0.52	16.1	B	243		TR	0.52	16.1	B	244	
		R	0.43	12.7	B	151	R	0.50	15.2	B	185		R	0.50	15.2	B	185	
	Westbound	T	0.84	74.7	E	365	T	0.92	77.5	E	401		T	0.92	63.7	E	435	
		L	0.12	15.2	B	22	L	0.13	16.2	B	19		L	0.13	7.4	A	8	
	Southbound	LT	0.33	27.6	C	105	LT	0.34	27.9	C	109		LT	0.34	27.9	C	109	
		R	0.24	27.3	C	72	R	0.26	27.8	C	74		R	0.26	27.8	C	74	
		Intersection		42.0	D		Intersection		44.3	D			Intersection		38.1	D		

Table 21-9: Signalized Level of Service Analysis – Saturday MD Peak Hour No-Action vs. With-Action vs. Mitigated Conditions (con't)

Int #	Intersection & Approach	No-Action Conditions					With-Action Conditions						With-Action With Mitigation Conditions					
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
	Victory Boulevard and Bay Street																	
	Eastbound	L	0.62	18.2	B	54	L	0.81	34.5	C	250		L	0.75	41.8	D	260	
		LT	0.63	18.9	B	55	LT	0.79	30.6	C	248		LT	0.73	40.0	D	258	
	Westbound	LTR	0.23	24.2	C	72	LTR	0.76	49.2	D	194	+	LTR	0.68	37.3	D	171	
12	Northbound	L	3.55	1171.5	F	247	L	4.38	1549.4	F	254	+	L	1.77	377.0	F	261	
		TR	0.74	24.2	C	185	TR	0.76	23.8	C	171		TR	0.80	22.9	C	383	
	Southbound	LT	0.93	43.6	D	315	LT	1.06	72.4	E	322	+	LT	1.47	231.9	F	401	+
		R	0.57	13.6	B	68	R	0.65	23.1	C	103		R	0.77	11.6	B	3	
		Intersection		119.1	F		Intersection		163.9	F			Intersection		123.2	F		
	Bay Street and Hannah Street																	
	Eastbound	LTR	0.04	17.4	B	26	LTR	0.04	17.4	B	26		LTR	0.04	18.7	B	27	
	Westbound	LTR	0.60	10.3	B	52	LTR	0.76	14.9	B	90		LTR	0.81	25.2	C	370	
	Northbound	LTR	1.43	217.9	F	666	LTR	1.59	290.2	F	719	+						
13													L	0.55	28.4	C	32	
													TR	0.94	58.7	E	476	
	Southbound	L	3.30	1064.7	F	410	L	4.86	1760.5	F	461	+	L	2.12	529.8	F	296	
		T	0.72	11.2	B	141	T	0.77	13.6	B	153		T	0.96	29.9	C	334	
		R	0.17	3.1	A	0	R	0.20	3.6	A	4		R	0.26	8.6	A	29	
		Intersection		194.8	F		Intersection		306.4	F			Intersection		93.2	F		
	Front Street and Hannah Street																	
	Eastbound	TR	0.38	10.5	B	0	TR	0.43	10.4	B	0		TR	0.43	12.0	B	6	
14	Westbound	LT	0.05	12.9	B	30	LT	0.05	12.9	B	30		LT	0.05	12.9	B	30	
	Northbound	LR	0.52	23.1	C	242	LR	0.74	32.0	C	326		LR	0.74	32.0	C	326	
		Intersection		16.5	B		Intersection		20.6	C			Intersection		21.4	C		
	Bay Street and Swan Street/Van Duzer Street																	
	Eastbound	L	0.66	33.6	C	178	L	0.71	36.6	D	188		L	0.71	37.8	D	188	
		LTR	0.17	19.9	B	66	LTR	0.19	20.2	C	69		LTR	0.19	20.2	C	69	
15	Westbound	LTR	0.00	0.0	0.0	0	LTR	0.00	0.0	0.0	0		LTR	0.00	0.0	0.0	0	
	Northbound	LTR	0.68	62.1	E	273	LTR	0.73	63.1	E	336		LTR	0.73	26.3	C	345	
	Southbound	LTR	0.90	21.4	C	480	LTR	0.96	26.9	C	528		LTR	0.96	27.7	C	85	
		Intersection		37.8	D		Intersection		41.4	D			Intersection		27.9	C		
	Bay Street and Grant Street																	
	Eastbound												LTR	0.24	29.8	C	74	
18	Westbound												R	0.21	29.1	C	64	
	Northbound	**Unsignalized**					**Unsignalized**						TR	0.46	10.8	B	195	
	Southbound												T	1.47	233.0	F	1233	+
													Intersection		134.1	F		
	Van Duzer Street and Clinton Street																	
19	Westbound	TR	0.27	33.1	C	53	TR	0.29	33.5	C	56		TR	0.29	32.9	C	60	
	Northbound	LT	0.33	7.1	A	95	LT	0.34	7.2	A	98		LT	0.34	7.2	A	98	
		Intersection		12.6	B		Intersection		13.0	B			Intersection		12.9	B		
	Bay Street and Clinton Street																	
	Westbound	LTR	0.30	23.6	C	100	LTR	0.31	23.9	C	101		LTR	0.37	29.3	C	109	
	Northbound	L	0.34	19.0	B	10	L	0.38	19.6	B	10		L	0.39	18.9	B	9	
20		TR	0.63	17.4	B	147	TR	0.69	18.2	B	144		TR	0.64	13.5	B	156	
	Southbound	L	0.54	14.2	B	25	L	0.65	21.4	C	32		L	0.55	8.0	A	9	
		TR	1.45	222.8	F	1228	TR	1.56	273.7	F	1256	+	TR	1.44	218.2	F	610	
		Intersection		118.3	F		Intersection		143.6	F			Intersection		114.4	F		
	Bay Street and Baltic Street																	
	Eastbound												LTR	0.21	38.7	D	35	
21	Westbound												LTR	0.05	33.8	C	13	
	Northbound	**Unsignalized**					**Unsignalized**						TR	0.85	7.9	A	133	
	Southbound												LT	1.18	96.4	F	39	+
													Intersection		56.2	E		
	Bay Street and Wave Street																	
	Westbound	LTR	0.34	26.2	C	87	LTR	0.34	25.9	C	87							
													L	0.28	36.6	D	39	
													TR	0.45	42.0	D	67	
24	Northbound	LT	1.24	141.6	F	820	LT	1.41	214.7	F	949	+	LT	1.10	75.8	E	857	
		R	0.10	12.9	B	22	R	0.10	12.7	B	23		R	0.08	5.7	A	14	
	Southbound	L	0.81	38.7	D	16	L	0.79	37.6	D	15		L	0.67	20.9	C	11	
		TR	1.54	268.3	F	707	TR	1.67	323.9	F	722	+	TR	1.34	171.8	F	874	
		Intersection		201.4	F		Intersection		259.9	F			Intersection		123.6	F		
	Front Street and Wave Street																	
	Eastbound	LR	0.25	17.9	B	43	LR	0.27	18.4	B	44		LR	0.30	26.0	C	62	
25	Northbound	LT	0.74	8.5	A	29	LT	0.87	11.4	B	24		LT	0.75	9.9	A	65	
	Southbound	TR	0.39	10.4	B	125	TR	0.48	11.5	B	156		TR	0.41	11.0	B	183	
		Intersection		10.0	B		Intersection		11.9	B			Intersection		11.4	B		
	Front Street and Prospect Street																	
	Eastbound	LTR	0.62	34.7	C	123	LTR	0.63	35.0	C	124		LTR	0.61	41.3	D	116	
26	Westbound	LTR	0.53	27.5	C	113	LTR	0.54	27.7	C	113		LTR	0.59	41.6	D	163	
	Northbound	TR	1.04	80.4	F	380	TR	1.24	150.2	F	463	+	TR	0.94	45.2	D	511	
	Southbound	LT	1.83	410.8	F	345	LT	3.42	1119.2	F	449	+	LT	1.52	271.8	F	563	
		Intersection		172.3	F		Intersection		445.7	F			Intersection		120.3	F		

Table 21-9: Signalized Level of Service Analysis – Saturday MD Peak Hour No-Action vs. With-Action vs. Mitigated Conditions (con't)

Int #	Intersection & Approach	No-Action Conditions					With-Action Conditions						With-Action With Mitigation Conditions					
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
27	**Van Duzer Street and Beach Street**																	
	Eastbound	LT	0.65	33.9	C	212	LT	0.71	37.2	D	252		LT	0.71	37.2	D	252	
	Westbound	TR	0.31	23.9	C	99	TR	0.33	24.1	C	103		TR	0.33	24.1	C	103	
	Northbound	L	0.29	12.1	B	121	L	0.29	12.2	B	124		L	0.29	12.2	B	124	
		TR	0.44	14.3	B	184	TR	0.45	14.5	B	190		TR	0.45	14.5	B	190	
		Intersection		20.1	C		Intersection		21.3	C			Intersection		21.3	C		
28	**Bay Street and Water Street**																	
	Westbound	LTR	0.31	27.3	C	84	LTR	0.31	27.3	C	84		LTR	0.41	34.7	C	93	
	Northbound	L	1.74	359.2	F	107	L	1.80	383.0	F	93	+	L	1.75	362.6	F	102	+
		T	1.06	61.3	E	200	T	1.20	107.5	F	190	+	T	1.08	63.4	E	309	
	Southbound	TR	1.46	240.6	F	1067	TR	1.57	290.6	F	1182	+	TR	1.41	211.8	F	1219	
		Intersection		169.3	F		Intersection		212.9	F			Intersection		153.6	F		
29	**Bay Street and Canal Street**																	
	Eastbound	L	0.62	145.5	F	163	L	0.62	145.2	F	161		L	0.93	144.8	F	231	
		TR	0.25	20.8	C	85	TR	0.25	20.7	C	84		TR	0.40	30.3	C	120	
	Westbound	LTR	0.20	134.0	F	52	LTR	0.25	134.8	F	64		LTR	0.38	86.2	F	88	
	Northbound	TR	1.17	97.7	F	77	TR	1.35	179.2	F	86	+	TR	1.12	72.3	E	83	
	Southbound	LT	3.56	1167.3	F	664	LT	3.88	1309.0	F	677	+	T	1.32	162.6	F	609	
		Intersection		606.5	F		Intersection		697.8	F			Intersection		116.9	F		
30	**Front Street and Canal Street**																	
	Eastbound	LR	0.65	30.2	C	110	LR	0.73	35.1	D	141		LR	0.56	29.5	C	123	
	Northbound	LT	0.53	12.8	B	165	LT	0.61	14.4	B	200		LT	0.63	21.1	C	300	
	Southbound	TR	0.44	10.4	B	63	TR	0.52	11.1	B	55		TR	0.54	14.8	B	109	
		Intersection		15.3	B		Intersection		17.1	B			Intersection		20.2	C		
31	**Bay Street and Broad Street**																	
	Eastbound	LR	0.30	25.2	C	127	LR	0.38	25.1	C	156							
													L	0.44	33.2	C	151	
													R	0.19	29.7	C	56	
	Northbound	LT	3.24	1024.5	F	244	LT	3.94	1339.0	F	189	+	LT	3.17	995.2	F	140	
	Southbound	T	1.35	180.6	F	108	T	1.46	229.5	F	111	+	T	1.24	128.4	F	246	
		R	0.20	6.3	A	0	R	0.24	6.6	A	0		R	0.21	3.4	A	8	
		Intersection		482.3	F		Intersection		627.8	F			Intersection		447.8	F		
32	**Richmond Terrace and Clove Road**																	
	Eastbound	LT	0.76	19.4	B	333	LT	0.81	21.9	C	366		LT	0.81	21.9	C	366	
		R	0.13	6.8	A	38	R	0.13	7.0	A	39		R	0.13	7.0	A	39	
	Westbound	L	0.47	15.6	B	37	L	0.60	25.3	C	120		L	0.60	25.3	C	120	
		TR	0.69	12.3	B	177	TR	0.73	13.8	B	198		TR	0.73	13.8	B	198	
	Northbound	LTR	0.27	22.7	C	31	LTR	0.28	22.9	C	32		LTR	0.28	22.9	C	32	
		Intersection		16.0	B		Intersection		18.2	B			Intersection		18.2	B		
35	**Victory Boulevard and Cebra Avenue**																	
	Eastbound	L	0.27	29.4	C	47	L	0.28	29.9	C	48		L	0.34	35.4	D	51	
		TR	0.50	31.2	C	153	TR	0.50	31.2	C	153		TR	0.57	35.7	D	161	
	Westbound	L	0.32	29.5	C	68	L	0.35	30.2	C	73		L	0.42	35.2	D	78	
		TR	0.55	32.1	C	176	TR	0.58	33.0	C	185		TR	0.66	38.6	D	195	
	Northbound	LTR	0.92	37.7	D	663	LTR	0.99	50.5	D	739	+	LTR	0.93	36.5	D	705	
	Southbound	LTR	1.07	65.3	E	561	LTR	1.17	103.8	F	601	+	LTR	1.09	67.5	E	565	
		Intersection		46.3	D		Intersection		65.7	E			Intersection		48.3	D		
36	**Victory Boulevard and Jersey Street**																	
	Eastbound	L	0.74	36.0	D	40	L	1.05	91.7	F	91	+	L	1.05	96.8	F	98	+
		T	1.00	42.9	D	509	T	1.06	58.0	E	502	+	T	1.06	59.9	E	556	+
	Westbound	T	1.00	50.2	D	664	T	1.05	64.2	E	712	+	T	1.05	64.2	E	712	+
		R	0.12	6.4	A	24	R	0.21	7.1	A	35		R	0.21	7.1	A	35	
	Southbound	LR	0.38	25.4	C	112	LR	0.59	31.6	C	156		LR	0.59	31.6	C	156	
		Intersection		42.6	D		Intersection		57.1	E			Intersection		58.1	E		
38	**Victory Boulevard and Forest Avenue**																	
	Eastbound	LR	0.57	29.4	C	162	LR	0.59	29.9	C	169		LR	0.64	32.5	C	175	
	Northbound	L	0.92	67.8	E	238	L	1.03	100.8	F	253	+	L	0.90	63.9	E	236	
		T	0.63	19.8	B	326	T	0.67	21.1	C	360		T	0.64	18.9	B	341	
	Southbound	T	0.78	64.8	E	448	T	0.82	78.7	E	541	+	T	0.79	67.7	E	465	
		R	0.33	3.0	A	37	R	0.34	3.1	A	38		R	0.33	2.9	A	36	
		Intersection		37.7	D		Intersection		44.8	D			Intersection		38.5	D		

Table 21-9: Signalized Level of Service Analysis – Saturday MD Peak Hour No-Action vs. With-Action vs. Mitigated Conditions (con't)

Int #	Intersection & Approach	No-Action Conditions					With-Action Conditions						With-Action With Mitigation Conditions					
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
41	**Broad Street and Canal Street**																	
	Eastbound	L	0.27	9.5	A	65	L	0.28	9.7	A	64		L	0.28	9.7	A	64	
		TR	0.25	8.6	A	70	TR	0.29	9.2	A	89		TR	0.29	9.2	A	89	
	Westbound	LTR	0.28	13.4	B	120	LTR	0.33	14.2	B	143		LTR	0.37	12.7	B	138	
	Northbound	L	0.28	25.8	C	68	L	0.28	25.8	C	68		L	0.28	25.8	C	68	
		TR	0.41	26.9	C	158	TR	0.42	27.0	C	160		TR	0.42	27.0	C	160	
	Southbound	LT	0.29	24.7	C	113	LT	0.30	24.9	C	117		LT	0.30	24.9	C	117	
		Intersection		17.8	B		Intersection		17.7	B			Intersection		17.4	B		
42	**Broad Street and Van Duzer Street**																	
	Westbound	L	0.66	68.3	E	173	L	0.70	66.6	E	178		L	0.70	66.7	E	177	
	Southbound	L	0.11	5.1	A	45	L	0.11	5.9	A	49		L	0.11	5.9	A	49	
		T	0.34	6.5	A	144	T	0.36	7.5	A	161		T	0.36	7.5	A	161	
		Intersection		22.4	C		Intersection		24.5	C			Intersection		24.5	C		
43	**Broad Street and Targee Street**																	
	Eastbound	LT	0.22	30.9	C	119	LT	0.22	30.2	C	120		LT	0.22	30.2	C	120	
	Westbound	TR	0.37	23.3	C	137	TR	0.43	24.6	C	163		TR	0.43	24.2	C	163	
	Northbound	LT	0.58	16.8	B	265	LT	0.58	17.0	B	270		LT	0.58	17.0	B	270	
		R	0.27	12.0	B	89	R	0.33	12.8	B	111		R	0.33	12.8	B	111	
		Intersection		19.0	B		Intersection		19.3	B			Intersection		19.2	B		
44	**Vanderbilt Avenue and Tompkins Avenue**																	
	Eastbound	LTR	0.81	32.3	C	445	LTR	0.88	38.4	D	501		LTR	0.88	38.4	D	501	
	Westbound	LTR	0.53	4.4	A	33	LTR	0.60	4.5	A	35		LTR	0.60	8.3	A	58	
	Northbound	LTR	0.83	44.8	D	273	LTR	0.87	48.4	D	305		LTR	0.87	48.4	D	305	
	Southbound	LTR	0.61	29.6	C	248	LTR	0.61	29.7	C	248		LTR	0.61	29.7	C	248	
		Intersection		27.9	C		Intersection		30.4	C			Intersection		31.3	C		
45	**Bay Street and Vanderbilt Avenue**																	
	Eastbound	L	0.38	28.7	C	124	L	0.47	30.3	C	149		L	0.52	33.3	C	155	
		R	0.20	26.6	C	51	R	0.20	26.6	C	48		R	0.22	29.0	C	50	
	Northbound	LT	8.16	3246.2	F	1218	LT	8.95	3598.7	F	1302	+	LT	7.95	3147.0	F	1272	
	Southbound	T	1.28	145.4	F	483	T	1.36	180.4	F	475	+	T	1.28	139.9	F	569	
		R	0.35	1.5	A	9	R	0.40	1.7	A	10		R	0.38	1.4	A	10	
		Intersection		1195.9	F		Intersection		1322.7	F			Intersection		1150.4	F		
47	**Bay Street and Edgewater Drive**																	
	Westbound	LR	0.30	22.5	C	105	LR	0.35	23.0	C	121		LR	0.37	24.7	C	126	
	Northbound	TR	0.60	16.8	B	84	TR	0.68	17.6	B	85		TR	0.65	15.5	B	78	
	Southbound	T	1.01	36.9	D	328	T	1.06	55.5	E	324	+	T	1.02	37.8	D	336	
	Northwestbound	R	0.37	3.8	A	25	R	0.39	5.6	A	42		R	0.40	6.0	A	43	
		Intersection		24.1	C		Intersection		31.5	C			Intersection		24.3	C		
48	**Bay Street and Hylan Boulevard**																	
	Eastbound	LTR	1.06	77.9	E	551	LTR	1.15	110.3	F	614	+	LTR	1.15	110.3	F	614	+
	Westbound	LTR	0.65	41.9	D	185	LTR	0.66	42.4	D	187		LTR	0.66	42.4	D	187	
	Northbound	LTR	4.39	1540.4	F	709	LTR	5.22	1909.6	F	718	+	LTR	5.22	1909.6	F	814	+
	Southbound	T	1.10	90.6	F	529	T	1.20	128.0	F	580	+	T	1.20	128.3	F	613	+
		R	0.63	18.8	B	179	R	0.68	19.5	B	191		R	0.68	19.4	B	203	
		Intersection		515.8	F		Intersection		654.4	F			Intersection		654.5	F		
49	**Bay Street and School Road**																	
	Eastbound	L	1.39	210.7	F	831	L	1.54	277.4	F	943	+	L	1.36	197.3	F	898	
		TR	0.09	8.3	A	28	TR	0.09	8.3	A	28		TR	0.08	6.8	A	25	
	Westbound	LTR	0.01	15.3	B	9	LTR	0.01	15.3	B	9		LTR	0.01	12.5	B	8	
	Northbound	LTR	0.10	13.9	B	46	LTR	0.10	13.9	B	46		LTR	0.11	16.9	B	51	
	Southbound	LTR	0.19	19.9	B	65	LTR	0.20	20.3	C	63		LTR	0.23	21.0	C	65	
		R	0.70	11.3	B	153	R	0.73	12.1	B	137		R	0.74	12.1	B	137	
		Intersection		98.3	F		Intersection		130.1	F			Intersection		94.8	F		

Notes: L = Left Turn, T = Through, R = Right Turn, DefL = Defacto Left Turn, LOS = Level of Service, "+" implies a significant adverse impact.

Table 21-10: Unsignalized Level of Service Analysis – Weekday AM Peak Hour No-Action vs. With-Action vs. Mitigated Conditions

#	Intersection & Approach	No-Action Conditions					With-Action Conditions						With-Action With Mitigation Conditions					
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
4	**Hamilton Avenue and Stuyvesant Place**																	
	Southbound	TR	0.54	21.2	C	78	TR	0.58	22.9	C	89		TR	0.58	22.9	C	89	
6	**Wall Street and Stuyvesant Place**																	
	Eastbound	R	0.44	18.6	C	56	R	0.45	19.0	C	57		R	0.45	19.0	C	57	
	Southbound	L	0.35	42.9	E	36	L	0.36	44.5	E	37		L	0.36	44.5	E	37	
16	**Van Duzer Street and St Julian Place**																	
	Westbound	R	0.03	15.7	C	2	R	0.03	16.4	C	2		R	0.03	16.4	C	2	
17	**Bay Street and St Julian Place**																	
	Eastbound	LTR	0.14	16.4	C	12	LTR	0.12	15.1	C	10		LTR	0.13	15.3	C	11	
	Westbound	LTR	0.02	10.3	B	2	LTR	0.02	9.9	A	2		LTR	0.02	10.3	B	2	
	Northbound	LTR	0.01	0.4	A	1	LTR	0.01	0.4	A	1		LTR	0.01	0.4	A	1	
18	**Bay Street and Grant Street**																	
	Eastbound	LTR	0.62	56.1	F	86	LTR	0.69	70.3	F	100	+	**Signalized**					
	Westbound	R	0.02	9.6	A	2	R	0.02	9.4	A	1							
21	**Bay Street and Baltic Street**																	
	Eastbound	LTR	0.45	58.9	F	49	LTR	0.91	210.3	F	104		**Signalized**					
	Westbound	LTR	0.06	68.3	F	5	LTR	0.20	239.2	F	14							
	Southbound	LT	0.00	0.0	--	0	LT	0.00	0.0	--	0							
22	**Bay Street and William Street**																	
	Eastbound	LR	0.58	48.6	E	77	LR	0.95	138.8	F	152	+	LR	1.45	353.7	F	224	+
	Northbound	LT	0.01	0.4	A	1	LT	0.02	0.7	A	2		LT	0.02	0.8	A	2	
23	**Bay Street and Congress Street**																	
	Eastbound	LR	0.04	23.2	C	3	LR	0.07	42.2	E	6		LR	0.11	62.7	F	9	
	Northbound	LT	0.01	0.3	A	1	LT	0.02	0.9	A	2		LT	0.02	1.0	A	2	
33	**Jersey Street and Brook Street**																	
	Westbound	LR	0.16	11.4	B	14	LR	0.17	12.0	B	16		LR	0.17	12.0	B	16	
	Southbound	LT	0.12	4.8	A	11	LT	0.13	4.7	A	11		LT	0.13	4.7	A	11	
34	**Pike Street and Brook Street**																	
	Westbound	LT	0.02	1.6	A	2	LT	0.02	1.6	A	2		LT	0.02	1.6	A	2	
37	**Pike Street and Victory Boulevard**																	
	Southbound	LR	0.14	20.6	C	12	LR	0.22	32.4	D	20		LR	0.22	33.4	D	20	
39	**Hudson Street and Cedar Street**																	
	Eastbound	LTR	0.03	10.4	B	3	LTR	0.03	10.4	B	3		LTR	0.03	10.4	B	3	
	Westbound	LTR	0.00	11.0	B	0	LTR	0.00	11.0	B	0		LTR	0.00	11.0	B	0	
	Northbound	LTR	0.01	1.0	A	1	LTR	0.01	1.0	A	1		LTR	0.01	1.0	A	1	
	Southbound	LTR	0.00	0.0	--	0	LTR	0.00	0.0	--	0		LTR	0.00	0.0	--	0	
40	**Broad Street and Cedar Street**																	
	Eastbound	LTR	0.05	1.4	A	4	LTR	0.05	1.4	A	4		LTR	0.05	1.4	A	4	
	Westbound	LT	0.00	0.1	A	0	LT	0.00	0.1	A	0		LT	0.00	0.1	A	0	
	Northbound	LTR	0.00	0.0	A	0	LTR	0.00	0.0	A	0		LTR	0.00	0.0	A	0	
	Southbound	LR	0.46	33.0	D	55	LR	0.52	40.9	E	67		LTR	0.52	40.9	E	67	

Notes: L = Left Turn, T= Through, R = Right Turn, DefL = Defacto Left Turn; LOS = Level of Service, -- = Approach has no volume recorded during this peak hour, "+" implies a significant adverse impact, Err = v/c or delay exceeds the maximum limit reportable in the analysis software

Table 21-11: Unsignalized Level of Service Analysis – Weekday MD Peak Hour No-Action vs. With-Action vs. Mitigated Conditions

#	Intersection & Approach	No-Action Conditions					With-Action Conditions					With-Action With Mitigation Conditions					
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
4	**Hamilton Avenue and Stuyvesant Place**																
	Southbound	TR	0.25	13.6	B	25	TR	0.27	13.8	B	27	TR	0.27	13.8	B	27	
6	**Wall Street and Stuyvesant Place**																
	Eastbound	R	0.31	13.4	B	34	R	0.32	13.6	B	34	R	0.32	13.6	B	34	
	Southbound	L	0.10	23.9	C	8	L	0.10	24.2	C	8	L	0.10	24.2	C	8	
16	**Van Duzer Street and St Julian Place**																
	Westbound	R	0.04	14.2	B	3	R	0.04	15.2	C	3	R	0.04	15.2	C	3	
17	**Bay Street and St Julian Place**																
	Eastbound	LTR	0.19	24.4	C	17	LTR	0.15	20.0	C	13	LTR	0.21	27.2	D	19	
	Westbound	LTR	0.04	10.8	B	3	LTR	0.04	10.3	B	3	LTR	0.05	11.7	B	4	
	Northbound	LTR	0.02	0.7	A	2	LTR	0.02	0.6	A	2	LTR	0.02	0.6	A	2	
18	**Bay Street and Grant Street**																
	Eastbound	LTR	8.60	Err	F	Err	LTR	5.65	Err	F	Err	**Signalized**					
	Westbound	R	0.08	10.1	B	6	R	0.08	10.4	B	7						
21	**Bay Street and Baltic Street**																
	Eastbound	LTR	3.03	Err	F	Err	LTR	2.25	1391.6	F	88	**Signalized**					
	Westbound	LTR	Err	Err	F	Err	LTR	Err	Err	F	Err						
	Southbound	LT	0.02	2.8	A	2	LT	0.03	4.9	A	2						
22	**Bay Street and William Street**																
	Eastbound	LR	4.41	Err	F	Err	LR	4.43	Err	F	Err	LR	9.26	Err	F	Err	
	Northbound	LT	0.15	25.8	D	12	LT	0.13	24.0	C	11	LT	0.32	166.6	F	25	+
23	**Bay Street and Congress Street**																
	Eastbound	LR	0.35	213.2	F	27	LR	0.36	217.3	F	27	LR	0.93	774.8	F	44	
	Northbound	LT	0.00	0.0	--	0	LT	0.00	0.0	--	0	LT	0.00	0.0	--	0	
33	**Jersey Street and Brook Street**																
	Westbound	LR	0.22	11.9	B	21	LR	0.29	14.5	B	29	LR	0.29	14.5	B	29	
	Southbound	LT	0.10	3.7	A	9	LT	0.12	3.9	A	11	LT	0.12	3.9	A	11	
34	**Pike Street and Brook Street**																
	Westbound	LT	0.03	1.3	A	2	LT	0.03	1.3	A	2	LT	0.03	1.3	A	2	
37	**Pike Street and Victory Boulevard**																
	Southbound	LR	0.47	59.7	F	52	LR	1.93	727.5	F	164	LR	1.93	727.5	F	164	
39	**Hudson Street and Cedar Street**																
	Eastbound	LTR	0.02	10.1	B	2	LTR	0.02	9.9	A	2	LTR	0.02	9.9	A	2	
	Westbound	LTR	0.00	10.5	B	0	LTR	0.00	10.4	B	0	LTR	0.00	10.4	B	0	
	Northbound	LTR	0.01	1.1	A	1	LTR	0.01	1.1	A	1	LTR	0.01	1.1	A	1	
	Southbound	LTR	0.00	0.0	--	0	LTR	0.00	0.0	--	0	LTR	0.00	0.0	--	0	
40	**Broad Street and Cedar Street**																
	Eastbound	LTR	0.05	1.6	A	4	LTR	0.05	1.5	A	4	LTR	0.05	1.5	A	4	
	Westbound	LT	0.03	0.9	A	2	LT	0.03	0.9	A	2	LT	0.03	0.9	A	2	
	Northbound	LTR	0.00	13.0	B	0	LTR	0.00	13.4	B	0	LTR	0.00	13.4	B	0	
	Southbound	LR	0.68	80.0	F	92	LR	0.64	71.4	F	85	LTR	0.64	71.4	F	85	

Notes: L = Left Turn, T= Through, R = Right Turn, DefL = Defacto Left Turn; LOS = Level of Service, -- = Approach has no volume recorded during this peak hour, "+" implies a significant adverse impact, Err = v/c or delay exceeds the maximum limit reportable in the analysis software

Table 21-12: Unsignalized Level of Service Analysis – Weekday PM Peak Hour No-Action vs. With-Action vs. Mitigated Conditions

#	Intersection & Approach	No-Action Conditions					With-Action Conditions						With-Action With Mitigation Conditions					
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
4	**Hamilton Avenue and Stuyvesant Place**																	
	Southbound	TR	0.18	11.8	B	16	TR	0.18	11.8	B	16		TR	0.18	11.8	B	16	
6	**Wall Street and Stuyvesant Place**																	
	Eastbound	R	0.30	13.8	B	31	R	0.30	13.8	B	31		R	0.30	13.8	B	31	
	Southbound	L	0.14	23.3	C	12	L	0.14	23.3	C	12		L	0.14	23.3	C	12	
16	**Van Duzer Street and St Julian Place**																	
	Westbound	R	0.03	12.1	B	3	R	0.04	12.8	B	3		R	0.04	12.8	B	3	
17	**Bay Street and St Julian Place**																	
	Eastbound	LTR	0.11	19.3	C	10	LTR	0.11	18.9	C	9		LTR	0.14	23.0	C	12	
	Westbound	LTR	0.01	14.7	B	1	LTR	0.01	12.9	B	1		LTR	0.01	15.1	C	1	
	Northbound	LTR	0.01	0.2	A	1	LTR	0.01	0.3	A	1		LTR	0.01	0.3	A	1	
18	**Bay Street and Grant Street**																	
	Eastbound	LTR	5.65	Err	F	Err	LTR	13.71	Err	F	Err		**Signalized**					
	Westbound	R	0.08	9.7	A	7	R	0.08	9.8	A	7							
21	**Bay Street and Baltic Street**																	
	Eastbound	LTR	1.30	683.4	F	76	LTR	3.00	1965.6	F	92		**Signalized**					
	Westbound	LTR	1.17	2659.2	F	25	LTR	Err	Err	F	Err							
	Southbound	LT	0.00	0.2	A	0	LT	0.01	3.7	A	1							
22	**Bay Street and William Street**																	
	Eastbound	LR	3.01	Err	F	Err	LR	6.82	Err	F	Err	+	LR	14.42	Err	F	Err	+
	Northbound	LT	0.14	13.8	B	12	LT	0.31	91.8	F	27	+	LT	0.64	298.8	F	48	+
23	**Bay Street and Congress Street**																	
	Eastbound	LR	0.40	155.2	F	34	LR	0.58	261.5	F	45		LR	0.90	494.7	F	57	
	Northbound	LT	0.03	2.1	A	2	LT	0.06	11.9	B	5		LT	0.11	43.5	E	9	+
33	**Jersey Street and Brook Street**																	
	Westbound	LR	0.19	11.8	B	17	LR	0.22	13.3	B	21		LR	0.22	13.3	B	21	
	Southbound	LT	0.08	3.0	A	6	LT	0.09	3.0	A	7		LT	0.09	3.0	A	7	
34	**Pike Street and Brook Street**																	
	Westbound	LT	0.03	1.7	A	2	LT	0.03	1.7	A	2		LT	0.03	1.7	A	2	
37	**Pike Street and Victory Boulevard**																	
	Southbound	LR	0.30	35.6	E	30	LR	0.98	249.4	F	107		LR	0.98	249.4	F	107	
39	**Hudson Street and Cedar Street**																	
	Eastbound	LTR	0.03	9.3	A	2	LTR	0.03	9.2	A	2		LTR	0.03	9.2	A	2	
	Westbound	LTR	0.00	0.0	A	0	LTR	0.00	0.0	A	0		LTR	0.00	0.0	A	0	
	Northbound	LTR	0.01	1.7	A	1	LTR	0.01	1.7	A	1		LTR	0.01	1.7	A	1	
	Southbound	LTR	0.01	4.1	A	1	LTR	0.01	4.1	A	1		LTR	0.01	4.1	A	1	
40	**Broad Street and Cedar Street**																	
	Eastbound	LTR	0.02	0.9	A	2	LTR	0.02	0.8	A	2		LTR	0.02	0.8	A	2	
	Westbound	LT	0.01	0.2	A	1	LT	0.01	0.2	A	1		LT	0.01	0.2	A	1	
	Northbound	LTR	0.00	0.0	A	0	LTR	0.00	0.0	A	0		LTR	0.00	0.0	A	0	
	Southbound	LR	0.17	28.8	D	15	LR	0.19	32.4	D	17		LTR	0.19	32.4	D	17	

Notes: L = Left Turn, T= Through, R = Right Turn, DefL = Defacto Left Turn; LOS = Level of Service, -- = Approach has no volume recorded during this peak hour, "+" implies a significant adverse impact, Err = v/c or delay exceeds the maximum limit reportable in the analysis software

Table 21-13: Unsignalized Level of Service Analysis – Saturday MD Peak Hour No-Action vs. With-Action vs. Mitigated Conditions

#	Intersection & Approach	No-Action Conditions					With-Action Conditions					With-Action With Mitigation Conditions					
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
4	**Hamilton Avenue and Stuyvesant Place**																
	Southbound	TR	0.15	11.8	B	13	TR	0.15	11.9	B	13	TR	0.15	11.9	B	13	
6	**Wall Street and Stuyvesant Place**																
	Eastbound	R	0.17	11.0	B	15	R	0.17	11.0	B	15	R	0.17	11.0	B	15	
	Southbound	L	0.08	15.0	C	6	L	0.08	15.0	C	6	L	0.08	15.0	C	6	
16	**Van Duzer Street and St Julian Place**																
	Westbound	R	0.04	11.7	B	3	R	0.04	12.2	B	3	R	0.04	12.2	B	3	
17	**Bay Street and St Julian Place**																
	Eastbound	LTR	0.09	17.9	C	8	LTR	0.08	16.1	C	7	LTR	0.11	20.3	C	9	
	Westbound	LTR	0.02	13.2	B	2	LTR	0.02	11.7	B	2	LTR	0.03	14.4	B	2	
	Northbound	LTR	0.01	0.2	A	1	LTR	0.01	0.2	A	1	LTR	0.01	0.2	A	1	
18	**Bay Street and Grant Street**																
	Eastbound	LTR	4.08	Err	F	Err	LTR	5.09	Err	F	Err	**Signalized**					
	Westbound	R	0.09	9.9	A	8	R	0.10	10.2	B	8						
21	**Bay Street and Baltic Street**																
	Eastbound	LTR	1.39	675.4	F	86	LTR	2.18	1230.9	F	97	**Signalized**					
	Westbound	LTR	5.02	Err	F	Err	LTR	Err	Err	F	Err						
	Southbound	LT	0.00	0.0	--	0	LT	0.00	0.0	--	0						
22	**Bay Street and William Street**																
	Eastbound	LR	1.81	568.0	F	219	LR	2.91	1110.4	F	281	LR	5.63	Err	F	Err	
	Northbound	LT	0.07	6.5	A	6	LT	0.09	11.6	B	7	LT	0.21	69.8	F	17	+
23	**Bay Street and Congress Street**																
	Eastbound	LR	0.09	96.7	F	7	LR	0.12	140.5	F	10	LR	0.35	475.1	F	21	
	Northbound	LT	0.01	1.2	A	1	LT	0.02	2.3	A	1	LT	0.04	11.9	B	3	
33	**Jersey Street and Brook Street**																
	Westbound	LR	0.15	10.6	B	13	LR	0.17	11.7	B	16	LR	0.17	11.7	B	16	
	Southbound	LT	0.05	2.2	A	4	LT	0.06	2.3	A	4	LT	0.06	2.3	A	4	
34	**Pike Street and Brook Street**																
	Westbound	LT	0.02	1.4	A	1	LT	0.02	1.5	A	1	LT	0.02	1.5	A	1	
37	**Pike Street and Victory Boulevard**																
	Southbound	LR	0.31	48.4	E	30	LR	0.73	181.2	F	73	LR	0.73	181.2	F	73	
39	**Hudson Street and Cedar Street**																
	Eastbound	LTR	0.02	9.6	A	2	LTR	0.02	9.5	A	2	LTR	0.02	9.5	A	2	
	Westbound	LTR	0.00	9.2	A	0	LTR	0.00	9.2	A	0	LTR	0.00	9.2	A	0	
	Northbound	LTR	0.01	2.0	A	1	LTR	0.01	2.0	A	1	LTR	0.01	2.0	A	1	
	Southbound	LTR	0.00	0.0	--	0	LTR	0.00	0.0	--	0	LTR	0.00	0.0	--	0	
40	**Broad Street and Cedar Street**																
	Eastbound	LTR	0.01	0.4	A	1	LTR	0.01	0.3	A	1	LTR	0.01	0.3	A	1	
	Westbound	LT	0.01	0.4	A	1	LT	0.01	0.3	A	1	LT	0.01	0.3	A	1	
	Northbound	LTR	0.01	19.1	C	1	LTR	0.02	20.5	C	1	LTR	0.02	20.5	C	1	
	Southbound	LR	0.21	30.3	D	19	LR	0.22	31.5	D	20	LTR	0.22	31.5	D	20	

Notes: L = Left Turn, T= Through, R = Right Turn, DefL = Defacto Left Turn; LOS = Level of Service, -- = Approach has no volume recorded during this peak hour, "+" implies a significant adverse impact, Err = v/c or delay exceeds the maximum limit reportable in the analysis software

TRANSIT (BUS)

The Proposed Actions would result in a capacity shortfall on all bus routes serving the study area during the Weekday AM and PM peak hours, as shown in Table 21-14. These significant adverse impacts could be fully mitigated by the addition of two to six additional standard buses to each direction of each route during both peak hours, as shown in Table 21-14. The general policy of NYCT is to provide additional bus service where demand warrants, taking into account financial and operational constraints.

Table 21-14: With-Action With-Mitigation Conditions Local Bus Analysis

Route	Peak Direction	Maximum Load Point	Peak Hour Buses [1]	Peak Hour Passengers	Average Passengers Per Bus	Total Capacity [2]	Available Capacity	Additional Buses for Mitigation	Total Mitigated Peak Hours Buses	Available Capacity with Mitigation
Weekday AM										
S51/81	NB	Bay Street and Canal Street	7	644	92	378	-266	5	12	4
S51/81	SB	Bay Street and Victory Boulevard	4	317	79	216	-101	2	6	7
S74/84	NB	Bay Street and Victory Boulevard	6	503	84	324	-179	4	10	37
S74/84	SB	Richmond Road and Clove Road	4	321	80	216	-105	2	6	3
S76/86	NB	Bay Street and Victory Boulevard	7	694	99	378	-316	6	13	8
S76/86	SB	Richmond Road and Clove Road	6	406	68	324	-82	2	8	26
S78	NB	Bay Street and Victory Boulevard	6	554	92	324	-230	5	11	40
S78	SB	Hylan Boulevard and Clove Road	7	472	67	378	-94	2	9	14
Weekday PM										
S51/81	NB	Bay Street and Victory Boulevard	4	473	118	216	-257	5	9	13
S51/81	SB	Bay Street and Victory Boulevard	7	536	77	378	-158	3	10	4
S74/84	NB	Targee Street and DeKalb Street	4	304	76	216	-88	3	7	74
S74/84	SB	Bay Street and Victory Boulevard	5	397	79	270	-127	3	8	35
S76/86	NB	Bay Street and Victory Boulevard	4	417	104	216	-201	4	8	15
S76/86	SB	Bay Street and Victory Boulevard	5	499	100	270	-229	5	10	41
S78	NB	Hylan Boulevard and Clove Road	4	370	92	216	-154	3	7	8
S78	SB	Bay Street and Victory Boulevard	5	391	78	270	-121	3	8	41

Notes:
(1) Based on most currently available data from NYCT/MTA.
(2) Available capacity based on a maximum of 54 passengers per bus (40-foot standard buses).

PEDESTRIAN

As discussed in Chapter 14, "Transportation," the results of the analyses of pedestrian conditions show that demand from the Proposed Actions would significantly adversely impact a total of 11 sidewalks and five crosswalks in one or more peak hours under the With-Action condition, as shown in Tables 21-15 through 21-17.

Table 21-15: Summary of Significant Pedestrian Sidewalk Impacts

Location	Total Width (ft.)	Obstruction Width (ft.)	Effective Width	Available Circulation Space (ft^2/p) Weekday AM	Weekday MD	Weekday PM	Sat MD	Non-Platoon Conditions LOS Weekday AM	Weekday MD	Weekday PM	Sat MD	Platoon Conditions LOS Weekday AM	Weekday MD	Weekday PM	Sat MD
Bay St and Victory Blvd (S leg, E sidewalk)	20	11.5	8.5	179.0	80.7	87.1	66.2	A	A	A	A	B	C	C	C
Bay St and Hannah St (N leg, E sidewalk)	20	11.5	8.5	151.0	56.6	56.1	62.8	A	B	B	A	B	C	C	C
Bay St and Hannah St (E leg, N sidewalk)	5	4.5	0.5	17.5	3.5	11.4	8.8	D +	F +	E +	E +	E +	F +	E +	F +
Bay St and Hannah St (S leg, E sidewalk)	7	3	4	112.0	56.7	49.7	58.7	A	B	B	B	B	C	C	C
Bay St and Hannah St (E leg, S sidewalk)	3.5	3	0.5	4.6	4.6	6.2	11.3	F +	F +	F +	E +	F +	F +	F +	E +
Bay St and Swan St (S leg, W sidewalk)	14.5	11	3.5	83.9	41.9	49.1	50.0	A	B	B	B	C	C	C	C
Bay St and Clinton St (N leg, E sidewalk)	13	8	5	107.0	64.9	64.5	93.4	A	A	A	A	B	C	C	B
Bay St and Clinton St (N leg, W sidewalk)	8.5	6.8	1.8	108.0	40.3	40.6	45.8	A	B	B	B	B	C	C	C
Bay St and Baltic St (N leg, E sidewalk)	16	9.5	6.5	193.0	119.0	108.0	89.9	A	A	A	A	B	B	B	C
Bay St and Baltic St (N leg, W sidewalk)	4.5	3.5	1	75.9	27.5	28.7	30.5	A	C	C	C	C	D +	D +	D +
Bay St and Wave St (N leg, E sidewalk)	5.1	3	2.1	42.8	30.1	24.5	19.0	B	C	C	D +	C	D +	D +	E +
Bay St and Wave St (S leg, E sidewalk)	7.3	3	4.3	63.4	56.3	44.6	39.7	A	B	B	C	C	C	C	D +
Bay St and Wave St (S leg, W sidewalk)	4.2	3.5	0.7	23.9	12.9	14.9	13.9	D +	E +	E +	E +	D +	E +	E +	E +
Bay St and Wave St (N leg, W sidewalk)	5	3.5	1.5	45.1	17.0	16.7	18.9	B	D +	D +	D +	C	E +	E +	E +
Front St and Hannah St (S leg, E sidewalk)	8	3	5	750.0	1240.0	1472.0	461.0	A	A	A	A	A	A	A	B
Front St and Hannah St (S leg, W sidewalk)	6	3	3	55.2	28.4	35.7	15.3	B	C	C	D +	C	D +	D +	E +
Front St and Wave St (N leg, E sidewalk)	17	14	3	54.0	53.5	34.1	33.0	B	B	C	C	C	C	D +	D +
Front St and Wave St (N leg, W sidewalk)	12	6	6	228.0	106.0	337.0	78.3	A	A	A	A	B	B	B	C
Pike St and Brook St (W leg, S sidewalk)	6	3	3	842.0	201.0	767.0	662.0	A	A	A	A	A	B	A	A
Jersey St and Victory Blvd (N leg, E sidewalk)	10	6.3	3.8	315.0	132.0	180.0	159.0	A	A	A	A	B	B	B	B
Jersey St and Victory Blvd (E leg, N sidewalk)	8	3	5	181.0	48.0	80.0	71.0	A	B	A	A	B	C	C	C
Jersey St and Victory Blvd (E leg, S sidewalk)	4	3	1	190.0	39.5	44.2	64.1	A	C	B	A	B	D +	C	C
Bay St and Minthorne St (E leg, S sidewalk)	10	4.5	5.5	126.0	66.3	52.6	121.0	A	A	B	A	B	C	C	B
Minthorne St and Victory Blvd (S leg, E sidewalk)	5	3	2	2444.0	1629.0	4888.0	815.0	A	A	A	A	A	A	A	A
Minthorne St and Victory Blvd (E leg, S sidewalk)	8.5	3	5.5	747.0	640.0	840.0	747.0	A	A	A	A	A	A	A	A
Minthorne St and Victory Blvd (W leg, S sidewalk)	8.5	3	5.5	249.0	106.0	163.0	115.0	A	A	A	A	B	B	B	B
Front St and Baltic St (N leg, E sidewalk)	12	3	9	172.0	474.0	152.0	157.0	A	A	A	A	B	B	B	B
Front St and Baltic St (N leg, W sidewalk)	5.5	3	2.5	99.0	29.6	32.2	26.0	A	C	C	C	B	D +	D +	D +

Note: "+" implies a significant adverse impact.

***This table has been modified for the FEIS.**

Table 21-16: Summary of Significant Pedestrian Crosswalk Impacts Signalized Intersections

Location	Length (ft.)	Width (ft.)	Available Circulation Space (ft^2/p)				Crosswalk Circulation LOS			
			Weekday			SAT	Weekday			Sat
			AM	MD	PM	MD	AM	MD	PM	MD
Bay St and Victory Blvd (S leg)	60.0	21.5	75.1	33.8	40.1	64.2	A	C	B	A
Bay St and Hannah St (N leg)	92.0	11.0	80.7	18.8	14.8	31.3	A	D +	E +	C
Bay St and Hannah St (E leg)	32.0	12.5	148	33.8	54.8	41	A	C	B	B
Bay St and Clinton St (N leg)	60.0	11.5	121	73	74.1	87.1	A	A	A	A
Bay St and Clinton St (S leg)	59.5	13.0	231	49.2	79.4	111	A	B	A	A
Bay St and Clinton St (W leg)	24.0	11.0	438	98.8	136	172	A	A	A	A
Bay St and Wave St (N leg)	35.5	10.0	134	35	20.4	34.5	A	C	D +	C
Bay St and Wave St (E leg)	30.3	11.3	82.6	45.5	58	38.7	A	B	B	C
Bay St and Wave St (S leg)	36.8	10.0	140	32.8	16.7	28.4	A	C	D +	C
Bay St and Wave St (W leg)	21.3	10.6	175	64.8	92.8	69.3	A	A	A	A
Front St and Hannah St (W leg)	34.5	10.0	49.5	45.3	22.7	22.1	B	B	D +	D +
Jersey St and Victory Blvd (N leg)	36.0	10.0	289	77.3	167	137	A	A	A	A
Jersey St and Victory Blvd (E leg)	40.0	10.0	69.8	13.2	23.1	22.2	A	E +	D +	D +

Note: "+" implies a significant adverse impact.

This table has been modified for the FEIS.

Table 21-17: Summary of Significant Pedestrian Crosswalk Impacts Unsignalized Intersections

Location	Length (ft)	Width (ft)	Average Pedestrian Delay (s)				Crosswalk Circulation LOS			
			Weekday			Sat	Weekday			Sat
			AM	MD	PM	MD	AM	MD	PM	MD
Bay St and Grant St (W leg)	37.4	8.0	2.4	0.9	2.1	1.7	A	A	A	A
Bay St and Baltic St (W leg)	23.5	12.0	0.6	0.2	0.2	0.3	A	A	A	A
Bay St and Minthorne St (E leg)	29.5	10.0	5.0	3.6	2.4	2.3	A	A	A	A

EFFECTS OF TRAFFIC MITIGATION ON PEDESTRIAN CONDITIONS

Proposed traffic mitigation measures would potentially affect pedestrian conditions at a total of eight intersections during one or more peak hours, including the intersections at Bay Street with Grant Street and Bay Street with Baltic Street, where new traffic signals are proposed. At these intersections, it was assumed that as part of the new traffic signals, crosswalks across Bay Street would be added; the east crosswalk at the Bay Street and Baltic Street intersection was not included in the analysis as it is across an existing driveway.

In total, potential traffic mitigation measures would result in new significant adverse impacts at five crosswalks: the south crosswalk at the Bay Street and Victory Boulevard intersection, the north and east crosswalks at the Bay Street and Hannah Street intersection, and the north and south crosswalks at the Bay Street and Wave Street intersection. Table 21-18 shows conditions at these pedestrian elements with the proposed traffic mitigation measures.

Table 21-18: Summary of Significant Pedestrian Crosswalk Impacts with Vehicle Mitigation Signalized Intersections

Location	Length (ft)	Width (ft)	Available Circulation Space (ft^2/p) Weekday AM	Weekday MD	Weekday PM	Sat MD	Crosswalk Circulation LOS Weekday AM	Weekday MD	Weekday PM	Sat MD
Bay St and Victory Blvd (S leg)	60.0	21.5	82.3	20.8	50.3	73.1	A	D +	B	A
Bay St and Hannah St (N leg)	92.0	11.0	147	13.2	26.2	22.4	A	E +	C	D +
Bay St and Hannah St (E leg)	32.0	12.5	75.5	16.4	19.7	21.7	A	D +	D +	D +
Bay St and Grant St (N leg)	59.0	10.0	75.4	60.6	32.3	55.8	A	A	C	B
Bay St and Grant St (S leg)	59.0	10.0	126	35.5	61.9	60.7	A	C	A	A
Bay St and Grant St (W leg)	21.0	7.0	254	51.7	108	92.8	A	B	A	A
Bay St and Clinton St (N leg)	60.0	11.5	78.7	39.7	30.5	47.2	A	C	C	B
Bay St and Clinton St (S leg)	59.5	13.0	148	25.1	29.0	56.9	A	C	C	B
Bay St and Clinton St (W leg)	24.0	11.0	464	111	168	188	A	A	A	A
Bay St and Baltic St (N leg)	37.0	11.0	137	24.9	40.3	36.1	A	C	B	C
Bay St and Baltic St (S leg)	36.0	22.0	233	24.1	44.4	50.1	A	C	B	B
Bay St and Baltic St (W leg)	23.5	12.0	451	143.1	205.1	182.4	A	A	A	A
Bay St and Wave St (N leg)	35.5	10.0	75.3	15.6	10.2	18.2	A	D +	E +	D +
Bay St and Wave St (E leg)	30.3	11.3	99.0	63.1	66.6	51.6	A	A	A	B
Bay St and Wave St (S leg)	36.8	10.0	79.9	14.6	8.6	15.3	A	E +	E +	D +
Bay St and Wave St (W leg)	21.3	10.6	206	88.3	106	90.5	A	A	A	A
Front St and Hannah St (W leg)	34.5	10.0	50.6	49.1	23.2	22.6	B	B	D +	D +
Jersey St and Victory Blvd (N leg)	36.0	10.0	261	77.3	167	137	A	A	A	A
Jersey St and Victory Blvd (E leg)	40.0	10.0	78.4	13.2	23.1	22.2	A	E +	D +	D +

Note: "+" implies a significant adverse impact.

A significant adverse pedestrian impact is considered mitigated if measures implemented return the anticipated conditions to an acceptable level, following the same impact criteria used in determining impacts. Standard mitigation for projected significant adverse pedestrian impacts can include providing additional signal green time or new signal phases; widening crosswalks; relocating or removing street furniture; providing curb extensions, neck-downs, or lane reductions to reduce pedestrian crossing distance; and sidewalk widening. Discussed below are recommended mitigation measures to address the Proposed Actions' potential significant adverse pedestrian impacts. The mitigation measures generally consist of crosswalk widening. If, prior to implementation, DOT determines that an identified mitigation measure is infeasible, an alternative and equivalent mitigation measure will be considered. However, if no other alternative mitigation measures can be identified, those impacts would be unmitigated.

SIDEWALKS

Of the 28 sidewalks analyzed, 11 are expected to be significantly adversely impacted during one or more peak hours, as shown in Table 21-19. Due to constrained right-of-way, mitigation measures to address the potential significant adverse pedestrian impacts for the 11 sidewalks are not feasible. Therefore, these sidewalks could not be mitigated and the impacts are considered significant and unavoidable.

CROSSWALKS

With the implementation of vehicle mitigation measures, seven of the 20 analyzed crosswalks would be significantly adversely impacted by the Proposed Actions during one or more peak hours. Tables 21-20 and 21-21 shows the recommended mitigation measures to address these impacts and their effectiveness. As discussed below, the implementation of the proposed mitigation measures would fully mitigate seven crosswalk elements.

Measures to mitigate the potentially significant adverse crosswalk impacts are as follows:

- *Bay Street and Victory Boulevard, south crosswalk:* to fully mitigate this potential significant adverse pedestrian impact, the crosswalk would have to be widened by 3.2 feet.
- *Bay Street and Hannah Street, north crosswalk:* to fully mitigate this potential significant adverse pedestrian impact, the crosswalk would have to be widened by 8.6 feet.
- *Bay Street and Hannah Street, east crosswalk:* to fully mitigate this potential significant adverse pedestrian impact, the crosswalk would have to be widened by 5.2 feet.
- *Bay Street and Wave Street, north crosswalk:* to fully mitigate this potential significant adverse pedestrian impact, the crosswalk would have to be widened by 5.6 feet.
- *Bay Street and Wave Street, south crosswalk:* to fully mitigate this potential significant adverse pedestrian impact, the crosswalk would have to be widened by 10.3 feet.
- *Front Street and Hannah Street, west crosswalk:* to fully mitigate this potential significant adverse pedestrian impact, the crosswalk would have to be widened by 0.6 feet.
- *Jersey Street and Victory Boulevard, east crosswalk:* to fully mitigate this potential significant adverse pedestrian impact, the crosswalk would have to be widened by 7.1 foot.

Table 21-19: With-Action With-Mitigation Sidewalk Conditions

Location	Total Width (ft.)	Obstruction Width (ft.)	Effective Width	Available Circulation Space (ft^2/p) Weekday AM	Weekday MD	Weekday PM	Sat MD	Non-Platoon Conditions LOS Weekday AM	Weekday MD	Weekday PM	Sat MD	Platoon Conditions LOS Weekday AM	Weekday MD	Weekday PM	Sat MD	Proposed Mitigation
Bay St and Victory Blvd (S leg, E sidewalk)	20	11.5	8.5	179.0	80.7	87.1	66.2	A	A	A	A	B	C	C	C	-
Bay St and Hannah St (N leg, E sidewalk)	20	11.5	8.5	151.0	56.6	56.1	62.8	A	B	B	A	B	C	C	C	-
Bay St and Hannah St (E leg, N sidewalk)	5	4.5	0.5	17.5	3.5	11.4	8.8	D +	F +	E +	E +	E +	F +	E +	F +	Unmitigatable
Bay St and Hannah St (S leg, E sidewalk)	7	3	4	112.0	56.7	49.7	58.7	A	B	B	B	B	C	C	C	-
Bay St and Hannah St (E leg, S sidewalk)	3.5	3	0.5	4.6	4.6	6.2	11.3	F +	F +	F +	E +	F +	F +	F +	E +	Unmitigatable
Bay St and Swan St (S leg, W sidewalk)	14.5	11	3.5	83.9	41.9	49.1	50.0	A	B	B	B	C	C	C	C	-
Bay St and Clinton St (N leg, E sidewalk)	13	8	5	107.0	64.9	64.5	93.4	A	A	A	A	B	C	C	B	-
Bay St and Clinton St (N leg, W sidewalk)	8.5	6.8	1.8	108.0	40.3	40.6	45.8	A	B	B	B	B	C	C	C	-
Bay St and Baltic St (N leg, E sidewalk)	16	9.5	6.5	193.0	119.0	108.0	89.9	A	A	A	A	B	B	B	C	-
Bay St and Baltic St (N leg, W sidewalk)	4.5	3.5	1	75.9	27.5	28.7	30.5	A	C	C	C	C	D +	D +	D +	Unmitigatable
Bay St and Wave St (N leg, E sidewalk)	5.1	3	2.1	42.8	30.1	24.5	19.0	B	C	C	D +	C	D +	D +	E +	Unmitigatable
Bay St and Wave St (S leg, E sidewalk)	7.3	3	4.3	63.4	56.3	44.6	39.7	A	B	B	C	C	C	C	D +	Unmitigatable
Bay St and Wave St (S leg, W sidewalk)	4.2	3.5	0.7	23.9	12.9	14.9	13.9	D +	E +	E +	E +	D +	E +	E +	E +	Unmitigatable
Bay St and Wave St (N leg, W sidewalk)	5	3.5	1.5	45.1	17.0	16.7	18.9	B	D +	D +	D +	C	E +	E +	E +	Unmitigatable
Front St and Hannah St (S leg, E sidewalk)	8	3	5	750.0	1240.0	1472.0	461.0	A	A	A	A	A	A	A	B	-
Front St and Hannah St (S leg, W sidewalk)	6	3	3	55.2	28.4	35.7	15.3	B	C	C	D +	C	D +	D +	E +	Unmitigatable
Front St and Wave St (N leg, E sidewalk)	17	14	3	54.0	53.5	34.1	33.0	B	B	C	C	C	C	D +	D +	Unmitigatable
Front St and Wave St (N leg, W sidewalk)	12	6	6	228.0	106.0	337.0	78.3	A	A	A	A	B	B	B	C	-
Pike St and Brook St (W leg, S sidewalk)	6	3	3	842.0	201.0	767.0	662.0	A	A	A	A	A	B	A	A	-
Jersey St and Victory Blvd (N leg, E sidewalk)	10	6.3	3.8	315.0	132.0	180.0	159.0	A	A	A	A	B	B	B	B	-
Jersey St and Victory Blvd (E leg, N sidewalk)	8	3	5	181.0	48.0	80.0	71.0	A	B	A	A	B	C	C	C	-
Jersey St and Victory Blvd (E leg, S sidewalk)	4	3	1	190.0	39.5	44.2	64.1	A	C	B	A	B	D +	C	C	Unmitigatable
Bay St and Minthorne St (E leg, S sidewalk)	10	4.5	5.5	126.0	66.3	52.6	121.0	A	A	B	A	B	C	C	B	-
Minthorne St and Victory Blvd (S leg, E sidewalk)	5	3	2	2444.0	1629.0	4888.0	815.0	A	A	A	A	A	A	A	A	-
Minthorne St and Victory Blvd (E leg, S sidewalk)	8.5	3	5.5	747.0	640.0	840.0	747.0	A	A	A	A	A	A	A	A	-
Minthorne St and Victory Blvd (W leg, S sidewalk)	8.5	3	5.5	249.0	106.0	163.0	115.0	A	A	A	A	B	B	B	B	-
Front St and Baltic St (N leg, E sidewalk)	12	3	9	172.0	474.0	152.0	157.0	A	A	A	A	B	B	B	B	-
Front St and Baltic St (N leg, W sidewalk)	5.5	3	2.5	99.0	29.6	32.2	26.0	A	C	C	C	B	D +	D +	D +	Unmitigatable

Note: "+" implies a significant adverse impact.

This table has been modified for the FEIS.

Table 21-20: With-Action With-Mitigation Crosswalk Conditions Signalized Intersections

Location	Length (ft)	Width (ft)	Available Circulation Space (ft^2/p)				Crosswalk Circulation LOS				Proposed Mitigation
			Weekday			Sat	Weekday			Sat	
			AM	MD	PM	MD	AM	MD	PM	MD	
Bay St and Victory Blvd (S leg)	60.0	24.7	95.0	24.1	58.1	84.3	A	C	B	A	Increase crosswalk width by 3.2'
Bay St and Hannah St (N leg)	92.0	19.6	263	24.0	48.1	40.5	A	C	B	B	Increase crosswalk width by 8.6'
Bay St and Hannah St (E leg)	32.0	17.7	108.9	24.0	28.9	31.6	A	C	C	C	Increase crosswalk width by 5.2'
Bay St and Grant St (N leg)	59.0	10.0	75.4	60.6	32.3	55.8	A	A	C	B	-
Bay St and Grant St (S leg)	59.0	10.0	126	35.5	61.9	60.7	A	C	A	A	-
Bay St and Grant St (W leg)	21.0	7.0	254	51.7	108	92.8	A	B	A	A	-
Bay St and Clinton St (N leg)	60.0	11.5	78.7	39.7	30.5	47.2	A	C	C	B	-
Bay St and Clinton St (S leg)	59.5	13.0	148	25.1	29.0	56.9	A	C	C	B	-
Bay St and Clinton St (W leg)	24.0	11.0	464	111	168	188	A	A	A	A	-
Bay St and Baltic St (N leg)	37.0	11.0	137	24.9	40.3	36.1	A	C	B	C	-
Bay St and Baltic St (S leg)	36.0	22.0	233	24.1	44.4	50.1	A	C	B	B	-
Bay St and Baltic St (W leg)	23.5	12.0	451	143.1	205.1	182.4	A	A	A	A	-
Bay St and Wave St (N leg)	35.5	15.6	118.9	25.2	16.9	29.5	A	C	D	C	Increase crosswalk width by 5.6'
Bay St and Wave St (E leg)	30.3	11.3	99.0	63.1	66.6	51.6	A	A	A	B	-
Bay St and Wave St (S leg)	36.8	20.3	165.0	31.3	19.1	33.1	A	C	D	C	Increase crosswalk width by 10.3'
Bay St and Wave St (W leg)	21.3	10.6	206	88.3	106	90.5	A	A	A	A	-
Front St and Hannah St (W leg)	34.5	10.6	53.8	52.2	24.7	24.1	B	B	C	C	Increase crosswalk width by 0.6'
Jersey St and Victory Blvd (N leg)	36.0	10.0	261	77.3	167	137	A	A	A	A	-
Jersey St and Victory Blvd (E leg)	40.0	17.1	137.3	24.2	41.6	39.9	A	C	B	C	Increase crosswalk width by 7.1'

Note: "-" implies that there is no proposed mitigation. Bay/Grant and Bay/Baltic are unsignalized in the No Action/With Action conditions and will be signalized in the Mitigation condition only.

Table 21-21: With-Action With-Mitigation Crosswalk Conditions Unsignalized Intersections

Location	Length (ft)	Width (ft)	Average Pedestrian Delay (s)				Crosswalk Circulation LOS			
			Weekday			Sat	Weekday			Sat
			AM	MD	PM	MD	AM	MD	PM	MD
Bay St and Grant St (W leg)*										
Bay St and Baltic St (W leg)*										
Bay St and Minthorne St (E leg)	29.5	10.0	5.0	3.6	2.4	2.3	A	A	A	A

Note: * - Intersection becomes signalized in Mitigation condition.

PROPOSED SCHEDULE FOR PEDESTRIAN MITIGATION MEASURES

Subject to DOT approval, the mitigation measures described above would be implemented to mitigate the significant adverse pedestrian impacts resulting from full build-out of the Proposed Actions in 2030. As the development of the Proposed Actions would be expected to occur over a 12-year period, it is possible that some of the significant adverse impacts to sidewalks, crosswalks and corner areas could occur prior to full build-out in 2030. Details regarding the TMP, which will confirm proposed mitigations measures, are discussed at the beginning of the Transportation section of this chapter.

Implementation of mitigation measures to address significant adverse pedestrian impacts should be coordinated with the completion of construction of adjacent projected development sites.

- Pedestrian mitigation measures at the Bay Street and Victory Boulevard intersection should be done in coordination with construction of Site 7.
- Pedestrian mitigation measures at the Bay Street and Hannah Street intersection should be done in coordination with construction of Sites 2 and 8.
- Pedestrian mitigation measures at the Bay Street and Wave Street intersection should be done in coordination with construction of Site 6.
- Pedestrian mitigation measures at the Front Street and Hannah Street intersection should be done in coordination with construction of Stapleton Waterfront Phase III Site.
- Pedestrian mitigation measures at the Jersey Street and Victory Boulevard intersection should be done in coordination with construction of Disposition Site 2.

PARKING

As discussed in Chapter 14, "Transportation," the Proposed Actions is not expected to result in significant adverse on-street parking impacts during the Weekday AM, MD, PM, or overnight periods, or the Saturday MD period. However, the proposed traffic mitigations would incorporate a number of modifications to curbside parking regulations. Additional restrictions would be implemented at approximately four locations within ¼-mile of the Project Area, which would result in the displacement of approximately 14 on-street parking spaces. Accounting for these displaced spaces, a total of approximately 1,259, 472, 1,374, and 776 on-street parking spaces would remain available during the Weekday AM, MD, PM, and overnight periods, respectively, and 1,298 on-street parking spaces would remain available during the Saturday MD period, as shown in Table 21-22. However, at the subarea level, parking demand is expected to exceed available on-street parking for the following conditions:

- St. George/Ferry Terminal: a parking deficit of 133 parking spaces of the total 1,076 on-street spaces is expected during the Weekday MD period.
- Bay Street North: a parking deficit of 283 parking spaces of the total 1,319 on-street spaces is expected during the Weekday MD period.
- Bay Street South: a parking deficit of 101, 77, and 491 parking spaces of the total 1,090 on-street spaces is expected during the Weekday AM, Weekday PM, and Weekday overnight periods, respectively, and a parking deficit of 62 parking spaces is expected during the Saturday MD period.

The expected on-street parking deficits in the Bay Street South subarea during the Weekday AM, Weekday PM, and Saturday MD periods would be less than half the available on-street parking spaces (101 of 333 available spaces, 77 of 435 available spaces, and 62 of 343 available spaces, respectively), and would therefore not be considered significant. The expected on-street parking deficits within the St. George/Ferry Terminal, Bay Street North, and Bay Street South (Weekday overnight only) would be greater than half the available on-street parking spaces. However, given the proximity to multiple bus routes on Bay Street/Richmond Terrace, the Staten Island Ferry, and the SIR, and the availability of parking spaces in adjacent subareas, the expected parking deficits are not considered significant. Furthermore, as shown in Table 20-22, the total parking availability within the ¼-mile radius of the overall Study Area would be sufficient to accommodate any shortfall within a specific subarea. The proposed traffic mitigation measures would therefore not result in new significant adverse impacts to on-street parking conditions within ¼-mile of the Project Area.

Table 21-22: With Action With Mitigation ¼-Mile On-Street Parking Utilization Summary (Subareas and Total)

2030 With-Action With Mitigation	Weekday AM	Weekday MD	Weekday PM	Weekday Overnight	Saturday MD
St. George/Ferry Terminal Area With-Action On-Street Capacity	*1076*	*1076*	*1076*	*1076*	*1076*
St. George/Ferry Terminal Area Net Change in With-Action With Mitigation On-Street Parking Supply [1]	*0*	*0*	*0*	*0*	*0*
St. George/Ferry Terminal Area With-Action With Mitigation On-Street Capacity	*1076*	*1076*	*1076*	*1076*	*1076*
St. George/Ferry Terminal Area With-Action Total On-Street Demand	877	1209	814	794	870
St. George/Ferry Terminal Area Available Spaces	199	-133	262	282	206
St. George/Ferry Terminal Subarea: With-Action With Mitigation Utilization	***82%***	***112%***	***76%***	***74%***	***81%***
Bay Street North Area With-Action On-Street Capacity	*1319*	*1319*	*1319*	*1319*	*1319*
Bay Street North Area Net Change in With-Action With Mitigation On-Street Parking Supply [1]	*-6*	*-6*	*-6*	*-6*	*-6*
Bay Street North Area With-Action With Mitigation On-Street Capacity	*1313*	*1313*	*1313*	*1313*	*1313*
Bay Street North Area With-Action Total On-Street Demand	1030	1596	1047	1089	989
Bay Street North Area Available Spaces	283	-283	266	224	324
Bay Street North Subarea: With-Action With Mitigation Utilization	***78%***	***122%***	***80%***	***83%***	***75%***
Victory Boulevard/Jersey Street Area With-Action On-Street Capacity	*1295*	*1295*	*1295*	*1295*	*1295*
Victory Boulevard/Jersey Street Area Net Change in With-Action With Mitigation On-Street Parking Supply [1]	*0*	*0*	*0*	*0*	*0*
Victory Boulevard/Jersey Street Area With-Action With Mitigation On-Street Capacity	*1295*	*1295*	*1295*	*1295*	*1295*
Victory Boulevard/Jersey Street Area With-Action Total On-Street Demand	776	752	778	820	790
Victory Boulevard/Jersey Street Area Available Spaces	519	543	517	475	505
Victory Boulevard/Jersey Street Subarea: With-Action With Mitigation Utilization	***60%***	***58%***	***60%***	***63%***	***61%***
Canal Street Area With-Action On-Street Capacity	*1363*	*1363*	*1363*	*1363*	*1363*
Canal Street Area Net Change in With-Action With Mitigation On-Street Parking Supply [1]	*-3*	*-3*	*-3*	*-3*	*-3*
Canal Street Area With-Action With Mitigation On-Street Capacity	*1360*	*1360*	*1360*	*1360*	*1360*
Canal Street Area With-Action Total On-Street Demand	1001	1049	955	1074	1035
Canal Street Area Available Spaces	359	311	405	286	325
Canal Street Subarea: With-Action With Mitigation Utilization	***74%***	***77%***	***70%***	***79%***	***76%***
Bay Street South Area With-Action On-Street Capacity	*1090*	*1090*	*1090*	*1090*	*1090*
Bay Street South Area Net Change in With-Action With Mitigation On-Street Parking Supply [1]	*-5*	*-5*	*-5*	*-5*	*-5*
Bay Street South Area With-Action With Mitigation On-Street Capacity	*1085*	*1085*	*1085*	*1085*	*1085*
Bay Street South Area With-Action Total On-Street Demand	1186	1051	1162	1576	1147
Bay Street South Area Available Spaces	-101	34	-77	-491	-62
Bay Street South Subarea: With-Action With Mitigation Utilization	***109%***	***97%***	***107%***	***145%***	***106%***
Total With-Action Capacity	*6143*	*6143*	*6143*	*6143*	*6143*
Net Change in With-Action With Mitigation On-Street Parking Supply [1]	*-14*	*-14*	*-14*	*-14*	*-14*
Total With-Action With Mitigation On-Street Capacity	6129	6129	6129	6129	6129
Total With-Action On-Street Demand	4870	5657	4755	5353	4831
Total Available Spaces	1259	472	1374	776	1298
Total With-Action With Mitigation Utilization	***79%***	***92%***	***78%***	***87%***	***79%***

Note:
1. Parking spaces lost due to mitigation measures

G. CONSTRUCTION

HISTORIC AND CULTURAL RESOURCES

As described in Chapter 7, "Historic and Cultural Resources," development under the Proposed Actions— specifically, on Projected Development Site 20 and Potential Development Site Q—could result in inadvertent construction-related damage to two NYCL- and/or S/NR-eligible historic resources, as they are located within 90 feet of one or more of the aforementioned projected and potential development sites. The two eligible resources – S/NR-eligible 292 Van Duzer Street and the S/NR-eligible and NYCL-eligible Stapleton Branch of the New York City Public Library – would not be redeveloped under the No-Action condition.

The New York City Building Code, under section C26-112.4, provides some measures of protection for all properties against accidental damage from adjacent construction by requiring that all buildings, lots, and service facilities adjacent to foundation and earthwork areas be protected and supported. For designated NYCL and S/NR- listed historic buildings located within 90 feet of a proposed construction site, additional protective measures under the DOB's TPPN #10/88 supplement the procedures of C26-112.4 by requiring a monitoring program to reduce the likelihood of construction damage and detect at an early stage the beginnings of damage so that construction procedures can be changed. For the two non-designated resources that are within 90 feet of Projected Development Site 20 and Potential Development Site Q, development under the Proposed Actions could potentially result in construction-related impacts to the resources, and the protective measures under TPPN #10/88 would only apply if the resources become designated.

If these eligible resources are designated in the future prior to the initiation of construction, the protective measures of DOB's TPPN #10/88 would apply and indirect significant adverse impact from construction would be avoided. Should they remain undesignated, however, the additional protective measures of TPPN #10/88 would not apply, and the potential for significant adverse construction-related impacts would not be mitigated.

NOISE

As described in Chapter 20, "Construction," the Proposed Actions would have the potential to result in significant adverse construction noise impacts throughout the Project Area and at sensitive receptors in the vicinity of the Project Area.

Based on the construction stage predicted to occur at each development site according to the conceptual construction schedule during each of the selected analysis periods, many receptors are expected to experience an exceedance of the *CEQR Technical Manual* noise impact threshold. One peak construction period per year over the analysis period of 2019 to 2030 was analyzed. Receptors where noise level increases are predicted to exceed the noise impact threshold criteria for two or more consecutive years or receptors where noise level increases are predicted to exceed the 15 dBA increment threshold for a shorter period (less than two years) were identified.

Because the analysis is based on anticipated construction phases, it does not capture the natural daily and hourly variability of construction noise at each receptor. The level of noise produced by construction fluctuates throughout the days and months of the construction phases, while the construction noise analysis is based on a conservative worst-case time periods only. The noise analysis results show that the predicted noise levels could exceed the *CEQR Technical Manual* impact criteria throughout the Project Area.

This analysis is based on a conceptual site plan and construction schedule. It is possible that the actual construction may be of less magnitude, or that construction on multiple Projected Development Sites might not overlap, in which case construction noise would be less intense than the analysis predicts.

Mitigation measures to address the identified construction noise impacts were explored between the DEIS and FEIS. It was found that there are no reasonable means to ensure measures be employed that would mitigate, partially or fully, the significant adverse construction noise impacts; therefore, the significant adverse construction noise impacts identified in Chapter 20, "Construction," would be unavoidable.