Chapter 22: Mitigation

INTRODUCTION

The preceding chapters of this EIS discussed the potential for significant adverse impacts to occur in each of the technical areas. Where significant impacts have been identified, in accordance with the *CEQR Technical Manual*, mitigation measures are examined to minimize or eliminate these impacts. These mitigation measures are discussed below. This chapter has been updated since the Draft Environmental Impact Statement (DEIS) to reflect the results of additional efforts to mitigate significant adverse impacts. In addition, the mitigation measures for traffic and parking and air quality have been updated to reflect changes in traffic patterns due to changes in the Reasonable Worst Case Development Scenario as described in Chapter 1, "Project Description."

SOCIOECONOMIC CONDITIONS

As discussed in Chapter 3, "Socioeconomic Conditions," the proposed action has the potential to cause significant indirect residential displacement impacts. The proposed actions would increase the population of the proposed action area by more than 5 percent and introduce residents with socioeconomic characteristics that are significantly different from the characteristics of residents in parts of the study area, and the study area contains a population that could be vulnerable to displacement pressures.

It is estimated that vulnerable population in the study area is approximately 5,400 persons who could be subject to indirect displacement pressures under the proposed actions. These people are living in approximately 1,835 housing units located in the project area. This potentially vulnerable population represents approximately 7 percent of the project area population and 3 percent of the population living in the overall study area based on the 2000 census data.

The *CEQR Technical Manual* states that:

> Mitigation would consist of relocation of the displaced residents within the neighborhood or providing new housing elsewhere within the study area to offset the effects of the action. Mitigation measures for indirect residential displacement can include: providing appropriate, comparable space as part of the project, either on-site of off-site but within a reasonable distance of the current location of the units that would be displaced; contributions to tenant advocacy groups; or enacting laws and regulations to prevent indirect displacement from occurring.

The City could mitigate indirect resident displacement impacts caused by the proposed action in a variety of ways. One option is for the Department of Housing, Preservation and Development (HPD) to work with the local community to counsel displaced tenants and connect them to affordable housing resources. Another is for HPD to utilize publicly controlled properties in the Jamaica area for the development of affordable housing. Under current HPD policy, current Jamaica area residents would be entitled to 50 percent of any affordable units constructed on

publicly controlled property. The preferred mitigation option would involve the use of inclusionary zoning policies and existing city housing programs to preserve existing affordable units and increase the affordable housing supply available to displaced residents.

These mitigation options and their potential to fully or partially mitigate displacement impacts caused by the proposed action were more thoroughly explored. In an effort to provide a rezoning scenario in which the potential for a significant adverse indirect residential displacement impact would be reduced, an additional alternative was developed for this EIS, Affordable Housing Alternative. With the use of incentive packages, this Alternative would provide approximately 894 affordable housing units and would partially mitigate the proposed action's significant adverse impact with respect to indirect residential displacement. This alternative is more fully discussed in Chapter 23, "Alternatives."

OPEN SPACE

As described in Chapter 5, "Open Space," the proposed actions would result in a significant adverse impact with respect to passive open space due primarily to the large population of new employees that would be introduced to the Jamaica Center CBD as a result of the proposed actions. As described in Chapter 3D, Section 500 of the *CEQR Technical Manual*, measures to mitigate open space impacts can include: 1) creation of new public space of the type needed to serve the proposed action's new population either on the project site or in the study area; 2) improving existing open spaces in the study area; and, 3) in the case of alienation or conversion of parkland, replacement of the parkland. Only the first and second potential mitigation measures apply in the case of the proposed actions since no alienation of parkland is proposed. Only the first and second potential measures apply in the case of the proposed actions since no alienation of parkland is proposed.

Between the Draft EIS and Final EIS potential measures to mitigate the significant adverse impact on passive open space resources were explored. As noted in the DEIS, there is limited City-owned vacant property that is available and suitable for open space creation, so options explored included improvements to existing open spaces, such as Rufus King Park, other City-owned properties, and open space in the proposed URA.

No practicable or feasible mitigation measures for the significant adverse impact on passive open space resources were identified between the Draft EIS and Final EIS. Measures which could improve overall open space conditions were identified, but these would not constitute mitigation for the significant adverse impact. Such measures include:

- City commitment to funding improvements to two school yard open spaces in the rezoning area, P.S. 118 and P.S. 160, through the City's Schoolyards to Playground initiative.
- Continued efforts by the New York City Department of Parks and Recreation (DPR) and DCP to identify sites for long term opportunities for open space improvements in the Jamaica area.
- Continued efforts by DPR to work with other City agencies to identify unused and unprogrammed space in the rezoning area for open space use.
- DPR will continue to seek funding in FY 2009 for its school yard program.
- DPR will continue to coordinate with the New York City Department of Education (DOE) in implementing its program that allows school yards to be improved and opened to the general public after school, and on weekends and in the summer.

SHADOWS

OPEN SPACE

As described in Chapter 6, "Shadows," the proposed actions have the potential to result in a significant adverse impact due to shadows on the proposed Atlantic Avenue Extension Park. Because the program and design for this open space have not been developed, it is possible that the incremental shadows from the proposed actions could diminish the usability of the open space and therefore result in a significant adverse impact. As mitigation to avoid such an impact, DCP, DPR, and EDC will coordinate on the design of this park to minimize any adverse shadow effects on this open space (see also the discussion above). For example, park designers would locate sun-sensitive features in areas where they would be least affected by shadows and choose shade tolerant species for vegetation to be planted in areas that would be in shadow. With such measures, the potential significant adverse shadow impacts on the Atlantic Avenue Extension Park could be fully mitigated.

HISTORIC ARCHITECTURAL RESOURCES

In accordance with the *CEQR Technical Manual*, a number of mitigation options were explored to eliminate or reduce for the potential shadow impacts from the potential development sites that could impact the stained glass windows of the Grace Episcopal Church, a State and City historic landmark. For shadow mitigation, the range of mitigation measures are limited particularly in an area-wide rezoning where site specific designs are not available. As described in the No Impact Alternative (see Chapter 23, "Alternatives"), shadow modeling has shown that any buildings of 50 feet (Potential Development Site 119), 100 feet (Potential Development Site 118) or 75 feet (Potential Development Site 122) in height would result in shadows over these windows. Limiting the building heights to 50–100 feet would not be a reasonable or feasible mitigation for these sites, all of which are located in Downtown Jamaica. Such limitations would be contrary to the objectives of the proposed actions and would conflict with the zoning and urban design objectives for redevelopment of the project area. Therefore, another measure that was explored is lighting of the resource.

The windows of the Grace Episcopal Church could potentially be lit by a new light source mounted on the easterly façade of any new development on Potential Development Site 119. This light could be utilized at this location to approximate sunlight conditions for the west window, without indirect light spillover to adjacent areas. However, such mitigation options are not likely to be feasible for the eastern façade due the orientation of the development sites with respect to the resource and the presence of intervening buildings. Lighting of the east facing windows could only be achieved through the use of fixtures on neighboring properties that are not a projected or potential development site or installation of such lighting fixtures on the site of the resource.

Such lighting mitigation would need to be substantial and could have significant adverse impacts on the surrounding community because of its intensity. In addition, there is no implementation technique available to the City that is reasonable or practical.

Based on the above, there are no reasonable means to avoid or mitigate shadow impacts on the Grace Episcopal Church at this time and no mitigation measures were identified between the DEIS and FEIS. Therefore, this shadow impact would be an unavoidable significant adverse impact of the proposed actions.

TRAFFIC AND PARKING

TRAFFIC

As discussed in Chapter 16 "Traffic and Parking," the proposed action would result in significant adverse impacts at 35 signalized intersections and one unsignalized intersection in one or more peak hours by 2015. A traffic mitigation plan was therefore developed to address these impacts. Table 22-1 summarizes the measures contained in the mitigation plan.

Mitigation measures would include signal timing adjustments, prohibition of parking to provide for additional travel lanes, and installation of a new signal. Mitigation proposed for the Hillside Avenue corridor would implement No Standing regulations from 7 AM to 10 AM along the westbound (north) curb lane to provide an additional travel lane in the AM peak period between 161st Street and Sutphin Boulevard. Similarly, to accommodate the westbound AM period demand on Jamaica Avenue, No Standing from 7 AM to 10 AM is proposed for the westbound (north) curb lane on Jamaica Avenue from 168th Street to Parsons Boulevard to provide an additional travel lane. Currently, the westbound curb lane is signed as No Parking during this period, however, vehicles frequently stand along the curb lane. A more restrictive No Standing regulation would help to open the lane to moving traffic. The bus lane along this section of Jamaica Avenue is only in effect during the PM peak period (4 PM to 7 PM) in both directions. Proposed signal timing adjustments would be incorporated into the proposed mitigation at most of the other impacted intersections. A new signal is proposed at the unsignalized intersection of Jamaica Avenue and 178th Street to accommodate the traffic volume increase.

According to the *CEQR Technical Manual,* a significant traffic impact can be considered mitigated if measures implemented return projected future conditions to what they would be if a proposed action were not in place, or to acceptable levels. For a Future No-Action level of service (LOS) D, E or F, mitigation back to the No-Action condition is required; for No-Action LOS A, B or C, mitigating to mid-LOS D is required (45 seconds of delay for signalized intersections, and 30 seconds of delay for unsignalized intersections). Tables 22-2A and 22-2B show the effectiveness of the proposed traffic mitigation measures to mitigate significant adverse impacts that would result due to the proposed action. The proposed mitigation would mitigate most of the traffic impacts that would occur as a result of the proposed action, including 27 of the 31 intersections with impacts during the AM peak hour, 16 of the 17 intersections with impacts during the midday peak hour, 22 of the 26 intersections with impacts in the PM peak hour, and 17 of the 19 intersections with impacts in the Saturday midday peak hour. The remaining intersections would have lane groups that are unmitigable.

There would be six intersections with unmitigated impacts in one or more peak hours. These intersections are:

- Hillside Avenue at the Van Wyck Expressway Southbound Service Road (Saturday midday)
- Hillside Avenue at the Van Wyck Expressway Northbound Service Road (AM and PM)
- Hillside Avenue at Sutphin Boulevard (AM, midday, PM, and Saturday midday)
- Hillside Avenue at Parsons Boulevard (PM)
- Liberty Avenue at Sutphin Boulevard (AM and PM)
- Liberty Avenue at 150th Street (AM)

Table 22-1
Proposed Traffic Mitigation Measures

THIS TABLE HAS BEEN REVISED FOR THE FEIS

Intersection	Approach	Impacted Period	No-Action Signal Timing (Seconds) (1)	Proposed Mitigation: Mitigation Signal Timing (Seconds) (1)	Proposed Mitigation: Description of Mitigation
1. (1) Hillside Avenue (E-W) @ Van Wyck Southbound Service Road (SB)	EB/WB WB SB	ALL	50/45/50/45 15/15/15/15 55/30/55/30	48/42/50/44 17/15/15/16 55/33/55/30	Implement No Standing Anytime within 100' of the intersection on the south side of the EB approach to provide a right-turn lane. (Eliminates 4 unmetered parking spaces) Transfer 2 sec and 1 sec of green time from EB/WB phase to WB phase in the AM and SMD peak hours, respectively. Transfer 3 sec of green time from EB/WB phase to SB phase in the MD peak hour.
2. (2) Hillside Avenue (E-W) @ Van Wyck Northbound Service Road (NB)	EB/WB EB NB	ALL	65/45/65/45 15/15/15/15 40/30/40/30	65/46/65/44 15/14/15/15 40/30/40/31	Transfer 1 sec of green time from EB phase to EB/WB phase in the MD peak hour. Transfer 1 sec of green time from EB/WB phase to NB phase in the SMD peak hour.
3. (3) Hillside Avenue (E-W) @ Queens Boulevard (N-S)	EB/WB EB-L/WB-L NB/SB SB	ALL	70/50/50/50 --/--/--/--/-- 30/40/40/40 20/30/30/30	65/57/52/60 12/12/18/12 31/36/38/36 12/15/12/12	Implement a new EB/WB exclusive left-turn phase. Implement No Standing 7am-10am and 4pm-7pm, Mon-Fri, within 100' of the intersection on the south side of the EB approach to provide a right-turn lane. (Eliminates 4 unmetered parking spaces) Implement No Standing Anytime within 100' of the intersection on the west side of the SB approach to provide a right-turn lane. (Eliminates 4 metered parking spaces) Relocate existing bus stop to the north of the no standing zone.
4. (4) Hillside Avenue (E-W) @ Sutphin Boulevard (N-S)	EB/WB WB WB/NB-R NB	ALL	76/76/76/76 14/14/14/14 --/--/--/--/-- 30/30/30/30	76/73/73/73 --/--/--/--/-- 14/17/17/17 30/30/30/30	Modify signal: Permit the NB-R movement to move with the WB only phase. Transfer 3 sec of green time from EB/WB phase to WB/NB-R phase in the MD, PM and SMD peak hours, respectively.
5. (5) Hillside Avenue (E-W) @ 148th Street South (NB)	EB/WB NB	AM MD	89/89/89/89 31/31/31/31	88/88/89/89 32/32/31/31	Implement No Standing 7am-10am, Mon-Fri, on the north side of the WB approach from 161th Street to Sutphin Boulevard to provide an additional travel lane. (Eliminates 19 metered parking spaces) Transfer 1 sec of green time from EB/WB phase to NB phase in the AM and MD peak hours, respectively.
6. (6) Hillside Avenue (E-W) @ 150th Street (SB)	EB/WB EB-L/WB-L SB	ALL	84/84/84/84 --/--/--/--/-- 35/35/35/35	70/70/79/68 15/13/11/19 35/37/30/33	Implement No Standing 7am-10am, Mon-Fri, on the north side of the WB approach from 161th Street to Sutphin Boulevard to provide an additional travel lane. (Eliminates 21 metered parking spaces) Implement No Standing 4pm-7pm, Mon-Fri, on the west side of the SB approach to provide a right turn lane. (Eliminates 4 metered parking spaces). Implement a new EB/WB exclusive left-turn phase.
7. (7) Hillside Avenue (E-W) @ 153th Street (NB)	EB/WB NB	AM PM	84/84/84/84 36/36/36/36	84/84/87/84 36/36/33/36	Implement No Standing 7am-10am, Mon-Fri, on the north side of the WB approach from 161th Street to Sutphin Boulevard to provide an additional travel lane. (Eliminates 16 metered parking spaces) Transfer 3 sec of green time from NB phase to EB/WB phase in the PM peak hour.
8. (8) Hillside Avenue (E-W) @ Parson Boulevard (N-S)	EB/WB EB-L/WB-L NB/SB	ALL	67/67/67/67 13/13/13/13 40/40/40/40	63/64/67/66 15/16/13/15 42/40/40/39	Implement No Standing 7am-10am, Mon-Fri, on the north side of the WB approach from 161th Street to Sutphin Boulevard to provide an additional travel lane. (Eliminates 16 metered parking spaces) Implement No Standing Anytime within 100' of the intersection on the north side of the WB approach to provide a right-turn lane in MD, PM and SMD. (Eliminates 2 metered parking spaces) Transfer 2 sec of green time from EB/WB phase to NB/SB phase in the AM peak hour. Transfer 2 sec and 3 sec of green time from EB/WB phase to EB-L/WB-L phase in the AM and MD peak hour, respectively. Transfer 1 sec of green time from EB/WB and NB/SB phase to EB-L/WB-L phase in the SMD peak hour.
9. (9) Hillside Avenue (E-W) @ 161st Street (NB)	EB/WB NB	AM PM	84/84/84/84 36/36/36/36	89/84/86/84 31/36/34/36	Implement No Standing Anytime within 100' of the intersection on the east side of the NB approach to provide additional lane. (Eliminates 4 metered parking spaces) spaces) Restripe NB approach from 1 left-turn and 1 right-turn lane to 1 left-turn lane, 1left-right turn lane and 1 right-turn lane. Transfer 5 sec and 2 sec of green time from NB phase to EB/WB phase in the AM and PM peak hours, respectively.
10. (10) Hillside Avenue (E-W) @ 162nd Street (SB)	EB/WB SB WB	ALL	89/89/89/89 31/31/31/31 --/--/--/--/--	79/79/88/80 29/29/21/28 12/12/11/12	Implement new WB leading phase. Implement No Standing 7am-10am and 4pm-7pm, Mon-Fri, within 100' of the intersection on the south side of the EB approach to provide a right-turn lane. (Eliminates 4 metered parking spaces) Implement No Standing 7am-10am and 4pm-7pm, Mon-Fri, within 100' of the intersection on the west side of the SB approach to provide a right-turn lane. (Eliminates 4 metered parking spaces)
11. (14) 89th Avenue (WB) @ Sutphin Boulevard (N-S)	WB NB/SB	AM	21/21/21/21 39/39/39/39	22/21/21/21 38/39/39/39	Implement No Standing 7am-10am, Mon-Fri, within 100' of the intersection on the north side of the WB approach to provide a right-turn lane. (Eliminates 4 metered parking spaces) Transfer 1 sec of green time from NB/SB phase to WB phase in the AM peak hour.
12. (21) Jamaica Avenue (E-W) @ Van Wyck Southbound Service Road (SB)	EB/WB WB SB	AM PM	68/68/68/68 15/15/15/15 37/37/37/37	65/68/66/68 15/15/15/15 40/37/39/37	Transfer 3 sec and 2 sec of green time from EB/WB phase to SB phase in the AM and PM peak hours, respectively.

Notes:

(1) Signal timings shown indicate green plus yellow (including red) for each phase.

Ped. - All pedestrian Phase

June 29, 2007

Table 22-1 (cont'd)
Proposed Traffic Mitigation Measures

THIS TABLE HAS BEEN REVISED FOR THE FEIS

Intersection	Approach	Impacted Period	No-Action Signal Timing (Seconds) (1)	Proposed Mitigation: Mitigation Signal Timing (Seconds) (1)	Proposed Mitigation: Description of Mitigation
13. (22) Jamaica Avenue (E-W) @ Van Wyck Northbound Service Road (NB)	EB/WB EB NB	AM MD PM	68/68/68/68 15/15/15/15 37/37/37/37	66/68/63/68 15/13/15/15 39/39/42/37	Transfer 2 sec and 5 sec of green time from EB/WB phase to NB phase in the AM and PM peak hours, respectively. Transfer 2 sec of green time from EB phase to NB phase in the MD peak hour.
14. (23) Jamaica Avenue (E-W) @ Queens Boulevard (N-S)	EB/WB SB	AM MD PM	60/60/60/60 60/60/60/60	64/61/61/60 56/59/59/60	Transfer 4 sec, 1 sec and 1 sec of green time from SB phase to EB/WB phase in AM, MD and PM peak hours, respectively.
15. (24) Jamaica Avenue (E-W) @ Sutphin Boulevard (N-S)	EB/WB NB/SB	AM MD PM	44/45/43/45 46/45/47/45	45/46/47/45 45/44/43/45	Transfer 1 sec, 1 sec and 4 sec of green time from NB/SB phase to EB/WB phase in AM , MD and PM peak hours, respectively.
16. (25) Jamaica Avenue (E-W) @ 150th Street	EB/WB NB/SB	ALL	78/78/78/78 42/42/42/42	78/78/78/77 42/42/42/43	Implement No Standing Anytime within 100' of the intersection on the east side of the NB approach to provide a right-turn lane. (Eliminates 4 metered parking spaces) Implement No Standing Anytime within 100' of the intersection on the north side of the WB receiving lanes. (Eliminates 4 metered parking spaces) Transfer 1 sec of green time from EB/WB phase to NB/SB phase in the SMD peak hour.
17. (26) Jamaica Avenue (E-W) @ Parson Boulevard (N-S)	EB/WB NB/SB Ped.	AM SMD	67/67/67/67 45/45/45/45 8/8/8/8	69/67/67/68 43/45/45/44 8/8/8/8	Implement No Standing 7am-10am, Mon-Fri, on the north side of the WB approach from 168th Street to Parson Boulevard to provide an additional travel lane. Transfer 2 sec of green time from NB/SB phase to EB/WB phase in the AM and SMD peak hours.
18. (27) Jamaica Avenue (E-W) @ 160th Street (NB)	EB/WB NB/SB	AM	80/80/80/80 40/40/40/40	80/80/80/80 40/40/40/40	Implement No Standing 7am-10am, Mon-Fri, on the north side of the WB approach from 168th Street to Parson Boulevard to provide an additional travel lane.
19. (28) Jamaica Avenue (E-W) @ 162nd Street/ Union Hall (SB)	EB/WB SB Ped.	AM MD SMD	81/73/81/73 31/39/31/39 8/8/8/8	81/77/81/78 31/35/31/34 8/8/8/8	Implement No Standing 7am-10am, Mon-Fri, on the north side of the WB approach from 168th Street to Parson Boulevard to provide an additional travel lane. Transfer 4 sec and 5 sec of green time from EB/WB phase to SB phase in the MD and SMD peak hours, respectively.
20. (29) Jamaica Avenue (E-W) @ 163th Street (NB)/ Guy R Brewer (N-S)	EB/WB NB/SB	AM	85/85/85/85 35/35/35/35	85/85/85/85 35/35/35/35	Implement No Standing 7am-10am, Mon-Fri, on the north side of the WB approach from 168th Street to Parson Boulevard to provide an additional travel lane.
21. (30) Jamaica Avenue (E-W) @ 164th Street (SB)	EB/WB SB	AM	90/85/70/90 30/35/50/30	87/85/70/90 33/35/50/30	Implement No Standing 7am-10am, Mon-Fri, on the north side of the WB approach from 168th Street to Parson Boulevard to provide an additional travel lane. Transfer 3 sec of green time from EB/WB phase to SB phase in the AM peak hour.
22. (31) Jamaica Avenue (E-W) @ 165th Street (SB)	EB/WB NB	AM	90/90/70/90 30/30/50/30	90/90/70/90 30/30/50/30	Implement No Standing 7am-10am, Mon-Fri, on the north side of the WB approach from 168th Street to Parson Boulevard to provide an additional travel lane.
23. (32) Jamaica Avenue (E-W) @ Merrick Boulevard (SB)	EB/WB SB	ALL	70/70/70/70 50/50/50/50	70/74/75/75 50/46/45/45	Implement No Standing 7am-10am, Mon-Fri, on the north side of the WB approach from 168th Street to Parson Boulevard to provide an additional travel lane. Transfer 4 sec, 5sec and 5 sec of green time from SB phase to EB/WB phase in the MD, PM and SMD peak hours, respectively.
24. (35) Archer Avenue (E-W) @ 150th Street (N-S)	EB/WB NB NB/SB	AM PM	46/46/46/46 9/9/9/9 35/35/35/35	47/46/47/46 9/9/9/9 34/35/34/35	Transfer 1 sec of green time from NB/SB phase to EB/WB phase in the AM and PM peak hours.
25. (37) Archer Avenue (E-W) @ 160th Street (NB)	EB/WB EB NB	AM PM	46/46/46/46 14/14/14/14 30/30/30/30	47/46/49/46 14/14/14/14 29/30/27/30	Transfer 1 sec and 3 sec of green time from NB phase to EB/WB phase in the AM and PM peak hours, respectively.
26. (39) Archer Avenue (E-W) @ Guy R Brewer (N-S)	EB/WB NB/SB	MD PM SMD	46/46/46/46 44/44/44/44	46/48/48/48 44/42/42/42	Transfer 2 sec of green time from NB/SB phase to EB/WB phase in MD, PM and SMD peak hours. Implement No Standing Anytime within 100' of the intersection on the west side of the SB approach. Restripe SB approach from 1 left-through-right lane to 1 exclusive left lane and 1 through-right turn lane. Restripe NB approach from 1 left-through-right lane to 1 exclusive left lane and 1 through-right turn lane.
27. (40) Archer Avenue (E-W) @ 165th Street (N-S)	EB/WB NB/SB	PM SMD	46/46/46/46 44/44/44/44	46/46/47/48 44/44/43/42	Transfer 1 sec and 2 sec of green time from NB/SB phase to EB/WB phase in PM and SMD peak hours, respectively.
28. (41) Archer Avenue (E-W) @ Merrick Boulevard (SB)	EB/WB SB	PM SMD	46/46/46/46 44/44/44/44	46/46/47/48 44/44/43/42	Transfer 1 sec and 2 sec of green time from NB/SB phase to EB/WB phase in PM and SMD peak hours, respectively.
29. (42) Atlantic Avenue (E-W) @ Van Wyck Southbound Service Road (SB)	EB/WB WB SB	AM PM	35/35/35/35 10/15/15/15 45/40/40/40	33/35/33/35 10/15/15/15 47/40/42/40	Transfer 2 sec of green time from EB/WB phase to SB phase in AM and PM peak hours, respectively.
30. (43) Atlantic Avenue (E-W) @ Van Wyck Northbound Service Road (NB)	EB/WB EB NB	MD SMD	30/31/31/31 11/11/11/11 49/48/48/48	30/31/31/31 11/13/11/13 49/46/48/46	Transfer 2 sec of green time from NB phase to EB lag phase in MD and SMD peak hour.

Notes:
(1) Signal timings shown indicate green plus yellow (including red) for each phase.
Ped. - All pedestrian Phase

Table 22-1 (cont'd)
Proposed Traffic Mitigation Measures

THIS TABLE HAS BEEN REVISED FOR THE FEIS

Intersection	Approach	Impacted Period	No-Action Signal Timing (Seconds) (1)	Proposed Mitigation: Mitigation Signal Timing (Seconds) (1)	Proposed Mitigation: Description of Mitigation
31. (46) Liberty Avenue (E-W) @ Sutphin Boulevard (N-S)	EB/WB NB/SB	AM PM SMD	35/35/35/35 25/25/25/25	33/35/33/33 27/25/27/27	Implement No Standing Anytime on the north side of the WB approach to provide a right-turn lane. (Eliminates 2 unmetered parking spaces) Transfer 2 sec of green time from EB/WB phase to NB/SB phase in AM, PM and SMD peak hours, respectively.
32. (47) Liberty Avenue (E-W) @ 150th Street (N-S)	EB/WB NB/SB	AM PM SMD	36/36/36/36 24/24/24/24	34/36/35/34 26/24/25/26	Transfer 2 sec, 1 sec and 2 sec of green time from EB/WB phase to NB/SB phase in AM, PM and SMD peak hours, respectively.
33. (48) Liberty Avenue (E-W) @ Guy R Brewer (N-S)	EB/WB NB/SB	AM PM SMD	30/30/30/30 30/30/30/30	30/30/31/32 30/30/29/28	Implement No Standing Anytime within 100' of the intersection on the east side of the NB approach to provide a right-turn lane. (Eliminates 4 unmetered parking spaces) Implement No Standing 7am-10am, Mon-Fri, within 100' of the intersection on the north side of the WB approach to provide a right-turn lane. (Eliminates 4 unmetered parking spaces) Transfer 2 sec of green time from NB/SB phase to EB/WB phase in PM peak hour.
34. (49) Liberty Avenue (E-W) @ Merrick Boulevard (SB)	EB/WB SB	ALL	54/54/54/54 36/36/36/36	54/54/57/54 36/36/33/36	Implement No Standing Anytime within 100' of the intersection on the east side of the SB approach to provide a right-turn lane. (Eliminates 4 unmetered parking spaces) Transfer 3 sec of green time from SB phase to EB/WB phase in PM peak hour.
35. (51) South Road (E-W) @ Guy R. Brewer (N-S)	EB/WB NB/SB	PM	24/24/24/24 36/36/36/36	24/24/23/24 36/36/37/36	Transfer 1 sec of green time from EB/WB phase to NB/SB phase in PM peak hour.
36. (54) Jamaica Avenue (E-W) @ 178th St (NB)	EB/WB NB	AM	Unsignalized	85/85/85/85 35/35/35/35	Install new traffic signal.

Notes:
(1) Signal timings shown indicate green plus yellow (including red) for each phase.
Ped. - All pedestrian Phase
June 29, 2007

The proposed traffic mitigation measures are detailed in Table 22-1. The following highlights the effects of the proposed mitigation on each corridor and a discussion of unmitigated significant adverse impacts.

HILLSIDE AVENUE CORRIDOR

The proposed action would result in significant impacts at 10 intersections along Hillside Avenue, and four of those intersections would continue to have unmitigated impacts with the proposed traffic mitigation plan. Traffic mitigation proposed along this corridor include parking prohibitions, and signal timing and phasing changes. A corridor-long parking prohibition is proposed on the westbound curb lane from 7 AM to 10 AM. At the Van Wyck Expressway Southbound Service Road significant impacts would occur during all four analyzed peak hours, and the proposed traffic mitigation plan would fully mitigate all impacts in the AM, midday and PM peak hours (signal timing changes and parking prohibition). An impact would remain at the southbound approach during the Saturday midday peak hour.

Significant impacts at the Van Wyck Expressway Northbound Service Road would occur during all peak hours. Impacts during the midday and Saturday midday peak hours would be mitigated, however, impacts during the AM (eastbound left turn, westbound right turn, and northbound approach) and PM (northbound approach) peak hours would remain.

There would be significant impacts at Queens Boulevard during all four analyzed peak hours, and all impacts would be fully mitigated with the proposed signal timing and phasing changes, and parking prohibitions during the AM and PM peak hours.

At Sutphin Boulevard, significant impacts would occur during all four analyzed peak hours. These impacts would remain unmitigated during all four analyzed peak hours (westbound left turn during all four peak hours, and in addition, the northbound right turn in the PM peak hour).

At 148th Street-south, impacts would occur during the AM and midday peak hours. Impacts at 150th Street would occur in all four analyzed peak hours. Impacts at 153rd Street would occur during the AM and PM peak hours. All impacts at 148th, 150th and 153rd streets would be fully mitigated under the proposed traffic mitigation plan consisting of an AM peak hour westbound parking prohibition, and signal timing changes.

The proposed action would result in impacts at Parsons Boulevard during all four analyzed peak hours. Impacts to the eastbound left turn, eastbound through, westbound left turn, and southbound left turn lane groups during the PM peak hour would remain unmitigated. All impacts during the AM, midday, and Saturday midday peak hours would be fully mitigated. Parking regulation and signal timing changes are proposed.

161st Street would have an impacted lane group in each of the AM and midday peak hours, and 162nd Street would have impacts during all four analyzed peak hours. The parking regulation and signal timing changes proposed in the traffic mitigation plan would fully mitigate all impacts at both locations.

89TH AVENUE CORRIDOR

Along the 89th Avenue corridor, the only location that would be impacted as a result of the project is at Sutphin Boulevard during the AM peak hour. The mitigation proposed, a transfer of one second of signal timing from the northbound/southbound phase to the westbound phase, would fully mitigate the intersection.

JAMAICA AVENUE CORRIDOR

The proposed action would result in impacts at 13 intersections in the Jamaica Avenue corridor in any of the four analyzed peak hours. The traffic mitigation plan proposes parking prohibitions, signal timing/phasing adjustments, and the installation of a new signal. The proposed plan would fully mitigate all locations.

The proposed traffic mitigation plan would fully mitigate all impacts at the Van Wyck Expressway Southbound Service Road (AM and PM peak hours), the Van Wyck Expressway Northbound Service Road (AM, midday and PM peak hours), Queens Boulevard (AM, midday and PM peak hours), and Sutphin Boulevard (AM and PM peak hours). The mitigation plan proposes signal timing changes at all four intersections.

The intersection at 150th Street would have impacts in all four analyzed peak hours at the westbound approach and the northbound approach as a result of the proposed project. The proposed traffic mitigation plan would consist of a parking prohibition on the northbound approach to provide a right turn lane. In addition it is proposed to prohibit parking on the westbound receiving curb lane to permit drivers to go around left turning vehicles queued at the intersection. There is an existing bus stop on the westbound approach curb lane that drivers can use to go around westbound vehicles waiting for gaps to turn left. This proposed mitigation would fully mitigate the all impacts.

All intersections from Parsons Boulevard to 168th Street on Jamaica Avenue require the implementation of more restrictive No Standing regulation on the westbound curb lane from 7 AM to 10 AM to replace the existing No Parking regulation. This parking prohibition and signal timing adjustments at some of the intersections would fully mitigate all impacts at the Parsons Boulevard (AM and Saturday midday), 160th Street (AM peak hour), Union Hall Street/162nd Street (AM, midday and Saturday midday), 163rd Street/Guy R. Brewer Boulevard (AM peak hour), 164th Street (AM peak hour), 165th Street (AM peak hour), and Merrick Boulevard (all four analyzed peak hours).

The unsignalized intersection at 178th Street would be mitigated with the installation of a new traffic signal. A preliminary traffic signal warrant analysis shows that the signal would be warranted based on the peak hour volume warrant for the AM peak hour.

ARCHER AVENUE CORRIDOR

The proposed action would result in impacts at five intersections along the Archer Avenue corridor. The proposed traffic mitigation plan would consist of signal timing adjustments at all impacted intersections and parking prohibitions at Guy R. Brewer Boulevard. These measures would fully mitigate all locations.

150th and 160th streets would be impacted during the AM and PM peak hours. The proposed traffic mitigation plan would fully mitigate those impacts.

At Guy R. Brewer Boulevard, the proposed action would result in significant impacts during the midday, PM and Saturday midday peak hours. In addition to signal timing changes, there are parking prohibitions proposed on the southbound approach, and restriping proposed in the northbound and southbound approaches. The proposed mitigation plan would fully mitigate all impacts.

165th Street and Merrick Boulevard would be impacted during the PM and Saturday midday peak hours as a result of the proposed action. The proposed traffic mitigation plan would fully mitigate the impacts at both intersections.

ATLANTIC AVENUE/94TH AVENUE CORRIDOR

There would be impacts at two intersections along the Atlantic Avenue/94th Avenue corridor as a result of the proposed action. Impacts at all intersections would be fully mitigated under the proposed traffic mitigation plan. Mitigation at intersections along the Atlantic Avenue/94th Avenue corridor consists of minor signal timing changes.

The intersection at the Van Wyck Expressway Southbound Service Road would be impacted during the AM and PM peak hours. The intersection at the Van Wyck Expressway Northbound Service Road would be impacted during the midday and Saturday midday peak hours. The proposed traffic mitigation plan would fully mitigate all intersections.

LIBERTY AVENUE CORRIDOR

The proposed action would result in significant impacts at four intersections along Liberty Avenue. The proposed traffic mitigation plan would consist of signal timing changes and parking prohibitions, and would mitigate all impacts except at Sutphin Boulevard during the AM and PM and at 150th Street during the AM peak hour.

Mitigation measures at Sutphin Boulevard include signal timing changes and a parking prohibition at the westbound approach. The mitigation measures would fully mitigate impacts occurring in the Saturday midday peak hour. Unmitigated locations would remain in the AM and PM, both at the eastbound left turn.

At 150th Street, Guy R. Brewer Boulevard and Merrick Boulevard, there would be impacts during the AM, PM and Saturday midday peak hours. The traffic mitigation plan proposes signal timing changes to all three intersections, and parking prohibitions at Guy R. Brewer Boulevard and Merrick Boulevard that would fully mitigate all impacts except at 150th Street in the AM peak hour where the southbound approach would remain unmitigated. In addition, Merrick Boulevard would be impacted at the southbound approach during the midday peak hour, which would be mitigated.

OTHER NON-CORRIDOR LOCATIONS

The proposed signal timing change at South Road and Guy R. Brewer Boulevard would fully mitigate the PM peak hour impact to the southbound approach.

Application and implementation of the traffic engineering improvements described above would require approval of NYCDOT. Coordination would be undertaken in order to implement the proposed mitigation measures. Approval of each proposed mitigation measure would depend upon the applicable agency. In the absence of the implementation of mitigation measures, unmitigated conditions would remain.

PARKING

The increase in parking demand generated by the proposed action would result in a shortfall of 2,165 off-street public parking spaces in the midday period. There are approximately 1,255 on-street fully utilized metered parking spaces in the overall project study area. As indicated in

Table 22-1, on-street parking spaces in the area affected by the proposed actions, would be eliminated due the proposed traffic mitigation. In the AM peak hour, approximately 85 metered and 22 non-metered parking spaces would be eliminated, these metered spaces would be located predominantly along Hillside Avenue. In the midday peak hour, approximately 4 metered and 14 non-metered parking spaces would be eliminated. There would be approximately 12 metered and 22 non-metered parking spaces eliminated in the PM peak hour, and approximately 4 metered and 10 non-metered parking spaces eliminated in the Saturday midday peak hour. A shortfall of parking spaces would remain, and as no mitigation is proposed.

SUMMARY

In summary, as shown in Tables 22-2A and 22-2B, the proposed traffic mitigation plan would fully address all impacts at 27 of the 31 intersections with impacts during the AM peak hour, 16 of the 17 intersections with impacts during the midday peak hour, 22 of the 26 intersections with impacts in the PM peak hour, and 17 of the 19 intersections with impacts in the Saturday midday peak hour. There would be a shortfall in parking in midday period, however, this shortfall would remain, as no mitigation is proposed.

TRANSIT AND PEDESTRIANS

BUS SERVICE

The results of local bus conditions in the future with the proposed action (as shown in Table 17-19) show that demand from the proposed action would result in significant adverse impacts on NYCT's eastbound Q30 service in the AM peak hour, NYCT's eastbound Q43 service in the PM peak hour, NYCT's Q54 service in both direction in the AM and the PM peak hours, MTA Bus' Q6 service in both directions in the AM peak hour, and southbound in the PM peak hour, MTA Bus' Q8 service in both directions in the AM peak hour and westbound in the PM peak hour, MTA Bus' Q40 service southbound in the PM peak hour, MTA Bus' Q41 service southbound in the AM peak hour and in both directions in the PM peak hour, and MTA Bus' Q60 in the both directions in the AM peak hour and eastbound in the PM peak hour.

According to current NYC Transit guidelines, increases in bus load levels to above their maximum capacity at any point is considered a significant adverse impact as it would necessitate the addition of more bus service along that route. As standard practice, the bus operating agencies routinely conducts ridership counts and adjusts bus service frequency to meet its service criteria, within fiscal and operational constraints. As such, the capacity shortfalls would be addressed by NYC Transit and MTA Bus, and no action-initiated mitigation is required for the proposed action.

Given the level of new demand generated by the proposed action, additional buses during the peak hours would be required to mitigate significant adverse impacts to bus service. The number of additional buses required to mitigate each impact are shown in Table 22-3. As shown in the table, most routes with impacts would require one additional bus per direction to mitigate impacts caused by the proposed action with the exception of the following routes. MTA Bus' Q6 eastbound in the AM peak hour and southbound in the PM peak hour, MTA Bus' westbound Q8 in the PM peak hour, MTA Bus' southbound Q41 in the PM peak hour, and MTA Bus' westbound Q60 in the AM peak hour would all require two additional buses each. MTA Bus' eastbound Q60 service in the PM peak hour would require three additional buses to mitigate impacts resulting from the proposed action.

Table 22-2A: 2015 With Mitigation Traffic Conditions In AM and Midday Peak Hour

THIS TABLE HAS BEEN REVISED FOR THE FEI

Signalized Intersection	Lane Group	2015 No-Action Weekday AM Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS		2015 With Action Weekday AM Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS		2015 With Mitigation Weekday AM Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS		2015 No-Action Weekday MD Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS	2015 With Action Weekday MD Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS		2015 With Mitigation Weekday MD Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS	
1) Hillside Avenue (E-W) @	EB-TR	0.98	60.0	E		1.03	72.3	E	*	EB-TR		46.6	D	0.59	20.6	C	0.60	20.8	C		EB-TR		21.4	C	
Van Wyck Expwy Southbound										EB-T	0.90	48.3	D								EB-T	0.55	21.8	C	
Service Road (SB)										EB-R	0.19	27.3	C								EB-R	0.09	16.5	B	
	WB-L	1.41	253.2	F		1.55	314.2	F	*		1.40	249.2	F	0.80	37.8	D	0.84	42.0	D			0.85	44.4	D	
	WB-T	0.38	19.3	B		0.40	19.5	B			0.40	19.5	B	0.25	8.4	A	0.26	8.4	A			0.28	9.9	A	
	SB-LTR	0.86	37.8	D		0.93	43.3	D			0.93	43.3	D	0.96	49.7	D	1.07	78.3	E	*		0.95	45.6	D	
2) Hillside Avenue (E-W) @	EB-L	1.03	89.4	F		1.08	106.0	F	*		1.08	106.0	F	**	0.56	26.1	C	0.57	27.0	C			0.59	27.3	C	
Van Wyck Expwy Northbound	EB-T	0.57	14.3	B		0.61	15.0	B			0.61	15.0	B		0.47	10.3	B	0.51	10.8	B			0.51	10.8	B	
Service Road (NB)	WB-T	0.55	22.0	C		0.58	22.7	C			0.58	22.7	C		0.57	20.3	C	0.59	20.5	C			0.57	19.7	B	
	WB-R	0.90	44.7	D		1.16	117.6	F	*		1.16	117.6	F	**	0.80	32.2	C	0.93	45.5	D	*		0.90	41.1	D	
	NB-LTR	1.03	75.6	E		1.11	104.1	F	*		1.11	104.1	F	**	0.87	39.2	D	0.93	44.9	D			0.93	44.9	D	
3) Hillside Avenue (E-W) @	EB-L	0.90	89.5	F		1.56	343.7	F	*		0.43	50.2	D		1.07	139.7	F	1.08	142.3	F	*		0.56	55.5	E	
Queens Boulevard (N-S)	EB-TR	0.86	29.8	C		0.92	34.6	C		EB-TR		34.6	C		0.91	47.5	D	1.01	67.1	E	*		0.88	39.2	D	
										EB-T	0.89	34.8	C												
										EB-R	0.17	17.0	B												
	WB-L	0.47	36.6	D		0.67	65.7	E	*		0.19	36.9	D		0.53	59.3	E	0.57	63.2	E			0.15	37.1	D	
	WB-T	0.77	25.0	C		0.89	31.8	C			0.97	44.7	D		0.96	53.9	D	1.03	71.5	E	*		0.89	40.2	D	
	WB-R	0.62	22.9	C		0.62	22.9	C			0.68	28.0	C		0.61	35.5	D	0.61	35.5	D			0.52	28.1	C	
	NB-L	0.33	44.6	D		0.42	47.3	D			0.38	44.7	D		0.25	34.6	C	0.27	35.0	D			0.29	38.3	D	
	NB-TR	0.87	70.8	E		0.90	75.2	E	*		0.87	68.7	E		0.45	37.7	D	0.46	37.8	D			0.52	42.5	D	
	SB-L	0.35	28.5	C		0.35	28.6	C			0.51	36.3	D		0.34	15.8	B	0.34	15.9	B			0.64	32.9	C	
	SB-TR	0.34	28.2	C		0.36	28.4	C		SB-TR		31.2	C		0.22	14.8	B	0.22	14.8	B		SB-TR		25.7	C	
										SB-T	0.34	33.1	C								SB-T	0.24	26.0	C	
										SB-R	0.19	30.7	C								SB-R	0.15	24.8	C	
4) Hillside Avenue (E-W) @	EB-T	0.63	18.3	B		0.68	19.4	B			0.68	19.4	B		0.63	18.2	B	0.69	19.7	B			0.72	22.3	C	
Sutphin Boulevard (N-S)	EB-R	0.32	14.2	B		0.32	14.2	B			0.32	14.2	B		0.29	13.6	B	0.29	13.7	B			0.30	15.4	B	
	WB-L	0.84	55.0	E		1.80	410.6	F	*		1.80	410.6	F	**	0.53	29.3	C	0.80	53.8	D	*		0.74	48.8	D	**
	WB-T	0.81	16.1	B		0.91	22.8	C			0.85	17.4	B		0.63	11.2	B	0.68	12.1	B			0.68	12.1	B	
	NB-L	0.74	60.1	E		0.74	60.6	E			0.74	60.6	E		0.78	63.2	E	0.78	63.5	E			0.78	63.5	E	
	NB-R	0.58	53.1	D		0.78	66.5	E	*		0.49	37.1	D		0.55	51.9	D	0.77	66.1	E	*		0.45	33.8	C	
5) Hillside Avenue (E-W) @	EB-T	0.63	11.2	B		0.70	12.5	B			0.71	13.2	B		0.62	11.0	B	0.70	12.7	B			0.71	13.4	B	
148th Street-South (N-S)	WB-T	0.92	23.3	C		1.16	98.0	F	*		0.79	14.8	B		0.65	11.5	B	0.73	13.4	B			0.74	14.1	B	
	NB-LR	0.81	65.9	E		0.84	70.0	E	*		0.81	64.7	E		1.04	110.2	F	1.05	113.2	F	*		1.01	100.1	F	
6) Hillside Avenue (E-W) @	EB-L	1.73	411.0	F		1.73	411.0	F			0.41	46.9	D		0.63	29.1	C	0.82	57.9	E	*		0.44	44.2	D	
150th Street (N-S)	EB-T	0.64	14.2	B		0.71	15.8	B			0.85	29.2	C		0.62	13.7	B	0.70	15.5	B			0.84	28.3	C	
	EB-R	0.10	8.1	A		0.11	8.2	A			0.13	14.0	B		0.10	8.1	A	0.11	8.2	A			0.13	13.9	B	
	WB-L	0.83	49.5	D		1.20	157.5	F	*		0.63	48.9	D		0.57	23.7	C	0.88	65.8	E	*		0.51	44.4	D	
	WB-TR	1.01	45.4	D		1.28	151.1	F	*		0.99	44.2	D		0.70	15.8	B	0.79	18.7	B			0.95	39.7	D	
	SB-LTR	0.98	80.9	F		0.98	80.9	F			0.98	80.9	F		0.64	46.9	D	0.64	46.9	D			0.60	43.8	D	
7) Hillside Avenue (E-W) @	EB-T	0.73	16.7	B		0.81	19.3	B			0.81	19.3	B		0.68	15.0	B	0.76	17.4	B			0.76	17.4	B	
153rd Street (NB)	WB-T	0.89	23.9	C		1.13	86.8	F	*		0.82	18.6	B		0.60	13.4	B	0.69	15.2	B			0.69	15.2	B	
	NB-L	0.67	50.6	D		0.72	53.8	D			0.72	53.8	D		0.55	45.3	D	0.58	46.5	D			0.58	46.5	D	
	NB-R	0.46	42.5	D		0.49	43.3	D			0.49	43.3	D		0.36	39.9	D	0.36	40.0	D			0.36	40.0	D	
8) Hillside Avenue (E-W) @	EB-L	0.85	83.6	F		0.94	99.3	F	*		0.85	78.6	E		0.63	48.8	D	0.78	67.0	E	*		0.63	48.4	D	
Parsons Boulevard (N-S)	EB-T	0.80	29.0	C		0.89	35.1	D			0.95	44.9	D		0.77	27.5	C	0.88	33.6	C			0.92	40.1	D	
	EB-R	0.44	20.8	C		0.44	20.8	C			0.47	23.9	C		0.27	17.6	B	0.27	17.6	B			0.29	19.6	B	
	WB-L	0.47	35.2	D		0.52	43.1	D			0.51	44.9	D		0.41	31.4	C	0.46	40.0	D			0.42	39.8	D	
	WB-TR	1.22	135.3	F		1.52	265.0	F	*		1.10	82.9	F		0.93	40.1	D	1.05	66.8	E	*	WB-TR		33.4	C	
																						WB-T	0.87	34.5	C	
																						WB-R	0.39	21.8	C	
	NB-L	0.59	50.9	D		0.58	50.5	D			0.54	45.7	D		0.36	39.0	D	0.38	39.7	D			0.38	39.7	D	
	NB-T	0.92	70.4	E		0.94	74.8	E	*		0.90	64.8	E		0.47	38.7	D	0.48	38.9	D			0.48	38.9	D	
	NB-R	0.37	36.9	D		0.38	37.1	D			0.36	35.3	D		0.38	37.4	D	0.41	37.9	D			0.41	37.9	D	
	SB-L	0.88	96.3	F		0.99	125.4	F	*		0.88	92.8	F		0.55	45.7	D	0.59	48.1	D			0.59	48.1	D	
	SB-T	0.73	49.3	D		0.71	48.2	D			0.68	45.0	D		0.58	42.4	D	0.59	42.8	D			0.59	42.8	D	
	SB-R	0.41	38.1	D		0.61	45.0	D			0.58	42.1	D		0.32	35.9	D	0.39	37.6	D			0.39	37.6	D	
9) Hillside Avenue (E-W) @	EB-T	0.67	14.9	B		0.74	16.6	B			0.69	12.9	B		0.65	14.4	B	0.73	16.4	B			0.73	16.4	B	
161st Street (NB)	WB-T	0.88	23.4	C		1.09	70.9	E	*		1.03	44.8	D		0.60	13.3	B	0.67	14.9	B			0.67	14.9	B	
	NB-L	0.30	38.8	D		0.35	39.8	D		NB-L	0.28	42.2	D		0.31	39.0	D	0.32	39.1	D		NB-L	0.29	38.4	D	
	NB-R	0.53	44.5	D		0.57	45.9	D		NB-LR	0.44	46.6	D		0.68	51.3	D	0.69	51.6	D		NB-LR	0.35	40.2	D	
										NB-R	0.45	47.1	D									NB-R	0.41	41.4	D	

Abbreviations:

EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound

L-Left, T-Through, R-Right, DefL-Defacto Left, E-W: East-West Roadway, N-S: North-South Roadway

V/C Ratio - Volume to Capacity Ratio

SEC/VEH - Seconds per Vehicle

LOS - Level of Service

* - Denotes Impacted Locations.

** - Denotes Unmitigated Impacted Locations.

June 29, 2007

Table 22-2A: 2015 With Mitigation Traffic Conditions In AM and Midday Peak Hour (cont'd)

THIS TABLE HAS BEEN REVISED FOR THE FEI

Signalized Intersection	Lane Group	2015 No-Action Weekday AM Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS		2015 With Action Weekday AM Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS		2015 With Mitigation Weekday AM Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS	2015 No-Action Weekday MD Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS	2015 With Action Weekday MD Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS		2015 With Mitigation Weekday MD Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS
10) Hillside Avenue (E-W) @ 162nd Street (SB)	EB-TR	0.78	15.1	B		0.86	18.5	B		EB-TR		20.9	C	0.78	15.1	B	0.86	18.9	B		0.98	39.6	D
										EB-T	0.82	21.8	C									
										EB-R	0.17	10.3	B									
	WB-L	0.72	38.2	D		0.91	79.1	E	*		0.39	33.6	C	0.56	25.2	C	0.76	54.2	D	*	0.34	40.2	D
	WB-T	0.84	17.7	B		1.05	51.6	D	*		1.02	42.6	D	0.58	10.3	B	0.65	11.6	B		0.64	10.3	B
	SB-LTR	0.88	71.6	E		0.87	71.2	E		SB-LTR		54.2	D	0.40	44.0	D	0.40	44.0	D		0.44	46.7	D
										SB-LT	0.71	58.5	E									
										SB-R	0.31	44.0	D									
14) 89th Avenue (WB)	WB-LTR	0.92	51.0	D		0.96	58.7	E	*		0.84	41.8	D	0.84	39.9	D	0.85	40.1	D		0.85	40.1	D
Sutphin Boulevard (N-S)	NB-LT	0.53	10.1	B		0.60	11.6	B			0.58	10.6	B	0.48	9.3	A	0.55	10.4	B		0.55	10.4	B
	SB-TR	0.63	12.2	B		1.01	46.5	D	*		0.98	38.6	D	0.47	9.2	A	0.56	10.6	B		0.56	10.6	B
										WB-R	0.23	19.0										
21) Jamaica Avenue (E-W) @ Van Wyck Expwy Southbound Service Road (SB)	EB-T	0.45	19.6	B		0.45	19.6	B			0.47	21.9	C	0.50	20.5	C	0.52	20.9	C		0.52	20.9	C
	EB-R	0.43	19.5	B		0.54	22.0	C			0.57	24.5	C	0.35	17.9	B	0.37	18.3	B		0.37	18.3	B
	WB-L	0.62	23.0	C		0.66	24.9	C			0.69	29.0	C	0.74	32.0	C	0.78	35.9	D		0.78	35.9	D
	WB-T	0.31	10.0	A		0.34	10.4	B			0.36	11.9	B	0.40	11.1	B	0.43	11.5	B		0.43	11.5	B
	SB-LTR	0.98	66.4	E		1.08	96.2	F	*		0.99	65.0	E	0.71	43.3	D	0.76	45.2	D		0.76	45.2	D
22) Jamaica Avenue (E-W) @ Van Wyck Expwy Northbound Service Road (NB)	EB-L	0.26	18.1	B		0.27	19.6	B			0.28	21.5	C	0.40	28.7	C	0.41	29.8	C		0.44	32.0	C
	EB-T	0.43	11.5	B		0.47	12.2	B			0.48	13.3	B	0.32	10.0	A	0.37	10.6	B		0.38	11.6	B
	WB-T	0.66	25.2	C		0.70	27.0	C			0.73	29.4	C	0.89	40.5	D	0.90	42.5	D		0.90	42.5	D
	WB-R	0.07	14.3	B		0.19	15.6	B			0.19	16.7	B	0.14	15.0	B	0.15	15.2	B		0.15	15.2	B
	NB-LTR	1.15	120.6	F		1.20	139.8	F	*		1.12	108.6	F	1.16	123.6	F	1.23	155.3	F	*	1.16	122.9	F
23) Jamaica Avenue (E-W) @ Queens Boulevard (N-S)					-DefL	1.04	111.0	F	*														
	EB-LT	0.89	43.7	D		0.84	39.9	D			0.92	45.5	D	0.84	38.6	D	0.92	47.9	D	*	0.89	43.5	D
	WB-T	0.64	29.4	C		0.79	36.5	D			0.74	30.6	C	0.88	44.3	D	0.90	47.6	D		0.89	44.6	D
	WB-R	0.33	22.3	C		0.33	22.3	C			0.31	19.6	B	0.31	22.0	C	0.32	22.1	C		0.31	21.4	C
	SB-L	0.28	21.2	C		0.30	21.5	C			0.33	24.4	C	0.22	20.3	C	0.23	20.4	C		0.23	21.1	C
	SB-R	0.13	19.1	B		0.14	19.3	B			0.15	21.7	C	0.18	19.9	B	0.19	19.9	B		0.19	20.5	C
24) Jamaica Avenue (E-W) @ Sutphin Boulevard (N-S)	EB-LTR	0.89	40.7	D		0.95	50.0	D	*		0.93	44.7	D	0.85	35.7	D	0.93	45.3	D	*	0.91	41.0	D
	WB-LTR	0.51	20.2	C		0.60	21.9	C			0.58	20.9	C	0.42	18.3	B	0.45	18.7	B		0.44	18.0	B
	NB-LTR	0.66	22.4	C		0.75	25.4	C			0.77	27.2	C	0.48	19.2	B	0.54	20.3	C		0.56	21.2	C
	SB-LTR	0.54	19.7	B		0.81	28.0	C			0.83	30.0	C	0.30	16.7	B	0.36	17.5	B		0.37	18.2	B
25) Jamaica Avenue (E-W) @ 150th Street (N-S)	EB-T	0.56	16.4	B		0.58	17.0	B			0.58	17.0	B	0.61	17.8	B	0.67	19.5	B		0.67	19.5	B
	EB-R	0.07	9.8	A		0.07	9.8	A			0.07	9.8	A	0.08	9.9	A	0.08	9.9	A		0.08	9.9	A
	WB-LT	1.32	180.4	F		2.00	479.1	F	*		1.32	176.1	F	0.84	32.9	C	1.04	74.7	E	*	0.83	30.4	C
	NB-LR	1.35	227.7	F		1.48	284.6	F	*	NB-LR		42.7	D	0.68	52.2	D	0.78	62.3	E	*	NB-LR		34.2	C
										NB-L	0.63	52.4	D							NB-L	0.19	32.8	C
										NB-R	0.40	36.0	D							NB-R	0.34	34.6	C
	SB-LT	0.64	42.6	D		0.72	46.4	D			0.72	46.4	D	0.58	40.2	D	0.63	42.0	D		0.63	42.0	D
	SB-R	0.36	35.2	D		0.38	35.6	D			0.38	35.6	D	0.30	33.9	C	0.31	33.9	C		0.31	33.9	C
26) Jamaica Avenue (E-W) @ Parsons Boulevard (N-S)	EB-L	0.87	70.1	E		2.10	575.8	F	*		0.86	69.2	E	0.48	23.4	C	0.58	27.8	C		0.58	27.8	C
	EB-T	0.74	29.2	C		0.79	32.7	C			0.77	29.9	C	0.63	23.7	C	0.67	25.2	C		0.67	25.2	C
	EB-R	0.24	17.0	B		0.21	16.6	B			0.21	15.6	B	0.14	14.9	B	0.17	15.2	B		0.17	15.2	B
	WB-L	0.39	22.7	C		0.43	24.8	C			0.40	22.3	C	0.29	18.7	B	0.31	19.5	B		0.31	19.5	B
	WB-T	1.02	69.5	E		1.32	185.3	F	*	WB-TR	0.86	32.2	C	0.69	26.6	C	0.76	30.0	C		0.76	30.0	C
	WB-R	0.25	17.2	B		0.27	17.5	B						0.20	15.7	B	0.20	15.7	B		0.20	15.7	B
	NB-LTR	0.17	28.7	C		0.17	28.7	C			0.18	30.1	C	0.18	29.3	C	0.18	29.3	C		0.18	29.3	C
	SB-LTR	0.82	46.4	D		0.82	46.7	D			0.86	51.1	D	0.69	40.2	D	0.69	40.3	D		0.69	40.3	D
27) Jamaica Avenue (E-W) @ 160th Street (NB)	EB-L	0.08	9.8	A		0.18	14.8	B			0.07	9.5	A	0.11	9.8	A	0.12	10.0	A		0.12	10.0	A
	EB-T	0.81	25.5	C		0.87	30.2	C			0.87	30.2	C	0.69	19.4	B	0.73	20.9	C		0.73	20.9	C
	WB-T	0.98	49.5	D		1.21	128.8	F	*	WB-TR	0.70	17.7	B	0.69	19.8	B	0.75	22.0	C		0.75	22.0	C
	WB-R	0.03	8.7	A		0.03	8.7	A				17.7	B	0.02	8.6	A	0.02	8.6	A		0.02	8.6	A
	NB-LTR	0.45	36.5	D		0.49	37.3	D			0.49	37.2	D	0.69	46.7	D	0.70	47.0	D		0.70	47.0	D
28) Jamaica Avenue (E-W) @ Union Hall / 162nd St (SB)	EB-T	0.70	19.3	B		0.76	21.7	C			0.76	21.7	C	0.64	21.5	C	0.69	23.0	C		0.64	19.0	B
	EB-R	0.07	8.7	A		0.07	8.7	A			0.07	8.7	A	0.10	12.2	B	0.10	12.2	B		0.09	10.2	B
	WB-T	1.21	130.3	F		1.48	244.1	F	*		0.67	16.3	B	1.03	72.1	E	1.11	97.4	F	*	1.04	71.4	E
	SB-LTR	0.39	42.3	D		0.41	42.7	D			0.41	42.6	D	0.29	34.5	C	0.28	34.5	C		0.33	38.5	D
29) Jamaica Avenue (E-W) @ 163rd Street (NB) / Guy R Brewer (N-S)	EB-LT	0.61	14.2	B		0.66	15.7	B			0.66	15.7	B	0.49	11.6	B	0.53	12.3	B		0.53	12.3	B
	EB-R	0.13	7.7	A		0.13	7.8	A			0.13	7.8	A	0.14	7.9	A	0.15	7.9	A		0.15	7.9	A
	WB-LT	0.97	42.3	D		1.17	109.1	F	*	WB-LTR	0.80	18.5	B	0.62	14.7	B	0.68	16.1	B		0.68	16.1	B
	WB-R	0.28	9.1	A		0.27	9.0	A						0.15	7.9	A	0.15	7.8	A		0.15	7.8	A
	NB-LTR	0.86	64.4	E		0.86	63.5	E			0.86	63.5	E	0.63	47.9	D	0.65	48.7	D		0.65	48.7	D
30) Jamaica Avenue (E-W) @ 164th Street (SB)	EB-T	0.57	11.0	B		0.62	12.1	B			0.65	14.2	B	0.50	11.9	B	0.54	12.6	B		0.54	12.6	B
	WB-T	1.01	49.8	D		1.16	100.8	F	*		0.70	14.2	B	0.58	13.6	B	0.62	14.5	B		0.62	14.5	B
	SB-L	0.37	44.4	D		0.43	45.9	D			0.37	42.0	D	0.42	41.4	D	0.43	41.8	D		0.43	41.8	D
	SB-R	0.36	45.3	D		0.50	50.8	D	*		0.43	44.5	D	0.52	45.9	D	0.55	47.1	D		0.55	47.1	D

Abbreviations:

EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound

L-Left, T-Through, R-Right, DefL-Defacto Left, E-W: East-West Roadway, N-S: North-South Roadway

V/C Ratio - Volume to Capacity Ratio

SEC/VEH - Seconds per Vehicle

LOS - Level of Service

* - Denotes Impacted Locations.

** - Denotes Unmitigated Impacted Locations.

June 29, 2007

Table 22-2A: 2015 With Mitigation Traffic Conditions In AM and Midday Peak Hour (cont'd)

THIS TABLE HAS BEEN REVISED FOR THE FEIS

Signalized Intersection	Lane Group	2015 No-Action Weekday AM Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS		2015 With Action Weekday AM Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS		2015 With Mitigation Weekday AM Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS		2015 No-Action Weekday MD Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS	2015 With Action Weekday MD Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS		2015 With Mitigation Weekday MD Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS
31) Jamaica Avenue (E-W) @	EB-T	0.56	10.7	B		0.62	12.1	B		0.62	12.1	B		0.53	10.1	B	0.57	10.8	B		0.57	10.8	B
165th Street (SB)	EB-R	0.16	6.2	A		0.16	6.2	A		0.16	6.2	A		0.10	5.8	A	0.10	5.8	A		0.10	5.8	A
	WB-LT	0.94	33.9	C		1.09	75.6	E	*	0.60	10.5	B		0.55	10.7	B	0.59	11.5	B		0.59	11.5	B
	NB-LTR	0.48	46.4	D		0.49	46.6	D		0.49	46.6	D		0.35	43.5	D	0.36	43.5	D		0.36	43.5	D
32) Jamaica Avenue (E-W) @	EB-T	0.61	22.5	C		0.67	24.7	C		0.67	24.7	C		0.61	22.3	C	0.65	23.6	C		0.61	20.1	C
Merrick Boulevard (SB)	EB-R	0.22	15.1	B		0.25	15.6	B		0.25	15.6	B		0.20	14.8	B	0.21	15.0	B		0.20	12.9	B
	WB-LT	1.39	213.2	F		1.65	326.9	F	*	0.88	33.7	C		1.02	73.2	E	1.15	114.5	F	*	1.03	72.0	E
	SB-LTR	0.59	32.4	C		0.60	32.6	C		0.60	32.6	C		0.43	29.1	C	0.47	29.8	C		0.52	33.4	C
35) Archer Avenue (E-W) @	EB-LTR	0.67	25.4	C		0.69	25.9	C		0.68	25.2	C		0.50	20.2	C	0.50	20.3	C		0.50	20.3	C
150th Street (N-S)	WB-L	1.18	136.7	F		1.19	143.1	F	*	1.17	134.0	F		0.58	25.5	C	0.58	25.4	C		0.58	25.4	C
	WB-TR	0.56	22.0	C		0.61	23.3	C		0.60	22.7	C		0.41	18.6	B	0.44	19.0	B		0.44	19.0	B
	NB-LTR	0.66	25.7	C		0.75	30.5	C		0.76	31.7	C		0.30	17.8	B	0.33	18.2	B		0.33	18.2	B
	SB-LTR	0.62	30.5	C		0.86	44.1	D		0.87	44.9	D		0.56	29.5	C	0.64	31.8	C		0.64	31.8	C
37) Archer Avenue (E-W) @	EB-LT	1.28	156.4	F		1.31	169.4	F	*	1.27	152.0	F		0.74	18.1	B	0.76	19.3	B		0.76	19.3	B
160th Street (NB)	EB-R	0.27	8.9	A		0.27	8.9	A		0.26	8.4	A		0.13	7.6	A	0.13	7.6	A		0.13	7.6	A
	WB-LTR	1.01	58.2	E		1.05	68.4	E	*	1.00	54.8	D		0.52	19.3	B	0.53	19.5	B		0.53	19.5	B
	NB-LTR	0.71	37.9	D		0.71	37.9	D		0.74	40.6	D		0.43	29.9	C	0.42	29.8	C		0.42	29.8	C
39) Archer Avenue (E-W) @	EB-LTR	1.20	128.8	F		1.20	126.7	F		1.19	125.4	F		1.00	59.4	E	1.03	67.8	E	*	0.98	52.8	D
Guy R Brewer Boulevard (N-S)	WB-L	0.43	27.4	C		0.42	26.7	C		0.42	26.7	C		0.47	25.8	C	0.48	26.9	C		0.44	23.0	C
	WB-TR	0.58	20.6	C		0.60	21.0	C		0.62	21.6	C		0.39	17.5	B	0.40	17.6	B		0.40	16.4	B
	NB-LTR	1.07	87.3	F		1.07	87.6	F	NB-LTR		21.8	C		0.63	26.0	C	0.65	26.7	C	NB-LTR		20.1	C
									NB-L	0.33	19.1	B								NB-L	0.18	17.9	B
									NB-TR	0.56	23.0	C								NB-TR	0.40	20.9	C
	SB-LTR	0.16	16.2	B		0.16	16.3	B	SB-LTR		15.9	B		0.16	16.1	B	0.16	16.2	B	SB-LTR		17.1	B
									SB-L	0.08	15.6	B								SB-L	0.08	16.7	B
									SB-TR	0.14	16.0	B								SB-TR	0.14	17.2	B
42) Atlantic Avenue (E-W) @	EB-TR	0.63	27.2	C		0.63	27.2	C		0.67	29.5	C		0.44	24.3	C	0.44	24.3	C		0.44	24.3	C
Van Wyck Expwy Southbound	WB-L	0.43	30.8	C		0.44	31.2	C		0.46	34.0	C		0.21	17.1	B	0.21	17.0	B		0.21	17.0	B
Service Road (SB)	WB-LT	0.63	22.2	C		0.64	22.3	C		0.68	24.8	C		0.31	13.9	B	0.31	13.9	B		0.31	13.9	B
	SB-LTR	0.89	29.6	C		1.04	57.7	E	*	0.99	41.9	D		0.86	30.9	C	0.90	33.7	C		0.90	33.7	C
43) Atlantic Avenue (E-W) @	EB-L	1.07	90.6	F		1.05	83.7	F		1.05	83.7	F		0.91	51.3	D	0.98	66.5	E	*	0.85	44.6	C
Van Wyck Expwy Northbound	EB-T	0.51	22.9	C		0.90	41.9	D		0.90	41.9	D		0.41	20.4	C	0.50	21.9	C		0.47	20.1	B
Service Road (NB)	WB-TR	0.59	27.1	C		0.62	27.9	C		0.62	27.9	C		0.33	22.6	C	0.38	23.2	C		0.38	23.2	C
	NB-LTR	0.92	29.0	C		0.94	31.2	C		0.94	31.2	C		0.80	22.8	C	0.81	23.2	C		0.85	26.2	D
46) Liberty Avenue (E-W) @	EB-L	0.82	45.7	D		1.14	129.3	F	*	1.08	111.9	F	**	0.41	14.5	B	0.58	22.2	C		0.50	17.4	B
Sutphin Boulevard (N-S)	EB-TR	0.73	14.2	B		0.88	20.5	C		0.95	28.3	C		0.41	9.6	A	0.47	10.1	B		0.47	10.1	B
	WB-L	0.15	9.5	A		0.20	11.4	B		0.20	12.5	B		0.14	8.3	A	0.15	8.6	A		0.15	8.6	A
	WB-TR	0.68	13.2	B		0.74	14.4	B	WB-TR		13.3	B		0.60	11.8	B	0.65	12.6	B	WB-TR		10.6	B
									WB-T	0.66	13.8	B								WB-T	0.55	10.9	B
									WB-R	0.15	9.0	A								WB-R	0.12	7.7	A
	NB-LTR	0.87	30.4	C		1.02	56.7	E	*	0.92	33.5	C		0.47	17.4	B	0.51	18.1	B		0.57	19.4	B
	SB-LTR	0.99	63.0	E		1.17	124.1	F	*	0.94	48.9	D		0.69	23.9	C	0.77	27.6	C		0.77	27.6	C
47) Liberty Avenue (E-W) @	EB-L	0.53	19.5	B		0.75	44.5	D		0.75	44.5	D		0.20	9.1	A	0.26	10.3	B		0.17	13.3	B
150th Street (N-S)	EB-TR	0.62	11.7	B		0.65	12.1	B		0.65	12.1	B		0.44	9.5	A	0.48	9.9	A		0.46	9.1	A
	WB-L	0.07	7.6	A		0.11	8.3	A		0.11	8.3	A		0.14	8.1	A	0.17	8.7	A		0.22	13.1	A
	WB-TR	0.66	12.3	B		0.80	15.8	B		0.80	15.8	B		0.52	10.4	B	0.57	10.9	B		0.70	17.1	B
	NB-LTR	1.18	119.1	F		1.16	111.7	F		1.16	111.7	F		0.58	22.0	C	0.60	22.7	C		0.60	22.7	C
	SB-LTR	1.34	192.4	F		1.59	298.0	F	*	1.59	298.0	F	**	0.54	20.1	C	0.62	22.1	C		0.62	22.1	C
48) Liberty Avenue (E-W) @	EB-L	0.87	67.7	E		0.78	54.7	D		0.79	54.7	D		0.35	17.1	B	0.40	19.2	B		0.40	19.2	B
Guy R. Brewer Boulevard (N-S)	EB-TR	0.80	19.9	B		0.82	20.9	C		0.82	20.9	C		0.61	15.4	B	0.67	16.5	B		0.67	16.5	B
	WB-L	0.31	17.8	B		0.34	19.0	B		0.34	19.0	B		0.23	13.6	B	0.29	15.5	B		0.29	15.5	B
	WB-TR	1.10	73.4	E		1.23	127.0	F	*	WB-TR	62.2	E		0.63	15.6	B	0.67	16.4	B		0.67	16.4	B
										WB-T 1.08	65.5	E											
										WB-R 0.12	10.7	B											
	NB-LTR	1.16	112.9	F		1.58	290.0	F	*	1.10	85.5	F		0.60	18.2	B	0.69	21.5	C		0.48	14.6	C
	SB-L	0.10	11.0	B		0.11	11.1	B		0.11	11.1	B		0.11	10.9	B	0.12	10.9	B		0.12	10.9	B
	SB-TR	0.54	16.6	B		0.55	16.8	B		0.55	16.8	B		0.59	17.7	B	0.60	18.0	B		0.60	18.0	B
49) Liberty Avenue (E-W) @	EB-T	0.62	16.0	B		0.62	16.0	B		0.62	16.0	B		0.39	12.7	B	0.42	13.0	B		0.42	13.0	B
Merrick Boulevard (SB)	EB-R	0.35	13.0	B		0.38	13.3	B		0.38	13.3	B		0.17	11.0	B	0.19	11.2	B		0.19	11.2	B
	WB-L	0.54	25.8	C		0.58	27.9	C		0.58	27.9	C		0.36	15.1	B	0.40	16.3	B		0.40	16.3	B
	WB-T	0.72	18.3	B		0.82	21.8	C		0.82	21.8	C		0.35	12.3	B	0.37	12.6	B		0.37	12.6	B
	SB-LTR	1.16	114.9	F		1.21	136.4	F	*	SB-LTR	46.1	D		0.87	39.0	D	0.93	46.5	D	*	SB-LTR	29.8	C
										SB-LT 0.96	50.0	D									SB-LT 0.73	31.0	C
										SB-R 0.35	24.3	C									SB-R 0.28	23.1	C
54) Jamaica Avenue (E-W) @	EB-LT	0.20	14.6	B		0.22	16.0	B		EB-LTR 0.65	14.9	B		0.03	9.0	A	0.03	9.2	A		EB-LTR 0.42	10.1	B
178th Street (SB)	WB-LT	0.03	8.9	A		0.03	9.1	A		WB-LTR 0.87	22.8	C		0.04	9.6	A	0.04	9.7	A		WB-LTR 0.42	10.1	B
	NB-LT	0.80	123.6	F		1.00	200.0	F	*	NB-LTR 0.47	42.5	D		0.17	20.7	C	0.18	21.8	C		NB-LTR 0.26	37.8	D
	NB-TR	0.81	107.3	F		1.02	180.8	F	*					0.13	17.6	C	0.14	18.4	B				
		(Unsignalized)				(Unsignalized)				(Signalized)				(Unsignalized)			(Unsignalized)				(Signalized)		

Abbreviations

EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound
L-Left, T-Through, R-Right, DefL-Defacto Left, E-W: East-West Roadway, N-S: North-South Roadway
V/C Ratio - Volume to Capacity Ratio
SEC/VEH - Seconds per Vehicle
LOS - Level of Service
* - Denotes Impacted Locations.
** - Denotes Unmitigated Impacted Locations.

June 29, 2007

Table 22-2B: 2015 With Mitigation Traffic Conditions In PM and Saturday Midday Peak Hour

THIS TABLE HAS BEEN REVISED FOR THE FEI

Signalized Intersection	Lane Group	2015 No-Action Weekday PM Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS		2015 With Action Weekday PM Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS		2015 With Mitigation Weekday PM Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS		2015 No-Action Saturday MD Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS	2015 With Action Saturday MD Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS		2015 With Mitigation Saturday MD Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS	
1) Hillside Avenue (E-W) @ Van Wyck Expwy Southbound Service Road (SB)	EB-TR	0.95	53.6	D		0.98	58.6	E	*	EB-TR	39.1	D		0.66	22.2	C	0.68	22.8	C		EB-TR	20.6	C	
										EB-T 0.82	40.2	D									EB-T 0.58	21.1	C	
										EB-R 0.16	25.6	C									EB-R 0.13	15.8	B	
	WB-L	1.44	268.1	F		1.51	294.9	F	*	1.42	257.2	F		0.85	46.2	D	0.92	56.8	E	*	0.85	44.3	D	
	WB-T	0.36	18.9	B		0.40	19.5	B		0.40	19.5	B		0.24	8.3	A	0.25	8.4	A		0.25	8.4	A	
	SB-LTR	0.78	33.7	C		0.92	42.8	D		0.92	42.8	D		0.98	55.2	E	1.13	102.1	F	*	1.13	102.1	F	**
2) Hillside Avenue (E-W) @ Van Wyck Expwy Northbound Service Road (NB)	EB-L	0.82	52.8	D		0.84	55.0	D		0.84	55.0	D		0.72	33.2	C	0.74	35.3	D		0.76	37.1	D	
	EB-T	0.48	12.8	B		0.58	14.4	B		0.58	14.4	B		0.46	10.2	B	0.52	10.9	B		0.53	11.6	B	
	WB-T	0.57	22.4	C		0.58	22.6	C		0.58	22.6	C		0.56	20.1	C	0.58	20.5	C		0.60	21.4	C	
	WB-R	0.63	26.1	C		0.76	31.6	C		0.76	31.6	C		0.70	26.4	C	0.89	39.8	D		0.91	43.6	D	
	NB-LTR	0.88	48.6	D		1.00	66.4	E	*	1.00	66.4	E	**	0.89	40.6	D	0.94	46.9	D	*	0.91	41.6	D	
3) Hillside Avenue (E-W) @ Queens Boulevard (N-S)	EB-L	1.98	533.9	F		2.02	548.3	F	*	0.40	44.7	D		1.29	245.5	F	1.37	278.9	F	*	0.33	39.7	D	
	EB-TR	0.98	58.4	E		1.21	138.7	F	*	EB-TR	54.7	D		1.04	73.2	E	1.17	125.2	F	*	0.96	47.2	D	
										EB-T 0.99	58.0	E												
										EB-R 0.19	24.7	C												
	WB-L	0.35	42.3	D		0.50	55.7	E	*	0.10	40.3	D		0.40	46.3	D	0.48	53.9	D	*	0.13	40.1	D	
	WB-T	0.86	42.4	D		0.94	50.6	D	*	0.90	43.8	D		0.86	42.5	D	0.97	56.8	E	*	0.80	32.1	C	
	WB-R	0.42	30.2	C		0.42	30.1	C		0.39	28.2	C		0.48	31.6	C	0.48	31.7	C		0.39	23.2	C	
	NB-L	0.59	47.0	D		0.64	50.0	D		0.59	47.7	D		0.25	34.5	C	0.28	35.0	C		0.28	38.0	D	
	NB-TR	0.30	34.6	C		0.33	35.0	C		0.35	37.4	D		0.31	34.7	C	0.32	35.1	D		0.37	38.9	D	
	SB-L	0.37	15.8	B		0.38	15.9	B		0.73	44.8	D		0.30	15.1	B	0.31	15.2	B		0.63	40.9	D	
	SB-TR	0.50	19.0	B		0.50	19.1	B		SB-TR	36.8	D		0.23	14.9	B	0.23	15.0	B		SB-TR	27.6	C	
										SB-T 0.53	32.3	C									SB-T 0.20	27.3	C	
										SB-R 0.36	29.1	C									SB-R 0.24	28.2	C	
4) Hillside Avenue (E-W) @ Sutphin Boulevard (N-S)	EB-T	0.76	21.9	C		0.89	28.9	C		0.93	34.9	C		0.64	18.4	B	0.72	20.5	C		0.75	23.2	C	
	EB-R	0.25	13.2	B		0.58	13.3	B		0.27	14.9	B		0.20	12.6	B	0.21	12.6	B		0.22	14.2	B	
	WB-L	0.82	61.4	E		0.70	176.9	F	*	1.05	114.0	F	**	0.53	31.6	C	0.84	61.8	E	*	0.77	54.4	D	**
	WB-T	0.61	10.8	B		0.70	11.8	B		0.66	11.8	B		0.55	9.8	A	0.61	10.8	B		0.61	10.8	B	
	NB-L	0.48	48.1	D		0.20	48.2	D		0.48	48.2	D		0.46	47.1	D	0.46	47.2	D		0.46	47.2	D	
	NB-R	0.54	51.7	D		0.20	469.9	F	*	1.10	114.3	F	**	0.46	48.2	D	0.69	58.9	E	*	0.40	32.6	C	
6) Hillside Avenue (E-W) @ 150th Street (N-S)	EB-L	1.00	93.3	F		1.32	214.5	F	*	0.64	49.1	D		0.39	15.4	B	0.55	25.6	C		0.24	31.7	C	
	EB-T	0.70	15.7	B		0.98	36.4	D		1.00	44.1	D		0.60	13.4	B	0.70	15.5	B		0.87	31.3	C	
	EB-R	0.13	8.3	A		0.14	8.4	A		0.15	10.2	B		0.07	7.8	A	0.07	7.9	A		0.09	14.5	B	
	WB-L	1.12	134.5	F		2.88	912.2	F	*	0.85	82.8	F		0.72	34.9	C	1.22	167.6	F	*	0.52	44.4	D	
	WB-TR	0.73	16.6	B		0.82	19.9	B		0.86	24.8	C		0.63	13.9	B	0.74	16.7	B		0.91	35.7	D	
	SB-LTR	0.57	44.3	D		0.57	44.3	D		0.53	47.7	D		0.59	45.2	D	0.59	45.2	D		0.64	48.4	D	
										SB-R 0.24	41.6													
7) Hillside Avenue (E-W) @ 153rd Street (NB)	EB-T	0.78	17.9	B		1.06	58.8	E	*	1.02	44.5	D		0.66	14.6	B	0.76	17.3	B		0.76	17.3	B	
	WB-T	0.64	14.2	B		0.73	16.2	B		0.70	13.9	B		0.58	13.0	B	0.69	15.2	B		0.69	15.2	B	
	NB-L	0.33	39.2	D		0.36	39.8	D		0.40	43.3	D		0.33	39.3	D	0.37	40.3	D		0.37	40.3	D	
	NB-R	NB-LR 0.39	40.6	D	NB-LR	0.41	41.1	D		NB-LR 0.46	45.0	D		0.55	45.4	D	0.57	45.9	D		0.57	45.9	D	
		NB-R 0.41	41.4	D	NB-R	0.42	41.6	D		NB-R 0.47	45.7	D												
8) Hillside Avenue (E-W) @ Parsons Boulevard (N-S)	EB-L	0.81	68.1	E		1.22	182.3	F	*	1.07	123.6	F	**	0.68	54.8	D	0.84	78.9	E	*	0.70	54.7	D	
	EB-T	0.93	39.1	D		1.26	151.7	F	*	1.26	151.7	F	**	0.82	29.7	C	0.95	41.4	D		0.96	44.8	D	
	EB-R	0.30	18.0	B		0.30	18.1	B		0.30	18.1	B		0.19	16.3	B	0.19	16.3	B		0.19	16.9	B	
	WB-L	0.59	51.6	D		0.63	58.3	E	*	0.63	58.3	E	**	0.38	34.5	C	0.45	45.5	D	*	0.41	43.6	D	
	WB-TR	1.00	54.1	D		1.11	87.8	F	*	WB-TR	32.7	C		0.96	43.9	D	1.11	88.9	F	*	0.86	32.8	C	
										WB-T 0.86	32.0	C									0.41	20.7	C	
										WB-R 0.38	19.5	B												
	NB-L	0.42	41.1	D		0.45	42.2	D		0.45	42.2	D		0.38	40.6	D	0.42	42.1	D		0.44	44.3	D	
	NB-T	0.65	44.7	D		0.67	45.5	D		0.67	45.5	D		0.38	36.3	D	0.40	36.8	D		0.41	37.8	D	
	NB-R	0.53	41.7	D		0.57	43.1	D		0.57	43.1	D		0.27	34.7	C	0.32	35.6	D		0.33	36.6	D	
	SB-L	0.75	64.1	E		0.89	85.3	F	*	0.89	85.3	F	**	0.36	37.9	D	0.44	40.8	D		0.46	42.3	D	
	SB-T	0.59	42.4	D		0.61	43.0	D		0.61	43.0	D		0.72	48.6	D	0.74	49.5	D		0.76	51.8	D	
	SB-R	0.36	36.8	D		0.44	38.6	D		0.44	38.6	D		0.24	34.2	C	0.32	35.7	D		0.33	36.7	D	
9) Hillside Avenue (E-W) @ 161st Street (NB)	EB-T	0.79	18.3	B		1.04	50.5	D	*	1.01	41.7	D		0.65	14.4	B	0.76	17.0	B		0.76	17.0	B	
	WB-T	0.63	14.0	B		0.71	15.8	B		0.69	14.3	B		0.58	13.0	B	0.68	14.9	B		0.68	14.9	B	
	NB-L	0.36	39.8	D		0.31	38.8	D		NB-L 0.34	40.9	D		0.45	42.3	D	0.47	43.0	D		NB-L 0.45	42.4	D	
	NB-R	NB-LR 0.43	41.9	D	NB-LR	0.41	41.4	D		NB-LR 0.45	44.0	D		0.76	56.4	E	0.78	57.6	E		NB-LR 0.41	40.9	D	
		NB-R 0.61	48.3	D	NB-R	0.58	47.1	D		NB-R 0.63	51.2	D									NB-R 0.41	41.2	D	
10) Hillside Avenue (E-W) @ 162nd Street (SB)	EB-TR	0.96	29.3	C		1.20	111.8	F	*	1.03	44.8	D		0.79	15.2	B	0.89	20.8	C		1.00	43.6	D	
										0.17	6.7	A												
	WB-L	1.63	366.3	F		1.87	464.4	F	*	0.55	57.1	E		0.87	67.9	E	1.38	252.4	F	*	0.49	49.8	D	
	WB-T	0.61	10.7	B		0.69	12.3	B		0.61	6.4	A		0.57	10.0	A	0.66	11.7	B		0.64	9.9	A	
	SB-LTR	0.76	59.1	E		0.76	59.3	E		0.72	62.0	E		0.39	43.7	D	0.39	43.8	D		0.45	47.9	D	

Abbreviations:

EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound
L-Left, T-Through, R-Right, DefL-Defacto Left, E-W: East-West Roadway, N-S: North-South Roadway
V/C Ratio - Volume to Capacity Ratio
SEC/VEH - Seconds per Vehicle
LOS - Level of Service
* - Denotes Impacted Locations.
** - Denotes Unmitigated Impacted Locations.

June 29, 2007

Table 22-2B: 2015 With Mitigation Traffic Conditions In PM and Saturday Midday Peak Hour (cont'd)

THIS TABLE HAS BEEN REVISED FOR THE FEI

Signalized Intersection	Lane Group	2015 No-Action Weekday PM Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS		2015 With Action Weekday PM Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS		2015 With Mitigation Weekday PM Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS	2015 No-Action Saturday MD Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS	2015 With Action Saturday MD Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS		2015 With Mitigation Saturday MD Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS
21) Jamaica Avenue (E-W) @	EB-T	0.55	21.5	C		0.59	22.5	C		0.65	24.2	C	0.70	26.0	C	0.72	27.0	C		0.72	27.0	C
Van Wyck Expwy Southbound	EB-R	0.31	17.3	B		0.34	17.6	B		0.35	18.9	B	0.11	14.7	B	0.14	15.0	B		0.14	15.0	B
Service Road (SB)	WB-L	0.64	28.4	C		0.68	32.5	C		0.71	36.0	D	0.29	23.5	C	0.31	25.3	C		0.31	25.3	C
	WB-T	0.42	11.3	B		0.51	12.6	B		0.52	13.9	B	0.33	10.2	B	0.36	10.5	B		0.36	10.5	B
	SB-LTR	1.01	73.6	E		1.08	93.3	F	*	1.01	71.4	E	0.79	46.3	D	0.85	49.7	D		0.85	49.7	D
22) Jamaica Avenue (E-W) @	EB-L	0.36	25.1	C		0.38	25.7	C		0.43	32.1	C	0.61	24.0	C	0.63	25.5	C		0.63	25.5	C
Van Wyck Expwy Northbound	EB-T	0.35	10.4	B		0.41	11.1	B		0.44	13.9	B	0.39	10.9	B	0.44	11.5	B		0.44	11.5	B
Service Road (NB)	WB-T	0.74	28.0	C		0.74	27.9	C		0.80	34.9	C	0.50	20.6	C	0.52	21.0	C		0.52	21.0	C
	WB-R	0.09	14.5	B		0.12	14.8	B		0.13	17.5	B	0.36	18.2	B	0.40	18.8	B		0.40	18.8	B
	NB-LTR	1.17	127.0	F		1.35	207.5	F	*	1.17	124.7	F	0.63	41.2	D	0.69	42.6	D		0.69	42.6	D
23) Jamaica Avenue (E-W) @																						
Queens Boulevard (N-S)	EB-LT	0.82	36.9	D		0.92	46.7	D	*	0.89	42.8	D	0.49	24.5	C	0.56	26.1	C		0.56	26.1	C
	WB-T	0.74	33.1	C		0.77	34.2	C		0.75	32.8	C	0.55	26.3	C	0.59	27.6	C		0.59	27.6	C
	WB-R	0.25	20.8	C		0.27	21.2	C		0.26	20.5	C	0.18	19.9	B	0.19	20.0	B		0.19	20.0	B
	SB-L	0.40	23.1	C		0.40	23.2	C		0.41	24.0	C	0.12	19.0	B	0.13	19.1	B		0.13	19.1	B
	SB-R	0.26	21.0	C		0.26	21.1	C		0.27	21.7	C	0.22	20.4	C	0.22	20.4	C		0.22	20.4	C
24) Jamaica Avenue (E-W) @	EB-LTR	1.00	61.3	E		1.12	98.2	F	*	1.01	59.7	E	0.73	27.1	C	0.81	31.6	C		0.81	31.6	C
Sutphin Boulevard (N-S)	WB-LTR	0.43	19.7	B		0.48	20.5	C		0.43	17.5	B	0.48	19.1	B	0.52	19.8	B		0.52	19.8	B
	NB-LTR	0.45	17.7	B		0.87	31.7	C		0.96	44.9	D	0.38	17.8	B	0.45	18.9	B		0.45	18.9	B
	SB-LTR	0.37	16.4	B		0.43	17.3	B		0.47	20.1	C	0.21	15.8	B	0.28	16.5	B		0.28	16.5	B
25) Jamaica Avenue (E-W) @	EB-T	0.58	16.9	B		0.79	24.5	C		0.80	25.8	C	0.51	15.3	B	0.58	16.7	B		0.58	16.7	B
150th Street (N-S)	EB-R	0.07	9.8	A		0.07	9.8	A		0.07	10.3	B	0.07	9.8	A	0.07	9.8	A		0.07	9.8	A
	WB-LT	1.16	115.7	F		1.48	252.8	F	*	0.88	35.4	D	0.94	48.5	D	1.19	128.1	F	*	0.80	27.1	C
	NB-LR	1.11	139.6	F		1.25	191.5	F	*	NB-LR	36.6	D	0.53	43.4	D	0.68	53.3	D	*	NB-LR	33.1	C
										NB-L 0.42	39.5	D							NB-L 0.25	34.0	C
										NB-R 0.40	35.3	D							NB-R 0.24	32.6	C
	SB-LT	0.67	43.5	D		0.70	45.1	D		0.68	43.3	D	0.52	38.3	D	0.59	40.4	D		0.59	40.4	D
	SB-R	0.28	33.3	C		0.28	33.5	C		0.28	32.6	C	0.31	34.0	C	0.32	34.3	C		0.32	34.3	C
26) Jamaica Avenue (E-W) @	EB-L	0.42	22.5	C		0.56	28.3	C		0.56	28.3	C	0.23	17.5	B	0.33	20.0	B		0.32	19.1	B
Parsons Boulevard (N-S)	EB-T	0.64	24.9	C		0.86	37.0	D		0.86	37.0	D	0.63	24.6	C	0.69	26.7	C		0.68	25.7	C
	EB-R	0.21	16.5	B		0.25	17.0	B		0.25	17.0	B	0.16	15.8	B	0.19	16.2	B		0.18	15.6	B
	WB-L	0.32	20.1	C		0.52	31.5	C		0.52	31.5	C	0.69	37.0	D	0.78	47.0	D	*	0.75	42.7	D
	WB-T	0.67	26.2	C		0.73	29.0	C		0.73	29.0	C	0.60	24.1	C	0.69	27.4	C		0.68	26.4	C
	WB-R	0.16	15.8	B		0.16	15.9	B		0.16	15.9	B	0.13	15.5	B	0.14	15.6	B		0.14	15.1	B
	NB-LTR	0.24	29.7	C		0.24	29.7	C		0.24	29.7	C	0.28	30.3	C	0.28	30.3	C		0.28	31.1	C
	SB-LTR	0.85	48.7	D		0.85	48.4	D		0.85	48.4	D	0.76	43.5	D	0.77	44.0	D		0.79	46.1	D
28) Jamaica Avenue (E-W) @	EB-T	0.66	17.5	B		0.83	25.2	C		0.83	25.2	C	0.72	23.9	C	0.76	26.1	C		0.71	20.3	C
Union Hall / 162nd St (SB)	EB-R	0.11	8.9	A		0.12	9.1	A		0.12	9.1	A	0.11	12.3	B	0.12	12.4	B		0.11	9.9	A
	WB-T	0.75	22.4	C		0.83	27.5	C		0.83	27.5	C	0.91	42.9	D	1.02	68.4	E	*	0.94	44.6	D
	SB-LTR	0.59	47.0	D		0.58	46.7	D		0.58	46.7	D	0.27	34.3	C	0.28	34.5	C		0.34	39.5	D
32) Jamaica Avenue (E-W) @	EB-T	0.65	23.3	C		0.83	31.9	C		0.77	25.1	C	0.73	26.3	C	0.77	28.4	C		0.71	22.2	C
Merrick Boulevard (SB)	EB-R	0.22	15.0	B		0.24	15.3	B		0.22	12.7	B	0.14	14.0	B	0.16	14.3	B		0.15	11.6	B
	WB-LT	1.23	150.2	F		1.45	244.7	F	*	1.23	144.6	F	1.38	209.5	F	1.62	317.9	F	*	1.38	207.1	F
	SB-LTR	0.69	35.1	D		0.74	36.6	D		0.83	44.7	D	0.64	33.5	C	0.70	35.3	D		0.80	43.2	D
35) Archer Avenue (E-W) @	EB-LTR	0.76	29.5	C		0.78	30.2	C		0.76	28.4	C	0.49	19.8	B	0.49	19.9	B		0.49	19.9	B
150th Street (N-S)	WB-L	1.07	100.9	F		1.08	103.9	F	*	1.04	90.2	F	0.59	26.3	C	0.60	26.6	C		0.60	26.6	C
	WB-TR	0.46	19.5	B		0.46	19.5	B		0.45	18.6	B	0.47	19.6	B	0.49	19.9	B		0.49	19.9	B
	NB-LTR	0.49	21.2	C		0.54	22.2	C		0.56	23.4	C	0.25	17.2	B	0.30	17.8	B		0.30	17.8	B
	SB-LTR	0.72	34.3	C		0.76	36.3	D		0.79	39.0	D	0.66	32.4	C	0.76	37.2	D		0.76	37.2	D
37) Archer Avenue (E-W) @	EB-LT	1.04	62.5	E		1.14	96.9	F	*	1.05	62.5	E	0.79	19.9	B	0.82	22.0	C		0.82	22.0	C
160th Street (NB)	EB-R	0.34	9.8	A		0.34	9.8	A		0.32	8.2	A	0.13	7.6	A	0.13	7.6	A		0.13	7.6	A
	WB-LTR	0.76	25.7	C		0.78	26.9	C		0.70	21.5	C	0.57	20.1	C	0.59	20.5	C		0.59	20.5	C
	NB-LTR	0.51	31.7	C		0.52	31.8	C		0.60	36.5	D	0.41	29.6	C	0.41	29.5	C		0.41	29.5	C
39) Archer Avenue (E-W) @	EB-LTR	1.15	107.6	F		1.18	122.0	F	*	1.13	98.0	F	1.07	78.9	E	1.13	97.5	F	*	1.07	76.0	E
Guy R Brewer Boulevard (N-S)	WB-L	0.80	55.9	E		0.82	61.2	E	*	0.74	45.1	D	0.67	40.6	D	0.71	45.3	D		0.63	34.9	C
	WB-TR	0.56	20.1	C		0.56	20.2	C		0.56	18.9	B	0.42	17.8	B	0.43	18.0	B		0.42	16.7	B
	NB-LTR	0.92	50.7	D		0.95	55.6	E		NB-LTR	22.0	C	0.77	33.6	C	0.78	34.2	C		NB-LTR	20.6	C
										NB-L 0.32	20.1	C								NB-L 0.26	19.0	B
										NB-TR 0.50	22.9	C								NB-TR 0.43	21.3	C
	SB-LTR	0.30	18.0	B		0.31	18.1	B		SB-LTR	18.2	B	0.19	16.5	B	0.19	16.6	B		SB-LTR	17.3	B
										SB-L 0.21	18.7	B								SB-L 0.11	17.1	B
										SB-TR 0.20	17.9	B								SB-TR 0.15	17.4	B
40) Archer Avenue (E-W) @	EB-LTR	1.20	128.4	F		1.23	140.5	F	*	1.17	118.1	F	1.17	116.8	F	1.22	135.1	F	*	1.16	110.2	F
165th Street (N-S)	WB-LTR	0.74	25.1	C		0.75	25.3	C		0.73	23.9	C	1.07	84.1	F	1.10	94.1	F	*	1.03	71.4	E
	NB-LTR	0.22	17.1	B		0.22	17.1	B		0.23	17.9	B	0.40	19.8	B	0.40	19.9	B		0.43	21.7	C
	SB-LTR	0.51	22.5	C		0.52	22.6	C		0.53	23.7	C	0.25	17.2	B	0.25	17.2	B		0.26	18.6	B

Abbreviations:

EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound

L-Left, T-Through, R-Right, Defl.-Defacto Left, E-W: East-West Roadway, N-S: North-South Roadway

V/C Ratio - Volume to Capacity Ratio

SEC/VEH - Seconds per Vehicle

LOS - Level of Service

* - Denotes Impacted Locations.

** - Denotes Unmitigated Impacted Locations.

June 29, 2007

Table 22-2B: 2015 With Mitigation Traffic Conditions In PM and Saturday Midday Peak Hour (cont'd)

THIS TABLE HAS BEEN REVISED FOR THE FEIS

Signalized Intersection	Lane Group	2015 No-Action Weekday PM Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS		2015 With Action Weekday PM Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS		2015 With Mitigation Weekday PM Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS		2015 No-Action Saturday MD Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS	2015 With Action Saturday MD Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS		2015 With Mitigation Saturday MD Peak Hour V/C RATIO	DELAY (SEC/VEH)	LOS
41) Archer Avenue (E-W) @	EB-TR	0.70	23.7	C		0.72	24.3	C		0.70	23.0	C		0.65	21.8	C	0.67	22.3	C		0.64	20.3	C
Merrick Boulevard (SB)	WB-LT	1.20	126.5	F		1.21	132.4	F	*	1.18	117.4	F	WB-DfL	1.18	147.8	F	-DefL 1.25	175.4	F	*	WB-L 1.15	134.7	F
													WB-T	0.66	24.3	C	WB-T 0.68	24.9	C		WB-T 0.65	22.5	C
	SB-LTR	0.69	23.8	C		0.73	25.0	C		0.75	26.3	C		0.61	22.0	C	0.68	23.6	C		0.72	26.0	C
42) Atlantic Avenue (E-W) @	EB-TR	0.58	26.3	C		0.58	26.3	C		0.62	28.4	C		0.67	28.1	C	0.67	28.1	C		0.67	28.1	C
Van Wyck Expwy Southbound	WB-L	0.37	24.5	C		0.38	24.9	C		0.40	27.1	C		0.25	23.0	C	0.26	23.0	C		0.26	23.0	C
Service Road (SB)	WB-LT	0.50	16.5	B		0.51	16.6	B		0.53	18.2	B		0.38	14.8	B	0.38	14.8	B		0.38	14.8	B
	SB-LTR	1.13	93.4	F		1.18	114.0	F	*	1.11	85.7	F		0.82	28.9	C	0.88	32.0	C		0.88	32.0	C
43) Atlantic Avenue (E-W) @	EB-L	0.98	66.7	E		0.80	42.9	D		0.80	42.9	D		1.00	68.7	E	1.10	103.2	F	*	0.96	60.4	C
Van Wyck Expwy Northbound	EB-T	0.52	22.4	C		0.62	24.8	C		0.62	24.8	C		0.46	21.3	C	0.58	23.8	C		0.56	21.8	B
Service Road (NB)	WB-TR	0.53	25.4	C		0.87	36.9	D		0.87	36.9	C		0.32	22.4	C	0.38	23.3	C		0.38	23.3	C
	NB-LTR	0.84	24.3	C		0.85	24.8	C		0.85	24.8	C		0.53	17.3	B	0.54	17.5	B		0.57	19.1	C
46) Liberty Avenue (E-W) @	EB-L	0.98	92.0	F		1.17	151.1	F	*	1.17	152.1	F	**	0.48	16.8	B	0.70	32.0	C		0.67	29.8	C
Sutphin Boulevard (N-S)	EB-TR	0.47	10.2	B		0.53	10.8	B		0.57	12.5	B		0.43	9.8	A	0.50	10.5	B		0.54	12.2	B
	WB-L	0.15	8.5	A		0.17	9.0	A		0.19	10.5	B		0.21	9.3	A	0.26	10.3	B		0.29	12.1	B
	WB-TR	0.81	16.8	B		1.01	40.7	D	WB-TR		26.7	C		0.61	11.9	B	0.68	13.1	B	WB-TR		12.4	B
									WB-T	0.95	28.0	C								WB-T	0.60	12.8	B
									WB-R	0.11	8.7	A								WB-R	0.15	9.0	A
	NB-LTR	0.64	20.7	C		0.70	22.7	C		0.63	18.9	B		0.59	19.5	B	0.64	20.7	C		0.57	17.7	B
	SB-LTR	1.60	300.1	F		1.83	404.4	F	*	SB-LTR 1.52	263.6	F		0.97	54.4	D	1.13	101.8	F	*	SB-LTR 0.34	46.1	D
47) Liberty Avenue (E-W) @	EB-L	0.39	14.2	B		0.48	18.6	B		0.51	21.5	C		0.17	8.9	A	0.26	10.8	B		0.29	12.8	B
150th Street (N-S)	EB-TR	0.55	10.7	B		0.71	13.3	B		0.73	14.5	B		0.54	10.6	B	0.58	11.2	B		0.62	13.0	B
	WB-L	0.23	9.7	A		0.45	18.0	B		0.48	20.6	C		0.18	8.9	A	0.27	10.7	B		0.30	12.9	B
	WB-TR	0.64	12.1	B		0.70	13.2	B		0.73	14.4	B		0.56	10.8	B	0.62	11.6	B		0.66	13.6	B
	NB-LTR	0.85	38.2	D		0.90	43.7	D		0.84	35.7	D		0.56	21.6	C	0.60	22.7	C		0.55	19.4	B
	SB-LTR	1.03	68.6	E		1.09	87.5	F	*	1.02	62.4	E		0.89	38.3	D	1.01	61.7	E	*	0.89	35.8	D
48) Liberty Avenue (E-W) @	EB-L	0.61	34.0	C		0.62	34.7	C		0.62	33.7	C		0.21	13.1	B	0.23	13.9	B		0.23	13.9	B
Guy R. Brewer Boulevard (N-S)	EB-TR	0.87	23.9	C		1.09	69.3	E	*	1.02	44.9	D		0.77	18.9	B	0.84	22.0	C		0.84	22.0	C
	WB-L	0.37	20.0	C		0.40	21.4	C		0.40	20.4	C		0.41	21.5	C	0.51	27.0	C		0.51	27.0	C
	WB-TR	0.93	28.6	C		0.96	32.7	C		0.89	23.9	C		0.56	14.6	B	0.61	15.4	B		0.61	15.4	B
	NB-LTR	0.99	60.4	E		1.20	130.0	F	*	0.98	57.3	E		0.83	30.4	C	1.03	68.7	E	*	0.72	21.0	C
	SB-L	0.22	12.3	B		0.23	12.4	B		0.25	14.0	B		0.21	12.2	B	0.21	12.3	B		0.21	12.3	B
	SB-TR	0.87	32.3	C		0.88	33.7	C		0.94	44.4	D		0.57	17.2	B	0.58	17.4	B		0.58	17.4	B
49) Liberty Avenue (E-W) @	EB-T	0.60	15.6	B		0.67	16.9	B		0.63	14.3	B		0.63	16.2	B	0.66	16.8	B		0.66	16.8	B
Merrick Boulevard (SB)	EB-R	0.45	14.4	B		0.57	16.6	B		0.53	14.0	B		0.38	13.4	B	0.41	13.8	B		0.41	13.8	B
	WB-L	0.71	36.9	D		0.90	71.5	E	*	0.78	44.6	D		0.56	27.4	C	0.65	35.4	D		0.65	35.4	D
	WB-T	0.56	15.0	B		0.59	15.4	B		0.55	13.1	B		0.49	13.9	B	0.51	14.3	B		0.51	14.3	B
	SB-LTR	1.25	150.8	F		1.29	169.2	F	*	SB-LTR	72.3	E		1.21	133.5	F	1.31	175.6	F	*	SB-LTR	47.4	D
										SB-LT 1.07	82.3	F									SB-LT 0.97	52.4	D
										SB-R 0.57	31.8	C									SB-R 0.48	26.8	C
51) South Road (E-W) @	EB-LTR	0.72	26.8	C		0.72	26.9	C		0.76	29.9	C		0.51	20.1	C	0.51	20.2	C		0.51	20.2	C
Guy R Brewer Boulevard (N-S)	WB-LTR	0.57	21.0	C		0.57	21.1	C		0.61	22.9	C		0.36	17.1	B	0.37	17.2	B		0.37	17.2	B
	NB-LTR	0.67	15.8	B		0.71	17.0	B		0.69	15.7	B		0.52	11.7	B	0.57	12.5	B		0.57	12.5	B
	SB-LTR	0.88	27.5	C		0.99	45.3	D	*	0.96	37.6	D		0.64	14.2	B	0.70	16.1	B		0.70	16.1	B
54) Jamaica Avenue (E-W) @	EB-LT	0.05	9.0	A		0.05	9.2	A	EB-LTR	0.48	10.8	B		0.12	10.5	B	0.05	9.2	A	EB-LTR	0.46	10.7	B
178th Street (SB)	WB-LT	0.07	9.6	A		0.08	10.2	B	WB-LTR	0.44	10.4	B		0.02	8.6	A	0.08	10.2	B	WB-LTR	0.55	11.8	B
	NB-LT	0.22	25.2	D		0.26	29.9	C	NB-LTR	0.32	39.0	D		0.27	32.7	D	0.26	29.9	C	NB-LTR	0.34	39.5	D
	NB-TR	0.24	22.5	C		0.28	26.6	C						0.30	25.5	D	0.28	26.6	C				
		(Unsignalized)				(Unsignalized)				(Signalized)				(Unsignalized)			(Unsignalized)				(Signalized)		

Abbreviations

EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound
L-Left, T-Through, R-Right, DefL-Defacto Left, E-W: East-West Roadway, N-S: North-South Roadway
V/C Ratio - Volume to Capacity Ratio
SEC/VEH - Seconds per Vehicle
LOS - Level of Service
* - Denotes Impacted Locations.
** - Denotes Unmitigated Impacted Locations.

June 29, 2007

Table 22-3
Additional Buses Required for Mitigation

Agency	Route	Direction	With-Action Available Capacity	Additional Buses Required for Mitigation
AM Peak Hour				
NYCT	Q30	EB	-17	1
NYCT	Q54	EB	-19	1
NYCT	Q54	WB	-25	1
MTA Bus	Q6	NB	-101	2
MTA Bus	Q6	SB	-48	1
MTA Bus	Q8	EB	-52	1
MTA Bus	Q8	WB	-45	1
MTA Bus	Q41	SB	-17	1
MTA Bus	Q60	EB	-38	1
MTA Bus	Q60	WB	-67	2
PM Peak Hour				
NYCT	Q43	EB	-22	1
NYCT	Q54	EB	-48	1
NYCT	Q54	WB	-3	1
MTA Bus	Q6	SB	-86	2
MTA Bus	Q8	WB	-101	2
MTA Bus	Q40	SB	-11	1
MTA Bus	Q41	NB	-27	1
MTA Bus	Q41	SB	-78	2
MTA Bus	Q60	EB	-141	3

Note: Assumes Capacity based on a maximum of 65 passengers for a standard 40-foot bus.
June 29, 2007

PEDESTRIANS

The results of the analysis of pedestrian conditions in the future with the proposed action show that demand from the proposed action would result in significant adverse impacts at four sidewalk corner locations. As shown in Table 17-21, in the 2015 future with the proposed action, the northeast corner of the intersection of Jamaica Avenue and 160th Street in the PM peak hour, the southeast corner of Jamaica Avenue and 160th Street in the PM peak hour, the northwest corner of Jamaica Avenue and Merrick Boulevard in the PM peak hour, and the southeast corner of Archer Avenue and 160th Street in the midday and PM peak hour would be impacted.

A significant adverse pedestrian impact is considered mitigated if measures implemented return the projected future conditions to what they would be if a proposed action were not in place, or to acceptable levels. For a No-Action LOS D, E or F, mitigation back to the No-Action condition is required; for No-Action LOS A, B, or C, mitigation to the mid-LOS D threshold is required (20 square feet per pedestrian for corners and crosswalks, and 13 pedestrians per foot per minute for sidewalks).

The following discusses potential mitigation measure for the pedestrian impact identified in Chapter 17, "Transit and Pedestrians." Table 22-4 shows the effectiveness of the proposed measures on the impacted corner.

Table 22-4
2015 Future with Mitigation Sidewalk Corner Conditions

	Corner	Peak Hour	2015 No-Action		2015 With-Action		2015 With Mitigation	
			SF/P	LOS	SF/P	LOS	SF/P	LOS
Jamaica Ave. @ Merrick Blvd.	Northwest	PM	18.0	D	16.5	D*	21.4	D

Note: SF/P - Square foot per pedestrian
* - Denotes a significant adverse impact based on CEQR criteria.
February 5, 2007

Pedestrian demand generated by the proposed action would significantly impact the northwest corner of Jamaica Avenue and Merrick Boulevard in the PM peak hour. The level of service would deteriorate to LOS E (16.5 SF/ped) compared to LOS D (18.0 SF/ped) under No-Action conditions. To address this impact it is proposed to bulb-out the corner by one foot along Merrick Boulevard on the west side to gain more pedestrian space. There is currently approximately 10.0 feet of sidewalk width along Merrick Boulevard, which would be widened to 11.0 feet at the corner, and decreasing the vehicle travelway from 37.1 feet to 36.1 feet. Creation of a one-foot bulb-out into Merrick Boulevard would address the impact and mitigate conditions to better than No-Action conditions with the level of service improving to LOS D (21.4 SF/ped).

Bulb-outs along Jamaica Avenue are avoided due to its use as a bus lane in the PM peak hour.

SUMMARY

In summary, the proposed mitigation plan for buses would fully address all bus impacts. All sidewalk corner impacts would be mitigated.

AIR QUALITY

Chapter 18, "Air Quality," shows the maximum of the predicted 8-hour carbon monoxide (CO) concentrations for the proposed action, and concludes that the proposed action would not result in any significant adverse air quality impacts. Therefore, no air quality mitigation is required. This section considers the effects on air quality of the proposed action with implementation of the traffic mitigation measures discussed above.

Table 22-5 illustrates the effect of the proposed traffic mitigation measures (see the discussion above) on maximum predicted CO concentrations with the proposed action. The values shown are the highest predicted concentrations for the analyzed receptor locations. Table 22-5 shows that the proposed traffic mitigation measures would be below the National Ambient Air Quality Standards (NAAQS), and would not result in any significant adverse air quality impacts.

Table 22-5
Future (2015) Maximum Predicted 8-Hour Average Carbon Monoxide With Proposed Traffic Mitigation

Receptor Site	Location	Time Period	8-Hour Concentration (ppm)
1	Hillside Avenue @ 150th Street	PM	4.0
2	Hillside Avenue @ Sutphin Boulevard	PM	4.1
3	Hillside Avenue @ Parsons Boulevard	PM	4.5
4	Atlantic Avenue @ Van Wyck Service Road	PM	5.7
5	Jamaica Avenue @ Sutphin Boulevard	AM	4.0
6	Jamaica Avenue @ 150th Street	AM	3.5
7	Jamaica Avenue @ Merrick Boulevard	PM	3.6
Note:	8-hour standard is 9 ppm.		

✷