FINAL ENVIRONMENTAL IMPACT STATEMENT FOR THE CATSKILL/ DELAWARE UV FACILITY

6. MITIGATION OF POTENTIAL SIGNIFICANT OR TEMPORARY ADVERSE IMPACTS

6.1. EASTVIEW SITE

6.1.1. Introduction

This section examines mitigation measures that have been developed in response to the potential significant or temporary adverse impacts that could result from the construction and/or operation of the proposed Catskill/Delaware Ultraviolet Light Disinfection Facility (UV Facility). The various study areas defined in the individual technical analyses are the same for the analyses presented below, as for those presented in the separate sections of this Final EIS. Additionally, the methodologies used to prepare the analyses in this section are the same as those presented in Section 3, Data Collection and Impact Methodologies.

At the Eastview Site, with or without the Croton Water Treatment Plant (Croton project), it is anticipated that the proposed project could have potential significant or temporary adverse impacts in the areas of: neighborhood character; traffic and transportation; noise; historic resources; and natural resources. The following section summarizes the proposed mitigation measures that have been developed for each area.

6.1.2. Neighborhood Character

Impacts from the simultaneous construction of both the proposed UV Facility and the Croton project may be noticeable off-site in terms of the traffic and noise that would be generated by construction worker vehicles and trucks. The introduction of the UV Facility to the site would result in construction truck trips greater than the number of the truck trips generated if the Croton project were under construction alone, because of the reduction of staging area available for the UV Facility with both projects under construction. As a result, significant adverse traffic and temporary adverse noise impacts could occur at numerous intersections and road segments, throughout the study area. Due to constraints involving road geometry, mitigation of these construction-period traffic impacts may not be feasible. Therefore, during construction, temporary adverse impacts to neighborhood character, due to traffic congestion and elevated noise levels, would likely occur. Traffic impacts during construction would result in widespread congestion in the regional area, resulting in potential temporary inconvenience to commercial, institutional, retail and residential uses, within the surrounding area. Potential traffic mitigation measures would continue to be pursued by the New York City Department of Environmental Protection (NYCDEP) to minimize traffic impacts on the community and thus reduce temporary adverse impacts on neighborhood character in the Future With the Project and with the Croton project scenario.

6.1.3. Traffic and Transportation

Section 3.9, Data Collection and Impact Methodologies, Traffic and Transportation, describes the criteria that have been used to determine the potential significant or temporary adverse traffic impacts of the various proposed UV Facility Build and Construction scenarios. As described in

Section 4.9, Traffic and Transportation, both 2008 Construction and 2010 Build conditions have been assessed with and without the traffic associated with the Croton project included in the Future No Build (FNB) volumes. Additionally, for 2008 Construction conditions with the Croton project, four worker parking Options (A, B, C, and D) have been assessed (and are briefly described again in the relevant sections below).

The potential for adverse traffic impacts during construction is unavoidable. The increased delay for persons traveling the surrounding roads would be a nuisance and annoying under this scenario. Many of the intersections that construction vehicles would travel are already congested and this congestion would be exacerbated by the proposed project. The construction period is anticipated to be a period of approximately five years if the Croton project is also located on the Eastview Site. The height of the construction period for the proposed UV Facility would persist for approximately 16 months. The periods leading up to and after the height of the construction period, although still anticipated to increase local congestion with undesirable effects, would be characterized by less project induced construction traffic. NYCDEP elected to quantify the anticipated construction related effects of the proposed project to identify these impacts on the local community and to determine what reasonable measures could be undertaken to minimize the congestion. Some of these measures would provide long term benefits, while other mitigation measures may not be warranted because of the temporary nature of construction impacts. Most of the measures that have been identified to address the project's construction related effects would require the approval of New York State Department of Transportation (NYSDOT). Between the Draft and Final EIS, discussions were held between NYCDEP and the relevant agencies (e.g., NYSDOT, Westchester County Department of Public Works [DPW]) and local representatives, to determine what level of mitigation would be appropriate to address the potential significant and temporary adverse impacts identified for the project's operation and construction.

Mitigation analyses have been prepared to develop measures that would restore traffic conditions (lane group and/or approach delays and level of service [LOS]) to FNB levels or better. Where it has not been possible to identify measures that would return service conditions to FNB levels, when those levels were better than mid-point LOS D, (delays of 45 seconds or less for signalized intersections and delays of 30 seconds or less for unsignalized intersections), measures have been identified that would result in at least a Mitigation condition of mid-LOS D.

The assessments presented in Sections 6.1.3 and 6.2.2 rely mostly on a combination of new traffic signals, lane striping changes, and traffic signal retiming or phasing changes as the recommended mitigation measures. However, some of the measures that were investigated were more extraordinary, involving additional lane construction or street widening, to give a complete range of potential measures that could eliminate impacts. In some instances, although specific measures have been identified in the traffic analyses that could mitigate impacts, implementation of these measures was not deemed necessary or appropriate by the relevant transportation agency with jurisdiction over particular roadways, either because of the short duration of impacts in some cases, or in deference to the coordinated long-term traffic management efforts/plans of other government agencies. Instead, a number of maintenance and protection of traffic (MPT) measures that would not involve physical improvements or changes have been investigated as measures to mitigate the short-term construction period impacts. The various MPT measures

could be used singly or in combination, to establish MPT plans for individual intersections, or overall traffic systems. MPT plans may include one or more of the following:

- Use of Traffic Cones, Drums and Barricades
- Signage (Standard)
- Signage (Flashing)
- Flagperson
- Uniformed Police Officers
- Lane Narrowings
- Speed Cushions
- Pavement Markers
- Rumble Strips

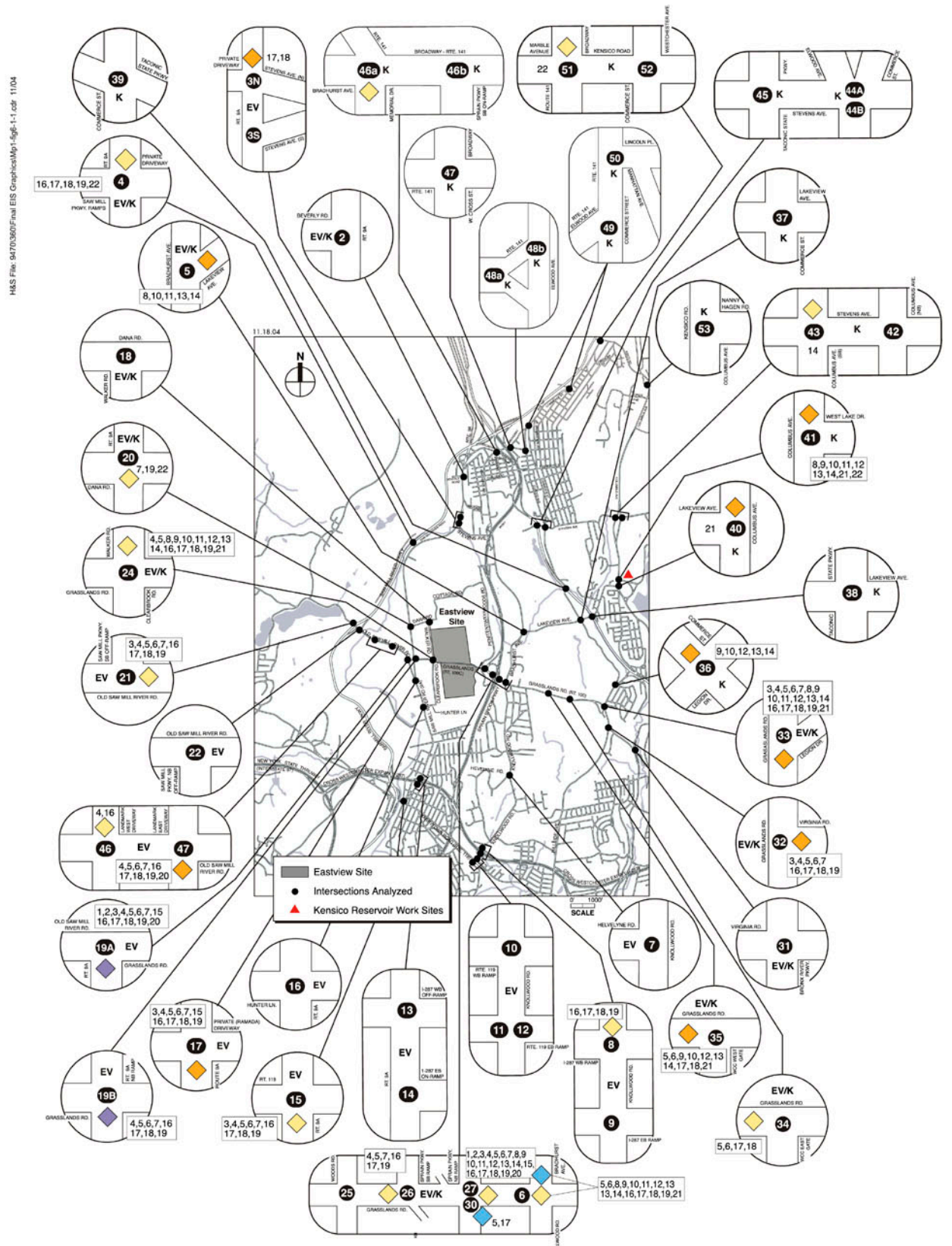
Before being implemented, the various MPT elements would be reviewed by the agency with jurisdiction over the particular intersection (either NYSDOT and/or Westchester County DPW) for use at any given location. At times the MPT measures chosen for a particular location and condition may not fully mitigate a project impact from an analytical perspective (in accordance with *CEQR Technical Manual* guidelines), but would serve to address the pedestrian and vehicular safety considerations at a particular location.

A discussion related to the use of alternative MPT measures, for locations where new traffic signals or other physical improvements have been suggested, has been included in the description of potential mitigation measures for locations where the use of such measures has been deemed appropriate by NYSDOT, Westchester County DPW, and/or local representatives. The discussion identifies the measures that are anticipated to be used at the particular locations where impacts have been identified for the proposed project (as discussed in Section 4.9, Traffic and Transportation).

For locations where the installation of a new traffic signal has been recommended as a mitigation measure, if requested by the agency(s) with jurisdiction over the particular intersection roadways involved, formal Signal Warrant Studies would be performed and submitted for review by the appropriate agency; in most cases NYSDOT.

The following text describes both the 2010 Build (operational) conditions' significant adverse traffic impacts, and the 2008 Construction conditions' potential significant or temporary adverse impacts, and the associated recommended traffic improvements/mitigation measures for these significant or temporary adverse impacts for the relevant project scenarios. A summary of proposed traffic mitigation is shown in Figures 6.1-1A and 6.1-1B.

All of the mitigation measures suggested below would serve to eliminate or reduce the predicted significant or temporary adverse impacts of the proposed project. If the mitigation identified is not applied, the predicted significant or temporary adverse impacts identified would remain unmitigated. In the absence of implementing the mitigation measures proposed below, NYCDEP would consider other traffic management techniques, if approved by the governing roadway entity, to offset these significant or temporary adverse impacts, and ensure the smooth and safe operation of traffic.



Summary of Proposed Traffic Mitigation

Catskill/Delaware UV Facility

Figure 6.1-1A

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MITIGATION MEASURES / CONDITION ANALYZED →	1	2	3	4	5	6	7	8	9	10	11	12	13	14*	15	16	17	18	19	20	21	22
Proposed Signalization	1	1	1	2	2	2	2	0	0	0	0	0	0	0	1	2	2	2	2	2	0	0
Proposed Pavement Restriping Changes	0	0	0	0	2	1	0	1	1	1	1	1	1	1	0	1	1	1	1	0	1	0
Proposed Retiming/Rephasing Changes	1	1	4	6	9	6	6	3	3	3	3	3	3	3	1	10	10	10	10	1	3	4
Proposed Geometric/Physical Changes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maintenance and Protection of Traffic (MPT) Plan	0	0	3	4	4	4	4	2	4	5	2	4	5	2-5	1	4	6	6	4	1	4	1
Total Number of Proposed Traffic Mitigation Measures**	2	2	8	12	17	13	12	6	8	9	6	8	9	6-9	3	17	19	19	17	3	7	5

*NOTE: Impacts Would be Similar to Numbers 8, 9, 10, 11, 12, 13 with One Additional Impact.

**NOTE: Total Number of Poposed Mitigation Measures Do Not Necessarily Equal the Nuber of Intersections Impacted. Some Intersections Have Multiple Mitigation Measures (e.g. Retiming and Restriping).

LEGEND

1 2010 Operation without Croton Project
2 2010 Operation with Croton Project
3 2008 Construction without Croton Project
4 2008 Construction Option A
5 2008 Construction Option B
6 2008 Construction Option C
7 2008 Construction Option D
8 2006 Off-Site Option A without Croton Project
9 2006 Off-Site Option B without Croton Project
10 2006 Off-Site Option C without Croton Project
11 2006 Off-Site Option A with Croton Project
12 2006 Off-Site Option B with Croton Project
13 2006 Off-Site Option C with Croton Project
14 2010 Off-Site Construction
15 2010 Operation Combined
16 2008 Construction Option A Combined
17 2008 Construction Option B Combined
18 2008 Construction Option C Combined
19 2008 Construction Option D Combined
20 2006 Extended Work Hours Alternative
21 2006 Off-Site Option D without Croton Project
22 2006 Off-Site Option E without Croton Project

2008: Parking Options

OPTION A: Construction Workers Park at the Landmark at Eastview

OPTION B: Construction Workers Park at Westchester Community Collage

OPTION C: Construction Workers Split Parking Evenly at the Landmark at Eastview and Westchester Community College

OPTION D: Construction Workers Park at the Landmark at Eastview and Home Depot

2006: Truck Route Options

OPTION A: Grasslands Road/Lakeview Avenue/ Columbus Avenue

OPTION B: Grasslands Road/Commerce street/ Columbus Avenue

OPTION C: Combination 50/50 Split Between Option A and B

OPTION D: Circular Route - Lakeview Avenue to Kensico/Commerce Street to Eastview (Preferred Alternative)

OPTION E: Route 9A/Route 141/Kensico Road/Columbus Avenue

Summary of Estimated Traffic Mitigation Measures

Catskill/Delaware UV Facility

Figure 6.1-1B

6.1.3.1. 2010 Potential Project Impacts and Mitigation

6.1.3.1.1. Without Croton Project at Eastview Site

The traffic analyses compared the proposed UV Facility's 2010 Build conditions with a "pure" 2010 FNB condition (without the Croton project). Under these conditions in 2010, it was found that traffic from the proposed UV Facility would be anticipated to result in three predicted significant adverse traffic impacts at two intersections. These impacts could be fully mitigated as described below; the resulting delays and LOS for these intersections, with the proposed mitigation applied, are compared to 2010 FNB and 2010 Build conditions (see Table 6.1-1).

The tables showing the results of applying the mitigation measures also indicate the specific measures recommended for each location. For many of the locations, more than one measure was identified that could be implemented that would reduce delays back to or below FNB conditions. The assessment presented here relies on a combination of new traffic signals, lane striping changes, and traffic signal retiming or phasing changes as the recommended measures.

With respect to proposed signal re-timings or re-phasings, many of the traffic signals at the intersections included in the analyses (and at locations where signal timing improvements are suggested under "mitigation") have "actuated" signals. Instead of computing the re-optimization of the signal via the actuation process (which is a typical analysis approach for projects undertaking comparable studies in Westchester County), the NYCDEP applied a rigorous methodology that did not take benefit of the natural, re-optimizing of the signal in the "With the Project" scenarios, and only demonstrated such benefits in the mitigation section.

Once the proposed UV Facility is built and operational, the various agencies responsible for maintaining traffic flow and roadways in the study area would conduct field inspections of the operations of the various intersections to determine if the proposed mitigation measures are actually warranted (particularly because traffic from anticipated No Build projects or background growth may be less than analyzed in this report).

Saw Mill River Road (Route 9A) and Grasslands Road (Route 100C)

During the AM peak hour, the northbound left-turn movement at Saw Mill River Road (Route 9A) and Grasslands Road (Route 100C) would continue to operate with a LOS F, but there would be a 3.2-second increase in delay. The installation of a traffic signal at this location would fully mitigate this impact. As a result of this mitigation, the northbound left-turn would improve compared to FNB conditions, to LOS C (30.4 seconds of delay), and all of the other traffic movements and approaches would operate at LOS C or better.

During the PM peak hour, the northbound left-turn movement would continue to operate at LOS F with delays increased beyond 240 seconds. Similar to the AM peak hour, this impact could be fully mitigated with the installation of a traffic signal at this location. As a result of this mitigation, the northbound left-turn movement would improve compared to FNB conditions, to

LOS C (30.1 seconds of delay), and all of the other movements and approaches would operate at LOS C or better.

It should be noted that the traffic analyses conducted for this area indicate that conditions at this location are already operating unacceptably under existing conditions, and are anticipated to deteriorate further in the future, even without the proposed UV Facility's additional traffic. This intersection also meets volume warrants under existing and No Build conditions, therefore; the installation of a traffic signal at this intersection appears to be warranted even without the proposed UV Facility, to improve the operation of this intersection. NYCDEP would propose for a traffic signal to be installed at this location before operations start in 2010. Additional discussions would be held with NYSDOT to determine the suitability of a new signal at this location in order to coordinate the new signal with the long-term traffic management efforts/plans for this corridor.

Grasslands Road (Route 100C) and Sprain Brook Parkway Northbound Ramp

During the AM peak hour, the northbound left/through movement would deteriorate from LOS E, to LOS F, with a 4.7-second increase in delay. A shift of 1 second of green time from the east-west signal phase to the northbound phase would fully mitigate this impact. NYSDOT would determine if retiming is necessary and implement accordingly.

TABLE 6.1-1. PURE NO BUILD VS. CAT DEL ALONE LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS: 2010 NO BUILD, OPERATION AND MITIGATION CONDITIONS

Intersection	No.	Approach	Lane Group	2010 Pure No Build v/c Ratio	2010 Pure No Build Delay (sec)	2010 Pure No Build LOS	2010 Cat Del Alone v/c Ratio	2010 Cat Del Alone Delay (sec)	2010 Cat Del Alone LOS	2010 Mitigation Lane Group	2010 Mitigation v/c Ratio	2010 Mitigation Delay (sec)	2010 Mitigation LOS	FEIS Mitigation Measures (1)
AM Peak Hour														
Saw Mill River Road (Route 9A) @	19A	Northbound	L	1.00	152.7	F	1.01	155.9 +	F	L	0.37	30.4	C	This intersection meets the volume warrants for a traffic signal, even under existing conditions. Propose new signal. Warrant studies will be completed and NYCDEP will work with NYSDOT.
Grasslands Road (Route 100C)			R	0.24	18.6	C	0.24	18.7	C	R	0.22	29.0	C	
		Eastbound								T	0.76	13.2	B	
										R	0.21	5.9	A	
		Westbound	L	0.17	12.2	B	0.17	12.2	B	L	0.33	7.0	A	
			T							T	0.27	6.2	A	
		Int.		Unsignalized			Unsignalized					12.5	B	
Grasslands Road (Route 100C) @	27	Eastbound	L	0.09	14.8	B	0.10	14.9	B	L	0.10	15.4	B	Signal Retiming: Shift 1 second of green time from eastbound and westbound phase to northbound phase. NYSDOT will determine if retiming is necessary after UV Facility begins operation.
Sprain Brook Parkway NB Ramp	30		T	0.51	18.2	B	0.51	18.2	B	T	0.52	18.9	B	
		Westbound	TR	0.48	24.8	C	0.48	24.8	C	TR	0.49	25.6	C	
		Northbound	LT	1.03	76.4	E	1.05	81.1 +	F	LT	1.03	73.3	E	
			R	1.05	84.7	F	1.05	84.7	F	R	1.03	76.8	E	
		Int.			48.2	D		49.4	D			46.1	D	
PM Peak Hour														
Saw Mill River Road (Route 9A) @	19A	Northbound	L	1.31	**	F	1.32	** +	F	L	0.35	30.1	C	This intersection meets the volume warrants for a traffic signal, even under existing conditions. Propose new signal. Warrant studies will be completed and NYCDEP will work with NYSDOT.
Grasslands Road (Route 100C)			R	0.30	16.5	C	0.30	16.5	C	R	0.35	30.1	C	
		Eastbound								T	0.59	9.1	A	
										R	0.20	5.9	A	
		Westbound	L	0.19	11.6	B	0.19	11.6	B	L	0.37	7.3	A	
			T							T	0.54	8.4	A	
		Int.		Unsignalized			Unsignalized					11.2	B	

Notes:

L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates significant impacts.

" ** " indicates a calculated delay greater than 240 seconds

(1) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

6.1.3.1.2. With Croton Project at Eastview Site

The traffic analyses compared the proposed UV Facility's 2010 Build conditions with 2010 FNB conditions with the Croton project. Under these conditions in 2010, it was found that traffic from the UV Facility would be anticipated to result in two predicted significant traffic impacts at two intersections. These impacts could be fully mitigated as described below; the resulting delays and LOS for these intersections, with the proposed mitigation applied, are compared to 2010 FNB and 2010 Build conditions (see Table 6.1-2).

The tables showing the results of applying the mitigation measures also indicate the specific measures recommended for each location. For these locations, more than one measure was identified that could be implemented that would reduce delays back to or below FNB conditions. The assessment presented here relies on a combination of new traffic signals, lane striping changes, and traffic signal retiming or phasing changes as the recommended measures. Once the proposed UV Facility is built and operational, the various agencies responsible for maintaining traffic flow and roadways in the study area would conduct field inspections of the operations of the various intersections to determine if the proposed mitigation measures are actually warranted (particularly because traffic from anticipated No Build projects or background growth may be less than analyzed in this report).

Saw Mill River Road (Route 9A) and Grasslands Road (Route 100C)

During the PM peak hour, the northbound left-turn movement would continue to operate at LOS F, with delays increased to beyond 240 seconds. This impact could be fully mitigated with the installation of a traffic signal at this location. As a result of this mitigation, the northbound left-turn movement would improve compared to FNB conditions, to LOS C (30.1 seconds of delay), and all of the other movements and approaches would operate at LOS C or better.

Although traffic from the proposed UV Facility would not result in a significant adverse impact at this location during the AM peak hour, operations were evaluated with the new traffic signal. The analysis shows that delays would improve substantially with the installation of the traffic signal required as mitigation for the PM peak hour impact, resulting in all movements and approaches operating at LOS C or better, during the AM peak hour.

It should be noted that the traffic analyses conducted for this area indicate that conditions at this location are already operating unacceptably under existing conditions, and are anticipated to deteriorate further in the future, even without the proposed UV Facility's additional traffic. This intersection also meets volume warrants under existing and No Build conditions; therefore, the installation of a traffic signal at this intersection appears to be warranted even without the proposed UV Facility, to improve the operation of this intersection. NYCDEP would propose for a traffic signal to be installed at this location before operations start in 2010. Additional discussions would be held with NYSDOT to determine the suitability of a new signal at this location in order to coordinate the new signal with the long-term traffic management efforts/plans for this corridor.

TABLE 6.1-2. PURE NO BUILD + CROTON VS. CAT DEL ALONE LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNAIZED INTERSECTIONS: 2010 NO BUILD, OPERATION AND MITIGATION CONDITIONS

Intersection	No.	Approach	Lane Group	2010 No Build v/c Ratio	2010 No Build Delay (sec)	2010 No Build LOS	2010 Cat Del Build v/c Ratio	2010 Cat Del Build Delay (sec)	2010 Cat Del Build LOS	2010 Mitigation Lane Group	2010 Mitigation v/c Ratio	2010 Mitigation Delay (sec)	2010 Mitigation LOS	FEIS Mitigation Measures (1)
AM Peak Hour														
Saw Mill River Road (Route 9A) @ Grasslands Road (Route 100C)	19A	Northbound	L	1.02	159.2	F	1.02	159.2	F	L	0.37	30.4	C	This intersection meets the volume warrants for a traffic signal, even under existing conditions. Propose new signal. Warrant studies will be completed and NYCDEP will work with NYSDOT.
			R	0.24	18.8	C	0.24	18.9	C	R	0.22	29.0	C	
		Eastbound								T	0.77	13.4	B	
										R	0.21	5.9	A	
		Westbound	L	0.17	12.2	B	0.17	12.2	B	L	0.33	7.1	A	
										T	0.27	6.2	A	
		Int.		Unsignalized			Unsignalized					12.7	B	
Grasslands Road (Route 100C) @ Sprain Brook Parkway NB Ramp	27	Eastbound	L	0.10	14.9	B	0.11	14.9	B	L	0.11	15.5	B	Signal Retiming: Shift 1 second of green time from eastbound and westbound phase to northbound phase. NYSDOT will determine if retiming is necessary after UV Facility begins operation.
	30		T	0.51	18.2	B	0.51	18.2	B	T	0.52	18.9	B	
		Westbound	TR	0.48	24.8	C	0.48	24.8	C	TR	0.49	25.6	C	
		Northbound	LT	1.06	83.8	F	1.07	89.0 +	F	LT	1.05	80.3	F	
			R	1.05	84.7	F	1.05	84.7	F	R	1.03	76.8	E	
		Int.			50.1	D		51.4	D			48.0	D	
PM Peak Hour														
Saw Mill River Road (Route 9A) @ Grasslands Road (Route 100C)	19A	Northbound	L	1.34	**	F	1.35	** +	F	L	0.35	30.1	C	This intersection meets the volume warrants for a traffic signal, even under existing conditions. Propose new signal. Warrant studies will be completed and NYCDEP will work with NYSDOT.
			R	0.30	16.5	C	0.30	16.6	C	R	0.35	30.1	C	
		Eastbound								T	0.60	9.2	A	
										R	0.20	5.9	A	
		Westbound	L	0.19	11.6	B	0.19	11.6	B	L	0.37	7.3	A	
										T	0.55	8.5	A	
		Int.		Unsignalized			Unsignalized					11.2	B	

Notes:

L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates significant impacts.

" ** " indicates a calculated delay greater than 240 seconds

(1) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

Grasslands Road (Route 100C) and Sprain Brook Parkway Northbound Ramp

During the AM peak hour, the northbound left/through movement would continue to operate at LOS F, with a 5.2-second increase in delay. A shift of 1 second of green time from the east-west signal phase to the northbound phase would fully mitigate this impact. As a result of this mitigation, the northbound left/through movement would improve compared to FNB conditions, to LOS F (80.3 seconds of delay), and the northbound right-turn movement would improve compared to FNB conditions, from LOS F to LOS E. All other approaches and lane movements would operate at LOS C or better. NYSDOT would determine if retiming is necessary and implement accordingly.

6.1.3.2. 2008 Potential Construction Impacts and Mitigation

6.1.3.2.1. Without Croton Project at Eastview Site

The traffic analyses compared the UV Facility's 2008 Construction conditions with a "pure" 2008 FNB condition (without the Croton project). Under these conditions in 2008, it was found that traffic from the construction of the proposed UV Facility would be anticipated to result in 15 potential temporary adverse traffic impacts, 6 during the AM peak hour, and 9 during the PM peak hour. These impacts could be fully mitigated as described below; the resulting delays and LOS for these intersections, with the proposed mitigation applied, are compared to 2008 FNB and 2008 Construction conditions (see Table 6.1-3).

The tables showing the results of applying the mitigation measures also indicate the specific measures recommended for each location. For many of the locations, more than one measure was identified that could be implemented that would reduce delays back to or below FNB conditions. The assessment presented here relies mostly on a combination of new traffic signals, lane striping changes, and traffic signal retiming or phasing changes as the recommended measures. However, some of the measures that were investigated were more extraordinary, involving additional lane construction or street widening, to give a complete range of potential measures that could eliminate impacts.

For locations where the installation of a new traffic signal has been recommended as a mitigation measure, if requested by the agency(s) with jurisdiction over the particular intersection roadways involved, formal Signal Warrant Studies would be performed and submitted for review by the appropriate agency; in most cases NYSDOT.

Once construction of the proposed UV Facility has commenced, particularly for locations where signal re-timings have been proposed, the various agencies responsible for maintaining traffic flow and roadways in the study area would conduct field inspections of the operations of the various intersections to determine if the proposed mitigation measures are actually warranted (particularly because traffic from anticipated No Build projects or background growth may be less than analyzed in this report).

TABLE 6.1-3. PURE NO BUILD VS. CAT DEL ALONE LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS: 2008 NO BUILD, CONSTRUCTION AND MITIGATION CONDITIONS

			AM Peak Hour											
			2008 Pure No Build				2008 Cat Del Alone				2008 Mitigation				
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS		Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (1)
Saw Mill River Road (Route 9A) @	15	Eastbound	L	0.97	66.8	E	1.03	83.9	+ F		L	0.96	64.8	E	Signal Retiming: Shift 7 seconds of green time from eastbound and westbound phase to eastbound leading phase. NYSDOT will determine if retiming is necessary after construction of the UV Facility begins.
Tarrytown-White Plains Road (Route 119)			TR	0.38	14.5	B	0.38	14.5	B		TR	0.38	14.5	B	
		Westbound	L	0.17	22.3	C	0.17	22.3	C		L	0.20	27.1	C	
			TR	0.30	23.5	C	0.30	23.5	C		TR	0.35	28.5	C	
		Northbound	L	0.38	34.2	C	0.38	34.3	C		L	0.38	34.3	C	
			TR	0.62	40.3	D	0.66	42.0	D		TR	0.66	42.0	D	
		Southbound	L	0.24	33.9	C	0.25	34.9	C		L	0.25	34.9	C	
			T	0.42	34.9	C	0.42	35.0	D		T	0.42	35.0	D	
			R	0.23	22.1	C	0.23	22.1	C		R	0.20	17.8	B	
		Int.			31.8	C		35.5	D				32.5	C	
Saw Mill River Road (Route 9A) @	17	Northbound	L	0.09	10.0	A	0.09	10.1	B		L	0.19	4.1	A	Propose to be signalized. MPT Plan may be more suitable.
Ramada Inn/Broadway Plaza Entrance											TR	0.32	4.3	A	
		Southbound	LT	0.01	8.7	A	0.01	9.0	A		LTR	0.37	4.6	A	
		Eastbound	L	0.01	31.9	D	0.02	34.8	D		L	0.01	20.9	C	
			T	0.02	36.9	E	0.02	42.1	+ E		T	0.01	20.9	C	
		Westbound	LT	0.10	33.1	D	0.12	38.9	+ E		Def	0.06	21.2	C	
			TR	0.01	10.6	B	0.01	11.0	B		TR	0.03	21.0	C	
		Int.		Unsignalized			Unsignalized						4.7	A	
Saw Mill River Road (Route 9A) @	19A	Northbound	L	0.78	85.3	F	0.91	121.2	+ F		L	0.36	30.3	C	Propose to be signalized. MPT Plan may be more suitable.
Grasslands Road (Route 100C)			R	0.20	16.3	C	0.23	18.2	C		R	0.22	28.9	C	
		Eastbound									T	0.74	12.5	B	
											R	0.21	5.9	A	
		Westbound	L	0.15	11.3	B	0.16	11.9	B		L	0.31	6.9	A	
			T								T	0.25	6.1	A	
		Int.		Unsignalized			Unsignalized						12.2	B	
Grasslands Road (Route 100C) @	27	Eastbound	L	0.09	14.7	B	0.11	14.9	B		L	0.15	21.6	C	Signal Retiming: Shift 11 seconds of green time from eastbound and westbound phase to northbound phase. NYSDOT will determine if retiming is necessary after construction of the UV Facility begins.
Sprain Brook Parkway NB Ramp	30		T	0.50	18.0	B	0.50	18.0	B		T	0.62	26.6	C	
		Westbound	TR	0.47	24.6	C	0.48	24.8	C		TR	0.64	34.8	C	
		Northbound	LT	1.00	68.7	E	1.28	172.3	+ F		LT	1.02	64.4	E	
			R	1.02	74.8	E	1.02	74.8	E		R	0.81	30.3	C	
		Int.			44.0	D		75.1	E				39.9	D	
Virginia Road @	31	Eastbound	LT	1.12	126.9	F	1.12	129.4	+ F		LT	1.08	113.7	F	Signal Retiming: Shift 1 second of green time from northbound and southbound phase to eastbound and westbound phase. The Westchester County DPW will determine if retiming is necessary.
Bronx River Parkway			R	0.21	19.6	B	0.21	19.6	B		R	0.21	19.0	B	
		Westbound	LTR	0.40	34.6	C	0.40	34.7	C		LTR	0.38	33.7	C	
		Northbound	L	0.04	46.3	D	0.05	46.3	D		L	0.05	46.3	D	
			TR	0.26	20.1	C	0.26	20.1	C		TR	0.27	20.7	C	
		Southbound	L	1.10	141.5	F	1.10	141.5	F		L	1.10	141.5	F	
			TR	0.70	27.3	C	0.70	27.3	C		TR	0.71	28.3	C	
		Int.			53.9	D		54.3	D				52.3	D	
Grasslands Road (Route 100) @	32	Southbound	LT	0.23	8.3	A	0.23	8.4	A		LT	0.23	8.4	A	MPT Plan is likely; NYSDOT is planning to signalize this intersection.
Virginia Road		Westbound	LR	0.55	16.6	C	0.55	16.8	C		L	0.18	26.6	D	
											R	0.37	11.4	B	
		Int.		Unsignalized			Unsignalized					Unsignalized			
Grasslands Road (Route 100) @	33	Southbound	L	0.42	29.8	D	0.43	30.5	D		L	0.32	21.1	C	MPT Plan is likely; NYSDOT is planning to signalize this intersection.
Legion Drive			R	0.20	12.1	B	0.20	12.3	B		R	0.44	22.1	C	
		Eastbound	LT	0.07	8.5	A	0.07	8.5	A		LT	0.51	6.4	A	
		Westbound									T	0.40	5.7	A	
											R	0.03	0.0	A	
		Int.		Unsignalized			Unsignalized						8.9	A	

Notes:

L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates significant impacts.

(1) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

TABLE 6.1-3. PURE NO BUILD VS. CAT DEL ALONE LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS: 2008 NO BUILD, CONSTRUCTION AND MITIGATION CONDITIONS

			PM Peak Hour											
				2008 Pure No Build			2008 Cat Del Alone			2008 Mitigation				
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (1)
Saw Mill River Road (Route 9A) @ Ramada Inn/Broadway Plaza Entrance	17	Northbound	L	0.15	10.3	B	0.16	10.7	B	L	0.34	4.9	A	Propose to be signalized. MPT Plan may be more suitable.
										TR	0.38	4.6	A	
		Southbound	LT	0.01	9.4	A	0.01	9.5	A	LTR	0.43	4.8	A	
		Eastbound	L	0.01	48.4	E	0.01	56.4 +	F	L	0.00	20.9	C	
			T	0.08	79.9	F	0.09	94.8 +	F	T	0.02	20.9	C	
		Westbound	LT	0.11	56.3	F	0.13	64.8 +	F	LTR	0.04	21.0	C	
			TR	0.03	17.0	C	0.03	18.2	C					
		Int.		Unsignalized			Unsignalized					4.9	A	
Saw Mill River Road (Route 9A) @ Grasslands Road (Route 100C)	19A	Northbound	L	0.99	145.4	F	1.14	202.7 +	F	L	0.34	30.0	C	Propose to be signalized. MPT Plan may be more suitable.
			R	0.28	15.7	C	0.28	15.8	C	R	0.34	30.1	C	
		Eastbound								T	0.57	8.7	A	
										R	0.19	5.8	A	
		Westbound	L	0.17	11.2	B	0.18	11.3	B	L	0.34	7.1	A	
			T							T	0.51	8.0	A	
		Int.		Unsignalized			Unsignalized					10.9	B	
Old Saw Mill River Road @ Saw Mill River Parkway SB Off Ramp	21	Eastbound	LT	1.04	70.0	E	1.06	76.8 +	E	LT	1.02	65.9	E	Signal Retiming: Shift 1 second of green time from southbound phase to eastbound and westbound phase. NYSDOT will determine if retiming is necessary after construction of the UV Facility begins.
		Westbound	TR	0.42	9.2	A	0.47	9.6	A	TR	0.47	9.1	A	
		Southbound	L	0.29	23.1	C	0.29	23.1	C	L	0.30	24.0	C	
			LR	0.21	22.6	C	0.21	22.6	C	LR	0.22	23.4	C	
		Int.			33.9	C		35.2	D			31.2	C	
Virginia Road @ Bronx River Parkway	31	Eastbound	LT	1.16	139.6	F	1.16	142.8 +	F	LT	1.12	125.4	F	Signal Retiming: Shift 1 second of green time from northbound and southbound phase to eastbound and westbound phase. The Westchester County DPW will determine if retiming is necessary.
			R	0.39	34.6	C	0.39	34.6	C	R	0.38	33.8	C	
		Westbound	LTR	1.26	185.8	F	1.27	189.6 +	F	LTR	1.17	146.4	F	
		Northbound	L	0.06	10.9	B	0.06	10.9	B	L	0.06	11.4	B	
			TR	0.62	25.3	C	0.62	25.3	C	TR	0.63	26.2	C	
		Southbound	L	0.13	11.7	B	0.13	11.7	B	L	0.13	12.2	B	
			TR	0.59	24.7	C	0.59	24.7	C	TR	0.60	25.5	C	
		Int.			61.7	E		62.7	E			55.3	E	
Grasslands Road (Route 100) @ Virginia Road	32	Southbound	LT	0.36	10.3	B	0.37	10.4	B	LT	0.37	10.4	B	MPT Plan is likely; NYSDOT is planning to signalize this intersection.
		Westbound	LR	1.23	155.8	F	1.25	161.1 +	F	L	0.63	58.0	F	
		Int.		Unsignalized			Unsignalized			R	0.61	19.6	C	
Grasslands Road (Route 100) @ Legion Drive	33	Southbound	L	1.27	210.8	F	1.28	217.2 +	F	L	0.66	27.1	C	MPT Plan is likely; NYSDOT is planning to signalize this intersection.
			R	0.47	19.7	C	0.47	19.7	C	R	0.73	31.4	C	
		Eastbound	LT	0.24	10.7	B	0.24	10.7	B	LT	0.86	18.7	B	
		Westbound								T	0.51	6.3	A	
										R	0.18	0.1	A	
		Int.		Unsignalized			Unsignalized					15.1	B	

Notes:

L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates significant impacts.

(1) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

All of the mitigation measures suggested below would serve to eliminate or reduce the predicted temporary adverse construction impacts of the proposed project. If the mitigation identified is not applied, the predicted temporary adverse construction traffic impacts identified would remain unmitigated. In the absence of implementing the mitigation measures proposed below, NYCDEP would consider other traffic management techniques, if approved by the governing roadway entity, to offset these temporary adverse impacts, and ensure the smooth and safe operation of traffic.

Saw Mill River Road (Route 9A) and Tarrytown/White Plains Road (Route 119)

During the AM peak hour, the eastbound left-turn movement would deteriorate from LOS E with 66.8 seconds of delay to LOS F with 83.9 seconds of delay. The transfer of 7 seconds of green time from the east-west signal phase to the eastbound, leading signal phase would fully mitigate this location. As a result of this mitigation, the eastbound left-turn movement would improve compared to FNB conditions, to LOS E with 64.8 seconds of delay. All other approaches would continue to operate at LOS D or better.

NYSDOT would determine if retiming is necessary after construction of the UV Facility begins.

Saw Mill River Road (Route 9A) and Ramada Inn/Broadway Plaza

During the AM peak hour, the eastbound through movement would continue to operate at LOS E with a 5.2-second increase in delay. The westbound left/through movement would deteriorate from LOS D with 33.1 seconds of delay to LOS E with 38.9 seconds of delay. The installation of a traffic signal would fully mitigate this location such that the impacted movements would improve to LOS C. All of the other traffic movements at this location would operate at LOS C or better.

During the PM peak hour, the eastbound left-turn would deteriorate from LOS E (48.4 seconds of delay) to LOS F (56.4 seconds of delay); the eastbound through movement would continue to operate at LOS F with a 14.9 second increase in delay, and the westbound left/through movement would continue to operate at LOS F with an 8.5-second increase in delay. As recommended for the AM peak hour, the installation of a traffic signal would fully mitigate this location during the PM peak hour such that all movements would operate at LOS C or better.

The predicted temporary adverse impact at this intersection is largely due to estimated peak construction worker trips. While an MPT solution may be more suitable at this location, compared to the installation of a signal due to the short-term nature of these peak construction activities, NYCDEP would propose a traffic signal to be installed at this location before peak construction worker activities occur in 2008. NYCDEP would submit the proposed traffic signal plan to the appropriate agency for approval. The approving agency may determine that an MPT is more suited for this location.

Saw Mill River Road (Route 9A) and Grasslands Road (Route 100C)

The northbound left-turn movement would continue to operate at LOS F with an increase in delay of 35.9 and 57.3 seconds During the AM and PM peak hours, respectively. The installation of a traffic signal would fully mitigate this location such that the impacted movements would improve to LOS C. All of the other traffic movements at this location would operate at LOS C or better in both the AM and PM peak hours.

The predicted temporary adverse impact at this intersection is largely due to estimated peak construction worker trips. While an MPT solution may be more suitable at this location, compared to the installation of a signal due to the short-term nature of these peak construction activities, NYCDEP would propose a traffic signal to be installed at this location before peak construction worker activities occur in 2008. NYCDEP would submit the proposed traffic signal plan to the appropriate agency for approval. The approving agency may determine that an MPT is more suited for this location.

Grasslands Road (Route 100C) and Sprain Brook Parkway Northbound Ramp

During the AM peak hour, the northbound left/through movement would deteriorate from LOS E with 68.7 seconds of delay to LOS F with 172.3 seconds of delay. A signal timing adjustment that transfers 11 seconds of green time from the east-west phase to the northbound phase would fully mitigate this location. As a result of this mitigation, the northbound left-turn and through movement would improve compared to FNB conditions, to LOS E with 64.4 seconds of delay and all of the other movements at this location would operate at LOS C or better. NYSDOT would determine if retiming is necessary after construction of the UV Facility begins, and implement accordingly.

Old Saw Mill River Road and Saw Mill River Parkway Southbound Off-Ramp

The eastbound left/through movement would continue to operate at LOS E with a 6.8-second increase in delay during the PM peak hour. This impact could be fully mitigated with the transfer of 1 second of green time from the southbound signal phase to the east-west signal phase. As a result of this mitigation, all of the movements at this location would operate at their FNB LOS with only minor changes in vehicle delays.

Virginia Road and Bronx River Parkway

The eastbound left/through movement would continue to operate at LOS F with a 2.5-second increase in delay during the AM peak hour. The transfer of 1 second of green time from the north-south signal phase to the east-west phase would fully mitigate this location. As a result of this mitigation, the eastbound left/through movement would operate better than under FNB conditions, at LOS F with 113.7 seconds of delay. All of the other traffic movements would continue to operate at their FNB LOS with only modest changes in delay.

During the PM peak hour, the eastbound left/through movement and the westbound approach would both continue to operate at LOS F, with an increase in delay of 3.2 and 3.8 seconds, respectively. The transfer of 1 second of signal time from the north-south phase to the east-west phase would fully mitigate this location such that all movements and approaches would operate at their FNB levels or better.

Westchester County DPW would determine if retiming is necessary after construction of the UV Facility begins.

Grasslands Road (Route 100) and Virginia Road

The westbound approach would continue to operate at LOS F with a 5.3-second increase in delay during the PM peak hour. This location could be fully mitigated by restriping the westbound approach to accommodate two travel lanes, one dedicated to left-turns and one to right-turns. As a result of this mitigation, the westbound left-turn movement would improve compared to FNB conditions, to LOS F with 58.0 seconds of delay; the westbound right-turn would improve compared to FNB conditions, to LOS C with 19.6 seconds of delay; and there would be no change in the operation of the southbound approach.

Although an impact was not identified at this location during the AM peak hour, the proposed restriping to mitigate the PM peak hour would affect traffic operations. Therefore, an analysis was conducted to determine the effect of the restriping on AM peak hour operations. There would be no change in delay for the southbound approach, and operations for the westbound right-turn would improve. Although the westbound left-turn movement would experience an increase in delay, it would operate below mid-LOS D.

NYCDEP would recommend the installation of a signal at this intersection. However, based on discussions that occurred between the Draft and Final EIS among NYCDEP and NYSDOT, Westchester County DPW, and local representatives, an MPT solution is more likely at this location than the mitigation measures described above, because NYSDOT is planning to install a traffic signal at this intersection in the future, in coordination with planned NYSDOT design work for the corridor. NYCDEP and NYSDOT would coordinate the improvement of this intersection to ensure that adequate traffic flow would occur during the proposed project's impact period.

Grasslands Road (Route 100) and Legion Drive

The southbound left-turn movement would continue to operate at LOS F during the PM peak hour, but delays would increase from 210.8 seconds in FNB conditions to 217.2 seconds in the Build condition. This impact could be fully mitigated with the installation of a traffic signal at this location. As a result of this mitigation, all movements at this intersection would operate at LOS C or better.

Although an impact was not identified at this location during the AM peak hour, an analysis was conducted to determine the effects of a traffic signal to vehicle operations. A traffic signal at this location would improve conditions at this location to better than their FNB LOS.

NYCDEP would recommend the installation of a signal at this intersection. However, based on discussions that occurred between the Draft and Final EIS among NYCDEP and NYSDOT, Westchester County DPW, and local representatives, an MPT solution is more likely at this location than the mitigation measures described above, because NYSDOT is planning to install a traffic signal at this intersection in the future, in coordination with planned NYSDOT design work for the corridor. NYCDEP and NYSDOT would coordinate the improvement of this intersection to ensure that adequate traffic flow would occur during the proposed project's impact period.

6.1.3.2.2. With Croton Project at Eastview Site

As mentioned previously, for the analysis scenario with the Croton project under construction, four different construction worker parking Options have been considered, resulting in four distinct 2008 Construction with Croton conditions (Options A, B, C, and D). This is because with the Croton project and the proposed UV Facility under construction at the Eastview Site concurrently, there would not be enough space on-site for all of the workers for both projects to park, as most of the available land area would either be under construction, or in use as construction lay-down or staging areas. These construction worker parking Options have been selected for analysis purposes, as representative of the types of routings that worker vehicles would use for off-site parking. As described in the traffic analyses (Section 4.9, Traffic and Transportation) each of the four construction worker parking Options also included an additional assignment for shuttle buses that would transport the workers between the Eastview Site and the off-site parking areas.

It is important to note that these 2008 Construction (Options A through D) conditions reflect the maximum number of worker trips that would be anticipated at the peak of the concurrent construction of the proposed UV Facility and the Croton project. During other times of the 5-year construction period, the numbers of total workers traveling to and from the Eastview Site would be substantially lower than for peak conditions in 2008. During these times with fewer workers, the impacts would be less than those discussed below, and would be likely to occur at locations similar to conditions outlined for Option A, because the workers would be able to park right at the Eastview Site, and the routing of those trips would be very similar to the routing examined for Option A.

The four construction worker parking Options that were analyzed are described below:

- *Option A:* All of the construction workers for both the proposed UV Facility and the Croton project would park at the Landmark at Eastview office park (Landmark property), west of the project site, and would be shuttled to the site in buses or vans.

- *Option B:* All of the construction workers for both the proposed UV Facility and the Croton project would park at the Westchester Community College (WCC) Campus, east of the project site, and would be shuttled to the site in buses or vans.

- *Option C:* Parking for all of the construction workers for both the proposed UV Facility and the Croton project would be split evenly between the Landmark property and WCC, and would be shuttled to the site in buses or vans.

- *Option D:* All of the construction workers for the Croton project would park at the Landmark property, west of the project site, and all of the construction workers for the proposed UV Facility would park at the new Home Depot off Dana Road, just northwest of the project site. Rather than simply splitting the workers between the two sites, workers from the proposed UV Facility were assigned to the Home Depot site because the property owner indicated that they anticipated that the parking that would be available would be just enough to accommodate the projected number of UV Facility construction worker vehicles, but would not be sufficient to accommodate the projected number of Croton project worker vehicles. All workers for either project would be shuttled to the site from their respective parking areas in buses or vans.

With respect to proposed signal re-timings or re-phasings, many of the traffic signals at the intersections included in the analyses (and at locations where signal timing improvements are suggested under "mitigation") have "actuated" signals. Instead of computing the re-optimization of the signal via the actuation process (which is a typical analysis approach from for projects undertaking comparable studies in Westchester County), the NYCDEP applied a rigorous methodology that did not take benefit of the natural, re-optimizing of the signal in the "Future With the Project" scenarios, and only demonstrated such benefits in the mitigation section.

For locations where the installation of a new traffic signal has been recommended as a mitigation measure, if requested by the agency(s) with jurisdiction over the particular intersection roadways involved, formal Signal Warrant Studies would be performed and submitted for review by the appropriate agency; in most cases NYSDOT.

All of the mitigation measures suggested below for 2008 Construction Conditions (Options A through D) would serve to eliminate the predicted significant adverse construction period impacts of the project. If the mitigation identified is not applied, the predicted significant adverse construction-related traffic impacts identified would remain unmitigated. In the absence of implementing the mitigation measures proposed above, NYCDEP would consider other MPT techniques (e.g., the use of traffic control officers, traffic cones, variable message signs, etc.), if approved by the governing roadway entity, to offset these temporary adverse impacts, and ensure the smooth and safe operation of traffic.

Once construction of the proposed UV Facility has commenced, particularly for locations where signal retimings have been proposed, the various agencies responsible for maintaining traffic flow and roadways in the study area would conduct field inspections of the operations of the various intersections to determine if the proposed mitigation measures are actually warranted (particularly because traffic from anticipated No Build projects or background growth may be less than analyzed in this report).

2008 Construction Parking Option A

The traffic analyses compared the UV Facility's 2008 Construction (Option A) conditions with a 2008 FNB Option A condition (with the Croton project under construction, and their workers also parking at the Landmark property). Under these conditions in 2008, it was found that traffic from the construction of the proposed UV Facility would be anticipated to result in 26 potential significant adverse traffic impacts, 10 during the AM peak hour, and 16 during the PM peak hour. These impacts could be fully mitigated as described below; the resulting delays and LOS for these intersections, with the proposed mitigation applied, are compared to 2008 FNB Option A and 2008 Construction Parking Option A conditions (see Table 6.1-4).

The tables showing the results of applying the mitigation measures also indicate the specific measures recommended for each location. For many of the locations, more than one measure was identified that could be implemented that would reduce delays back to or below FNB conditions. The assessment presented here relies mostly on a combination of new traffic signals, lane striping changes, and traffic signal retiming or phasing changes as the recommended measures. However, some of the measures that were investigated were more extraordinary, involving additional lane construction or street widening, to give a complete range of potential measures that could eliminate impacts.

Once construction of the proposed UV Facility has commenced, the various agencies responsible for maintaining traffic flow and roadways in the study area would conduct field inspections of the operations of the various intersections to determine if the proposed mitigation measures are actually warranted (particularly because traffic from anticipated No Build projects or background growth may be less than analyzed in this report).

TABLE 6.1-4. PURE NO BUILD + CROTON VS. CAT DEL, PARKING AT THE LANDMARK LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS: 2008 NO BUILD, CONSTRUCTION (OPTION A) AND MITIGATION CONDITIONS

			AM Peak Hour											
				2008 No Build			2008 Cat Del Build			2008 Mitigation				
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (1)
Saw Mill River Road (Route 9A) @ Tarrytown-White Plains Road (Route 119)	15	Eastbound	L	1.05	92.2	F	1.12	113.5 +	F	L	1.03	84.9	F	Signal Retiming and change of phase plan: split the timing of southbound lagging phase to eastbound leading phase (3 secs) and northbound/southbound phase (5 secs). NYSDOT will determine if retiming is necessary after construction of the UV Facility begins.
			TR	0.38	14.5	B	0.38	14.5	B	TR	0.37	12.9	B	
		Westbound	L	0.17	22.3	C	0.17	22.3	C	L	0.17	22.3	C	
			TR	0.31	23.6	C	0.31	23.6	C	TR	0.31	23.6	C	
		Northbound	L	0.39	34.3	C	0.39	34.4	C	L	0.34	30.4	C	
			TR	0.67	42.7	D	0.72	44.9	D	TR	0.62	37.0	D	
		Southbound	L	0.27	35.4	D	0.29	36.6	D	L	0.37	38.2	D	
			T	0.43	35.1	D	0.44	35.3	D	T	0.52	40.0	D	
			R	0.23	22.1	C	0.24	22.2	C	R	0.24	22.2	C	
		Int.			37.4	D		42.3	D			35.8	D	
Saw Mill River Road (Route 9A) @ Ramada Inn/Broadway Plaza Entrance	17	Northbound	L	0.16	10.5	B	0.20	11.0	B	L	0.42	5.4	A	Propose to be signalized. MPT Plan may be more suitable.
										TR	0.34	4.4	A	
		Southbound	LT	0.01	9.0	A	0.01	9.1	A	LTR	0.39	4.7	A	
		Eastbound	L	0.02	43.3	E	0.03	54.3 +	F	L	0.01	20.9	C	
			T	0.03	51.8	F	0.03	66.0 +	F	T	0.01	20.9	C	
		Westbound	LT	0.14	48.3	E	0.19	65.7 +	F	Def	0.06	21.2	C	
			TR	0.01	10.9	B	0.01	11.2	B	TR	0.03	21.0	C	
		Int.			Unsignalized			Unsignalized				4.9	A	
Saw Mill River Road (Route 9A) @ Grasslands Road (Route 100C)	19A	Northbound	L	*	**	F	*	** +	F	L	0.60	34.7	C	Propose to be signalized. MPT Plan may be more suitable.
			R	0.22	17.2	C	0.22	17.9	C	R	0.22	28.9	C	
		Eastbound								T	0.73	12.2	B	
										R	0.22	6.0	A	
		Westbound	L	0.15	11.7	B	0.16	11.9	B	L	0.31	6.8	A	
										T	0.81	15.3	B	
		Int.			Unsignalized			Unsignalized				15.0	B	
Grasslands Road (Route 100C) @ Saw Mill River Road (Route 9A) NB Ramp	19B	Northbound	LT	0.60	73.7	F	*	** +	F	LTR	0.41	44.1	D	Propose to be signalized. MPT Plan may be more suitable.
			TR	0.07	14.3	B	0.07	14.7	B					
		Eastbound	L	0.29	12.9	B	0.37	16.1	C	L	0.83	33.7	C	
										T	0.68	12.9	B	
		Westbound								TR	1.01	42.8	D	
		Int.			Unsignalized			Unsignalized				32.4	C	
Grasslands Road (Route 100C) @ Sprain Brook Parkway SB Ramp	26	Eastbound	TR	0.28	7.6	A	0.29	7.6	A	TR	0.29	8.1	A	Signal Retiming: shift 1 second of green time from eastbound/westbound phase to southbound phase. NYSDOT will determine if retiming is necessary after construction of the UV Facility begins.
		Westbound	T	0.41	8.5	A	0.48	9.0	A	T	0.48	9.6	A	
		Southbound	L	0.55	34.0	C	0.55	34.0	C	L	0.52	32.8	C	
			R	0.62	36.3	D	0.82	48.4 +	D	R	0.79	44.4	D	
		Int.			14.5	B		16.8	B			16.5	B	

Notes:

L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates significant impacts.

" * " indicates a v/c ratio greater than 1.50; " ** " indicates a calculated delay greater than 240 seconds.

(1) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

TABLE 6.1-4. PURE NO BUILD + CROTON VS. CAT DEL, PARKING AT THE LANDMARK LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS: 2008 NO BUILD, CONSTRUCTION (OPTION A) AND MITIGATION CONDITIONS

			AM Peak Hour											
				2008 No Build			2008 Cat Del Build			2008 Mitigation				
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (1)
Grasslands Road (Route 100C) @	27	Eastbound	L	0.12	15.0	B	0.14	15.2	B	L	0.18	20.1	C	Signal Retiming: shift 8 seconds of green time from eastbound/westbound phase to northoubnd phase. NYSDOT will determine if retiming is necessary after construction of the UV Facility begins.
Sprain Brook Parkway NB Ramp	30		T	0.50	18.0	B	0.51	18.1	B	T	0.59	24.2	C	
		Westbound	TR	0.49	24.9	C	0.51	25.1	C	TR	0.62	32.3	C	
		Northbound	LT	1.39	216.3	F	*	** +	F	LT	1.38	208.9	F	
			R	1.02	74.8	E	1.02	74.8	E	R	0.86	36.5	D	
		Int.			90.2	F		132.9	F			89.6	F	
Virginia Road @	31	Eastbound	LT	1.12	129.4	F	1.13	130.6 +	F	LT	1.08	114.8	F	Signal Retiming: Shift 1 second of green time from northbound and southbound phase to eastbound and westbound phase. The Westchester County DPW will determine if retiming is necessary.
Bronx River Parkway			R	0.21	19.6	B	0.21	19.6	B	R	0.21	19.0	B	
		Westbound	LTR	0.40	34.7	C	0.40	34.7	C	LTR	0.38	33.7	C	
		Northbound	L	0.05	46.3	D	0.06	46.4	D	L	0.06	46.4	D	
			TR	0.26	20.1	C	0.26	20.1	C	TR	0.27	20.7	C	
		Southbound	L	1.10	141.5	F	1.10	141.5	F	L	1.10	141.5	F	
			T	0.70	27.3	C	0.70	27.3	C	T	0.71	28.3	C	
		Int.			54.3	D		54.5	D			52.4	D	
Grasslands Road (Route 100) @	32	Southbound	LT	0.23	8.4	A	0.23	8.4	A	LT	0.23	8.4	A	MPT Plan is likely; NYSDOT is planning to signalize this intersection.
Virginia Road		Westbound	LR	0.56	16.9	C	0.56	17.1	C	L	0.18	26.9	D	
		Int.		Unsignalized			Unsignalized			R	0.38	11.5	B	
Grasslands Road (Route 100) @	33	Southbound	L	0.43	30.6	D	0.43	31.0	D	L	0.32	21.1	C	MPT Plan is likely; NYSDOT is planning to signalize this intersection.
Legion Drive			R	0.20	12.3	B	0.21	12.4	B	R	0.45	22.2	C	
		Eastbound	LT	0.07	8.6	A	0.07	8.6	A	LT	0.51	6.4	A	
		Westbound								T	0.41	5.7	A	
										R	0.03	0.0	A	
		Int.		Unsignalized			Unsignalized					8.9	A	
Old Saw Mill River Road @	47	Northbound	LTR	0.16	18.7	C	0.21	19.7	C	LTR	0.50	38.8	D	Propose to be signalized. MPT Plan may be more suitable.
Landmark East Driveway		Southbound	LTR	0.96	**	F	*	** +	F	LTR	0.48	39.7	D	
		Eastbound	LTR	0.02	8.7	A	0.02	9.3	A	LTR	0.95	37.2	D	
		Westbound	LTR	0.34	12.7	B	0.55	16.1	C	LT	0.96	30.8	C	
										R	0.32	2.3	A	
		Int.		Unsignalized			Unsignalized					29.4	C	

Notes:

L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates significant impacts.

" * " indicates a v/c ratio greater than 1.50; " ** " indicates a calculated delay greater than 240 seconds.

(1) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

TABLE 6.1-4. PURE NO BUILD + CROTON VS. CAT DEL, PARKING AT THE LANDMARK LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS: 2008 NO BUILD, CONSTRUCTION (OPTION A) AND MITIGATION CONDITIONS

			PM Peak Hour											
				2008 No Build			2008 Cat Del Build			2008 Mitigation				
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (1)
Saw Mill River Road (Route 9A) @ Tarrytown-White Plains Road (Route 119)	15	Eastbound	L	1.01	79.6	E	1.02	83.3 +	F	L	0.98	70.5	E	Signal Retiming: shift 1 second of green time from southbound lagging phase to eastbound leading phase. NYSDOT will determine if retiming is necessary after construction of the UV Facility begins.
			TR	0.46	20.2	C	0.46	20.2	C	TR	0.45	19.5	B	
		Westbound	L	0.42	34.4	C	0.42	34.4	C	L	0.42	34.4	C	
			TR	0.89	49.1	D	0.89	49.7	D	TR	0.89	49.7	D	
		Northbound	L	0.32	25.5	C	0.34	25.8	C	L	0.34	25.9	C	
			TR	0.83	41.6	D	0.83	42.1	D	TR	0.83	42.1	D	
		Southbound	L	0.56	35.8	D	0.58	36.5	D	L	0.60	38.3	D	
			T	0.31	23.4	C	0.34	23.8	C	T	0.35	24.5	C	
			R	0.41	11.2	B	0.43	11.3	B	R	0.43	11.3	B	
		Int.			35.3	D		35.9	D			34.5	C	
Saw Mill River Road (Route 9A) @ Ramada Inn/Broadway Plaza Entrance	17	Northbound	L	0.16	10.4	B	0.16	10.5	B	L	0.33	4.8	A	Propose to be signalized. MPT Plan may be more suitable.
										TR	0.39	4.6	A	
		Southbound	LT	0.01	9.5	A	0.01	9.6	A	LTR	0.41	4.7	A	
		Eastbound	L	0.01	51.8	F	0.01	53.6	F	L	0.00	20.9	C	
			T	0.08	84.9	F	0.09	92.7 +	F	T	0.02	20.9	C	
		Westbound	LT	0.12	60.3	F	0.13	63.9 +	F	LTR	0.04	21.0	C	
			TR	0.03	17.5	C	0.03	18.0	C					
		Int.			Unsignalized			Unsignalized				4.9	A	
Saw Mill River Road (Route 9A) @ Grasslands Road (Route 100C)	19A	Northbound	L	*	**	F	*	** +	F	L	0.68	39.4	D	Propose to be signalized. MPT Plan may be more suitable.
			R	0.48	29.8	D	0.68	57.2 +	F	R	0.66	38.8	D	
		Eastbound								T	1.03	41.3	D	
										R	0.35	3.3	A	
		Westbound	L	0.28	16.5	C	0.39	23.5	C	L	0.60	9.2	A	
										T	0.45	3.7	A	
		Int.			Unsignalized			Unsignalized				25.9	C	
Grasslands Road (Route 100C) @ Saw Mill River Road (Route 9A) NB Ramp	19B	Northbound	LT	0.10	39.6	E	0.16	58.5 +	F	LTR	0.20	21.8	C	Propose to be signalized. MPT Plan may be more suitable.
			TR	0.26	21.2	C	0.35	29.6	D					
		Eastbound	L	0.24	11.2	B	0.29	11.8	B	L	0.72	14.9	B	
										T	0.97	28.9	C	
		Westbound								TR	0.78	10.7	B	
		Int.			Unsignalized			Unsignalized				20.5	C	
Old Saw Mill River Road @ Saw Mill River Parkway SB Off Ramp	21	Eastbound	LT	1.07	79.8	E	1.09	86.2 +	F	LT	1.05	75.0	E	Signal Retiming: shift 1 second of green time from southbound phase to eastbound/westbound phase. NYSDOT will determine if retiming is necessary after construction of the UV Facility begins.
		Westbound	TR	0.49	9.8	A	0.54	10.3	B	TR	0.53	9.7	A	
		Southbound	L	0.29	23.1	C	0.29	23.1	C	L	0.30	24.0	C	
			LR	0.21	22.6	C	0.21	22.6	C	LR	0.22	23.4	C	
		Int.			35.8	D		37.1	D			33.1	C	
Grasslands Road (Route 100C) @ Clearbrook Road/Walker Road	24	Eastbound	L	0.04	9.2	A	0.04	9.3	A	L	0.02	5.4	A	Signal Retiming: shift 9 seconds of green time from northbound/southbound phase to eastbound/westbound phase. NYSDOT will determine if retiming is necessary after construction of the UV Facility begins.
			TR	1.03	55.4	E	1.23	133.1 +	F	TR	1.03	48.6	D	
		Westbound	L	*	**	F	*	**	F	L	*	**	F	
			TR	0.72	17.2	B	0.73	17.5	B	TR	0.61	9.7	A	
		Northbound	LT	0.19	19.9	B	0.19	19.9	B	LT	0.32	27.5	C	
		Southbound	LT	0.23	20.3	C	0.23	20.3	C	LT	0.33	27.6	C	
			R	0.05	18.8	B	0.08	19.0	B	R	0.11	25.7	C	
		Int.			108.6	F		144.3	F			97.5	F	

Notes:

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(1) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

TABLE 6.1-4. PURE NO BUILD + CROTON VS. CAT DEL, PARKING AT THE LANDMARK LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS: 2008 NO BUILD, CONSTRUCTION (OPTION A) AND MITIGATION CONDITIONS

			PM Peak Hour											
			2008 No Build				2008 Cat Del Build				2008 Mitigation				
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS		Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (1)
Grasslands Road (Route 100C) @	27	Eastbound	L	0.87	41.3	D	1.11	104.4 +	F		L	0.85	42.2	D	Signal Retiming and change of phase plan: switch eastbound leading phase to lagging phase and shift 3 seconds of green time from northbound phase to eastbound/westbound phase. NYSDOT will determine if retiming is necessary after construction of the UV Facility begins.
Sprain Brook Parkway NB Ramp	30		T	0.34	9.0	A	0.34	9.1	A		T	0.32	7.6	A	
		Westbound	TR	1.07	69.5	E	1.07	71.4	E		TR	1.00	49.4	D	
		Northbound	LT	0.71	30.2	C	0.73	30.8	C		LT	0.84	41.5	D	
			R	0.35	23.1	C	0.35	23.1	C		R	0.41	25.7	C	
		Int.			44.7	D		53.2	D				36.4	D	
Virginia Road @	31	Eastbound	LT	1.16	142.8	F	1.17	144.9 +	F		LT	1.13	127.3	F	Signal Retiming: Shift 1 second of green time from northbound and southbound phase to eastbound and westbound phase. The Westchester County DPW will determine if retiming is necessary.
Bronx River Parkway			R	0.39	34.6	C	0.40	34.7	C		R	0.39	33.8	C	
		Westbound	LTR	1.27	189.6	F	1.28	193.5 +	F		LTR	1.17	149.5	F	
		Northbound	L	0.06	10.9	B	0.06	10.9	B		L	0.06	11.4	B	
			TR	0.62	25.3	C	0.62	25.3	C		TR	0.63	26.2	C	
		Southbound	L	0.13	11.7	B	0.13	11.7	B		L	0.13	12.2	B	
			T	0.59	24.7	C	0.59	24.7	C		T	0.60	25.5	C	
		Int.			62.7	E		63.5	E				56.0	E	
Grasslands Road (Route 100) @	32	Southbound	LT	0.37	10.4	B	0.37	10.4	B		LT	0.37	10.4	B	MPT Plan is likely; NYSDOT is planning to signalize this intersection.
Virginia Road		Westbound	LR	1.25	162.4	F	1.26	166.5 +	F		L	0.65	60.1	F	
		Int.		Unsignalized			Unsignalized				R	0.61	19.6	C	
Grasslands Road (Route 100) @	33	Southbound	L	1.29	220.5	F	1.31	227.1 +	F		L	0.66	27.1	C	MPT Plan is likely; NYSDOT is planning to signalize this intersection.
Legion Drive			R	0.47	19.7	C	0.47	19.7	C		R	0.73	31.4	C	
		Eastbound	LT	0.24	10.7	B	0.24	10.7	B		LT	0.88	19.8	B	
		Westbound									T	0.51	6.3	A	
											R	0.18	0.1	A	
		Int.		Unsignalized			Unsignalized						15.5	B	
Old Saw Mill River Road @	46	Eastbound	LTR	0.58	6.0	A	0.58	6.1	A		LTR	0.61	7.5	A	Shift 2 seconds of green time from EB/WB phase to NB/SB phase. NYSDOT will determine if retiming is necessary after construction of the UV Facility begins.
Landmark West Driveway		Westbound	LTR	0.43	4.9	A	0.43	4.9	A		LTR	0.45	5.9	A	
		Northbound	LTR	0.59	27.0	C	0.92	63.3 +	E		LTR	0.77	35.2	D	
		Southbound	LTR	0.03	21.0	C	0.03	21.0	C		LTR	0.02	19.3	B	
		Int.			7.5	A		13.2	B				10.6	B	
Old Saw Mill River Road @	47	Northbound	LTR	0.69	33.7	D	1.08	103.2 +	F		LTR	0.86	39.4	D	Propose to be signalized. MPT Plan may be more suitable.
Landmark East Driveway		Southbound	LTR	*	**	F	*	** +	F		LTR	0.93	43.3	D	
		Eastbound	LTR	0.01	8.7	A	0.01	8.8	A		LTR	0.86	27.4	C	
		Westbound	LTR	0.04	9.3	A	0.06	9.4	A		LT	0.95	43.8	D	
											R	0.06	11.9	B	
		Int.		Unsignalized			Unsignalized						36.9	D	

Notes:

L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates significant impacts.

" * " indicates a v/c ratio greater than 1.50; " ** " indicates a calculated delay greater than 240 seconds.

(1) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

Saw Mill River Road (Route 9A) and Tarrytown/White Plains Road (Route 119)

The eastbound left-turn movement would continue to operate at LOS F with a 21.3-second increase in delay during the AM peak hour. This impact could be fully mitigated with a revised signal timing and phasing plan. The southbound lagging phase would be reduced by 8 seconds of green time. Three seconds of this time would be transferred to the eastbound leading phase, and five seconds would be transferred to the north-south phase. As a result of this mitigation, the eastbound left-turn would improve compared to FNB conditions, to a LOS F with 84.9 seconds of delay. All of the other movements at this location would operate at their FNB LOS with only minor changes in delay.

During the PM peak hour, the eastbound left-turn movement would deteriorate from LOS E to LOS F with a 3.7-second increase in delay. This impact could be fully mitigated by transferring 1 second of green time from the southbound lagging phase to the eastbound leading phase. As a result of this mitigation, the eastbound left-turn would improve compared to FNB conditions, to LOS E with 70.5 seconds of delay. All of the other movements at this location would operate at their FNB LOS with only minor changes in delay.

NYSDOT would determine if retiming is necessary after construction of the UV Facility begins.

Saw Mill River Road (Route 9A) and Ramada Inn/Broadway Plaza

During the AM peak hour, the eastbound left-turn movement would deteriorate from LOS E with 43.3 seconds of delay to LOS F with 54.3 seconds of delay; the eastbound through movement would continue to operate at LOS F with a 14.2-second increase in delay; and the westbound left/through movement would deteriorate from LOS E to LOS F with an increase in delay of 17.4-seconds. This location could be fully mitigated with the installation of a traffic signal, which would result in a LOS C or better for all of the vehicle movements.

During the PM peak hour, the eastbound through movement and the westbound left/through movement would continue to operate at LOS F with a 7.8- and 3.6-second increase in delay, respectively. As with the AM peak hour, this location would be fully mitigated with the installation of a traffic signal. This mitigation would result in a LOS C or better for all of the vehicle movements at this location.

The predicted significant adverse impact at this intersection is largely due to estimated peak construction worker trips. While an MPT solution may be more suitable at this location, compared to the installation of a signal due to the short-term nature of these peak construction activities, if this scenario occurs, NYCDEP would propose a traffic signal to be installed at this location before peak construction worker activities occur in 2008. NYCDEP would submit the proposed traffic signal plan to the appropriate agency for approval. The approving agency may determine that an MPT is more suited for this location.

Saw Mill River Road (Route 9A) and Grasslands Road (Route 100C)

During the AM peak hour, the northbound left-turn movement would continue to operate at LOS F, with delays increased to well beyond 240 seconds. During the PM peak hour, the northbound left-turn movement would also continue to operate at LOS F, with delays increased to well beyond 240 seconds, and the northbound right-turn movement would deteriorate from LOS D to LOS F with a 27.4-second increase in delay. The installation of a traffic signal at this location could fully mitigate both the AM and PM peak hour impacts such that all of the movements would operate at LOS D or better.

The predicted significant adverse impact at this intersection is largely due to estimated peak construction worker trips. While an MPT solution may be more suitable at this location, compared to the installation of a signal due to the short-term nature of these peak construction activities, if this scenario occurs, NYCDEP would propose a traffic signal to be installed at this location before peak construction worker activities occur in 2008. NYCDEP would submit the proposed traffic signal plan to the appropriate agency for approval. The approving agency may determine that an MPT is more suited for this location.

Grasslands Road (Route 100C) and Saw Mill River Road (Route 9A) Northbound Ramp

The northbound left/through movement would continue to operate at LOS F, with delays increased to well beyond 240 seconds during the AM peak hour and would deteriorate from LOS E to LOS F with an 18.9-second increase in delay during the PM peak hour. This location could be fully mitigated with the installation of a traffic signal such that all of the movements would operate at LOS D or better during AM and PM peak hours.

The predicted significant adverse impact at this intersection is largely due to estimated peak construction worker trips. While an MPT solution may be more suitable at this location, compared to the installation of a signal due to the short-term nature of these peak construction activities, if this scenario occurs, NYCDEP would propose a traffic signal to be installed at this location before peak construction worker activities occur in 2008. NYCDEP would submit the proposed traffic signal plan to the appropriate agency for approval. The approving agency may determine that an MPT is more suited for this location.

Old Saw Mill River Road and Saw Mill River Parkway Southbound Off-Ramp

The eastbound left/through movement at this location would deteriorate from LOS E to LOS F with a 6.4-second increase in delay during the PM peak hour. This impact would be fully mitigated with the transfer of 1 second of green time from the southbound signal phase to the east-west phase. As a result of this mitigation, the eastbound left/through movement would improve compared to FNB conditions, to a LOS E with 75.0 seconds of delay, and all of the other movements at this location would operate at LOS C or better.

NYSDOT would determine if retiming is necessary after construction of the UV Facility begins.

Grasslands Road (Route 100C) and Clearbrook Road/Walker Road

The eastbound through/right movement would deteriorate from LOS E with 55.4 seconds of delay to LOS F with 133.1 seconds of delay during the PM peak hour. This impact could be mitigated by transferring 9 seconds of green time from the north-south signal phase to the east-west phase. As a result of this mitigation, the eastbound through/right movement would improve compared to FNB conditions, to LOS D with 48.6 seconds of delay. Although the westbound left-turn movement would continue to operate at LOS F (with delays over 240 seconds), this signal timing adjustment would improve its delay as compared to FNB conditions; all of the other movements at this location would operate at LOS C or better.

NYSDOT would determine if retiming is necessary after construction of the UV Facility begins.

Grasslands Road (Route 100C) and Sprain Brook Parkway Southbound Ramp

The southbound right-turn movement would continue to operate at LOS D with a 12.1-second increase in delay during the AM peak hour. This impact could be mitigated by transferring one second of green time from the east-west signal phase to the southbound signal phase, which would improve the southbound right-turn movement to LOS D with 44.4 seconds of delay. This mitigation would not affect the LOS of the other movements at this location.

NYSDOT would determine if retiming is necessary after construction of the UV Facility begins.

Grasslands Road (Route 100C) and Sprain Brook Parkway Northbound Ramp

During the AM peak hour, the northbound left/through movement would continue to operate at LOS F, with delays increased to well beyond 240 seconds. This location would be mitigated by transferring 8 seconds of green time from the east-west signal phase to the northbound signal phase. As a result of this mitigation, the northbound left/through movement would improve compared to FNB conditions, to LOS F with 208.9 seconds of delay. All of the other movements at this location would operate at LOS D or better.

The eastbound left-turn movement would deteriorate from LOS D with 41.3 seconds of delay to LOS F with 104.4 seconds of delay during the PM peak hour. This impact could be fully mitigated with a revised signal phasing and timing plan. The eastbound leading phase would be made a lagging phase, and 3 seconds of green time would be shifted from the northbound phase to the east-west phase. As a result of this mitigation, all of the intersection movements would operate at LOS D or better.

NYSDOT would determine if retiming is necessary after construction of the UV Facility begins.

Virginia Road and Bronx River Parkway

The eastbound left/through movement would continue to operate at LOS F with a 1.2-second and 2.1-second increase in delay during the AM and PM peak hours, respectively. During

the PM peak hour, the westbound approach would also continue to operate at LOS F with a 3.9 second increase in delay. During both peak hours, this location could be fully mitigated with the transfer of 1 second of green time from the north-south signal phase to the east-west phase. As a result of this mitigation, all of the vehicle movements would operate at their FNB LOS with only minor changes in delay.

Westchester County DPW would determine if retiming is necessary after construction of the UV Facility begins.

Grasslands Road (Route 100) and Virginia Road

During the PM peak hour, the westbound approach would continue to operate at LOS F with a 4.1-second increase in delay. This impact could be mitigated by restriping the westbound approach to accommodate an additional travel lane. As a result of this mitigation, the westbound left-turn movement would improve compared to FNB conditions, to LOS F with 60.1 seconds of delay and the westbound right-turn movement would improve compared to FNB conditions, to LOS C with 19.6 seconds of delay.

An analysis was conducted to determine the impact of this improvement to operations at this location during the AM peak hour. All of the vehicle movements at this location would operate at LOS D or better.

NYCDEP would recommend the installation of a signal at this intersection. However, based on discussions that occurred between the Draft and Final EIS among NYCDEP and NYSDOT, Westchester County DPW, and local representatives, an MPT solution is more likely at this location than the mitigation measures described above, because NYSDOT is planning to install a traffic signal at this intersection in the future, in coordination with planned NYSDOT design work for the corridor. NYCDEP and NYSDOT would coordinate the improvement of this intersection to ensure that adequate traffic flow would occur during the proposed project's impact period.

Grasslands Road (Route 100) and Legion Drive

The southbound left-turn movement would deteriorate from LOS F with 220.5 seconds of delay to LOS F with 227.1 seconds of delay during the PM peak hour. This location could be fully mitigated with the installation of a traffic signal. As a result of this mitigation, all of the vehicle movements would operate at LOS C or better during the PM peak hour.

Although no impacts were identified at this location during the AM peak hour, an analysis was conducted to test the impact of a traffic signal to vehicle operations. A signal at this location would improve operations for some movements but would increase delays for others. However, all of the vehicle movements would operate at LOS C or better during the AM peak hour.

NYCDEP would recommend the installation of a signal at this intersection. However, based on discussions that occurred between the Draft and Final EIS among NYCDEP and NYSDOT, Westchester County DPW, and local representatives, an MPT solution is more likely at this

location than the mitigation measures described above, because NYSDOT is planning to install a traffic signal at this intersection in the future, in coordination with planned NYSDOT design work for the corridor. NYCDEP and NYSDOT would coordinate the improvement of this intersection to ensure that adequate traffic flow would occur during the proposed project's impact period.

Old Saw Mill River Road and the Landmark West Driveway

The northbound approach would deteriorate from LOS C with 27.0 seconds of delay, to LOS F with 63.3 seconds of delay during the PM peak hour. This impact could be fully mitigated by shifting 2 seconds of green time from the east-west phase to the north-south phase. As a result of this mitigation, the northbound approach would operate below mid-LOS D, with 35.2 seconds of delay, and all of the other vehicle movements would operate at LOS B or better during the PM peak hour compared to FNB conditions.

NYSDOT would determine if retiming is necessary after construction of the UV Facility begins.

Old Saw Mill River Road and the Landmark East Driveway

During the AM and PM peak hours, the southbound approach would continue operating at LOS F, with delays increased to well beyond 240 seconds. During the PM peak hour, the northbound approach would deteriorate from LOS D with 33.7 seconds of delay, to LOS F with 103.2 seconds of delay. These impacts could be fully mitigated with a combination of measures, including shoulder work and lane restripings, in concert with the installation of a new traffic signal, as outlined in Table 6.1-4. As a result of this mitigation, all approaches would operate below mid-LOS D or better, compared to FNB conditions, with maximum delays at any given approach of 39.7 seconds during the AM peak hour, and 43.3 seconds during the PM peak hour.

The predicted significant adverse impact at this intersection is largely due to estimated peak construction worker trips. While an MPT solution may be more suitable at this location, compared to the installation of a signal due to the short-term nature of these peak construction activities, if this scenario occurs, NYCDEP would propose a traffic signal to be installed at this location before peak construction worker activities occur in 2008. NYCDEP would submit this solution to the approval agency for approval. If the approval agency (NYSDOT) rejects this measure, the significant adverse impact would remain unmitigated

All of the mitigation measures suggested above would serve to eliminate construction-related impacts of the proposed project. If the mitigation identified is not applied, the predicted significant adverse construction traffic impacts identified would remain unmitigated. In the absence of implementing the mitigation measures recommended above, NYCDEP would consider other MPT techniques (e.g., the use of traffic control officers, traffic cones, variable message signs, etc.), if approved by the governing roadway entity, to offset these significant adverse impacts, and ensure the smooth and safe operation of traffic.

2008 Construction Parking Option B

The traffic analyses compared the UV Facility's 2008 Construction (Option B) conditions with a 2008 FNB Option B condition (with the Croton project under construction, and their workers also parking at the WCC Campus). Under these conditions in 2008, it was found that traffic from the construction of the proposed UV Facility would be anticipated to result in 33 potential significant adverse traffic impacts, 16 during the AM peak hour, and 17 during the PM peak hour. These impacts could be fully mitigated as described below; the resulting delays and LOS for these intersections, with the proposed mitigation applied, are compared to 2008 FNB Option B and 2008 Construction Parking Option B conditions (see Table 6.1-5).

The tables showing the results of applying the mitigation measures also indicate the specific measures recommended for each location. For many of the locations, more than one measure was identified that could be implemented that would reduce delays back to or below FNB conditions. The assessment presented here relies mostly on a combination of new traffic signals, lane striping changes, and traffic signal retiming or phasing changes as the recommended measures. However, some of the measures that were investigated were more extraordinary, involving additional lane construction or street widening, to give a complete range of potential measures that could eliminate impacts.

Grasslands Road (Route 100C) and Bradhurst Avenue (Route 100)

During the AM peak hour, the eastbound left-turn movement would deteriorate from LOS D with 47.6 seconds of delay to LOS E with 64.3 seconds of delay, and the eastbound through movement would deteriorate from LOS F with delays increased to well beyond 240 seconds. The westbound through/right movement would deteriorate from LOS F with delays increased to well beyond 240 seconds during the PM peak hour. A combination of measures is required to fully mitigate both the AM and PM peak hour impacts at this location. The westbound approach would be restriped to accommodate two travel lanes (shared left-turn and through and shared through and right-turn). During the AM peak hour, a new signal timing and phasing plan would also be implemented as shown in Table 6.1-5.

During the AM peak hour, these mitigation measures would result in a decrease in delay on the eastbound left-turn movement of 47.0 seconds and the eastbound through movement of over 200 seconds as compared to FNB conditions, and all of the other movements would operate at LOS D or better. During the PM peak hour, the addition of a westbound lane would significantly improve operations for the westbound through/right movement. Although delay for the westbound left-turn movement would increase, the overall delay for the westbound approach would improve from LOS F with delays over 240 seconds to a mitigated LOS F with delays of 218.0 seconds. All of the other movements at this location would operate at or near their FNB LOS without adverse increases in delay.

TABLE 6.1-5. PURE NO BUILD + CROTON VS. CAT DEL ALONE LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS: 2008 NO BUILD, CONSTRUCTION (OPTION B) AND MITIGATION CONDITIONS

			AM Peak Hour											
				2008 No Build			2008 Cat Del Build			2008 Mitigation				
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (1)
Grasslands Road (Route 100C) @	6	Eastbound	L	0.81	47.6	D	0.90	64.3 +	E	L	0.54	17.3	B	Add protected left-turn phase, signal retiming, and westbound lane restriping from exclusive left-turn lane to shared left-turn through lane.
Bradhurst Avenue (Route 100)			T	*	**	F	*	** +	F	T	*	**	F	
			R	0.36	16.4	B	0.36	16.5	B	R	0.37	14.6	B	
		Westbound	L	0.68	56.6	E	0.68	56.6	E	LTR	0.42	15.0	B	
			TR	0.50	26.9	C	0.55	27.9	C					
		Northbound	L	0.24	23.5	C	0.25	23.6	C	L	0.39	29.2	C	
			TR	0.35	26.1	C	0.36	26.2	C	TR	0.64	39.0	D	
		Southbound	L	0.51	40.5	D	0.52	40.8	D	L	0.42	30.6	C	
			TR	0.68	49.7	D	0.68	49.7	D	TR	0.65	39.7	D	
		Intersection			175.7	F		**	F			179.4	F	
Saw Mill River Road (Route 9A) @	15	Eastbound	L	1.05	92.2	F	1.12	113.5 +	F	L	1.04	90.5	F	Shift 7 seconds of green time from EB/WB phase to EB/SB-R phase. NYSDOT will determine if retiming is necessary after construction of the UV Facility begins.
Tarrytown-White Plains Road (Route 119)			TR	0.38	14.5	B	0.38	14.5	B	TR	0.38	14.5	B	
		Westbound	L	0.17	22.3	C	0.17	22.3	C	L	0.20	27.1	C	
			TR	0.31	23.6	C	0.31	23.6	C	TR	0.36	28.6	C	
		Northbound	L	0.39	34.3	C	0.39	34.4	C	L	0.39	34.4	C	
			TR	0.67	42.7	D	0.72	44.9	D	TR	0.72	44.9	D	
		Southbound	L	0.27	35.4	D	0.29	36.6	D	L	0.29	36.6	D	
			T	0.43	35.1	D	0.44	35.3	D	T	0.44	35.3	D	
			R	0.23	22.1	C	0.24	22.2	C	R	0.21	17.9	B	
		Intersection			37.4	D		42.3	D			38.3	D	
Saw Mill River Road (Route 9A) @	17	Northbound	L	0.09	10.1	B	0.10	10.3	B	L	0.20	4.1	A	Propose to be signalized. MPT Plan may be more suitable.
Ramada Inn/Broadway Plaza Entrance										TR	0.38	4.6	A	
		Southbound	LT	0.01	9.1	A	0.02	9.4	A	LTR	0.40	4.7	A	
		Eastbound	L	0.02	36.9	E	0.02	41.0 +	E	L	0.01	20.9	C	
			T	0.02	45.0	E	0.03	52.4 +	F	T	0.01	20.9	C	
		Westbound	LT	0.13	41.7	E	0.15	50.5 +	F	Def	0.06	21.2	C	
			TR	0.01	11.1	B	0.01	11.6	B	TR	0.03	21.0	C	
		Intersection			Unsignalized			Unsignalized				4.8	A	
Saw Mill River Road (Route 9A) @	19A	Northbound	L	0.97	142.0	F	1.10	195.5 +	F	L	0.36	30.3	C	Propose to be signalized. MPT Plan may be more suitable.
Grasslands Road (Route 100C)			R	0.23	18.6	C	0.26	20.4	C	R	0.22	28.9	C	
		Eastbound								T	0.82	15.9	B	
										R	0.21	5.9	A	
		Westbound	L	0.17	12.2	B	0.19	12.8	B	L	0.38	7.5	A	
										T	0.25	6.1	A	
		Intersection			Unsignalized			Unsignalized				14.1	B	
Grasslands Road (Route 100C) @	19B	Northbound	LT	0.07	28.5	D	0.07	30.5	D	LTR	0.42	21.5	C	Propose to be signalized. MPT Plan may be more suitable.
Saw Mill River Road (Route 9A) NB Ramp			TR	0.38	20.1	C	0.63	32.1 +	D					
		Eastbound	L	0.21	10.1	B	0.21	10.2	B	L	0.53	7.5	A	
										T	0.82	13.5	B	
		Westbound								TR	0.58	7.1	A	
		Intersection			Unsignalized			Unsignalized				11.8	B	
Grasslands Road (Route 100C) @	24	Eastbound	L	0.01	2.6	A	0.01	2.6	A	L	0.01	2.9	A	Shift 1 second of green time from EB/WB phase to NB/SB phase. NYSDOT will determine if retiming is necessary after construction of the UV Facility begins.
Clearbrook Road/Walker Road			TR	0.51	4.5	A	0.61	5.5	A	TR	0.62	6.0	A	
		Westbound	L	0.52	5.4	A	0.68	11.1	B	L	0.71	13.6	B	
			TR	0.42	4.0	A	0.44	4.1	A	TR	0.45	4.5	A	
		Northbound	LT	0.24	34.0	C	0.30	34.8	C	LT	0.25	33.3	C	
		Southbound	LT	0.50	37.3	D	0.68	48.5 +	D	LT	0.62	42.2	D	
			R	0.00	32.2	C	0.00	32.2	C	R	0.00	31.4	C	
		Intersection			6.4	A		8.4	A			8.7	A	

Notes:

L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates significant impacts.

" * " indicates a v/c ratio greater than 1.50; " ** " indicates a calculated delay greater than 240 seconds.

(1) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

TABLE 6.1-5. PURE NO BUILD + CROTON VS. CAT DEL ALONE LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS: 2008 NO BUILD, CONSTRUCTION (OPTION B) AND MITIGATION CONDITIONS

			AM Peak Hour											
			2008 No Build				2008 Cat Del Build			2008 Mitigation				
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (1)
Grasslands Road (Route 100C) @	26	Eastbound	TR	0.37	8.2	A	0.44	8.7	A	TR	0.46	9.7	A	Shift 2 seconds of green time from EB/WB phase to SB phase. NYSDOT will determine if retiming is necessary after construction of the UV Facility begins.
Sprain Brook Parkway SB Ramp		Westbound	T	0.34	8.0	A	0.35	8.0	A	T	0.36	9.0	A	
		Southbound	L	0.75	41.4	D	0.88	53.9 +	D	L	0.81	44.4	D	
			R	0.32	31.0	C	0.32	31.0	C	R	0.30	29.3	C	
		Intersection			14.7	B		17.1	B			16.2	B	
Grasslands Road (Route 100C) @	27	Eastbound	L	0.09	15.1	B	0.10	15.4	B	L	0.12	19.6	B	Shift 7 seconds of green time from EB/WB phase to NB phase. NYSDOT will determine if retiming is necessary after construction of the UV Facility begins. (Eastbound shoulder usage determined not feasible by NYSDOT)
Sprain Brook Parkway NB Ramp	30		T	0.75	23.3	C	0.92	33.4	C	T	0.74	26.6	C	
		Westbound	TR	0.52	25.4	C	0.56	26.0	C	TR	0.67	32.7	C	
		Northbound	LT	1.00	68.7	E	1.00	68.7	E	LT	0.86	36.6	D	
			R	1.32	189.5	F	*	** +	F	R	1.31	177.8	F	
		Intersection			69.9	E		93.1	F			64.0	E	
Virginia Road @	31	Eastbound	LT	1.15	137.8	F	1.17	145.7 +	F	LT	1.12	128.1	F	Shift 1 second of green time from NB/SB phase to EB/WB phase; shift another 4 seconds of green time from NB/SB phase to NB-L/SB-L phase. The Westchester County DPW will determine if retiming is necessary.
Bronx River Parkway			R	0.22	19.7	B	0.22	19.8	B	R	0.20	16.8	B	
		Westbound	LTR	0.41	34.9	C	0.43	35.0	D	LTR	0.40	34.0	C	
		Northbound	L	0.43	50.0	D	0.70	59.8 +	E	L	0.55	48.9	D	
			TR	0.26	20.1	C	0.26	20.1	C	TR	0.29	23.3	C	
		Southbound	L	1.10	141.5	F	1.10	141.5	F	L	0.87	72.2	E	
			T	0.70	27.3	C	0.70	27.3	C	T	0.77	32.7	C	
		Intersection			55.4	E		57.0	E			49.3	D	
Grasslands Road (Route 100) @	32	Northbound								TR	0.25	17.4	B	MPT Plan is likely; NYSDOT is planning to signalize this intersection.
Virginia Road		Southbound	LT	0.24	8.4	A	0.24	8.4	A	LT	0.69	14.1	B	
		Westbound	LR	0.70	21.1	C	0.81	27.3	D	L	0.08	20.9	C	
		Intersection		Unsignalized			Unsignalized					15.1	B	
Grasslands Road (Route 100) @	33	Southbound	L	0.51	40.3	E	0.58	50.3 +	F	L	0.32	21.1	C	MPT Plan is likely; NYSDOT is planning to signalize this intersection.
Legion Drive			R	0.24	13.9	B	0.26	15.3	C	R	0.44	22.1	C	
		Eastbound	LT	0.08	9.0	A	0.08	9.3	A	LT	0.54	6.8	A	
		Westbound								T	0.60	7.5	A	
										R	0.03	0.0	A	
		Intersection		Unsignalized			Unsignalized					9.4	A	
Grasslands Road (Route 100) @	35	Northbound	L	0.13	44.5	E	0.24	84.1 +	F	L	0.14	36.0	D	Propose to be signalized. MPT Plan may be more suitable.
WCC West Gate			R	0.03	23.5	C	0.04	36.0 +	E					
		Eastbound								T	1.04	43.9	D	
		Westbound	LT	0.01	13.1	B	0.01	16.3	C	L	0.01	1.4	A	
										T	0.28	1.9	A	
		Intersection		Unsignalized			Unsignalized					34.9	C	
Old Saw Mill River Road @	47	Northbound	LTR	0.08	19.5	C	0.09	21.0	C	LTR	0.07	22.0	C	Propose to be signalized. MPT Plan may be more suitable.
Landmark East Driveway		Southbound	LTR	0.01	10.3	B	0.01	10.3	B	LTR	0.02	21.7	C	
		Eastbound	LTR	0.01	8.1	A	0.01	8.1	A	LTR	0.86	16.2	B	
		Westbound	LTR	0.02	10.7	B	0.02	11.0	B	LTR	0.30	5.7	A	
		Intersection		Unsignalized			Unsignalized					13.7	B	

Notes:

L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates significant impacts.

" * " indicates a v/c ratio greater than 1.50; " ** " indicates a calculated delay greater than 240 seconds.

(1) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

TABLE 6.1-5. PURE NO BUILD + CROTON VS. CAT DEL ALONE LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS: 2008 NO BUILD, CONSTRUCTION (OPTION B) AND MITIGATION CONDITIONS

			PM Peak Hour										
			2008 No Build				2008 Cat Del Build			2008 Mitigation			
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (1)
Grasslands Road (Route 100C) @	6	Eastbound	L	*	**	F	*	**	F	L	*	**	F	Add protected left-turn phase, signal retiming, and westbound lane restriping from exclusive left-turn lane to shared left-turn through lane.
Bradhurst Avenue (Route 100)			T	0.65	23.9	C	0.69	25.2	C	T	0.69	25.2	C	
			R	0.28	12.2	B	0.29	12.2	B	R	0.29	12.2	B	
		Westbound	L	0.28	18.7	B	0.32	19.4	B	LTR	1.41	218.0	F	
			TR	*	**	F	*	** +	F					
		Northbound	L	0.88	61.6	E	0.90	64.9	E	L	0.90	64.9	E	
			TR	0.20	16.3	B	0.20	16.3	B	TR	0.20	16.3	B	
		Southbound	L	0.30	25.1	C	0.30	25.1	C	L	0.30	25.1	C	
			TR	1.12	109.2	F	1.12	109.2	F	TR	1.12	109.2	F	
		Intersection			157.0	F		**	F			138.6	F	
Saw Mill River Road (Route 9A) @	15	Eastbound	L	1.01	79.6	E	1.02	83.3 +	F	L	1.00	76.3	E	Change the cycle length from 107 to 105 seconds by decreasing the green time for SB phase by 2 seconds. NYSDOT will detemine if retiming is necessary after construction of the UV Facility begins.
Tarrytown-White Plains Road (Route 119)			TR	0.46	20.2	C	0.46	20.2	C	TR	0.45	19.2	B	
		Westbound	L	0.42	34.4	C	0.42	34.4	C	L	0.41	33.2	C	
			TR	0.89	49.1	D	0.89	49.7	D	TR	0.87	46.7	D	
		Northbound	L	0.32	25.4	C	0.34	25.8	C	L	0.33	23.3	C	
			TR	0.83	41.6	D	0.83	42.1	D	TR	0.82	39.5	D	
		Southbound	L	0.56	35.7	D	0.57	36.4	D	L	0.61	37.6	D	
			T	0.31	23.3	C	0.34	23.7	C	T	0.35	24.2	C	
			R	0.41	11.2	B	0.43	11.3	B	R	0.43	11.5	B	
		Intersection			35.3	D		35.9	D			34.0	C	
Saw Mill River Road (Route 9A) @	17	Northbound	L	0.16	10.4	B	0.16	10.5	B	L	0.32	4.7	A	Propose to be signalized. MPT Plan may be more suitable.
Ramada Inn/Broadway Plaza Entrance										TR	0.40	4.6	A	
		Southbound	LT	0.01	9.5	A	0.01	9.6	A	LTR	0.41	4.7	A	
		Eastbound	L	0.01	51.2	F	0.01	53.0	F	L	0.00	20.9	C	
			T	0.08	84.9	F	0.09	90.6 +	F	T	0.02	20.9	C	
		Westbound	LT	0.12	60.3	F	0.13	63.9 +	F	LTR	0.04	21.0	C	
			TR	0.03	17.5	C	0.03	18.0	C					
		Intersection		Unsignalized			Unsignalized					4.9	A	
Saw Mill River Road (Route 9A) @	19A	Northbound	L	*	**	F	*	** +	F	L	0.57	27.8	C	Propose to be signalized. MPT Plan may be more suitable.
Grasslands Road (Route 100C)			R	0.28	15.8	C	0.28	15.8	C	R	0.57	28.2	C	
		Eastbound								T	0.54	4.9	A	
										R	0.18	3.2	A	
		Westbound	L	0.33	12.7	B	0.43	14.0	B	L	0.76	13.9	B	
										T	0.57	5.1	A	
		Intersection		Unsignalized			Unsignalized					8.8	A	
Grasslands Road (Route 100C) @	19B	Northbound	LT	0.06	31.3	D	0.08	37.4 +	E	LTR	0.26	23.7	C	Propose to be signalized. MPT Plan may be more suitable.
Saw Mill River Road (Route 9A) NB Ramp			TR	0.18	14.4	B	0.19	14.5	B					
		Eastbound	L	0.21	12.1	B	0.24	13.5	B	L	0.62	10.0	A	
										T	0.50	4.5	A	
		Westbound								TR	1.02	40.3	D	
		Intersection		Unsignalized			Unsignalized					26.6	C	
Old Saw Mill River Road @	21	Eastbound	LT	1.06	77.9	E	1.08	83.6 +	F	LT	1.05	72.2	E	Shift 1 second of green time from SB phase to EB/WB phase. NYSDOT will detemine if retiming is necessary after construction of the UV Facility begins.
Saw Mill River Parkway SB Off Ramp		Westbound	TR	0.48	9.7	A	0.52	10.1	B	TR	0.51	9.5	A	
		Southbound	L	0.29	23.1	C	0.29	23.1	C	L	0.30	24.0	C	
			LR	0.21	22.6	C	0.21	22.6	C	LR	0.22	23.4	C	
		Intersection			35.4	D		36.6	D			32.5	C	
Grasslands Road (Route 100C) @	24	Eastbound	L	0.07	9.7	A	0.07	9.7	A	L	0.07	7.5	A	Shift 5 seconds of green time from NB/SB phase to EB/WB phase. NYSDOT will detemine if retiming is necessary after construction of the UV Facility begins.
Clearbrook Road/Walker Road			TR	0.74	17.5	B	0.74	17.8	B	TR	0.67	12.8	B	
		Westbound	L	1.46	**	F	*	** +	F	L	1.02	82.1	F	
			TR	0.94	34.8	C	1.1	79.6 +	E	TR	0.99	41.9	D	
		Northbound	LT	0.20	20.0	B	0.20	20.0	C	LT	0.27	24.2	C	
		Southbound	LT	0.30	20.9	C	0.34	21.4	C	LT	0.40	25.5	C	
			R	0.01	18.5	B	0.01	18.5	B	R	0.01	21.9	C	
		Intersection			49.8	D		71.9	E			34.1	C	

Notes:

L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates significant impacts.

" * " indicates a v/c ratio greater than 1.50; " ** " indicates a calculated delay greater than 240 seconds.

(1) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

TABLE 6.1-5. PURE NO BUILD + CROTON VS. CAT DEL ALONE LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS: 2008 NO BUILD, CONSTRUCTION (OPTION B) AND MITIGATION CONDITIONS

			PM Peak Hour											
			2008 No Build				2008 Cat Del Build				2008 Mitigation				
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS		Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (1)
Grasslands Road (Route 100C) @	27	Eastbound	L	0.50	15.4	B	0.50	15.4	B		L	0.66	22.1	C	Shift 4 seconds of green time from EB phase and another 1 second of green time from NB phase to EB/WB phase. NYSDOT will determine if retiming is necessary after construction of the UV Facility begins. (Eastbound shoulder usage determined not feasible by NYSDOT)
Sprain Brook Parkway NB Ramp	30		T	0.35	9.1	A	0.36	9.2	A		T	0.25	8.0	A	
		Westbound	TR	1.43	223.9	F	*	**	+ F		TR	1.44	223.4	F	
		Northbound	LT	0.69	29.4	C	0.69	29.4	C		LT	0.72	31.5	C	
			R	0.37	23.2	C	0.38	23.3	C		R	0.39	24.2	C	
		Intersection			134.5	F		206.8	F				141.0	F	
Virginia Road @	31	Eastbound	LT	1.35	215.8	F	1.47	**	+ F		LT	1.32	202.2	F	Shift 3 seconds of green time from NB/SB phase to EB/WB phase. The Westchester County DPW will determine if retiming is necessary.
Bronx River Parkway			R	0.56	37.6	D	0.67	41.5	D		R	0.62	37.3	D	
		Westbound	LTR	*	**	F	*	**	+ F		LTR	1.31	204.0	F	
		Northbound	L	0.06	11.0	B	0.07	11.0	B		L	0.07	12.4	B	
			TR	0.62	25.3	C	0.62	25.3	C		TR	0.65	28.0	C	
		Southbound	L	0.13	11.7	B	0.13	11.7	B		L	0.14	13.2	B	
			T	0.59	24.7	C	0.59	24.7	C		T	0.62	27.2	C	
		Intersection			89.8	F		113.1	F				77.8	E	
Grasslands Road (Route 100) @	32	Northbound									TR	0.81	37.6	D	MPT Plan is likely; NYSDOT is planning to signalize this intersection.
Virginia Road		Southbound	LT	0.49	11.6	B	0.57	12.8	B		LT	0.96	30.0	C	
		Westbound	LR	*	**	F	*	**	+ F		L	0.46	41.8	D	
		Intersection			Unsignalized			Unsignalized					33.4	C	
Grasslands Road (Route 100) @	33	Southbound	L	1.48	**	F	*	**	+ F		L	0.71	36.1	D	MPT Plan is likely; NYSDOT is planning to signalize this intersection.
Legion Drive			R	0.47	19.9	C	0.47	20.1	C		R	0.78	42.9	D	
		Eastbound	LT	0.24	10.8	B	0.24	10.8	B		LT	0.98	36.6	D	
		Westbound									T	0.48	6.0	A	
											R	0.18	0.1	A	
		Intersection			Unsignalized			Unsignalized					25.0	C	
Grasslands Road (Route 100) @	34	Eastbound	T	0.72	16.6	B	0.72	16.6	B		T	0.93	41.3	D	Shift 9 seconds of green time from EB/WB phase to NB phase. NYSDOT will detemine if retiming is necessary after construction of the UV Facility begins.
WCC East Gate		Westbound	L	0.23	11.2	B	0.24	11.3	B		L	0.32	20.9	C	
			T	0.58	7.9	A	0.58	7.9	A		T	0.71	15.5	B	
		Northbound	L	*	**	F	*	**	+ F		L	*	**	F	
		Intersection			180.2	F		**	F				196.4	F	
Grasslands Road (Route 100) @	35	Northbound	L	0.61	166.1	F	1.04	**	+ F		L	0.31	44.7	D	Propose to be signalized. MPT Plan may be more suitable.
WCC West Gate			R	0.53	20.5	C	0.56	22.1	C						
		Eastbound									T	0.42	2.1	A	
		Westbound	LT	0.13	9.3	A	0.13	9.5	A		L	0.20	1.6	A	
											T	1.05	43.8	D	
		Intersection			Unsignalized			Unsignalized					30.4	C	
Old Saw Mill River Road @	47	Northbound	LTR	0.13	35.2	E	0.14	39.2	+ E		LTR	0.05	21.9	C	Propose to be signalized. MPT Plan may be more suitable.
Landmark East Driveway		Southbound	LTR	0.08	19.7	C	0.09	21.4	C		LTR	0.07	22.0	C	
		Eastbound	LTR	0.01	9.0	A	0.01	9.2	A		LTR	0.57	7.7	A	
		Westbound	LTR	0.01	9.2	A	0.01	9.2	A		LTR	0.55	7.4	A	
		Intersection			Unsignalized			Unsignalized					7.9	A	

Notes:

L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates significant impacts.

" * " indicates a v/c ratio greater than 1.50; " ** " indicates a calculated delay greater than 240 seconds.

(1) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

Based on discussions that occurred between the Draft and Final EIS between NYCDEP and NYSDOT, an alternative restriping (change the westbound left-turn lane to a shared through left-turn lane) and revised signal plan to provide a lead eastbound/westbound phase[2] is more suitable at this location than the mitigation measures described in the Draft EIS. Although this measure does not fully mitigate the predicted traffic impacts at the intersection per the guidance in the *CEQR Technical Manual*, this revised mitigation would dramatically improve eastbound and westbound operations and reflect improved phasing of the signal operation. When compared to the Future With the Project with the Croton project, overall intersection level-of- service would be equivalent or better than the Future Without the Project condition with the proposed improvement measure in place.

Saw Mill River Road (Route 9A) and Tarrytown/White Plains Road (Route 119)

During the AM peak hour, the eastbound left-turn movement would continue to operate at LOS F with a 21.3-second increase in delay and would deteriorate from LOS E with 79.6 seconds of delay to LOS F with 83.3 seconds of delay during the PM peak hour. During the AM peak hour, this impact could be fully mitigated with the transfer of 7 seconds of green time from the east-west signal phase to the east-southbound right-turn phase. During the PM peak hour, this impact would be mitigated by reducing the southbound signal phase by 2 seconds to result in a total cycle length of 105 seconds.

During the AM peak hour, the mitigation measures would reduce the delay on the eastbound left-turn movement by 1.7 seconds as compared to FNB conditions, and all of the other movements would operate at or near the FNB LOS with no adverse changes in their average vehicle delays. During the PM peak hour, the proposed mitigation measure would reduce the delay of the eastbound left-turn movement by 3.3 seconds as compared to FNB conditions, and all of the other movements at this location would operate at or better than their FNB LOS with only minor changes in their average vehicle delays.

NYSDOT would determine if retiming is necessary after construction of the UV Facility begins.

Saw Mill River Road (Route 9A) and Ramada Inn/Broadway Plaza

During the AM peak hour, the eastbound through and westbound left/through movements would deteriorate from LOS E to LOS F with 7.4- and 8.8-second increases in delay, respectively. The eastbound left-turn movement would continue to operate at LOS E with a 4.1-second increase in delay. This impact would be fully mitigated with the installation of a traffic signal at this location. As a result of this mitigation, all of the vehicle movements at this intersection would operate at LOS C or better compared to FNB conditions, with a maximum delay of 21.2 seconds per vehicle.

During the PM peak hour, the eastbound through and westbound left/through movements would continue to operate at LOS F with 5.7- and 3.6-second increases in delay, respectively. Similar to the AM peak hour, a traffic signal would fully mitigate these anticipated impacts, resulting in a

[2] A lead phase indicates a specific movement that will proceed through a given intersection while all other approaches to that intersection are stopped.

LOS C or better for all of the traffic movements at this location, compared to FNB conditions, with a maximum average vehicle delay of 21.0 seconds.

The predicted significant adverse impact at this intersection is largely due to estimated peak construction worker trips. While an MPT solution may be more suitable at this location, compared to the installation of a signal due to the short-term nature of these peak construction activities, if this scenario occurs, NYCDEP would propose a traffic signal to be installed at this location before peak construction worker activities occur in 2008. NYCDEP would submit the proposed traffic signal plan to the appropriate agency for approval. The approving agency may determine that an MPT is more suited for this location.

Saw Mill River Road (Route 9A) and Grasslands Road (Route 100C)

The northbound left-turn movement would continue to operate at LOS F with a 53.5-second increase in delay, during the AM peak hour. During the PM peak hour, the northbound left-turn movement would continue to operate at LOS F with delays increased to well beyond 240 seconds. The installation of a traffic signal at this location would fully mitigate these impacts. With this mitigation, all of the traffic movements at this location would operate at LOS C or better with a maximum delay of 30.3 and 28.2 seconds per vehicle during the AM and PM peak hours, respectively.

The predicted significant adverse impact at this intersection is largely due to estimated peak construction worker trips. While an MPT solution may be more suitable at this location, compared to the installation of a signal due to the short-term nature of these peak construction activities, if this scenario occurs, NYCDEP would propose a traffic signal to be installed at this location before peak construction worker activities occur in 2008. NYCDEP would submit the proposed traffic signal plan to the appropriate agency for approval. The approving agency may determine that an MPT is more suited for this location.

Grasslands Road (Route 100C) and Saw Mill River Road (Route 9A) Northbound Ramp

During the AM peak hour, the northbound through/right movement would deteriorate from LOS C with 20.1 seconds of delay to LOS D with 32.1 seconds of delay. During the PM peak hour, the northbound left/through movement would deteriorate from LOS D with 31.3 seconds of delay to LOS E with 37.4 seconds of delay. These impacts would be fully mitigated with the installation of a traffic signal. As a result of this mitigation, all of the vehicle movements at this location would operate at LOS D or better compared to FNB conditions, with a maximum average vehicle delay of 21.5 and 40.3 seconds during the AM and PM peak hours, respectively.

The predicted significant adverse impact at this intersection is largely due to estimated peak construction worker trips. While an MPT solution may be more suitable at this location, compared to the installation of a signal due to the short-term nature of these peak construction activities, if this scenario occurs, NYCDEP would propose a traffic signal to be installed at this location before peak construction worker activities occur in 2008. NYCDEP would submit the

proposed traffic signal plan to the appropriate agency for approval. The approving agency may determine that an MPT is more suited for this location.

Old Saw Mill River Road and Saw Mill River Parkway Southbound Off-Ramp

During the PM peak hour, the eastbound left/through movement would deteriorate from LOS E to LOS F with a 5.7-second increase in delay. This impact would be mitigated by transferring 1 second of green time from the southbound signal phase to the east-west phase. This measure would improve the operation of the eastbound left/through movement to LOS E with 72.2 seconds of delay, compared to FNB conditions. All of the other vehicle movements would operate at their FNB LOS or better with minimal changes in their average delays.

NYSDOT would determine if retiming is necessary after construction of the UV Facility begins.

Grasslands Road (Route 100C) and Clearbrook Road/Walker Road

The southbound left/through movement would continue to operate at LOS D during the AM peak hour, but the average vehicle delay would increase by 11.2 seconds. By transferring 1 second of green time from the east-west signal phase to the southbound signal phase, the average vehicle delay for the southbound left/through movement would improve to 42.2 seconds, below mid-LOS D. This mitigation would not adversely impact the LOS or the average delay for the other vehicle movements at this location.

During the PM peak hour, the westbound left-turn movement would continue to operate at LOS F with delays increased beyond 240 seconds. The westbound through/right movement would deteriorate from LOS C with 34.8 seconds of delay to LOS E with 79.6 seconds of delay. These impacts would be mitigated by transferring 5 seconds of green time from the north-south signal phase to the east-west phase. As a result of this mitigation, the westbound left-turn movement would improve compared to FNB conditions, to LOS F with 82.1 seconds of delay and the westbound through/right movement would improve to below mid-LOS D with 41.9 seconds of delay. The remaining vehicle movements at this location would operate at or near their FNB LOS without adverse changes in their average vehicle delay.

NYSDOT would determine if retiming is necessary after construction of the UV Facility begins.

Grasslands Road (Route 100C) and Sprain Brook Parkway Southbound Ramp

During the AM peak hour, the southbound left-turn movement would deteriorate from LOS D with 41.4 seconds of delay to LOS D with 53.9 seconds of delay during the AM peak hour. This impact would be mitigated by shifting 2 seconds of green time from the east-west signal phase to the southbound phase. As a result of this mitigation, the southbound left-turn movement would improve compared to FNB conditions, to below mid-LOS D with 44.4 seconds of delay and the remaining vehicle movements would continue to operate at their FNB LOS.

NYSDOT would determine if retiming is necessary after construction of the proposed UV Facility begins.

Grasslands Road (Route 100C) and Sprain Brook Parkway Northbound Ramp

During the AM peak hour, the northbound right-turn movement would continue to operate at LOS F, with delays increased to beyond 240 seconds. The westbound approach would also continue to operate at LOS F with delays increased to beyond 240 seconds during the PM peak hour. A re-striping of the westbound approach to add a lane, and retiming the signal to shift 7 seconds of green time from the northbound phase to the east/west phase, would fully mitigate these impacts such that the impacted movements would operate at delays below FNB conditions, and all of the remaining vehicle movements would operate below mid-LOS D or better, with a maximum delay of 36.6 seconds during the AM and PM peak hours.

NYSDOT would determine if retiming is necessary after construction of the proposed UV Facility begins. NYCDEP would submit this solution to the approval agency for approval. If the approval agency (NYSDOT) rejects this measure, the significant adverse impact would remain unmitigated.

Virginia Road and Bronx River Parkway

During the AM peak hour, the eastbound left/through movement would continue to operate at LOS F with 7.9 seconds increase in delay. The northbound left-turn movement would deteriorate from LOS D to LOS E with 9.8 seconds increase in delay. These impacts would be mitigated with a 5-second reduction in the north-south signal phase and a subsequent 1-second increase in the east-west phase and 4 second increase in the north-south permitted left-turn phase. As a result of this mitigation, the eastbound left/through movement would improve compared to FNB conditions, to LOS F with 128.1 seconds of delay and the northbound left-turn movement would improve compared to FNB conditions, to LOS D with 48.9 seconds of delay. There would also be an improvement in LOS for the westbound approach and the southbound left-turn movement as compared to FNB conditions. The remaining movements at this location would continue to operate at their FNB LOS without adverse changes in average vehicle delay.

During the PM peak hour, the eastbound left/through movement and the westbound approach would continue to operate at LOS F, both with delays increased beyond 240 seconds. These impacts would be fully mitigated by transferring 3 seconds of green time from the north-south signal phase to the east-west phase. As a result of this mitigation, the eastbound left/through movement would improve compared to FNB conditions, to LOS F with 202.2 seconds of delay and the westbound approach would operate at LOS F with 204.0 seconds of delay. The remaining vehicle movements at this location would operate at their FNB LOS with minimal changes in average vehicle delay.

Westchester County DPW would determine if retiming is necessary after construction of the UV Facility begins.

Grasslands Road (Route 100) and Virginia Road

The westbound approach would continue to operate at LOS F, with delays increased to well beyond 240 seconds during the PM peak hour. This location would be fully mitigated with the creation of a channelized right-turn lane on the westbound approach and with the installation of a traffic signal (see Table 6.1-5). With these mitigation measures, all of the vehicle movements at this location would operate at LOS D or better with a maximum average vehicle delay of 41.8 seconds.

Although mitigation was not required at this intersection during the AM peak period, these measures would improve the operation of the westbound approach as compared to FNB conditions (to LOS C), and the northbound and southbound approaches would operate at LOS B.

NYCDEP would recommend the installation of a signal at this intersection. However, based on discussions that occurred between the Draft and Final EIS among NYCDEP and NYSDOT, Westchester County DPW, and local representatives, an MPT solution is more likely at this location than the mitigation measures described, because NYSDOT is planning to install a traffic signal at this intersection in the future, in coordination with planned NYSDOT design work for the corridor. NYCDEP and NYSDOT would coordinate the improvement of this intersection to ensure that adequate traffic flow would occur during the proposed project's impact period.

Grasslands Road (Route 100) and Legion Drive

During the AM peak hour, the southbound left-turn movement would deteriorate from LOS E with 40.3 seconds of delay to LOS F with 50.3 seconds of delay. During the PM peak hour, this movement would continue to operate at LOS F with delays increased to well beyond 240 seconds. These impacts would be fully mitigated with the installation of a traffic signal at this location. As result of this mitigation, all of the vehicle movements would operate at LOS C or better compared to FNB conditions, during the AM peak hour with a maximum delay of 22.1 seconds, and below mid-LOS D or better compared to FNB conditions, during the PM peak hour with a maximum delay of 42.9 seconds.

NYCDEP would recommend the installation of a signal at this intersection. However, based on discussions that occurred between the Draft and Final EIS among NYCDEP and NYSDOT, Westchester County DPW, and local representatives, an MPT solution is more likely at this location than the mitigation measures described, because NYSDOT is planning to install a traffic signal at this intersection in the future, in coordination with planned NYSDOT design work for the corridor. NYCDEP and NYSDOT would coordinate the improvement of this intersection to ensure that adequate traffic flow would occur during the proposed project's impact period.

Grasslands Road (Route 100C) and WCC East Gate

The northbound left-turn movement would continue to operate at LOS F with delays increased to well beyond 240 seconds during the PM peak hour. This impact would be fully mitigated by transferring 9 seconds of green time from the east-west signal phase to the

northbound phase. As a result of this mitigation, the average vehicle delay for the northbound left-turn movement would decrease below the delay predicted for FNB conditions. The other vehicle movements at this location would experience a change in LOS as compared to FNB conditions; however, none of the increases in delay would be above mid-LOS D, or result in adverse impacts.

NYSDOT would determine if retiming is necessary after construction of the UV Facility begins.

Grasslands Road (Route 100C) and WCC West Gate

During the AM peak hour, the northbound left-turn movement would deteriorate from LOS E to LOS F with a 39.6-second increase in delay, and the northbound right-turn movement would deteriorate from LOS C to LOS E with a 12.5-second increase in delay. During the PM peak hour, the northbound left-turn movement would continue to operate at LOS F with delays increased to well beyond 240 seconds. A new traffic signal at this location would fully mitigate these impacts such that all vehicle movements would operate at LOS D or better with a maximum delay of 44.7 seconds during peak hours.

The predicted significant adverse impact at this intersection is largely due to estimated peak construction worker trips. While an MPT solution may be more suitable at this location, compared to the installation of a signal due to the short-term nature of these peak construction activities, if this scenario occurs, NYCDEP would propose a traffic signal to be installed at this location before peak construction worker activities occur in 2008. NYCDEP would submit the proposed traffic signal plan to the appropriate agency for approval. The approving agency may determine that an MPT is more suited for this location.

Old Saw Mill River Road and the Landmark East Driveway

During the PM peak hour, northbound approach would deteriorate from LOS E with 35.2 seconds of delay, to LOS E with 39.2 seconds of delay. This impact could be fully mitigated with the installation of a new traffic signal. While this intersection was not predicted to experience any impacts during the AM peak hour, the effect of installing a traffic signal at this location was evaluated. As a result of this mitigation, all approaches would operate at LOS C, or better compared to FNB conditions, with maximum delays at any given approach of 22.0 seconds during both the AM and PM peak hours.

The predicted significant adverse impact at this intersection is largely due to estimated peak construction worker trips. While an MPT solution may be more suitable at this location, compared to the installation of a signal due to the short-term nature of these peak construction activities, if this scenario occurs, NYCDEP would propose a traffic signal to be installed at this location before peak construction worker activities occur in 2008. NYCDEP would submit this solution to the approval agency for approval. If the approval agency (NYSDOT) rejects this measure, the significant adverse impact would remain unmitigated.

2008 Construction Parking Option C

The traffic analyses compared the UV Facility's 2008 Construction (Option C) conditions with a 2008 FNB Option C condition (with the Croton project under construction, and their workers also parking at both the Landmark property and the WCC Campus). Under these conditions in 2008, it was found that traffic from the construction of the proposed UV Facility would be anticipated to result in 27 potential significant adverse traffic impacts, 12 during the AM peak hour, and 15 during the PM peak hour. These impacts could be fully mitigated as described below; the resulting delays and LOS for these intersections, with the proposed mitigation applied, are compared to 2008 FNB Option C and 2008 Construction Parking Option C conditions (see Table 6.1-6).

The tables showing the results of applying the mitigation measures also indicate the specific measures recommended for each location. For many of the locations, more than one measure was identified that could be implemented that would reduce delays back to or below FNB conditions. The assessment presented here relies mostly on a combination of new traffic signals, lane striping changes, and traffic signal retiming or phasing changes as the recommended measures. However, some of the measures that were investigated were more extraordinary, involving additional lane construction or street widening, to give a complete range of potential measures that could eliminate impacts.

Grasslands Road (Route 100C) and Bradhurst Avenue (Route 100)

The eastbound through movement would deteriorate from LOS F with 211.3 seconds of delay to LOS F with delays increased to well beyond 240 seconds during the AM peak hour, and the westbound through/right movement would deteriorate from LOS F with 164.5 seconds of delay to LOS F with delays increased beyond 240 seconds during the PM peak hour. A combination of measures is required to fully mitigate both the AM and PM peak hour impacts at this location. The westbound approach would be restriped to accommodate two travel lanes (shared left-turn and through and shared through and right-turn). During the AM peak hour, a new signal timing and phasing plan would also be implemented as shown in Table 6.1-6.

During the AM peak hour, these mitigation measures would result in a decrease in delay on the eastbound through movement of 28.9 seconds as compared to FNB conditions, and all of the other movements would operate at LOS C or better. During the PM peak hour, the addition of a westbound lane would significantly improve operations for the westbound through and right-turn movement as well as the eastbound left-turn movement. Although delay for the westbound left-turn movement would increase, the overall delay for the westbound approach would improve beyond the FBN LOS F with 156.0 seconds of delay, to a mitigated LOS F with 81.3 seconds of delay. All of the other movements at this location would operate at their FNB LOS without adverse increases in delay.

TABLE 6.1-6. PURE NO BUILD + CROTON VS. CAT DEL ALONE LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS: 2008 NO BUILD, CONSTRUCTION (OPTION C) AND MITIGATION CONDITIONS

			AM Peak Hour											
				2008 No Build			2008 Cat Del Build			2008 Mitigation				
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (1)
Grasslands Road (Route 100C) @	6	Eastbound	L	0.77	42.2	D	0.82	48.0	D	L	0.55	19.3	B	Add protected left-turn phase, signal
Bradhurst Avenue (Route 100)			T	1.37	211.3	F	*	** +	F	T	1.33	182.4	F	retiming, and westbound lane restriping
			R	0.36	16.4	B	0.36	16.5	B	R	0.40	16.5	B	from exclusive left-turn lane to shared
		Westbound	L	0.68	56.6	E	0.68	56.6	E	LTR	0.43	16.8	B	left-turn through lane.
			TR	0.47	26.5	C	0.50	26.9	C					
		Northbound	L	0.24	23.6	C	0.26	23.8	C	L	0.37	26.6	C	
			TR	0.35	26.0	C	0.35	26.1	C	TR	0.55	34.1	C	
		Southbound	L	0.51	40.3	D	0.51	40.5	D	L	0.38	27.4	C	
			TR	0.68	49.7	D	0.68	49.7	D	TR	0.57	34.8	C	
		Intersection			100.2	F		147.5	F			89.1	F	
Saw Mill River Road (Route 9A) @	15	Eastbound	L	1.05	92.2	F	1.12	113.5 +	F	L	1.03	84.9	F	Provide the intersection with a new
Tarrytown-White Plains Road (Route 119)			TR	0.38	14.5	B	0.38	14.5	B	TR	0.37	12.9	B	signal plan as follows
		Westbound	L	0.17	22.3	C	0.17	22.3	C	L	0.17	22.3	C	EB/SB-R: G/A/R = 16/3/2
			TR	0.31	23.6	C	0.31	23.6	C	TR	0.31	23.6	C	EB/WB: G/A/R = 50/3/2
		Northbound	L	0.39	34.3	C	0.39	34.4	C	L	0.34	30.4	C	NB: G/A/R = 6/3/0
			TR	0.67	42.7	D	0.72	44.9	D	TR	0.62	37.0	D	NB/SB: G/A/R = 30/3/2
		Southbound	L	0.27	35.4	D	0.29	36.6	D	L	0.37	38.2	D	C = 120 seconds
			T	0.43	35.1	D	0.44	35.3	D	T	0.52	40.0	D	NYSDOT will determine if retiming is
			R	0.23	22.1	C	0.24	22.2	C	R	0.24	22.2	C	necessary after construction of the UV
		Intersection			37.4	D		42.3	D			35.8	D	Facility begins.
Saw Mill River Road (Route 9A) @	17	Northbound	L	0.13	10.3	B	0.15	10.6	B	L	0.31	4.7	A	Propose to be signalized. MPT Plan may be more suitable.
Ramada Inn/Broadway Plaza Entrance										TR	0.36	4.5	A	
		Southbound	LT	0.01	9.0	A	0.02	9.3	A	LTR	0.40	4.7	A	
		Eastbound	L	0.02	40.0	E	0.02	47.4 +	E	L	0.01	20.9	C	
			T	0.02	47.9	E	0.03	58.7 +	F	T	0.01	20.9	C	
		Westbound	LT	0.14	45.4	E	0.17	57.7 +	F	Def	0.06	21.2	C	
			TR	0.01	11.0	B	0.01	11.4	B	TR	0.03	21.0	C	
		Intersection		Unsignalized			Unsignalized					4.8	A	
Saw Mill River Road (Route 9A) @	19A	Northbound	L	1.43	**	F	*	** +	F	L	0.49	31.7	C	Propose to be signalized. MPT Plan
Grasslands Road (Route 100C)			R	0.22	17.9	C	0.24	19.1	C	R	0.22	28.9	C	may be more suitable.
		Eastbound								T	0.78	13.8	B	
										R	0.21	5.9	A	
		Westbound	L	0.16	11.9	B	0.17	12.3	B	L	0.34	7.1	A	
										T	0.53	8.2	A	
		Intersection		Unsignalized			Unsignalized					12.9	B	
Grasslands Road (Route 100C) @	19B	Northbound	LT	0.29	40.3	E	0.51	64.4 +	F	LTR	0.33	20.9	C	Propose to be signalized. MPT Plan
Saw Mill River Road (Route 9A) NB Ramp			TR	0.22	16.5	C	0.34	19.6	C					may be more suitable.
		Eastbound	L	0.25	11.3	B	0.28	12.4	B	L	0.80	25.7	C	
										T	0.76	11.1	B	
		Westbound								TR	0.85	15.3	B	
		Intersection		Unsignalized			Unsignalized					15.1	B	

Notes:

L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates significant impacts.

" * " indicates a v/c ratio greater than 1.50; " ** " indicates a calculated delay greater than 240 seconds.

(1) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

TABLE 6.1-6. PURE NO BUILD + CROTON VS. CAT DEL ALONE LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS: 2008 NO BUILD, CONSTRUCTION (OPTION C) AND MITIGATION CONDITIONS

			AM Peak Hour											
				2008 No Build			2008 Cat Del Build			2008 Mitigation				
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (1)
Grasslands Road (Route 100C) @	27	Eastbound	L	0.11	15.0	B	0.12	15.3	B	L	0.14	16.9	B	Change the cycle length from 100 to 110 seconds by increasing the green time for EB/WB phase by 10 seconds. NYSDOT will determine if retiming is necessary after construction of the UV Facility begins.
Sprain Brook Parkway NB Ramp	30		T	0.63	20.2	C	0.72	22.2	C	T	0.79	25.7	C	
		Westbound	TR	0.51	25.1	C	0.53	25.6	C	TR	0.63	28.7	C	
		Northbound	LT	1.20	135.1	F	1.32	187.6 +	F	LT	1.20	131.4	F	
			R	1.17	126.2	F	1.27	165.4 +	F	R	1.15	112.8	F	
		Intersection			71.6	E		93.0	F			70.2	E	
Virginia Road @	31	Eastbound	LT	1.15	138.2	F	1.17	148.9 +	F	LT	1.13	130.8	F	Signal Retiming: Shift 1 second of green time from northbound and southbound phase to eastbound and westbound phase. The Westchester County DPW will determine if retiming is necessary.
Bronx River Parkway			R	0.22	19.7	B	0.22	19.7	B	R	0.21	19.1	B	
		Westbound	LTR	0.42	34.9	C	0.44	35.2	D	LTR	0.41	34.1	C	
		Northbound	L	0.24	47.9	D	0.36	49.2	D	L	0.36	49.2	D	
			TR	0.26	20.1	C	0.26	20.1	C	TR	0.27	20.7	C	
		Southbound	L	1.10	141.5	F	1.10	141.5	F	L	1.10	141.5	F	
			T	0.70	27.3	C	0.70	27.3	C	T	0.71	28.3	C	
		Intersection			55.5	E		57.0	E			54.7	D	
Grasslands Road (Route 100) @	32	Southbound	LT	0.23	8.4	A	0.24	8.4	A	LT	0.24	8.4	A	MPT Plan is likely; NYSDOT is planning to signalize this intersection.
Virginia Road		Westbound	LR	0.63	18.6	C	0.69	20.6	C	L	0.19	27.5	D	
										R	0.50	13.0	B	
		Intersection		Unsignalized			Unsignalized				Unsignalized			
Grasslands Road (Route 100) @	33	Southbound	L	0.47	35.2	E	0.50	39.1	E	L	0.32	21.1	C	MPT Plan is likely; NYSDOT is planning to signalize this intersection.
Legion Drive			R	0.22	13.0	B	0.23	13.7	B	R	0.44	22.1	C	
		Eastbound	LT	0.07	8.8	A	0.08	8.9	A	LT	0.53	6.6	A	
		Westbound								T	0.51	6.4	A	
										R	0.03	0.0	A	
		Intersection		Unsignalized			Unsignalized					9.0	A	
Grasslands Road (Route 100) @	35	Northbound	L	0.09	29.6	D	0.12	38.9 +	E	L	0.08	24.7	C	Propose to be signalized. MPT Plan may be more suitable.
WCC West Gate			R	0.02	17.6	C	0.02	21.2	C					
		Eastbound								T	0.80	8.8	A	
		Westbound	LT	0.01	11.3	B	0.01	12.4	B	LT	0.29	2.8	A	
		Intersection		Unsignalized			Unsignalized					7.4	A	
Old Saw Mill River Road @	47	Northbound	LTR	0.12	18.0	C	0.14	18.5	C	LTR	0.18	26.7	C	Propose to be signalized. MPT Plan may be more suitable.
Landmark East Driveway		Southbound	LTR	0.22	67.7	F	0.55	174.1 +	F	LTR	0.12	26.4	C	
		Eastbound	LTR	0.02	8.4	A	0.02	8.6	A	LTR	0.67	6.6	A	
		Westbound	LTR	0.18	11.2	B	0.28	12.1	B	LTR	0.85	15.4	B	
		Intersection		Unsignalized			Unsignalized					11.0	B	

Notes:

L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates significant impacts.

" * " indicates a v/c ratio greater than 1.50; " ** " indicates a calculated delay greater than 240 seconds.

(1) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

TABLE 6.1-6. PURE NO BUILD + CROTON VS. CAT DEL ALONE LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS: 2008 NO BUILD, CONSTRUCTION (OPTION C) AND MITIGATION CONDITIONS

			PM Peak Hour											
				2008 No Build			2008 Cat Del Build			2008 Mitigation				
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (1)
Grasslands Road (Route 100C) @	6	Eastbound	L	1.70	**	F	1.70	**	F	L	1.58	**	F	Add protected left-turn phase, signal
Bradhurst Avenue (Route 100)			T	0.63	23.3	C	0.65	23.9	C	T	0.65	23.9	C	retiming, and westbound lane restriping
			R	0.28	12.2	B	0.29	12.3	B	R	0.29	12.3	B	from exclusive left-turn lane to shared
		Westbound	L	0.26	18.4	B	0.28	18.7	B	LTR	1.09	81.3	F	left-turn through lane.
			TR	1.28	164.5	F	1.48	** +	F					
		Northbound	L	0.88	61.6	E	0.90	64.9	E	L	0.90	64.9	E	
			TR	0.20	16.3	B	0.20	16.3	B	TR	0.20	16.3	B	
		Southbound	L	0.30	25.1	C	0.30	25.1	C	L	0.30	25.1	C	
			TR	1.12	109.2	F	1.12	109.2	F	TR	1.12	109.2	F	
		Intersection			104.3	F		137.0	F			76.0	E	
Saw Mill River Road (Route 9A) @	15	Eastbound	L	1.01	79.6	E	1.02	83.2 +	F	L	1.00	76.3	E	Change the cycle length from 107 to 105
Tarrytown-White Plains Road (Route 119)			TR	0.46	20.2	C	0.46	20.2	C	TR	0.45	19.2	B	seconds by decreasing the green time for
		Westbound	L	0.42	34.4	C	0.42	34.4	C	L	0.41	33.2	C	SB phase by 2 seconds.
			TR	0.89	49.1	D	0.89	49.3	D	TR	0.87	46.5	D	NYSDOT will determine if retiming is
		Northbound	L	0.32	25.5	C	0.34	25.8	C	L	0.33	23.3	C	necessary after construction of the UV
			TR	0.83	41.6	D	0.83	42.1	D	TR	0.82	39.5	D	Facility begins.
		Southbound	L	0.56	35.7	D	0.57	36.4	D	L	0.61	37.6	D	
			T	0.31	23.4	C	0.34	23.8	C	T	0.35	24.2	C	
			R	0.41	11.2	B	0.43	11.3	B	R	0.43	11.5	B	
		Intersection			35.3	D		35.8	D			33.9	C	
Saw Mill River Road (Route 9A) @	17	Northbound	L	0.16	10.4	B	0.16	10.5	B	L	0.32	4.7	A	Propose to be signalized. MPT Plan may be
Ramada Inn/Broadway Plaza Entrance										TR	0.39	4.6	A	more suitable.
		Southbound	LT	0.01	9.5	A	0.01	9.6	A	LTR	0.41	4.7	A	
		Eastbound	L	0.01	51.2	F	0.01	53.0	F	L	0.00	20.9	C	
			T	0.08	84.9	F	0.09	90.6 +	F	T	0.02	20.9	C	
		Westbound	LT	0.12	60.3	F	0.13	63.9 +	F	LTR	0.04	21.0	C	
			TR	0.03	17.5	C	0.03	18.0	C					
		Intersection			Unsignalized			Unsignalized				4.9	A	
Saw Mill River Road (Route 9A) @	19A	Northbound	L	*	**	F	*	** +	F	L	0.57	27.9	C	Propose to be signalized. MPT Plan
Grasslands Road (Route 100C)			R	0.37	20.8	C	0.44	26.2	D	R	0.57	28.2	C	may be more suitable.
		Eastbound								T	0.82	10.7	B	
										R	0.28	3.5	A	
		Westbound	L	0.32	14.5	B	0.45	18.7	C	L	0.79	20.8	C	
										T	0.52	4.7	A	
		Intersection			Unsignalized			Unsignalized				10.9	B	
Grasslands Road (Route 100C) @	19B	Northbound	LT	0.08	34.7	D	0.11	45.0 +	E	LTR	0.20	21.8	C	Propose to be signalized. MPT Plan
Saw Mill River Road (Route 9A) NB Ramp			TR	0.21	17.2	C	0.25	19.9	C					may be more suitable.
		Eastbound	L	0.23	11.7	B	0.27	12.7	B	L	0.72	16.7	B	
										T	0.75	9.2	A	
		Westbound								TR	0.93	21.5	C	
		Intersection			Unsignalized			Unsignalized				16.1	B	

Notes:

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(1) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

TABLE 6.1-6. PURE NO BUILD + CROTON VS. CAT DEL ALONE LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS: 2008 NO BUILD, CONSTRUCTION (OPTION C) AND MITIGATION CONDITIONS

			PM Peak Hour											
			2008 No Build				2008 Cat Del Build				2008 Mitigation				
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS		Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (1)
Old Saw Mill River Road @	21	Eastbound	LT	1.06	78.5	E	1.08	86.1 +	F		LT	1.05	74.3	E	Shift 1 second of green time from SB
Saw Mill River Parkway SB Off Ramp		Westbound	TR	0.49	9.8	A	0.53	10.2	B		TR	0.52	9.6	A	phase to EB/WB phase. NYSDOT will
		Southbound	L	0.29	23.1	C	0.29	23.1	C		L	0.30	24.0	C	determine if retiming is necessary after
			LR	0.21	22.6	C	0.21	22.6	C		LR	0.22	23.4	C	construction of the UV Facility begins.
		Intersection			35.5	D		37.2	D				33.1	C	
Grasslands Road (Route 100C) @	27	Eastbound	L	0.68	22.3	C	0.80	32.8	C		L	0.80	33.8	C	Shift 3 seconds of green time from NB
Sprain Brook Parkway NB Ramp	30		T	0.34	9.1	A	0.35	9.2	A		T	0.33	7.6	A	phase to EB/WB phase. NYSDOT will
		Westbound	TR	1.25	144.1	F	1.38	199.0 +	F		TR	1.25	142.0	F	determine if retiming is necessary after
		Northbound	LT	0.70	29.8	C	0.71	30.0	C		LT	0.82	39.5	D	construction of the UV Facility begins.
			R	0.36	23.1	C	0.37	23.2	C		R	0.42	25.9	C	
		Intersection			84.3	F		116.2	F				86.5	F	
Virginia Road @	31	Eastbound	LT	1.26	179.7	F	1.32	205.4 +	F		LT	1.23	166.6	F	Shift 2 seconds of green time from
Bronx River Parkway			R	0.48	35.8	D	0.53	36.9	D		R	0.50	34.8	C	NB/SB phase to EB/WB phase.
		Westbound	LTR	1.42	**	F	*	** +	F		LTR	1.27	186.7	F	The Westchester County DPW will
		Northbound	L	0.06	10.9	B	0.06	11.0	B		L	0.07	11.9	B	determine if retiming is necessary.
			TR	0.62	25.3	C	0.62	25.3	C		TR	0.64	27.1	C	
		Southbound	L	0.13	11.7	B	0.13	11.7	B		L	0.14	12.7	B	
			T	0.59	24.7	C	0.59	24.7	C		T	0.61	26.4	C	
		Intersection			76.7	E		87.5	F				68.3	E	
Grasslands Road (Route 100) @	32	Southbound	LT	0.43	11.0	B	0.47	11.4	B		LT	0.47	11.4	B	MPT Plan is likely; NYSDOT is
Virginia Road		Westbound	LR	1.42	236.2	F	*	** +	F		L	0.95	142.7	F	planning to signalize this intersection.
											R	0.62	20.0	C	
		Intersection		Unsignalized			Unsignalized					Unsignalized			
Grasslands Road (Route 100) @	33	Southbound	L	1.38	**	F	1.46	** +	F		L	0.66	27.1	C	MPT Plan is likely; NYSDOT is
Legion Drive			R	0.47	19.8	C	0.47	19.9	C		R	0.73	31.4	C	planning to signalize this intersection.
		Eastbound	LT	0.24	10.7	B	0.24	10.8	B		LT	0.97	34.8	C	
		Westbound									T	0.51	6.4	A	
											R	0.18	0.1	A	
		Intersection		Unsignalized			Unsignalized						21.6	C	
Grasslands Road (Route 100) @	34	Eastbound	T	0.73	16.8	B	0.73	17.0	B		T	0.86	28.9	C	Shift 6 seconds of green time from
WCC East Gate		Westbound	L	0.22	11.2	B	0.23	11.3	B		L	0.28	17.4	B	EB/WB phase to NB phase. NYSDOT
			T	0.58	7.9	A	0.58	7.9	A		T	0.66	12.5	B	will determine if retiming is necessary
		Northbound	L	1.34	199.2	F	*	** +	F		L	1.29	173.2	F	after construction of the UV Facility
		Intersection			58.0	E		132.3	F				66.9	E	begins.
Grasslands Road (Route 100) @	35	Northbound	L	0.40	87.2	F	0.54	136.4 +	F		L	0.22	35.6	D	Propose to be signalized. MPT Plan
WCC West Gate			R	0.52	19.7	C	0.53	20.5	C						may be more suitable.
		Eastbound									T	0.42	2.6	A	
		Westbound	LT	0.12	9.2	A	0.13	9.3	A		LT	1.00	33.6	C	
		Intersection		Unsignalized			Unsignalized						23.8	C	
Old Saw Mill River Road @	47	Northbound	LTR	0.40	22.1	C	0.59	28.0	D		LTR	0.43	21.0	C	Propose to be signalized. MPT Plan
Landmark East Driveway		Southbound	LTR	*	**	F	*	** +	F		LTR	0.73	30.9	C	may be more suitable.
		Eastbound	LTR	0.01	8.7	A	0.01	8.7	A		LTR	0.64	11.2	B	
		Westbound	LTR	0.02	9.2	A	0.03	9.3	A		LTR	0.54	9.8	A	
		Intersection		Unsignalized			Unsignalized						14.3	B	

Notes:

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(1) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

Based on discussions that occurred between the Draft and Final EIS between NYCDEP and NYSDOT, an alternative restriping (change the westbound left-turn lane to a shared through left-turn lane) a revised signal plan, and adding a protected left-turn phase is more suitable at this location than the mitigation measures described. Although this measure does not fully mitigate the predicted traffic impacts at the intersection per the guidance in the *CEQR Technical Manual*, this revised mitigation would dramatically improve eastbound and westbound operations and reflect improved phasing of the signal operation. Overall intersection level-of- service would improve with the proposed improvement measure in place.

Saw Mill River Road (Route 9A) and Tarrytown/White Plains Road (Route 119)

During the AM peak hour, the eastbound left-turn movement would continue to operate at LOS F with a 21.3-second increase in delay and would deteriorate from LOS E with 79.6 seconds of delay to LOS F with 83.2 seconds of delay during the PM peak hour. During the AM peak hour, this impact could be fully mitigated with a new signal phasing and timing plan, which is shown in Table 6.1-6. During the PM peak hour, the impact would be mitigated by reducing the southbound signal phase by 2 seconds to result in a total cycle length of 105 seconds.

During the AM peak hour, the mitigation measures would reduce the delay on the eastbound left-turn movement by 7.3 seconds as compared to FNB conditions, and all of the other movements would operate at the FNB LOS with no adverse changes in their average vehicle delays. During the PM peak hour, the proposed mitigation measure would reduce the delay of the eastbound left-turn movement by 3.3 seconds as compared to FNB conditions, and all of the other movements at this location would operate at or better than their FNB LOS with only minor changes in their average vehicle delays.

NYSDOT would determine if retiming is necessary after construction of the UV Facility begins.

Saw Mill River Road (Route 9A) and Ramada Inn/Broadway Plaza

During the AM peak hour, the eastbound through and westbound left/through movements would deteriorate from LOS E to LOS F with a 10.8- and 12.3-second increase in delay, respectively. The eastbound left-turn movement would continue to operate at LOS E with a 7.4-second increase in delay. This impact would be fully mitigated with the installation of a traffic signal at this location. As a result of this mitigation, all of the vehicle movements at this intersection would operate at LOS C or better compared to FNB conditions, with a maximum delay of 21.2 seconds per vehicle.

During the PM peak hour, the eastbound through and westbound left/through movements would continue to operate at LOS F with a 5.7- and 3.6-second increase in delay, respectively. Similar to the AM peak hour, a traffic signal would fully mitigate these anticipated impacts, resulting in a LOS C or better for all of the traffic movements at this location with a maximum average vehicle delay of 21.0 seconds.

The predicted significant adverse impact at this intersection is largely due to estimated peak construction worker trips. While an MPT solution may be more suitable at this location,

compared to the installation of a signal due to the short-term nature of these peak construction activities, if this scenario occurs, NYCDEP would propose a traffic signal to be installed at this location before peak construction worker activities occur in 2008. NYCDEP would submit the proposed traffic signal plan to the appropriate agency for approval. The approving agency may determine that an MPT is more suited for this location.

Saw Mill River Road (Route 9A) and Grasslands Road (Route 100C)

In both the AM and PM peak hours, the northbound left-turn movement would continue to operate at LOS F, both with delays increased to well beyond 240 seconds. The installation of a traffic signal at this location would fully mitigate these impacts. With this mitigation, all of the traffic movements at this location would operate at LOS C or better with a maximum delay of 31.7 and 28.2 seconds per vehicle during the AM and PM peak hours, respectively

The predicted significant adverse impact at this intersection is largely due to estimated peak construction worker trips. While an MPT solution may be more suitable at this location, compared to the installation of a signal due to the short-term nature of these peak construction activities, if this scenario occurs, NYCDEP would propose a traffic signal to be installed at this location before peak construction worker activities occur in 2008. NYCDEP would submit the proposed traffic signal plan to the appropriate agency for approval. The approving agency may determine that an MPT is more suited for this location.

Grasslands Road (Route 100C) and Saw Mill River Road (Route 9A) Northbound Ramp

The northbound left/through movement would be adversely impact by the project's construction in both the AM and PM peak hours. During the AM, this movement would deteriorate from LOS E with 40.3 seconds of delay to LOS F with 64.4 seconds of delay. During the PM, this movement would deteriorate from LOS D with 34.7 seconds of delay to LOS E with 45.0 seconds of delay. The installation of a traffic signal at this location would fully mitigate these impacts such that all of the vehicle movements would operate at LOS C or better during peak hours.

The predicted significant adverse impact at this intersection is largely due to estimated peak construction worker trips. While an MPT solution may be more suitable at this location, compared to the installation of a signal due to the short-term nature of these peak construction activities, if this scenario occurs, NYCDEP would propose a traffic signal to be installed at this location before peak construction worker activities occur in 2008. NYCDEP would submit the proposed traffic signal plan to the appropriate agency for approval. The approving agency may determine that an MPT is more suited for this location.

Old Saw Mill River Road and Saw Mill River Parkway Southbound Off-Ramp

The eastbound approach would deteriorate from LOS E to LOS F with a 7.6-second increase in delay during the PM peak hour. This impact could be fully mitigated by transferring 1 second of green time from the southbound signal phase to the east-west phase. As a result of this mitigation, the eastbound approach would operate better than under FNB conditions, at LOS E

with 74.3 seconds of delay. The other vehicle movements at this location would continue to operate at their FNB LOS without notable changes in their average vehicle delay.

NYSDOT would determine if retiming is necessary after construction of the UV Facility begins.

Grasslands Road (Route 100C) and Sprain Brook Parkway Northbound Ramp

During the AM peak hour, the northbound left/through movement and the northbound right-turn movement would continue to operate at LOS F with a 52.5- and 39.2-second increase in delay, respectively. This impact would be mitigated by extending the signal cycle length from 100 to 110 seconds, which would allow for a 10-second increase in the east-west phase. As a result of this mitigation, the northbound left/through and northbound right-turn movements would still operate at LOS F but with shorter delays than projected for FNB conditions. Although there would be minor increases in delay for other movements at these locations, there would be no change in LOS as compared to FNB conditions.

During the PM peak hour, the westbound approach would continue to operate at LOS F with a 54.9-second increase in delay. This impact would be fully mitigated by transferring 3 seconds of green time from the northbound signal phase to the east-west phase. Although the westbound approach would not experience an improvement in LOS, there would be a reduction in delay as compared to FNB conditions. The northbound left/through movement would experience a deterioration in its LOS; however, the change in delay would not be adverse. All of the other movements at this location would operate at their FNB LOS with minimal changes in average vehicle delays.

NYSDOT would determine if retiming is necessary after construction of the UV Facility begins.

Virginia Road and Bronx River Parkway

The eastbound left/through movement would continue to operate at LOS F in both the AM and PM peak hours with a 10.7- and 25.7-second increase in delay, respectively. An additional impact would occur during the PM peak hour for the westbound approach, which would operate at LOS F with delays increased to well beyond 240 seconds. These impacts could be fully mitigated with signal timing adjustments. During the AM peak hour, a shift of 1 second of green time from the north-south phase to the east-west phase would be required, and a 2 second shift would be needed during the PM. With this mitigation measure, the impacted movements would improve to better than FNB conditions. All of the other vehicle movements would operate at or better than their FNB LOS with only minor changes in average vehicle delay.

Westchester County DPW would determine if retiming is necessary after construction of the UV Facility begins.

Grasslands Road (Route 100) and Virginia Road

The westbound approach would operate at LOS F with delays increased to beyond 240 seconds during the PM peak hour. This impact would be fully mitigated by restriping the westbound approach to accommodate two travel lanes, which would improve operations to better than FNB conditions.

Although an impact was not identified at this location during the AM peak hour, an analysis was conducted to determine the affect of an additional westbound lane. With this new improvement, all vehicle movements would operate below mid-LOS D, without adverse increases in delay as compared to FNB conditions.

NYCDEP would recommend the installation of a signal at this intersection. However, based on discussions that occurred between the Draft and Final EIS among NYCDEP and NYSDOT, Westchester County DPW, and local representatives, an MPT solution is more likely at this location than the mitigation measures described, because NYSDOT is planning to install a traffic signal at this intersection in the future, in coordination with planned NYSDOT design work for the corridor. NYCDEP and NYSDOT would coordinate the improvement of this intersection to ensure that adequate traffic flow would occur during the proposed project's impact period.

Grasslands Road (Route 100) and Legion Drive

The southbound left-turn movement would continue to operate at LOS F with delays increased to well beyond 240 seconds during the PM peak hour. This impact would be fully mitigated with the installation of a traffic signal at this location, which would result in LOS C or better for all of the vehicle movements and a maximum delay of 34.8 seconds per vehicle. A new traffic signal would also improve the operation of this intersection during the AM peak hour, although no impact was identified. During this period, all of the vehicle movements at this location would operate at LOS C or better with a maximum vehicle delay of 22.1 seconds.

NYCDEP would recommend the installation of a signal at this intersection. However, based on discussions that occurred between the Draft and Final EIS among NYCDEP and NYSDOT, Westchester County DPW, and local representatives, an MPT solution is more likely at this location than the mitigation measures described, because NYSDOT is planning to install a traffic signal at this intersection in the future, in coordination with planned NYSDOT design work for the corridor. NYCDEP and NYSDOT would coordinate the improvement of this intersection to ensure that adequate traffic flow would occur during the proposed project's impact period.

Grasslands Road (Route 100C) and WCC East Gate

The northbound left-turn movement would deteriorate from LOS F with 199.2 seconds of delay to LOS F with delays increased to well beyond 240 seconds during the PM peak hour. This impact would be mitigated by transferring 6 seconds of green time from the east-west phase to the northbound phase. As a result of this mitigation, the northbound left-turn movement would improve compared to FNB conditions, to a LOS F with 173.2 seconds of delay. The proposed

transfer of signal time would result in increased delays for the eastbound and westbound approaches as compared to FNB conditions. However, these increases would not result in adverse impacts.

Grasslands Road (Route 100C) and WCC West Gate

The northbound left-turn movement would deteriorate from LOS D (29.6 seconds of delay) to LOS E (38.9 seconds of delay) during the AM peak hour. During the PM peak hour, this movement would remain at LOS F, with the average vehicle delay increased by 49.2 seconds. These impacts would be mitigated with the installation of a traffic signal at this location. As a result of this mitigation, all of the vehicle movements would operate at LOS D or better compared to FNB conditions, with a maximum peak hour delay of 35.6 seconds per vehicle.

The predicted significant adverse impact at this intersection is largely due to estimated peak construction worker trips. While an MPT solution may be more suitable at this location, compared to the installation of a signal due to the short-term nature of these peak construction activities, if this scenario occurs, NYCDEP would propose a traffic signal to be installed at this location before peak construction worker activities occur in 2008. NYCDEP would submit the proposed traffic signal plan to the appropriate agency for approval. The approving agency may determine that an MPT is more suited for this location.

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Old Saw Mill River Road and the Landmark East Driveway

During the AM peak hour, southbound approach would deteriorate from LOS F with 67.7 seconds of delay, to LOS F with 174.1 seconds of delay. During the PM peak hour, southbound approach would remain at LOS F, delays increased well beyond 240 seconds. These impacts could be fully mitigated with the installation of a new traffic signal. As a result of this mitigation, all approaches would operate at LOS C or better compared to FNB conditions, with maximum delays at any given approach of 30.9 seconds during both the AM and PM peak hours.

The predicted significant adverse impact at this intersection is largely due to estimated peak construction worker trips. While an MPT solution may be more suitable at this location, compared to the installation of a signal due to the short-term nature of these peak construction activities, if this scenario occurs, NYCDEP would propose a traffic signal to be installed at this location before peak construction worker activities occur in 2008. NYCDEP would submit this solution to the approval agency for approval. If the approval agency (NYSDOT) rejects this measure, the significant adverse impact would remain unmitigated.

2008 Construction Parking Option D

The traffic analyses compared the UV Facility's 2008 Construction (Option D) conditions (the UV Facility workers parking at the Home Depot site) with a 2008 FNB Option D condition (with the Croton project under construction, and their workers parking at the Landmark property). Under these conditions in 2008, it was found that traffic from the construction of the proposed UV Facility would be anticipated to result in 24 potential significant adverse traffic

impacts, 10 during the AM peak hour, and 14 during the PM peak hour. These impacts could be fully mitigated as described below; the resulting delays and LOS for these intersections, with the proposed mitigation applied, are compared to 2008 FNB Option D and 2008 Construction Parking Option D conditions (see Table 6.1-7).

The tables showing the results of applying the mitigation measures also indicate the specific measures recommended for each location. For many of the locations, more than one measure was identified that could be implemented that would reduce delays back to or below FNB conditions. The assessment presented here relies mostly on a combination of new traffic signals, lane striping changes, and traffic signal retiming or phasing changes as the recommended measures. However, some of the measures that were investigated were more extraordinary, involving additional lane construction or street widening, to give a complete range of potential measures that could eliminate impacts.

Saw Mill River Road (Route 9A) and Tarrytown/White Plains Road (Route 119)

The eastbound left-turn movement would continue to operate at LOS F with a 21.3-second increase in delay during the AM peak hour. This impact could be fully mitigated with a revised signal timing and phasing plan. The southbound lagging phase would be reduced by eight seconds of green time. Three seconds of this time would be transferred to the eastbound leading phase, and five seconds would be transferred to the north-south phase. As a result of this mitigation, the eastbound left-turn would improve compared to FNB conditions, to a LOS F with 84.9 seconds of delay. All of the other movements at this location would operate at their FNB LOS with only minor changes in delay.

During the PM peak hour, the eastbound left-turn movement would deteriorate from LOS E to LOS F with a 3.7-second increase in delay. This impact could be fully mitigated by transferring 1 second of green time from the southbound lagging phase to the eastbound leading phase. As a result of this mitigation, the eastbound left-turn would improve compared to FNB conditions, to LOS E with 70.5 seconds of delay. All of the other movements at this location would operate at their FNB LOS with only minor changes in delay.

NYSDOT would determine if retiming is necessary after construction of the proposed UV Facility begins.

TABLE 6.1-7. PURE NO BUILD + CROTON VS. CAT DEL, PARKING AT LANDMARK(CROTON) AND HOME DEPOT(CAT DEL) LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS: 2008 NO BUILD, CONSTRUCTION (OPTION D) AND MITIGATION CONDITIONS

			AM Peak Hour											
				2008 No Build			2008 Cat Del Build			2008 Mitigation				
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (1)
Saw Mill River Road (Route 9A) @ Tarrytown-White Plains Road (Route 119)	15	Eastbound	L	1.05	92.2	F	1.12	113.5 +	F	L	1.03	84.9	F	Signal Retiming and change of phase plan: split the timing of southbound lagging phase to eastbound leading phase (3 secs) and northbound/southbound phase (5 secs). NYSDOT will detemine if retiming is necessary after construction of the UV Facilit begins.
			TR	0.38	14.5	B	0.38	14.5	B	TR	0.37	12.9	B	
		Westbound	L	0.17	22.3	C	0.17	22.3	C	L	0.17	22.3	C	
			TR	0.31	23.6	C	0.31	23.6	C	TR	0.31	23.6	C	
		Northbound	L	0.39	34.3	C	0.39	34.4	C	L	0.34	30.4	C	
			TR	0.67	42.7	D	0.72	44.9	D	TR	0.62	37.0	D	
		Southbound	L	0.27	35.4	D	0.29	36.6	D	L	0.37	38.2	D	
			T	0.43	35.1	D	0.44	35.3	D	T	0.52	40.0	D	
			R	0.23	22.1	C	0.24	22.2	C	R	0.24	22.2	C	
		Int.			37.4	D		42.3	D			35.8	D	
Saw Mill River Road (Route 9A) @ Ramada Inn/Broadway Plaza Entrance	17	Northbound	L	0.16	10.5	B	0.16	10.7	B	L	0.34	4.8	A	Propose to be signalized. MPT Plan may be more suitable.
										TR	0.35	4.5	A	
		Southbound	LT	0.01	9.0	A	0.02	9.3	A	LTR	0.40	4.7	A	
		Eastbound	L	0.02	43.3	E	0.02	48.4 +	E	L	0.01	20.9	C	
			T	0.03	51.8	F	0.03	60.4 +	F	T	0.01	20.9	C	
		Westbound	LT	0.14	48.3	E	0.17	59.3 +	F	Def	0.06	21.2	C	
			TR	0.01	10.9	B	0.01	11.3	B	TR	0.03	21.0	C	
		Int.			Unsignalized			Unsignalized				4.8	A	
Saw Mill River Road (Route 9A) @ Grasslands Road (Route 100C)	19A	Northbound	L	*	**	F	*	** +	F	L	0.51	32.0	C	Propose to be signalized. MPT Plan may be more suitable.
			R	0.22	17.2	C	0.24	19.0	C	R	0.22	28.9	C	
		Eastbound								T	0.77	13.7	B	
										R	0.21	5.9	A	
		Westbound	L	0.15	11.7	B	0.16	12.2	B	L	0.33	7.0	A	
										T	0.59	9.0	A	
		Int.			Unsignalized			Unsignalized				13.0	B	
Grasslands Road (Route 100C) @ Saw Mill River Road (Route 9A) NB Ramp	19B	Northbound	LT	0.60	73.7	F	0.99	202.6 +	F	LTR	0.23	30.2	C	Propose to be signalized. MPT Plan may be more suitable.
			TR	0.07	14.3	B	0.07	14.3	B					
		Eastbound	L	0.29	12.9	B	0.43	14.8	B	L	0.73	26.7	C	
										T	0.59	6.0	A	
		Westbound								TR	0.97	36.1	D	
		Int.			Unsignalized			Unsignalized				24.2	C	

Notes:

L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates significant impacts.

" * " indicates a v/c ratio greater than 1.50; " ** " indicates a calculated delay greater than 240 seconds.

(1) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

TABLE 6.1-7. PURE NO BUILD + CROTON VS. CAT DEL, PARKING AT LANDMARK(CROTON) AND HOME DEPOT(CAT DEL) LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS: 2008 NO BUILD, CONSTRUCTION (OPTION D) AND MITIGATION CONDITIONS

			AM Peak Hour											
				2008 No Build			2008 Cat Del Build			2008 Mitigation				
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (1)
Grasslands Road (Route 100C) @	26	Eastbound	TR	0.28	7.6	A	0.29	7.6	A	TR	0.29	8.1	A	Signal Retiming: shift 1 second of green time from eastbound/westbound phase to southbound phase. NYSDOT will detemine if retiming is necessary after construction of the UV Facility begins.
Sprain Brook Parkway SB Ramp		Westbound	T	0.41	8.5	A	0.48	9.0	A	T	0.48	9.6	A	
		Southbound	L	0.55	34.0	C	0.55	34.0	C	L	0.52	32.8	C	
			R	0.62	36.3	D	0.82	48.4 +	D	R	0.79	44.4	D	
		Int.			14.5	B		16.8	B			16.5	B	
Grasslands Road (Route 100C) @	27	Eastbound	L	0.12	15.0	B	0.14	15.2	B	L	0.18	20.1	C	Signal Retiming: shift 8 seconds of green time from eastbound/westbound phase to northoubnd phase. NYSDOT will detemine if retiming is necessary after construction of the UV Facility begins.
Sprain Brook Parkway NB Ramp	30		T	0.50	18.0	B	0.51	18.1	B	T	0.59	24.2	C	
		Westbound	TR	0.49	24.9	C	0.51	25.1	C	TR	0.62	32.3	C	
		Northbound	LT	1.39	216.3	F	*	** +	F	LT	1.38	208.9	F	
			R	1.02	74.8	E	1.02	74.8	E	R	0.86	36.5	D	
		Int.			90.2	F		132.9	F			89.6	F	
Virginia Road @	31	Eastbound	LT	1.12	129.4	F	1.13	130.6 +	F	LT	1.08	114.8	F	Signal Retiming: Shift 1 second of green time from northbound and southbound phase to eastbound and westbound phase. The Westchester County DPW will determine if retiming is necessary.
Bronx River Parkway			R	0.21	19.6	B	0.21	19.6	B	R	0.21	19.0	B	
		Westbound	LTR	0.40	34.7	C	0.40	34.7	C	LTR	0.38	33.7	C	
		Northbound	L	0.05	46.3	D	0.06	46.4	D	L	0.06	46.4	D	
			TR	0.26	20.1	C	0.26	20.1	C	TR	0.27	20.7	C	
		Southbound	L	1.10	141.5	F	1.10	141.5	F	L	1.10	141.5	F	
			T	0.70	27.3	C	0.70	27.3	C	T	0.71	28.3	C	
		Int.			54.3	D		54.5	D			52.4	D	
Grasslands Road (Route 100) @	32	Southbound	LT	0.23	8.4	A	0.23	8.4	A	LT	0.23	8.4	A	MPT Plan is likely; NYSDOT is planning to signalize this intersection.
Virginia Road		Westbound	LR	0.56	16.9	C	0.56	17.1	C	L	0.18	26.9	D	
		Int.		Unsignalized			Unsignalized			R	0.38	11.5	B	
Grasslands Road (Route 100) @	33	Southbound	L	0.43	30.6	D	0.43	31.0	D	L	0.32	21.1	C	MPT Plan is likely; NYSDOT is planning to signalize this intersection.
Legion Drive			R	0.20	12.3	B	0.21	12.4	B	R	0.45	22.2	C	
		Eastbound	LT	0.07	8.6	A	0.07	8.6	A	LT	0.51	6.4	A	
		Westbound								T	0.41	5.7	A	
										R	0.03	0.0	A	
		Int.		Unsignalized			Unsignalized					8.9	A	
Old Saw Mill River Road @	47	Northbound	LTR	0.16	18.7	C	0.18	20.5	C	LTR	0.23	32.1	C	Propose to be signalized. MPT Plan may be more suitable.
Landmark East Driveway		Southbound	LTR	0.96	**	F	1.18	** +	F	LTR	0.15	31.6	C	
		Eastbound	LTR	0.02	8.7	A	0.02	8.8	A	LTR	0.69	6.4	A	
		Westbound	LTR	0.34	12.7	B	0.36	13.5	B	LTR	1.00	42.6	D	
		Int.		Unsignalized			Unsignalized					22.6	C	

Notes:

L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates significant impacts.

" * " indicates a v/c ratio greater than 1.50; " ** " indicates a calculated delay greater than 240 seconds.

(1) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

TABLE 6.1-7. PURE NO BUILD + CROTON VS. CAT DEL, PARKING AT LANDMARK(CROTON) AND HOME DEPOT(CAT DEL) LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS: 2008 NO BUILD, CONSTRUCTION (OPTION D) AND MITIGATION CONDITIONS

			PM Peak Hour											
				2008 No Build			2008 Cat Del Build			2008 Mitigation				
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (1)
Saw Mill River Road (Route 9A) @ Tarrytown-White Plains Road (Route 119)	15	Eastbound	L	1.01	79.6	E	1.02	83.3 +	F	L	0.98	70.5	E	Signal Retiming: shift 1 second of green time from southbound lagging phase to eastbound leading phase. NYSDOT will determine if retiming is necessary after construction of the UV Facility begins.
			TR	0.46	20.2	C	0.46	20.2	C	TR	0.45	19.5	B	
		Westbound	L	0.42	34.4	C	0.42	34.4	C	L	0.42	34.4	C	
			TR	0.89	49.1	D	0.89	49.7	D	TR	0.89	49.7	D	
		Northbound	L	0.32	25.5	C	0.34	25.8	C	L	0.34	25.9	C	
			TR	0.83	41.6	D	0.83	42.1	D	TR	0.83	42.1	D	
		Southbound	L	0.56	35.8	D	0.58	36.5	D	L	0.60	38.3	D	
			T	0.31	23.4	C	0.34	23.8	C	T	0.35	24.5	C	
			R	0.41	11.2	B	0.43	11.3	B	R	0.43	11.3	B	
		Int.			35.3	D		35.9	D			34.5	C	
Saw Mill River Road (Route 9A) @ Ramada Inn/Broadway Plaza Entrance	17	Northbound	L	0.16	10.4	B	0.17	10.9	B	L	0.36	5.0	A	Propose to be signalized. MPT Plan may be more suitable.
										TR	0.39	4.6	A	
		Southbound	LT	0.01	9.5	A	0.01	9.6	A	LTR	0.44	4.9	A	
		Eastbound	L	0.01	51.8	F	0.02	60.4 +	F	L	0.00	20.9	C	
			T	0.08	84.9	F	0.10	102.1 +	F	T	0.02	20.9	C	
		Westbound	LT	0.12	60.3	F	0.14	69.1 +	F	LTR	0.04	21.0	C	
			TR	0.03	17.5	C	0.03	19.0	C					
		Int.			Unsignalized			Unsignalized				5.0	A	
Saw Mill River Road (Route 9A) @ Grasslands Road (Route 100C)	19A	Northbound	L	*	**	F	*	** +	F	L	0.58	28.3	C	Propose to be signalized. MPT Plan may be more suitable.
			R	0.48	29.8	D	0.48	30.1	D	R	0.57	28.2	C	
		Eastbound								T	0.87	14.2	B	
										R	0.30	3.6	A	
		Westbound	L	0.28	16.5	C	0.28	16.6	C	L	0.50	5.8	A	
										T	0.45	4.2	A	
		Int.			Unsignalized			Unsignalized				11.4	B	
Grasslands Road (Route 100C) @ Saw Mill River Road (Route 9A) NB Ramp	19B	Northbound	LT	0.10	39.6	E	0.10	40.3	E	LTR	0.19	21.7	C	Propose to be signalized. MPT Plan may be more suitable.
			TR	0.26	21.2	C	0.26	21.2	C					
		Eastbound	L	0.24	11.2	B	0.25	11.3	B	L	0.61	9.2	A	
										T	0.79	10.7	B	
		Westbound								TR	0.76	9.8	A	
		Int.			Unsignalized			Unsignalized				10.7	B	
Saw Mill River Road (Route 9A) @ Dana Road	20	Eastbound	LT	0.29	27.5	C	0.99	81.2 +	F	LT	0.78	44.8	D	New signal timing plan:
			R	0.24	26.9	C	0.61	32.2	C	R	0.36	23.2	C	Cycle length = 120 secs G/Y/R
		Westbound	L	0.50	29.8	C	1.50	** +	F	L	0.52	41.1	D	EB 16/4/1
			TR	0.41	28.5	C	0.48	29.3	C	TR	0.47	38.5	D	EB/WB 20/3/2
		Northbound	L	0.39	32.7	C	0.41	32.9	C	L	0.45	36.7	D	WB 6/3/2
			TR	0.89	35.9	D	0.91	37.4	D	TR	0.90	43.7	D	NB/SB 47/4/1
		Southbound	L	0.16	30.8	C	0.18	31.0	C	L	0.26	39.9	D	NB-L/SB-L/EB-R 6/4/1
			TR	0.74	27.8	C	0.74	27.8	C	TR	0.73	33.6	C	(Same mitigation measure with and without Home Depot, See Technical Appendix)
		Int.			31.5	C		53.0	D			38.5	D	To be reviewed and implemented if requested by the approving agency.

Notes:

L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates significant impacts.

" * " indicates a v/c ratio greater than 1.50; " ** " indicates a calculated delay greater than 240 seconds.

(1) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

TABLE 6.1-7. PURE NO BUILD + CROTON VS. CAT DEL, PARKING AT LANDMARK(CROTON) AND HOME DEPOT(CAT DEL) LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS: 2008 NO BUILD, CONSTRUCTION (OPTION D) AND MITIGATION CONDITIONS

			PM Peak Hour										
			2008 No Build				2008 Cat Del Build			2008 Mitigation			
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (1)
Old Saw Mill River Road @	21	Eastbound	LT	1.07	79.8	E	1.09	86.2 +	F	LT	1.05	75.0	E	Signal Retiming: shift 1 second of green time from southbound phase to eastbound/westbound phase. NYSDOT will determine if retiming is necessary after construction of the UV Facilit begins.
Saw Mill River Parkway SB Off Ramp		Westbound	TR	0.49	9.8	A	0.54	10.3	B	TR	0.53	9.7	A	
		Southbound	L	0.29	23.1	C	0.29	23.1	C	L	0.30	24.0	C	
			LR	0.21	22.6	C	0.21	22.6	C	LR	0.22	23.4	C	
		Int.			35.8	D		37.1	D			33.1	C	
Grasslands Road (Route 100C) @	27	Eastbound	L	0.87	41.3	D	1.11	104.4 +	F	L	0.85	42.2	D	Signal Retiming and change of phase plan: switch eastbound leading phase to lagging phase and shift 3 seconds of green time from northbound phase to eastbound/westbound phase. NYSDOT will determine if retiming is necessary after construction of the UV Facility begins.
Sprain Brook Parkway NB Ramp	30		T	0.34	9.0	A	0.34	9.1	A	T	0.32	7.6	A	
		Westbound	TR	1.07	69.5	E	1.07	71.4	E	TR	1.00	49.4	D	
		Northbound	LT	0.71	30.2	C	0.73	30.8	C	LT	0.84	41.5	D	
			R	0.35	23.1	C	0.35	23.1	C	R	0.41	25.7	C	
		Int.			44.7	D		53.2	D			36.4	D	
Virginia Road @	31	Eastbound	LT	1.16	142.8	F	1.17	144.9 +	F	LT	1.13	127.3	F	Signal Retiming: Shift 1 second of green time from northbound and southbound phase to eastbound and westbound phase. The Westchester County DPW will determine if retiming is necessary.
Bronx River Parkway			R	0.39	34.6	C	0.40	34.7	C	R	0.39	33.8	C	
		Westbound	LTR	1.27	189.6	F	1.28	193.5 +	F	LTR	1.17	149.5	F	
		Northbound	L	0.06	10.9	B	0.06	10.9	B	L	0.06	11.4	B	
			TR	0.62	25.3	C	0.62	25.3	C	TR	0.63	26.2	C	
		Southbound	L	0.13	11.7	B	0.13	11.7	B	L	0.13	12.2	B	
			T	0.59	24.7	C	0.59	24.7	C	T	0.60	25.5	C	
		Int.			62.7	E		63.5	E			56.0	E	
Grasslands Road (Route 100) @	32	Southbound	LT	0.37	10.4	B	0.37	10.4	B	LT	0.37	10.4	B	MPT Plan is likely; NYSDOT is planning to signalize this intersection.
Virginia Road		Westbound	LR	1.25	162.4	F	1.26	166.5 +	F	L	0.65	60.1	F	
		Int.			Unsignalized			Unsignalized		R	0.61	19.6	C	
Grasslands Road (Route 100) @	33	Southbound	L	1.29	220.5	F	1.31	227.1 +	F	L	0.66	27.1	C	MPT Plan is likely; NYSDOT is planning to signalize this intersection.
Legion Drive			R	0.47	19.7	C	0.47	19.7	C	R	0.73	31.4	C	
		Eastbound	LT	0.24	10.7	B	0.24	10.7	B	LT	0.88	19.8	B	
		Westbound								T	0.51	6.3	A	
										R	0.18	0.1	A	
		Int.			Unsignalized			Unsignalized				15.5	B	
Old Saw Mill River Road @	47	Northbound	LTR	0.69	33.7	D	0.71	35.9	E	LTR	0.40	18.8	B	Propose to be signalized. MPT Plan may be more suitable.
Landmark East Driveway		Southbound	LTR	*	**	F	*	** +	F	LTR	0.69	26.3	C	
		Eastbound	LTR	0.01	8.7	A	0.01	9.0	A	LTR	0.73	18.5	B	
		Westbound	LTR	0.04	9.3	A	0.04	9.3	A	LTR	0.70	17.6	B	
		Int.			Unsignalized			Unsignalized				19.2	B	

Notes:

L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates significant impacts.

" * " indicates a v/c ratio greater than 1.50; " ** " indicates a calculated delay greater than 240 seconds.

(1) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

Saw Mill River Road (Route 9A) and Ramada Inn/Broadway Plaza

During the AM peak hour, the eastbound left-turn movement would deteriorate from LOS E with 43.3 seconds of delay to LOS F with 48.4 seconds of delay; the eastbound through movement would continue to operate at LOS F with an 8.6-second increase in delay; and the westbound left/through movement would deteriorate from LOS E to LOS F with an increase in delay of 11.0-seconds. This location could be fully mitigated with the installation of a traffic signal, which would result in a LOS C or better for all of the vehicle movements.

During the PM peak hour, the eastbound left-turn, eastbound through, and the westbound left/through movements would all continue to operate at LOS F, with 8.6-, 17.2-, and 8.8-second increases in delay, respectively. As with the AM peak hour, this location would be fully mitigated with the installation of a traffic signal. This mitigation would result in a LOS C or better for all of the vehicle movements at this location.

The predicted significant adverse impact at this intersection is largely due to estimated peak construction worker trips. While an MPT solution may be more suitable at this location, compared to the installation of a signal due to the short-term nature of these peak construction activities, if this scenario occurs, NYCDEP would propose a traffic signal to be installed at this location before peak construction worker activities occur in 2008. NYCDEP would submit the proposed traffic signal plan to the appropriate agency for approval. The approving agency may determine that an MPT is more suited for this location.

Saw Mill River Road (Route 9A) and Grasslands Road (Route 100C)

During the AM and PM peak hours, the northbound left-turn movement would continue to operate at LOS F, both with delays increased to well beyond 240 seconds. The installation of a traffic signal at this location could fully mitigate both the AM and PM peak hour impacts such that all of the movements would operate at LOS C or better.

The predicted significant adverse impact at this intersection is largely due to estimated peak construction worker trips. While an MPT solution may be more suitable at this location, compared to the installation of a signal due to the short-term nature of these peak construction activities, if this scenario occurs, NYCDEP would propose a traffic signal to be installed at this location before peak construction worker activities occur in 2008. NYCDEP would submit the proposed traffic signal plan to the appropriate agency for approval. The approving agency may determine that an MPT is more suited for this location.

Grasslands Road (Route 100C) and Saw Mill River Road (Route 9A) Northbound Ramp

The northbound left/through movement would continue to operate at LOS F, with delays increasing by 128.9 seconds during the AM peak hour. While this intersection was not predicted to experience any impacts during the PM peak hour, the effect of installing a traffic signal at this location was evaluated. This location could be fully mitigated with the installation of a traffic

signal. As a result of this mitigation compared to FNB conditions, all of the movements would operate below mid-LOS D, or better during AM peak hour, and at LOS C or better during the PM peak hour.

The predicted significant adverse impact at this intersection is largely due to estimated peak construction worker trips. While an MPT solution may be more suitable at this location, compared to the installation of a signal due to the short-term nature of these peak construction activities, if this scenario occurs, NYCDEP would propose a traffic signal to be installed at this location before peak construction worker activities occur in 2008. NYCDEP would submit the proposed traffic signal plan to the appropriate agency for approval. The approving agency may determine that an MPT is more suited for this location.

Saw Mill River Road (Route 9A) and Dana Road

During the PM peak hour, the eastbound left/through movement would deteriorate from LOS C with 27.5 seconds of delay to LOS F with 81.2 seconds of delay, and the westbound left-turn movement would deteriorate from LOS C to LOS F with delays increased to well beyond 240 seconds. This location could be fully mitigated with the implementation of a new signal phasing plan, as outlined in Table 6.1-7. This new phasing plan would result in all movements operating below mid-LOS D during the PM peak hour.

Based on discussions that occurred between the Draft and Final EIS among NYCDEP and NYSDOT, Westchester County DPW, and/or local representatives, either a signal phasing plan or an MPT solution are more likely at this location than the mitigation measures described.

Old Saw Mill River Road and Saw Mill River Parkway Southbound Off-Ramp

The eastbound left/through movement at this location would deteriorate from LOS E to LOS F with a 6.4-second increase in delay during the PM peak hour. This impact would be fully mitigated with the transfer of 1 second of green time from the southbound signal phase to the east-west phase. As a result of this mitigation, the eastbound left/through movement would improve compared to FNB conditions, to a LOS E with 75.0 seconds of delay, and all of the other movements at this location would operate at LOS C or better.

NYSDOT would determine if retiming is necessary after construction of the proposed UV Facility begins.

Grasslands Road (Route 100C) and Sprain Brook Parkway Southbound Ramp

The southbound right-turn movement would continue to operate at LOS D with a 12.1-second increase in delay during the AM peak hour. This impact could be mitigated by transferring one second of green time from the east-west signal phase to the southbound signal phase, which would improve the southbound right-turn movement to below mid -LOS D, with 44.4 seconds of delay. This mitigation would not affect the LOS of the other movements at this location.

NYSDOT would determine if retiming is necessary after construction of the proposed UV Facility begins.

Grasslands Road (Route 100C) and Sprain Brook Parkway Northbound Ramp

During the AM peak hour, the northbound left/through movement would continue to operate at LOS F, with delays increased to well beyond 240 seconds. This location would be mitigated by transferring eight seconds of green time from the east-west signal phase to the northbound signal phase. As a result of this mitigation, the northbound left/through movement would improve compared to FNB conditions, to LOS F with 208.9 seconds of delay. All of the other movements at this location would operate below mid-LOS D or better.

The eastbound left-turn movement would deteriorate from LOS D with 41.3 seconds of delay to LOS F with 104.4 seconds of delay during the PM peak hour. This impact could be fully mitigated with a revised signal phasing and timing plan. The eastbound leading phase would be made a lagging phase, and 3 seconds of green time would be shifted from the northbound phase to the east-west phase. As a result of this mitigation, all of the intersection movements would operate at LOS D or better compared to FNB conditions.

NYSDOT would determine if retiming is necessary after construction of the proposed UV Facility begins.

Virginia Road and Bronx River Parkway

The eastbound left/through movement would continue to operate at LOS F with 1.2-second and 2.1-second increases in delay during the AM and PM peak hours, respectively. During the PM peak hour, the westbound approach would also continue to operate at LOS F with a 3.9 second increase in delay. During both peak hours, this location could be fully mitigated with the transfer of 1 second of green time from the north-south signal phase to the east-west phase. As a result of this mitigation, all of the vehicle movements would operate at their FNB LOS with only minor changes in delay.

Westchester County DPW would determine if retiming is necessary after construction of the proposed UV Facility begins.

Grasslands Road (Route 100) and Virginia Road

During the PM peak hour, the westbound approach would continue to operate at LOS F with a 4.1-second increase in delay. This impact could be mitigated by restriping the westbound approach to accommodate an additional travel lane. As a result of this mitigation, the westbound left-turn movement would improve compared to FNB conditions, to LOS F with 60.1 seconds of delay and the westbound right-turn movement would improve compared to FNB conditions, to LOS C with 19.6 seconds of delay.

An analysis was conducted to determine the effects of this improvement to operations at this location during the AM peak hour. All of the vehicle movements at this location would operate below mid-LOS D or better with this improvement.

NYCDEP would recommend the installation of a signal at this intersection. However, based on discussions that occurred between the Draft and Final EIS among NYCDEP and NYSDOT, Westchester County DPW, and local representatives, an MPT solution is more likely at this location than the mitigation measures described, because NYSDOT is planning to install a traffic signal at this intersection in the future, in coordination with planned NYSDOT design work for the corridor. NYCDEP and NYSDOT would coordinate the improvement of this intersection to ensure that adequate traffic flow would occur during the proposed project's impact period.

Grasslands Road (Route 100) and Legion Drive

The southbound left-turn movement would deteriorate from LOS F with 220.5 seconds of delay to LOS F with 227.1 seconds of delay during the PM peak hour. This location could be fully mitigated with the installation of a traffic signal. As a result of this mitigation compared to FNB conditions, all of the vehicle movements would operate at LOS C or better during the PM peak hour.

Although no impacts were identified at this location during the AM peak hour, an analysis was conducted to test the effects of a traffic signal to vehicle operations. A signal at this location would improve operations for some movements but would increase delays for others. However, all of the vehicle movements would operate at LOS C or better during the AM peak hour.

NYCDEP would recommend the installation of a signal at this intersection. However, based on discussions that occurred between the Draft and Final EIS among NYCDEP and NYSDOT, Westchester County DPW, and local representatives, an MPT solution is more likely at this location than the mitigation measures described, because NYSDOT is planning to install a traffic signal at this intersection in the future, in coordination with planned NYSDOT design work for the corridor. NYCDEP and NYSDOT would coordinate the improvement of this intersection to ensure that adequate traffic flow would occur during the proposed project's impact period.

Old Saw Mill River Road and the Landmark East Driveway

During the AM and PM peak hours, the southbound approach would continue operating at LOS F, with delays increased well beyond 240 seconds. These impacts could be fully mitigated with the installation of a new traffic signal. As a result of this mitigation compared to FNB conditions, all approaches would operate below mid-LOS D during the AM peak hour, with maximum delays at any given approach of 42.6 seconds, and all approaches would operate at LOS C or better with maximum delays of 26.3 seconds during the PM peak hour.

The predicted significant adverse impact at this intersection is largely due to estimated peak construction worker trips. While an MPT solution may be more suitable at this location, compared to the installation of a signal due to the short-term nature of these peak construction activities, if this scenario occurs, NYCDEP would propose a traffic signal to be installed at this

location before peak construction worker activities occur in 2008. NYCDEP would submit this solution to the approval agency for approval. If the approval agency (NYSDOT) rejects this measure, the significant adverse impact would remain unmitigated.

6.1.4. Air Quality

2008 Construction Conditions

Since the proposed traffic mitigation measures would largely improve traffic level of service when compared to the Future with the Project without mitigation, localized air quality impacts from the proposed UV Facility with the traffic mitigation measures would be comparable to or less than those projected without the mitigation. However, in order to determine the potential air quality impacts that may result from the emplacement of new traffic signals (as part of the potential traffic mitigation in 2008), an assessment of the proposed traffic signal at the intersection of Saw Mill River Road (Route 9A) and Grasslands Road (Route 100C) was performed for CO. Particulate matter impacts in 2008 are anticipated to be minimal at this location, since the project's induced diesel truck traffic is less in this time period, compared to the detailed analysis that were performed to assess impacts from the filling of the Aerators in 2006. The results of this analysis indicated that there would be no significant adverse air quality impacts with the proposed UV Facility and the proposed traffic mitigation. Results for the Future With the Project with the Croton project at the Eastview Site during the peak year for construction-related traffic (2008) are presented in Tables 6.1-8 to 6.1-13.

Carbon Monoxide. As indicated in Tables 6.1-8 to 6.1-10, the predicted concentrations of CO for the peak year for construction-related traffic (2008) with mitigation at the intersection of Route 100C and Route 9A, for each separate parking option, are below the corresponding ambient air quality standards. Both the 1-hour and 8-hour averaging periods for the modeled intersection are in compliance with the standards.

TABLE 6.1-8: PREDICTED CO 1-HOUR AND 8-HOUR CO CONCENTRATIONS IN THE FUTURE WITH THE PROJECT WITH CROTON PROJECT AT EASTVIEW SITE WITH MITIGATION
LANDMARK PARKING OPTION A

Intersection	Averaging Period	Ambient AQ Background	Model Results		Total Predicted Conc.[1a]		Standard
			AM	PM	AM	PM	
Peak Traffic Year 2008							
Route 100C at Route 9A with mitigation	1-hour	5.9	1.4	2.0	7.3	7.9	35
	8-hour	2.0	1.0	1.4	3.0	3.4	9

Notes: a. A[1]Ambient AQ Background + Model Results = Total Predicted Concentration.

TABLE 6.1-9: PREDICTED CO 1-HOUR AND 8-HOUR CO CONCENTRATIONS IN THE FUTURE WITH THE PROJECT WITH CROTON PROJECT AT EASTVIEW SITE WITH MITIGATION
WCC PARKING/WCC AND LANDMARK SPLIT PARKING (OPTIONS B AND C)

Intersection	Averaging Period	Ambient AQ Background	Model Results		Total Predicted Conc.[1a]		Standard
			AM	PM	AM	PM	
Peak Traffic Year 2008							
Route 100C at Route 9A with mitigation	1-hour	5.9	1.4	1.7	7.3	7.6	35
	8-hour	2.0	1.0	1.2	3.0	3.2	9

Notes: a. A[1]Ambient AQ Background + Model Results = Total Predicted Concentration.

TABLE 6.1-10: PREDICTED CO 1-HOUR AND 8-HOUR CO CONCENTRATIONS IN THE FUTURE WITH THE PROJECT WITH CROTON PROJECT AT EASTVIEW SITE WITH MITIGATION
LANDMARK AND HOME DEPOT PARKING (OPTION D)

Intersection	Averaging Period	Ambient AQ Background	Model Results		Total Predicted Conc.[1a]		Standard
			AM	PM	AM	PM	
Peak Traffic Year 2008							
Route 100C at Route 9A with mitigation	1-hour	5.9	1.4	1.8	7.3	7.7	35
	8-hour	2.0	1.0	1.3	3.0	3.3	9

Notes: a. A[1]Ambient AQ Background + Model Results = Total Predicted Concentration.

As indicated in Tables 6.1-11 to 6.1-13, the CEQR *de minimis* criteria for the 8-hour period for each separate parking option would not be exceeded. Therefore, the proposed project would not result in significant CO impacts in the Future With the Project and with~~out~~ the Croton project at the Eastview Site.

TABLE 6.1-11: 8-HOUR CO CONCENTRATIONS AND CEQR DE MINIMIS CRITERIA IN THE FUTURE WITH THE PROJECT WITHOUT CROTON PROJECT AT EASTVIEW SITE WITH MITIGATION
LANDMARK PARKING OPTION A

Intersection	Averaging Period	No Build Conc.[a]		Build Conc.[a]		Project Increment [b]		*De Minimis* Criteria[c]	
		AM	PM	AM	PM	AM	PM	AM	PM
Peak Year 2008									
Route 100C at Route 9A with mitigation	8-hour	2.8	3.1	3.0	3.4	0.2	0.3	3.1	2.9

Notes:
[a] Includes Background. No build is without the UV Facility but with the Croton project
[b] the project increment is defined as the project build value minus the no build value. The project increment is below the *de minimus* criteria.
[c] See Section 3.10, Data Collection and Impact Methodologies, Air Quality, for details on how this value is calculated.

TABLE 6.1-12: 8-HOUR CO CONCENTRATIONS AND CEQR DE MINIMIS CRITERIA IN THE FUTURE WITH THE PROJECT WITH CROTON PROJECT AT EASTVIEW SITE WITH MITIGATION
WCC PARKING/WCC AND LANDMARK SPLIT PARKING (OPTIONS B AND C)

Intersection	Averaging Period	No Build Conc.[a]		Build Conc.[a]		Project Increment[b]		*De Minimis* Criteria[c]	
		AM	PM	AM	PM	AM	PM	AM	PM
Peak Year 2008									
Route 100C at Route 9A with mitigation	8-hour	2.7	2.9	3.0	3.2	0.3	0.3	3.1	3.0

Notes:
[a] Includes Background. No build is without the UV Facility but with Croton project
[b] the project increment is defined as the project build value minus the no build value. The project increment is below the *de minimus* criteria.
[c] See Section 3.10, Data Collection and Impact Methodologies, Air Quality, for details on how this value is calculated.

TABLE 6.1-13: 8-HOUR CO CONCENTRATIONS AND CEQR DE MINIMIS CRITERIA IN THE FUTURE WITH THE PROJECT WITH CROTON PROJECT AT EASTVIEW SITE WITH MITIGATION
LANDMARK AND HOME DEPOT PARKING (OPTION D)

Intersection	Averaging Period	No Build Conc.[a]		Build Conc.[a]		Project Increment[b]		*De Minimis* Criteria[c]	
		AM	PM	AM	PM	AM	PM	AM	PM
Peak Year 2008									
Route 100C at Route 9A with mitigation	8-hour	2.8	3.1	3.0	3.3	0.2	0.2	3.1	2.9

Notes:
[a] Includes Background. No build is without the UV Facility but with Croton project
[b] the project increment is defined as the project build value minus the no build value. The project increment is below the *de minimus* criteria.
[c] See Section 3.10, Data Collection and Impact Methodologies, Air Quality, for details on how this value is calculated.

2010 Operational Conditions

As part of the proposed traffic mitigation measures for the operational scenario in 2010, a traffic signal at the intersection of Saw Mill River Road (Route 9A) and Grasslands Road (Route 100C) is proposed. Potential carbon monoxide impacts with a traffic street light at this intersection are presented above. As indicated in Tables 6.1-8 to 6.1-13, the concentrations of CO would be the below corresponding ambient air quality standards and the incremental CO concentrations during construction in 2008 would be well below the CEQR *de minimis* criteria. In comparison to the construction conditions in 2008, the predicted air quality impacts in 2010 with the proposed traffic mitigation at this intersection would be anticipated to be the same or less than that projected for the 2008 construction impact assessment. Therefore, no significant adverse mobile source air quality impacts are anticipated to occur in 2010 with the proposed traffic signal at this intersection.

6.1.5. Noise

The potential for temporary adverse noise impacts would be limited to the construction period for the proposed UV Facility, with or without the Croton project. The impacts would occur sporadically at several receptors during the early stages of construction, when site preparation is undertaken, involving outdoor activities such as clearing, excavation, and foundation work. In addition, predicted exceedances of the Town of Mount Pleasant Code construction limits were predicted at three locations (County Laboratory, Penitentiary, and the Juvenile Detention Center) in the future with the Croton project. Measures to ensure compliance with the CEQR impact criteria could include the erection of temporary noise barriers, fitting of air compressors and cranes with silencers, or the use of walled enclosures around noisy construction activities.

6.1.6. Historic Resources

The Hammond House, a historic resource located on the Eastview Site, is listed on the State and National Registers of Historic Places and is also on the Westchester County Inventory of Historic Places. As noted in Section 4.12, Historic and Archaeological Resources, NYCDEP may choose in the future to relocate the Hammond House from the Eastview Site to another location as part of the proposed UV Facility project due to security concerns associated with a private residence being located on the same site as critical components of the City's water system. As shown in Figure 7-8, Alternatives, which shows the NYCDEP's comprehensive long-term plan for the site, the Hammond House would be an isolated residential use surrounded by NYCDEP's water supply facilities.

If the Hammond House remains on the Eastview Site, construction of the proposed project would not have significant adverse physical impacts on the historic resource from vibrations, subsidence, or other accidental construction damage, nor would it have any significant adverse visual or contextual impacts on the house during operation of the UV Facility.

However, the possible relocation of the Hammond House, if pursued by NYCDEP as part of the proposed project, could have potential significant adverse physical and contextual impacts on the resource. To avoid or minimize such impacts, NYCDEP would develop a relocation and preservation plan in consultation with the New York State Office of Parks, Recreation and Historic Preservation (serving as the State Historic Preservation Office [SHPO]), and other applicable agencies in accordance with Section 106 of the National Historic Preservation Act of 1966. A Memorandum of Agreement between NYCDEP and SHPO, and the federal Advisory Council on Historic Preservation, if necessary, would stipulate items to be addressed in the plan. It is anticipated that plan components would include the selection of an appropriate site for the Hammond House, preparation of Historic American Buildings Survey documentation of the house and current site, preparation of a structural analysis of the house and a detailed relocation protocol, and provisions for future maintenance and preservation.

6.1.7. Natural Resources

This section presents the proposed mitigation for the natural resources impacts associated with the UV Facility with and without the Croton Project located at the Eastview Site. This section is organized by presenting the mitigation requirements (in accordance with the CEQR Technical Manual Guidelines) and NYCDEP's mitigation objectives followed by a summary of the natural resources impacts for both project scenarios. The proposed mitigation is presented for the following categories: reforestation, habitat replacement, and wetland enhancement/creation. All currently viable on-site and off-site options for mitigation are presented and discussed in terms of meeting NYCDEP's mitigation objectives. For the Eastview Site the amount of on-site mitigation and habitat replacement would depend on the development scenario. Under the UV Facility only scenario, some habitat replacement, in the form of a created shrubland/grassland habitat would be accomplished on-site. Under a scenario where both the Croton and the UV projects coexist at the Eastview Site, the opportunity for on-site natural resources mitigation is diminished. It is anticipated that under both the UV Facility only and the UV Facility with the Croton project scenarios at the Eastview Site, mitigation for the loss of trees and forested habitat would be accomplished through off-site reforestation. This is primarily due to future possible uses of the Eastview Site and security concerns. Wetland mitigation for both site development scenarios would occur on-site through a combination of wetland creation and enhancement which would provide improved habitat, vegetative diversity and restore the water quality improvement and stormwater attenuation functionality of the impacted wetlands.

6.1.7.1. Mitigation Requirements

The CEQR guidelines stipulate that if a significant impact on natural resources is identified, then mitigation measures should be identified. Mitigation measures fall under five general categories: avoidance, minimization, restoration, reduction, and compensation. Compensation should be used as a last resort to compensate for the unavoidable impacts remaining after the first four types of mitigation are investigated to the extent practicable.

Avoidance and minimization mitigation techniques are usually employed very early in the design phase of a project. Restoration involves rectifying the impact by repairing, rehabilitating, or restoring the affected environment. Reduction techniques involve reducing or eliminating the impact over time by preserving and maintaining the ecological integrity of the site and its surrounding areas to the extent practicable. Compensation refers to replacing or substituting for the affected resource. There are three types of compensatory mitigation: creation, restoration, and acquisition.

Compensatory mitigation could be either in-kind or out-of-kind. In-kind compensation refers to the creation, restoration, or acquisition of the same habitat type as the disturbed habitat type. Out-of-kind compensation refers to the creation, restoration, or acquisition of a habitat type that is different from the disturbed habitat type. In-kind compensation is preferred because it results in a more direct replacement of the lost resource. Out-of-kind compensation may be selected on an individual case-by-case basis if in-kind compensation is not feasible. A combination of in-

kind and out-of-kind techniques may be appropriate. It is also preferred that mitigation activities take place as close as possible to the projected impacts.

In general, the Towns of Mount Pleasant and Greenburgh and the U.S. Army Corps of Engineers require the same mitigation measures as CEQR. In addition, the Town of Mount Pleasant also has a tree preservation ordinance with formulas to determine the number of trees required to be re-planted based on the loss of trees from the proposed project. The Town of Greenburgh does not have a specific tree replacement formula but leaves tree replacement decisions up to the town forester.

It is anticipated that the amount of area that would be impacted from the construction and operation of the UV Facility would significantly alter the natural resources habitat on the north parcel of the Eastview Site. The site would be converted from an unmanaged parcel to buildings, structures, and underground infrastructure that would alter the ecosystem. While these significant adverse impacts on natural resources would probably displace wildlife from the site, at a minimum for the construction period, they are not anticipated to have serious consequences for natural resources in a regional context. The additional loss of habitat resulting from the UV Facility and Croton project occurring simultaneously would further displace wildlife from the site and decrease the leaf litter, available water, and cover available for wildlife shelter in the north portion of the site. However, resident and migratory wildlife would be able to utilize the undisturbed portions of the Eastview Site. The specific impacts to natural resources at the Eastview Site are discussed below.

As per CEQR guidelines, avoidance and minimization of impacts to natural resources were employed early on in the design phase of the proposed projects. As such, the mature upland and wetland forests that occur in the northeast portion of the north parcel were left undisturbed by the proposed project. Restoration and compensation of the significant impacts to natural resources would be undertaken to the maximum extent practicable. This section presents specific mitigation for the impacts associated with the UV Facility alone, and those associated with the UV Facility with the Croton project scenarios.

It is the objective of NYCDEP to provide, at a minimum, a more diverse and functional ecosystem for habitat lost at the Eastview Site under both the UV Facility alone and the UV Facility with the Croton project scenarios. Valuable forest habitat lost due to construction would be replaced in kind through reforestation efforts that would include the re-planting of canopy, sub-canopy and herbaceous layers. The reforestation plan for impacts associated with the proposed UV Facility would include plant communities indigenous to the area and of a size that would provide for long-term success of the reforestation efforts. An appropriate ecological mixture of trees and shrubs would be chosen that would replicate and improve the type of forest habitat lost by re-introducing ecologically important indigenous species. The growth and development of the reforested area(s) would increase habitat complexity, by selecting from an appropriate mix of indigenous plant material and designing the mitigation site to be restored to encourage a diverse habitat for wildlife.

Mitigation of wetland impacts would be accomplished at a minimum 2:1 replacement ratio for both the UV Facility and Croton project scenarios. The goal of the wetland mitigation program

is to replace the lost functionality and habitat of the wetlands impacted. The wetlands on the Eastview Site provide stormwater attenuation, water quality improvement, and wildlife habitat. It is anticipated that the required wetland mitigation would be achieved with on-site mitigation opportunities. This would enable the restoration of impacted wetlands and their functionality within the same water body and watershed which is critical to minimizing wetland related impacts associated with the proposed project.

6.1.7.1.1. Without Croton Project at Eastview Site

Approximately 28 acres of upland forested habitat and 34 acres of successional shrubland and old field habitat would be lost on the north and south parcels. The upland forested habitat includes approximately 5 acres of oak-tulip tree forest and 23 acres of successional southern hardwood forest. In addition, approximately 3 acres of wetland habitat would be impacted or lost as a result of the construction of the proposed UV Facility project (see Section 4.14, Natural Resources, Tables 4.14-8 and 4.14-9).

Potentially significant impacts from the construction of the proposed UV Facility at the Eastview Site also include the removal of 1,918 trees greater than four inches in diameter at breast height (dbh) on the north parcel. A total of 373 trees greater than 4-inch dbh adjacent to the construction impact area, although not proposed for removal, may be threatened by construction activity (e.g., soil compaction). For the Catskill Aqueduct treated water conveyance, there are 456 trees greater than four inches at diameter at breast height (dbh) that would be cut within the construction area in the south parcel. There are an additional 193 trees greater than 4-inch dbh immediately adjacent to the construction impact area that may be threatened by construction activity (e.g., soil compaction).

For the potential raw water pressurization conveyance, there are 246 trees greater than four inches at diameter at breast height (dbh) that would be cut within the construction area in the south parcel. An additional 98 trees greater than 4-inch dbh immediately adjacent to the construction impact area may be threatened by construction activity (e.g., soil compaction) of the potential raw water pressurization conveyance.

Six additional trees, three having a dbh greater than six inches, would be cut in the south parcel as a result of the replacement of the culvert that carries flow from Mine Brook under Route 100C. Six trees would be threatened in the culvert replacement work area, four of which have dbh's greater than six inches.

6.1.7.1.2. With Croton Project at Eastview Site

With the Croton project, construction of the UV Facility would result in an additional loss of approximately 18 acres of upland forested habitat on the north parcel for a total loss of 28 acres of upland forest habitat at the Eastview Site and an additional loss of 11 acres of successional shrubland and old field habitat on the north parcel for a total loss of 34 acres of successional shrubland and old field habitat on the Eastview Site. The additional losses of upland forested habitat include 2.7 acres of oak-tulip tree forest and 15.4 acres of successional southern hardwood forest on the north parcel. Approximately 3.0 acres of additional wetland

habitat on the north parcel would be impacted or lost as a result of the construction of the proposed UV Facility project with Croton Project for a total loss of 3.2 acres of wetlands at the Eastview Site (see Section 4.14, Natural Resources, Tables 4.14-8 and 4.14-9).

The introduction of the proposed UV Facility would result in the additional incremental removal of 1,393 trees greater than four inches dbh from the north parcel (see Section 4.14, Natural Resources, Table 4.14-17). 159 trees greater than 4 inches dbh adjacent to the construction impact area, although not proposed for removal, may be threatened by construction activity, for example from compacted soils, so their survival is uncertain.

6.1.7.2. Mitigation

As per CEQR guidelines, avoidance and minimization of impacts to natural resources were employed early on in the design phase of the proposed projects. As such, the mature upland and wetland forests that occur in the northeast portion of the north parcel were left undisturbed by the proposed project. Restoration and compensation of the significant impacts to natural resources would be undertaken to the extent practicable. This section presents specific on-site and off-site upland and wetland mitigation to provide an ecologically diverse and functional mitigation for the impacts upland and wetland habitats associated with the proposed UV Facility alone, and UV Facility with the Croton project scenarios. The mitigation measures presented below include reforestation (canopy, sub-canopy, and herbaceous layer) and upland habitat replacement, wetland enhancement and creation, and construction mitigation.

6.1.7.2.1. Tree Removal and Protection

Prior to any construction activities (such as clearing, grading, or excavation) tree protection fencing would be installed. A minimum of six-feet-tall fencing would be installed at the edge of twice the dripline[3] distance of the trees to provide protection. Signs would be attached to the fence stating that inside the fencing is a tree protection zone, which is not to be disturbed unless prior approval has been obtained from the Town of Mount Pleasant's arborist and from NYCDEP. No application of chemicals, trenching, grading, root/branch pruning, or other activity would occur within the tree protection zone without the supervision of an on-site arborist approved by the Town of Mount Pleasant and NYCDEP. The fencing would not be removed until all construction activities are completed. The tree protection fence would be used in conjunction with silt fences and hay bales to prevent damage from erosion or the transport of construction debris.

6.1.7.2.2. Reforestation

The reforestation plan of canopy, sub-canopy, and herbaceous layers for impacts associated with the site development scenarios would include plant communities indigenous to the area and of a size that would provide for the long-term success of the reforestation efforts. An appropriate ecological mixture of trees and shrubs would be chosen that would replicate and improve the type of forest habitat lost by re-introducing ecologically important indigenous

[3] The dripline is the farthest point that the tree canopy extends from the trunk of the tree.

species (Table 6.1-14). The proposed reforestation plan would be designed to produce a forest type with a vertically stratified vegetative composition with well-defined herbaceous, shrub/understory and canopy layers. Dominant canopy trees could include northern red oak, tulip tree, American beech, American elm, black birch, red maple, black oak, and white oak. In addition to these tree species, an ecologically appropriate mix of understory, shrub, and herbaceous species would be planted as well. Such species as flowering dogwood, witch hazel, sassafras, maple leaf viburnum, northern blackberry and blueberry could be part of the subcanopy stratum. Typical groundcover could include white wood aster, New York fern, Virginia creeper, jack-in-the-pulpit, Solomon's Seal and false Solomon's Seal. The growth and development of the reforested area(s) would increase habitat complexity, by selecting from an appropriate mix of indigenous plant material and designing the site to be restored to encourage a diverse habitat for wildlife. Such a mitigation plan would provide an overall benefit to local and regional wildlife populations by supplying increased foraging and cover opportunities.

TABLE 6.1-14. VEGETATION TYPICAL OF A DIVERSE, VERTICALLY STRATIFIED FORESTED COMMUNITY

		Common Name	**Scientific Name**
Canopy	Trees	Red Oak	*Quercus rubra*
		Tulip Tree	*Liriodendron tulipifera*
		American Beech	*Fagus grandifolia*
		Black Birch	*Betula lenta*
		Red Maple	*Acer rubrum*
		Black Oak	*Quercus velutina*
		American Elm	*Ulmus americana*
		White Oak	*Quercus alba*
Subcanopy		Flowering Dogwood	*Cornus florida*
		Sassafras	*Sassafras albidum*
Under story	Shrubs	Witch-hazel	*Hamamelis virginiana*
		Maple-Leaf Viburnum	*Viburnum acerifolium*
		Northern Blackberry	*Rubus allegheniensis*
		Blueberry	*Vaccinium sp.*
	Herbaceous	White Wood Aster	*Aster divaricatus*
		New York Fern	*Thelypteris noveboracensis*
		Jack-in-the-Pulpit	*Arisaema triphyllum*
		Wild Geranium	*Geranium maculatum*
		Solomon's Seal	*Polygonatum biflorum*
		False Solomon's Seal	*Smilacina racemosa*
	Vines	Virginia Creeper	*Parthenocissus quinquefolia*

In the time period between the issuance of the Draft and Final EIS, NYCDEP has refined its proposed natural area restoration and mitigation program to include more comprehensive off-site and on-site mitigation. To provide mitigation for the significant impacts that have been predicted

to occur on the project site, an off-site reforestation area has been identified, along with the on-site mitigation. The identified off-site reforestation location is described below.

- **NYCDEP property within the Town of North Castle**. This area presents an opportunity for a forested wetland restoration (Figure 6.1-2). Parcel A (the north parcel) of this NYCDEP property presents the opportunity to create a forested wetland similar to the surrounding habitat. Parcel B (the south parcel) of this property consists of a former freshwater wetland area eliminated by extensive fill. Existing site hydrology remains in the form of Bear Gutter Creek and drainage channels conveying runoff to this low-lying area. Permanent open water within the creek and linear drainage channels border this property on all four sides, suggesting that the entire parcel could be excavated to successfully restore forested and emergent wetland habitats. NWI-mapped wetlands here consist of Riverine, upper perennial, unconsolidated bottom, permanently flooded, excavated (R3UBHx); Palustrine, scrub-shrub, broad-leaved deciduous, seasonally flooded (PSS1C); and, Palustrine, unconsolidated bottom, permanently flooded, excavated (PUBHx).

  This mitigation site would allow for the creation/enhancement of approximately 4.2 acres of forested habitat of which 3.6 acres is forested wetland and 0.6 acres is upland forested habitat. The remaining 1.9 acres would be available for the creation of emergent and open water wetland habitat (see Section 6.1.7.3.6 for details). Of all the sites evaluated by NYCDEP to be available for mitigation, this site offers the greatest potential for restoring a more diverse natural resource to the ones that the proposed project would eliminate at the project site. The opportunity to design a restoration plan that would be sizable and viable to achieve the habitat value that is predicted to be lost at the project site makes this site the best choice for implementing a natural resource restoration plan, as mitigation for the proposed project. This site provides an opportunity to mitigate for the anticipated natural resource losses at the project site and it is in public ownership within the Kensico Watershed, increasing the likelihood that it would be preserved. Because of the proximity of this site to a larger contiguous forest and existing stream, the restoration of the site with additional forest and wetlands would provide a greater overall ecological value, promoting vegetative and wildlife diversity. This proposed mitigation provides a comprehensive restoration of several sub-ecosystems, and meets the NYCDEP's mitigation objective.

6.1.7.2.3. Without Croton Project at Eastview Site

Under the UV only scenario, the loss of 2,620 trees and 28 acres of forested habitat would need to be mitigated. Due to the possible future development of the Eastview Site with the Catskill/Delaware Filtration Plant or other NYCDEP facilities, as well as for security reasons, mitigation of tree and habitat loss associated with the project would be accomplished through reforestation of the off-site locations described above. The mitigation potential provided by the off-site location selected would provide mitigation for the tree and habitat loss associated with the proposed UV Facility. In conjunction with the on-site mitigation, the NYCDEP would accomplish its mitigation goal of off-setting the natural resources lost with a more diverse habitat replacement.

As discussed in Section 4.14, Natural Resources, the impacts associated with tree and habitat loss would not be a significant impact on regional ecology and wildlife. Westchester County contains large parcels of land that contain contiguous acres of land that have not been fragmented by development and thus are of greater value from ecological and open space perspectives. The availability of these other large parcels for resident and migratory wildlife in the region demonstrates that development of the project site would not result in a significant impact on regional ecology. The anticipated reduction in the amount of available habitat on site resulting from the proposed project is less onerous than the loss of a large, contiguous forested parcel shown to provide the necessary habitat for neotropical migrant birds or other wildlife.

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Off-Site Reforestation and Wetland Mitigation
Town of North Castle

Catskill/Delaware UV Facility

Figure 6.1-2

6.1.7.2.4. With Croton Project at Eastview Site

With the Croton project on-site, the UV Facility would be assumed to result in the incremental loss of 1,393 trees and 18 acres of forested habitat on the north parcel. The development of the Eastview Site with the two projects would preclude habitat replacement and reforestation on-site due to a lack of space and for security reasons. Mitigation of tree and habitat loss associated with the proposed project would be accomplished through reforestation of the off-site locations described above. The mitigation potential provided by the off-site location would, at best, provide mitigation for the tree and habitat loss associated with the UV Facility. The NYCDEP would strive to accomplish its mitigation goal of equivalent or better habitat replacement. As described above, the potential significant adverse impacts, although considered a significant loss on a local scale, would not result in a significant impact to the regional ecology.

6.1.7.2.5. Shrubland/Grassland and Indigenous Meadow Grass

On-site mitigation to compensate for the loss of habitat with the proposed UV Facility at the Eastview Site could include the creation of 17.0 acres of shrubland/grassland habitat on the north parcel (Figure 6.1-3 and Table 6.1-15). Characteristic herbaceous species associated with this type of habitat include goldenrods, bluegrasses, timothy, quackgrass, sweet vernal grass, orchard grass, common chickweed, common evening primrose, New England aster, wild strawberry, Queen Anne's lace, ragweed, hawkweed, and ox-tongue. Shrubs would have less than 50 percent cover and could include hawthorn, apple, cherry, blue berry, viburnums, amelanchier, dogwoods, California and Virginia rose. Mitigation with a shrubland/grassland habitat would provide an improved and more diverse habitat value over the successional shrubland dominated with multiflora rose that currently exists on-site. The proposed on-site restoration of a shrubland/grassland community would include vegetative species that would provide perching habitat and a food source for migratory passerine avian species.

This particular habitat in time would eventually succeed to woodland, or forest. The created shrubland/grassland community could either be maintained as such or left to the above referenced successional processes.

On-site mitigation to compensate for the loss of habitat with the proposed UV Facility at the Eastview Site could also include the creation of 21.3 acres of indigenous meadow grass habitat on the north parcel (Figure 6.1-3 and Table 6.1-15). Characteristic herbaceous species associated with this type of habitat include Kentucky fescue, perennial ryegrass, birdsfoot trefoil, red clover, white clover, and redtop. Mitigation with an indigenous meadow grass habitat would provide improved habitat value over the successional shrubland dominated with multiflora rose and successional old field that currently exists on-site. The proposed on-site restoration of an indigenous meadow grass community would include vegetative species that would provide food source for wildlife species. In addition to the on-site restoration, approximately 6.0 acres surrounding the Catskill and Delaware Aerators would be restored with an indigenous meadow grass community.

TABLE 6.1-15. HABITAT COVER TYPE CHANGE IN THE NORTH PARCEL WITH THE PROPOSED UV FACILITY AND ON-SITE MITIGATION

Cover Type (acres)	Existing Area (acres)	Future Without the Project (acres) (1)	Future With the Project (acres)	UV Project Induced Impacts Acres (% change)	New York State Natural Heritage Program Cover Type Categories (2)		
					System	Subsystem	Community Type
Floodplain Forest Wetland	4.8	4.8	3.6	-1.2 (-25.0%)	Palustrine	Forested Mineral Soil Wetland	Floodplain Forest
Red Maple Hardwood Swamp	4.2	4.2	4.2	0.0	Palustrine	Forested Mineral Soil Wetland	Red Maple Hardwood Swamp
Shrub Swamp	2.7	2.7	0.8	-1.9 (-70.4%)	Palustrine	Open Mineral Soil Wetland	Shrub Swamp
Reedgrass/Purple Loosestrife Marsh (3)	0.4	0.4	0.0	-0.4 (-100.0%)	Palustrine	Palustrine Cultural	Reedgrass Marsh
Oak-Tulip Tree Forest	8.3	8.3	4.5	-3.8 (-45.8%)	Terrestrial	Forested Upland	Oak-Tulip Tree Forest
Successional Southern Hardwood Forest	20.8	20.8	0.5	-20.3 (-97.6%)	Terrestrial	Forested Upland	Successional S. Hardwood Forest
Successional Shrubland	32.2	31.4	2.9	-28.5 (-88.5%)	Terrestrial	Open Uplands	Successional Shrubland
Successional Old Field	7.7	5.8	1.1	-4.7 (-61.0%)	Terrestrial	Open Uplands	Successional Old Field
Cultural Trees	0.7	0.7	0.0	-0.7 (-100.0%)	Terrestrial	Terrestrial Cultural	Planted Shade Trees
Pretreatment Forebay	0.0	0.0	0.3	0.3	Palustrine	Palustrine Cultural	Water recharge Basin
Landscaped/Lawn Area	0.4	1.5	12.4	10.9	Terrestrial	Terrestrial Cultural	Mowed Lawn With Trees
Roads, Parking, Buildings	1.1	2.7	12.6	9.9	Terrestrial	Terrestrial Cultural	Mixed Community Types
Shrubland/Grassland Restoration	0.0	0.0	17.0	17.0	Terrestrial	Open Uplands	Successional Old Field
Meadow/Grassland/Wildflower Restoration	0.0	0.0	21.3	21.3	Terrestrial	Terrestrial Cultural	Mixed Community Types/Grasses
Ornamental Flowers	0.0	0.0	0.3	0.3	Terrestrial	Terrestrial Cultural	Mixed Community Types/Wildflowers
Wetland Enhancement/Creation	0.0	0.0	1.4	1.4	Palustrine	Forested Mineral Soil Wetland	Floodplain Forest/ Emergent Wetland
Restored Upland Buffer	0.0	0.0	0.4	0.4	Terrestrial	Forested Upland	Oak-Tulip Tree Forest
TOTAL	83.3	83.3	83.3	0.0	--	--	--
Stream Length (feet)	2,345	2,345	2,305	-40.0	Riverine	Natural	*Intermittent Stream*
50-foot Wetland Buffer	11.4	11.4	6.5	-4.9	NA	NA	*NA*

Notes:

(1) Future Without the Project acreage includes cover type changes associated with the Police Precinct

(2) Reschke, Carol, e.t al. 2002. Ecological Communities of New York State. New York Natural Heritage Program. N.Y.S. Dept. of Environmental Conservation. Latham, NY.

(3) Loss of 0.4 acres of Reedgrass/Purple Loosestrife Marsh results from proposed Wetland Enhancement/Creation that will replace the existin low ecological value monoculture reedgrass marsh with diverse, native emergent wetland plantings thereby improving vegetative habitat diversity and providing increased habitat value for aquatic fauna, herpetiles, and reptiles.

This particular habitat in time would eventually succeed to shrubland, woodland, or forest. The created indigenous meadow grass community would be maintained as such.

It should be noted that the on-site shrubland/grassland and indigenous meadow grass habitat enhancement areas may be temporary in nature due to the possible future development of the site with the Catskill/Delaware Filtration Plant, or if in the near future, NYCDEP should propose (and Mount Pleasant approves) to locate an Administration/Laboratory building in this proximate location on the Eastview Site.

Without Croton Project at Eastview Site

Approximately 38 acres are available for shrubland/grassland and indigenous meadow grass habitat creation on the north parcel under the UV Facility only scenario (Figure 6.1-3). This would provide mitigation for all of successional shrubland and successional old field lost due to the UV Facility project. As discussed above, mitigation with shrubland/grassland and indigenous meadow grass habitat would provide improved habitat value over the successional shrubland dominated with multiflora rose and successional old field that currently exists on-site. The proposed on-site restoration of a shrubland/grassland community would include vegetative species that would provide perching habitat and a food source for migratory passerine avian species.

With Croton Project at Eastview Site

With Croton on the Eastview Site approximately 17.8 acres would be available for the shrubland/grassland and indigenous meadow grass restoration, because the Croton project would occupy a portion of the site. This would provide mitigation for the successional shrubland and successional old field lost due to the UV Facility. As noted above, the shrubland/grassland and indigenous meadow grass restoration would provide an improved habitat and food source for local wildlife. The NYCDEP would strive to accomplish its mitigation goal of equivalent or better habitat replacement for the successional shrubland habitat.

The New York State Natural Heritage Program has given the successional shrubland and successional old field community a State element rank of S4 (apparently secure in New York State) so the loss of this habitat type is less onerous than for rarer habitat types such as floodplain forest wetlands.

6.1.7.2.6. Wetland Mitigation

NYCDEP endeavors to mitigate for the wetlands to be disturbed under the UV Facility alone and the UV Facility with the Croton project development scenarios. Mitigation could include restoration of temporary disturbances, enhancement of disturbed or degraded wetlands, or creation of new wetlands that provide the same functions and values as the disturbed areas. Mitigation of wetland impacts would be accomplished at a minimum of 2:1 replacement ratio for the UV Facility alone and the UV Facility with Croton project scenarios. Mitigation is preferred on-site in the vicinity of the disturbed areas, but may need to be located off-site when space is

not available, or future grades and water budgets would not support wetland systems. The on-site wetland enhancement associated with the proposed stormwater best management practice system for the proposed UV Facility would replace an existing poor quality habitat monoculture reed grass marsh with diverse, native emergent wetland plantings. This would improve vegetative habitat diversity and provide increased habitat value for aquatic fauna, herptiles, and reptiles. Loss of shrub swamp and floodplain forest wetlands and their associated stormwater attenuation functions would be mitigated for with the proposed online storage and floodplain forest wetland creation in the south parcel, which would provide water quality treatment by way of removal of sediments, nutrients, and bacteria. The lost habitat value would also be replaced with on-site wetland enhancement and creation of shrub swamp and floodplain forest wetlands.

On-site and off-site wetland mitigation options have been developed for the proposed project. The available on-site and off-site wetland mitigation options are listed in Table 6.1-16 and described in detail at the end of this section. There are 13 acres of on-site and off-site wetland mitigation opportunities available to offset impacts to wetlands associated with the UV Facility. The preferred options for mitigating the significant adverse impacts under the two development scenarios is discussed below followed by a detailed description of the on-site and off-site wetland mitigation sites.

TABLE 6.1-16. SUMMARY OF POTENTIAL WETLAND MITIGATION SITES FOR THE PROPOSED UV FACILITY AND CROTON PROJECT

Wetland	On-Site/ Off-Site	Ownership	Approximate Size of Potential Wetland Creation*/ Enhancement Area	Location	Type of Mitigation
Eastview North Parcel	UV On-Site	NYCDEP	1.4	West of Mine Brook, north of Rt. 100C	Creation/ Enhancement
Eastview South Parcel	On-Site	NYCDEP	6.1	Between and adjacent to Mine Brook wetlands in south parcel	Creation
Town of North Castle	Off-Site	NYCDEP	5.5	Route 22 in Town of North Castle	Creation/ Enhancement

Notes: *Based on topography and available space outside the mapped portion of existing NWI wetlands.

Without Croton Project at Eastview Site

Mitigation of wetland impacts would be accomplished at a minimum of 2:1 replacement ratio for the UV Facility only project scenario. Mitigation for the 3.1 acres of wetlands to be disturbed under the proposed UV Facility at the Eastview Site would require a minimum of 6.2 acres of wetland mitigation and could be accomplished with on-site mitigation options. Approximately 7.5 acres of wetland enhancement and creation opportunities have been identified

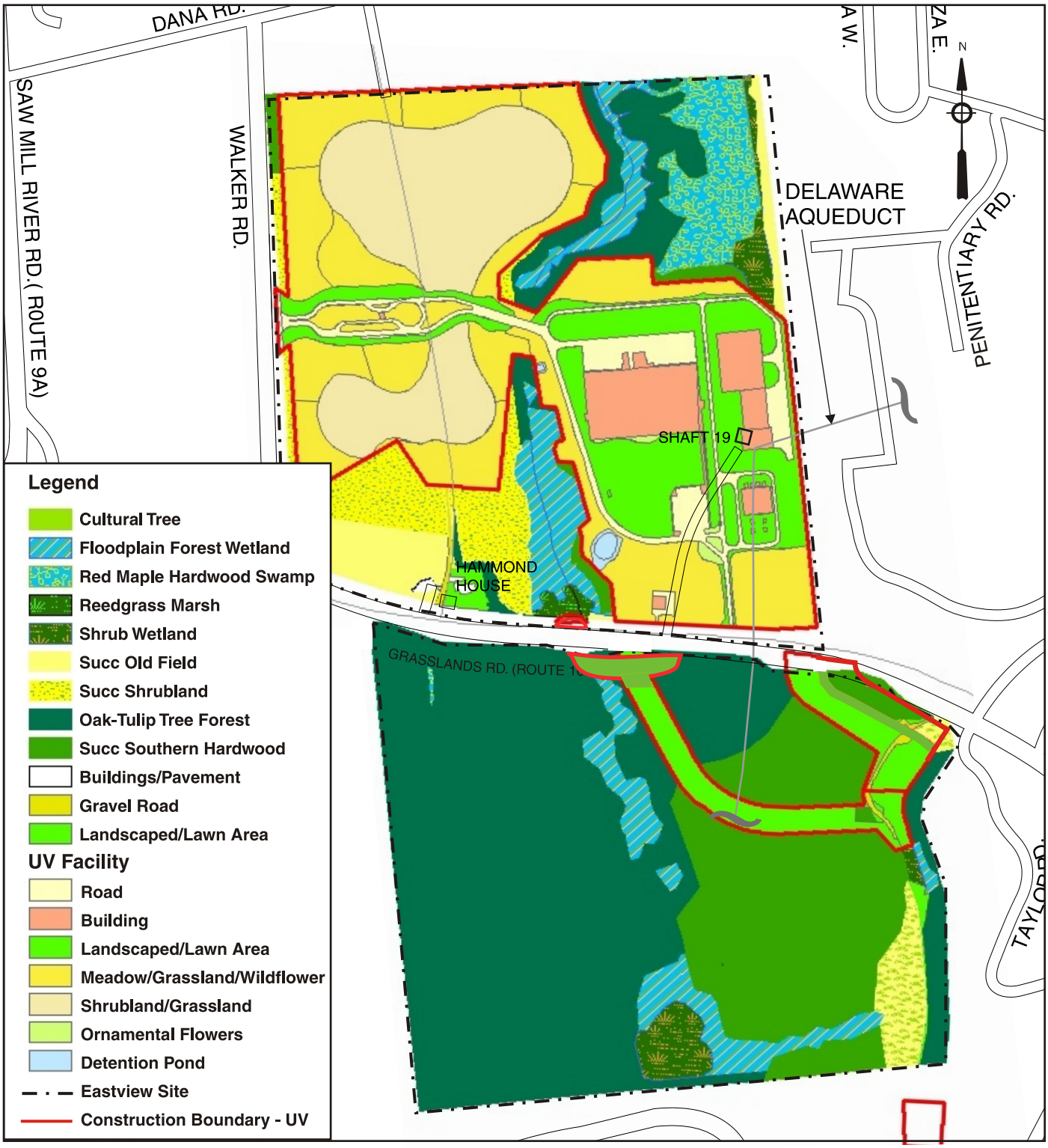
on the Eastview Site (see Table 6.1-16). The 7.5 acres of on-site wetland mitigation would satisfy the 2:1 wetland replacement ratio. On-site mitigation of wetland impacts is preferred because it would provide benefits to the same waterbody and watershed that has been impacted. The goal of the wetland mitigation plan is to replace the functionality and habitat of the wetlands lost due to project related impacts. To that end, the on-site wetland enhancement associated with the proposed stormwater best management practice system for the UV Facility would replace an existing poor quality habitat monoculture reed grass marsh with diverse, native emergent wetland plantings. This would improve vegetative habitat diversity and provide increased habitat value for aquatic fauna, herptiles, and reptiles. Loss of shrub swamp and floodplain forest wetlands and their associated stormwater attenuation functions would be mitigated for with the proposed pretreatment forebay which would provide water quality treatment by way of removal of sediments, nutrients, and bacteria. The lost habitat value would be replaced with on-site wetland enhancement and creation of shrub swamp and floodplain forest wetlands.

Off-site wetland mitigation of 5.5 acres would also be undertaken (see Table 6.1-16).

With Croton Project at Eastview Site

Mitigation of wetland impacts would be accomplished at a minimum of 2:1 replacement ratio for the UV Facility and Croton project scenarios. Mitigation for the loss of 3.2 acres of wetlands to be disturbed under the proposed UV Facility with Croton project at the Eastview Site would require 6.4 acres of wetland mitigation and could be accomplished with on-site mitigation scenarios. Approximately 7.5 acres of wetland enhancement and creation opportunities have been identified on the Eastview Site under the UV Facility and Croton project scenarios (1.4 acres on the north parcel; 6.1 acres on the south parcel). The 7.5 acres of on-site wetland mitigation would satisfy the 2:1 wetland replacement ratio. As discussed above, on-site mitigation of wetland impacts is preferred because it would provide benefits and replace the lost wetland functions to the same waterbody and watershed that has been impacted.

Additional off-site wetland mitigation opportunities of 5.5 acres have also been identified (see Table 6.1-16).



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Conceptual Plan for On-Site Mitigation of Habitat Loss Associated with Construction of UV Facility with Shrubland/Grassland and Naturalized Meadow Grass Restoration

Catskill/Delaware UV Facility

Figure 6.1-3

On-Site Wetland Mitigation:

- **Expand the floodplain forest wetland north of 100C to the west towards Hammond House (Figure 6.1-4 and Table 6.1-15)**. This would be done in conjunction with the proposed 1.4 acre wetland enhancement for stormwater flow attenuation, which includes the creation of 0.2 acres of floodplain forest wetland within existing successional shrubland habitat. Successional shrubland habitat has a New York State Natural Heritage Program (NYSNHP) element rank of S4 indicating that this community is apparently secure throughout New York State. Floodplain forest wetland habitat has a NYSNHP element rank of S2 (demonstrably vulnerable in New York State) and S3 (limited acreage or miles of stream in New York State). Therefore, replacing successional shrubland habitat with floodplain forest would constitute a beneficial replacement of a more secure habitat with a less secure habitat. A wetland mitigation plant schedule summary providing details on typical species to be planted, plant size, planting density and plant quantities for each planting zone in Mount Pleasant is provided in Table 6.1-17.

- **Expand and make contiguous the forested and scrub/shrub wetlands along Mine Brook in the south parcel (Town of Greenburgh)**. A 6.1 acre area has been identified in the southeastern portion of the south parcel that appears to provide the necessary criteria to create a functioning wetland ecosystem (see Figure 6.1-4). This portion of the property is predominantly successional southern hardwood forest (3.5 acres) to the east of Mine Brook and oak-tulip tree forest (3.0 acres) to the west of mine brook. It is anticipated that by excavating portions of these areas and utilizing surface water flows from the two adjacent streams, 6.1 acres of floodplain forest, wet meadow and emergent wetlands could be created to offset the loss of the functions and values of the wetlands disturbed to accommodate the proposed UV Facility and Croton project (Table 6.1-18). Grading associated with the proposed wetland mitigation on the south parcel would result in the loss of 656 trees, 80 percent of which are black cherry, black locust, and red maple with dbh's of less than 10 inches. The wetland mitigation planting program calls for the planting of 1,085 trees of higher quality species such as red maple, green ash, pin oak, yellow birch, swamp white oak, ironwood, alternate-leaved dogwood, and American hornbeam. A wetland mitigation plant schedule summary providing details on typical species to be planted, plant size, planting density and plant quantities for each planting zone in the south parcel is provided in Table 6.1-19.

  Successional southern hardwood forest and successional shrubland habitats have (NYSNHP) element ranks of S5 and S4, respectively, indicating that these communities are demonstrably secure and/or apparently secure throughout New York State. Oak-tulip tree forest has a NYSNHP element rank of S2 (demonstrably vulnerable) and S3 (limited acreage in New York State). Floodplain forest wetland habitat has a NYSNHP element rank of S2 and S3 as well. Therefore, replacing successional southern hardwood forest and successional shrubland habitat with floodplain forest would constitute a beneficial replacement of a more secure habitat with a less secure habitat. Replacing oak-tulip tree forest with floodplain forest wetland would constitute an equivalent replacement of similarly ranked habitat. The creation of 0.8 acres of restored oak-tulip tree habitat as

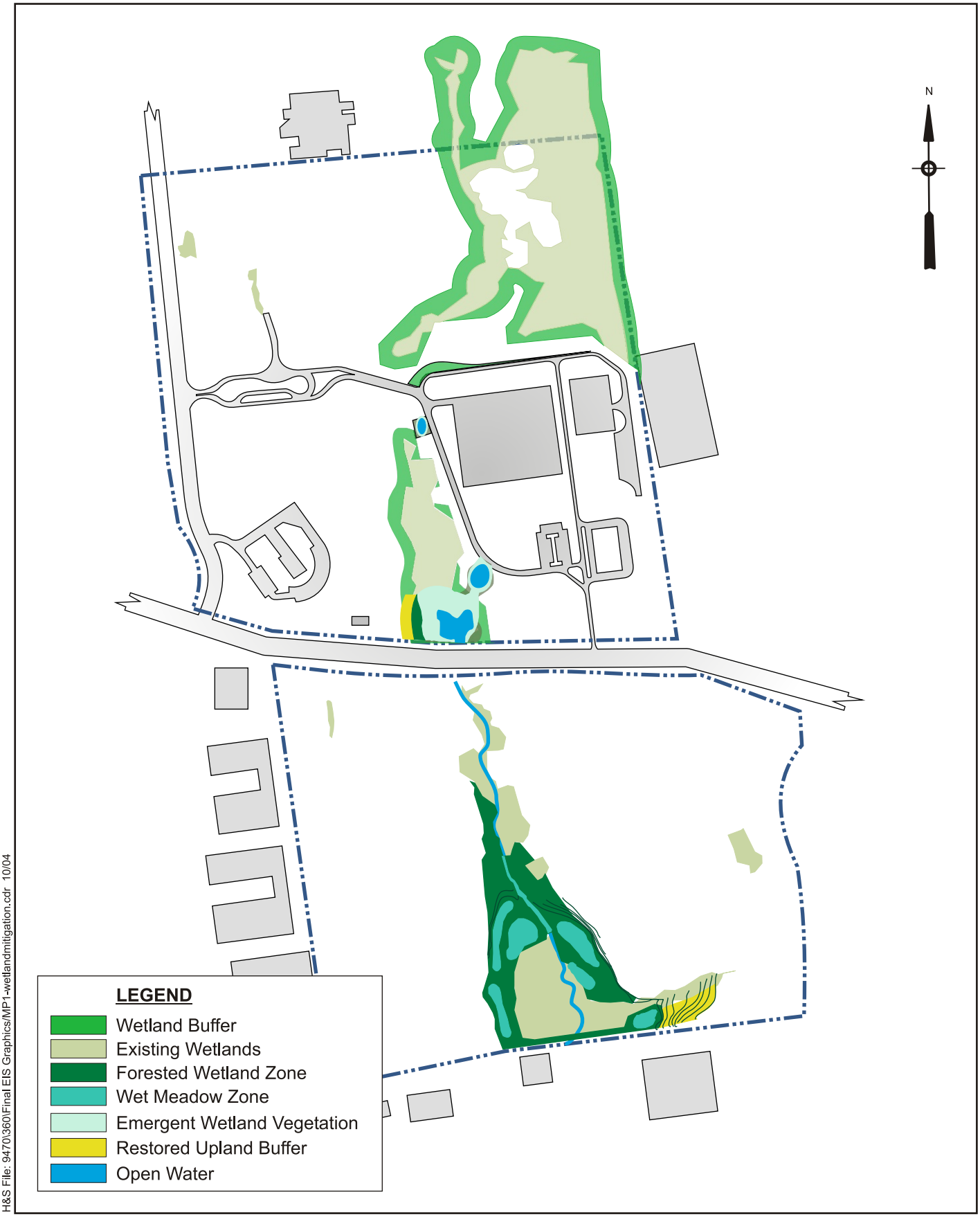
part of the proposed wetland mitigation would result in a net change of approximately 5 percent of oak-tulip tree habitat to forested floodplain habitat on the south parcel.

Off-Site Wetland Mitigation:

- **NYCDEP property within the Town of North Castle**: As described above, this mitigation site consists of Parcel A (the north parcel) and Parcel B (the south parcel), both of which are located off Route 22 in the Town of North Castle on land owned by the NYCDEP (Figure 6.1-2). Of all the potential wetland mitigation sites, this site offers the greatest potential benefit to restore a wetland of considerable size because it consists of a former wetland area eliminated by extensive construction-fill derived soils.

  Parcel A contains an early successional habitat characterized by mounds of fill and rubble interspersed with less disturbed wetland areas. The disturbed fill areas contain such species as multiflora rose and pussy willow, with the less disturbed, wetter areas dominated by tussock sedge and red maple. With the removal of existing fill/rubble roughly half of the northern area presents an opportunity to create a forested wetland similar to the surrounding habitat. Proposed mitigation on Parcel A includes 2.2 acres of forested wetland. A wetland mitigation plant schedule summary providing details on typical species to be planted, plant size, planting density and plant quantities for each planting zone in Parcel A is provided in Table 6.1-20.

  Within Parcel B, south of Kaysal Place, such species as Ironwood (*Ostrya virginiana*), and Gray Birch (*Betula populifolia*) were noted, as well as invasive shrubs. However, the central fill area, representing the majority of the parcel, is primarily low-wildlife habitat maintained lawn. Existing site hydrology suggests that this entire area could be excavated to successfully restore a forested or emergent wetland. Proposed mitigation on Parcel B includes 1.6 acres of wet meadow, 1.4 acres of forested wetland, and 0.3 acres of open water. A wetland mitigation plant schedule summary providing details on typical species to be planted, plant size, planting density and plant quantities for each planting zone in Parcel B is provided in Table 6.1-21.



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On-Site Wetland Mitigation Areas

Catskill/Delaware UV Facility

Figure 6.1-4

TABLE 6.1-17. MOUNT PLEASANT WETLAND MITIGATION PLANT SCHEDULE SUMMARY

Forested Wetland Zone (0.2 acres)		
Canopy Trees	Typical Species	Red Maple, Green Ash, Pin Oak, Yellow Birch, Sweet Gum, Swamp White Oak
	Density	100 trees/acre (20' o.c.)
	Size	1.5"-2" caliper, 6'-8' whip, 4'-6' whip, 2'-4' whip
	Quantity	20
Understory Trees	Typical Species	Ironwood, Shadblow, Alternate-leaved Dogwood, American Hornbeam, Pussy Willow
	Density	50 trees/acre (30' o.c.)
	Size	8'-10'
	Quantity	10
Shrubs	Typical Species	Witch Hazel, Spice Bush, Arrowwood Viburnum, Red-panicled Dogwood, Hardhack Spirea
	Density	675 plants/acre (8' o.c.)
	Size	from 18"-24" to 3'-4'
	Quantity	135
Herbaceous	Typical Species	Woodland Aster, Joe-Pye Weed, Sensitive Fern, Boneset, False Solomon's Seal
	Density	2,025 plants/acre (3X shrub density)
	Size	1 qt. Container
	Quantity	400
Restored Upland Buffer Zone (0.4 acres)		
Canopy Trees	Typical Species	Red Maple, American Beech, Red Oak, Tulip Poplar, White Ash
	Density	100 trees/acre (20' o.c.)
	Size	1.5"-2" caliper, 6'-8' whip, 4'-6' whip, 2'-4' whip
	Quantity	40
Understory Trees	Typical Species	Shadblow, American Hornbeam, Alternate-leaved Dogwood, American Holly, Blackhaw Viburnum
	Density	50 trees/acre (30' o.c.)
	Size	8'-10'
	Quantity	20
Shrubs	Typical Species	Black Chokeberry, American Filbert, Atlantic Leatherwood, Carolina Rose, Arrowwood Viburnum
	Density	675 plants/acre (8' o.c.)
	Size	from 18"-24" to 3'-4'
	Quantity	270
Herbaceous	Typical Species	White Baneberry, Jack in the Pulpit, Woodland Aster, White Snakeroot, Mayapple, Scented Goldenrod
	Density	2,025 plants/acre (3X shrub density)
	Size	1 qt. Container
	Quantity	800
Emergent Wetland Zone (0.8 acres)		
Herbaceous	Typical Species	Soft Rush, Arrow Arum, Softstem Bulrush, Blueflag, Pickerelweed
	Density	19,600 plants/acre (1.5' o.c.)
	Size	1 qt. Container
	Quantity	15,680
Open Water (0.4 acres)		
Herbaceous	Typical Species	Spatterdock, Fragrant White Water Lily
	Density	43, 250 plants/acre (1.0' o.c.)
	Size	1 qt. Container
	Quantity	17,300

TABLE 6.1-18. HABITAT COVER TYPE CHANGE IN THE SOUTH PARCEL WITH THE PROPOSED UV FACILITY AND ON-SITE WETLAND MITIGATION

Cover Type (acres)	Existing Area (acres)	Future Without the Project (acres)	Future With the Project (acres)	UV Project Induced Imapcts Acres (% Change)	New York State Natural Heritage Program Cover Type Categories (1)		
					System	Subsystem	Community Type
Floodplain Forest Wetland	4.5	4.5	9.1	4.6	Palustrine	Forested Mineral Soil Wetland	Floodplain Forest
Red Maple Hardwood Swam	0.1	0.1	0.1	0.0	Palustrine	Forested Mineral Soil Wetland	Red Maple Hardwood Swamp
Shrub Swamp	1.6	1.6	1.6	0.0	Palustrine	Open Mineral Soil Wetland	Shrub Swamp
Oak-Tulip Tree Forest	42.2	42.2	37.9	-4.3 (-10.2%)	Terrestrial	Forested Upland	Oak-Tulip Tree Forest
Successional Southern Hardwood Forest	21.6	21.6	15.4	-6.2 (-28.7%)	Terrestrial	Forested Upland	Successional S. Hardwood Forest
Successional Shrubland	2.9	2.9	2.1	-0.8 (-27.6%)	Terrestrial	Open Uplands	Successional Shrubland
Landscaped/Lawn Area	0.7	0.7	5.4	4.7	Terrestrial	Terrestrial Cultural	Mowed Lawn With Trees
Roads, Parking, Buildings	0.3	0.3	0.4	0.1	Terrestrial	Terrestrial Cultural	Mixed Community Types
Wet Meadow	0.0	0.0	1.4	1.4	Palustrine	Open Mineral Soil Wetland	Shrub Swamp
Emergent Wetland	0.0	0.0	0.1	0.1	Palustrine	Open Mineral Soil Wetland	Shallow Emergent Marsh
Restored Upland Forest	0.0	0.0	0.4	0.4	Terrestrial	Forested Upland	Oak-Tulip Tree Forest
TOTAL	73.9	73.9	73.9	0.0	--	--	--
Stream Length (feet)	1,750	1,750	1,750	0.0	Riverine	Natural	*Stream*
50-foot Wetland Buffer	9.7	9.7	9.2	-0.5	NA	NA	*NA*

Notes:

1. Reschke, Carol, e.t al. 2002. Ecological Communities of New York State. New York Natural Heritage Program. N.Y.S. Dept. of Environmental Conservation. Latham, NY.

TABLE 6.1-19. GREENBURGH WETLAND MITIGATION PLANT SCHEDULE SUMMARY

Forested Wetland Zone (4.6 acres)		
Canopy Trees	Typical Species	Red Maple, Green Ash, Pin Oak, Yellow Birch, Swamp White Oak
	Density	150 trees/acre (17' o.c.)
	Size	1.5"-2" caliper, 6'-8' whip, 4'-6' whip, 2'-4' whip
	Quantity	700
Understory Trees	Typical Species	Ironwood, Shadblow, Alternate-leaved Dogwood, American Hornbeam, Pussy Willow
	Density	50 trees/acre (30' o.c.)
	Size	8'-10'
	Quantity	225
Shrubs	Typical Species	Witch Hazel, Spice Bush, Arrowwood Viburnum, Red-panicled Dogwood, Hardhack Spirea
	Density	675 plants/acre (8' o.c.)
	Size	from 18"-24" to 3'-4'
	Quantity	3,100
Herbaceous	Typical Species	Woodland Aster, Joe-Pye Weed, Sensitive Fern, Boneset, False Solomon's Seal
	Density	2,025 plants/acre (3X shrub density)
	Size	1 qt. Container
	Quantity	9,300
Restored Upland Forest Zone (0.8 acres)		
Canopy Trees	Typical Species	Red Maple, American Beech, Red Oak, Tulip Poplar, White Ash
	Density	150 trees/acre (17' o.c.)
	Size	1.5"-2" caliper, 6'-8' whip, 4'-6' whip, 2'-4' whip
	Quantity	120
Understory Trees	Typical Species	Shadblow, American Hornbeam, Alternate-leaved Dogwood, American Holly, Blackhaw Viburnum
	Density	50 trees/acre (30' o.c.)
	Size	8'-10'
	Quantity	40
Shrubs	Typical Species	Black Chokeberry, American Filbert, Atlantic Leatherwood, Carolina Rose, Arrowwood Viburnum
	Density	675 plants/acre (8' o.c.)
	Size	from 18"-24" to 3'-4'
	Quantity	550
Herbaceous	Typical Species	White Baneberry, Jack in the Pulpit, Woodland Aster, White Snakeroot, Mayapple, Scented Goldenrod
	Density	2,025 plants/acre (3X shrub density)
	Size	1 qt. Container
	Quantity	1,600
Wet Meadow Zone (1.4 acres)		
Shrubs	Typical Species	Common Alder, Silky Dogwood, Common Winterberry, Swamp Rose, Northern Blackberry
	Density	1,225 plants/acre (6' o.c.)
	Size	from 18"-24" to 3'-4'
	Quantity	1,700
Herbaceous	Typical Species	Big Blue Stem, Swamp Milkweed, Hyssop-leaved Boneset, Cinnamon Fern, Switchgrass
	Density	3,675 plants/acre (3X shrub density)
	Size	1 qt. Container
	Quantity	5,145
Emergent Wetland Zone (0.1 acres)		
Herbaceous	Typical Species	Soft Rush, Arrow Arum, Softstem Bulrush, Blueflag, Pickerelweed
	Density	19,600 plants/acre (1.5' o.c.)
	Size	1 qt. Container
	Quantity	2,000

TABLE 6.1-20. NORTH CASTLE (PARCEL A) WETLAND MITIGATION PLANT SCHEDULE SUMMARY

Forested Wetland Zone (2.2 acres)		
Canopy Trees	Typical Species	Red Maple, Green Ash, Pin Oak, Yellow Birch, American Elm, Swamp White Oak
	Density	65 trees/acre (25' o.c.)
	Size	1.5"-2" caliper, 6'-8' whip, 4'-6' whip, 2'-4' whip
	Quantity	145
Understory Trees	Typical Species	Ironwood, Alternate-leaved Dogwood, American Hornbeam, Pussy Willow, Black Gum
	Density	35 trees/acre (35' o.c.)
	Size	8'-10'
	Quantity	75
Shrubs	Typical Species	Witch Hazel, Spice Bush, Arrowwood Viburnum, Red-panicled Dogwood, Hardhack Spirea
	Density	675 plants/acre (8' o.c.)
	Size	from 18"-24" to 3'-4'
	Quantity	1,500
Herbaceous	Typical Species	Woodland Aster, Joe-Pye Weed, Sensitive Fern, Boneset, False Solomon's Seal
	Density	2,025 plants/acre (3X shrub density)
	Size	1 qt. Container
	Quantity	4,450

TABLE 6.1-21. NORTH CASTLE (PARCEL B) WETLAND MITIGATION PLANT SCHEDULE SUMMARY

Forested Wetland Zone (1.4 acres)		
Canopy Trees	Typical Species	Red Maple, Green Ash, Pin Oak, Yellow Birch, Sweet Gum, Swamp White Oak
	Density	65 trees/acre (25' o.c.)
	Size	1.5"-2" caliper, 6'-8' whip, 4'-6' whip, 2'-4' whip
	Quantity	90
Understory Trees	Typical Species	Ironwood, Shadblow, Alternate-leaved Dogwood, American Hornbeam, Pussy Willow
	Density	35 trees/acre (35' o.c.)
	Size	8'-10'
	Quantity	50
Shrubs	Typical Species	Witch Hazel, Spice Bush, Arrowwood Viburnum, Red-panicled Dogwood, Hardhack Spirea
	Density	675 plants/acre (8' o.c.)
	Size	from 18"-24" to 3'-4'
	Quantity	950
Herbaceous	Typical Species	Woodland Aster, Joe-Pye Weed, Sensitive Fern, Boneset, False Solomon's Seal
	Density	2,025 plants/acre (3X shrub density)
	Size	1 qt. Container
	Quantity	2,850
Upland Forest Zone (0.6 acres)		
Canopy Trees	Typical Species	Red Maple, American Beech, Red Oak, Tulip Poplar, White Ash
	Density	65 trees/acre (25' o.c.)
	Size	1.5"-2" caliper, 6'-8' whip, 4'-6' whip, 2'-4' whip
	Quantity	40
Understory Trees	Typical Species	Shadblow, American Hornbeam, Alternate-leaved Dogwood, American Holly, Blackhaw Viburnum
	Density	35 trees/acre (35' o.c.)
	Size	8'-10'
	Quantity	20
Shrubs	Typical Species	Black Chokeberry, American Filbert, Atlantic Leatherwood, Carolina Rose, Arrowwood Viburnum
	Density	675 plants/acre (8' o.c.)
	Size	from 18"-24" to 3'-4'
	Quantity	400
Herbaceous	Typical Species	White Baneberry, Jack in the Pulpit, Woodland Aster, White Snakeroot, Mayapple, Scented Goldenrod
	Density	2,025 plants/acre (3X shrub density)
	Size	1 qt. Container
	Quantity	1,200
Wet Meadow Zone (1.6 acres)		
Shrubs	Typical Species	Buttonbush, Common Alder, Silky Dogwood, Common Winterberry, Northern Blackberry
	Density	1,225 plants/acre (6' o.c.)
	Size	from 18"-24" to 3'-4'
	Quantity	1,950
Herbaceous	Typical Species	Big Blue Stem, Swamp Milkweed, Hyssop-leaved Boneset, Cinnamon Fern, Switchgrass
	Density	3,675 plants/acre (3X shrub density)
	Size	1 qt. Container
	Quantity	5,850
Open Water (0.3 acres)		
Herbaceous	Typical Species	Spatterdock, Fragrant White Water Lily
	Density	43, 250 plants/acre (1.0' o.c.)
	Size	1 qt. Container
	Quantity	12,975

Wetland Planting Program

The restoration program for the proposed wetland mitigation sites is important since it allows the creation and enhancement of wetlands and the replacement of existing disturbed wetlands and provides visual buffers. The overall objective of the restoration program is to mitigate for the wetland losses as a result of the proposed UV Facility that have been predicted to occur in Section 4.14, Natural Resources. The mitigation plan would be designed to emulate a natural, self-sustaining system that is integrated ecologically with its surroundings. Plantings would be specifically designed to individual sites and indigenous species would be used. The existing indigenous vegetation at the individual sites would be used to guide the plant choices. Opportunities to increase the diversity of species planted among the sites in keeping with the context of the native community would be taken wherever feasible. Maintenance during the period of establishment of any restored or enhanced wetland system is critical for its survival and success. Additionally, NYCDEP would use proven techniques and soil and plant specifications for its wetland designs. NYCDEP is committed to ensuring the success of this wetland mitigation project.

Tables 6.1-17, 19, 20, and 21, list the typical plant species, plant size, planting density, and plant quantities that are anticipated to be used in the various zones of the wetlands to be created or enhanced. These zones include forested wetland, upland forest, wet meadow, emergent wetland and open water.

6.1.7.2.7. Sediment and Erosion Control

The potential for soil erosion during construction is increased when the soil is cleared of its vegetation, excavated, and stockpiled, thereby exposing the loose soil to the direct impacts of rainwater and wind. To prevent, to the extent possible, the short- and long-term potentially significant erosion impacts on the watershed creeks and wetlands, a detailed erosion-control plan would be specified for each of the construction contracts and cover all activities—both those in the upland and in the wetlands.

For example, work activities and clearing limits would be included in the construction specifications; no vegetation outside these limits would be disturbed. Also, no stockpiling of excavated material would be allowed in a manner that would cause erosion. “Stop work” orders would be issued to the contractor if erosion-control measures were not properly installed and maintained, after the contractor has been given a reasonable amount of time to correct the problem. To properly maintain erosion control measures, an allotment item would be set up in each contract, providing a fund of money to be spent for maintenance as needed by the contractor at the direction of the resident engineer.

At the end of each day, each work area would be cleaned and swept. This further reduces the amount of soil that could potentially affect watercourses and wetlands. Another proposed

technique is the control of sediments through the use of temporary sediment traps[4] and/or temporary sediment basins[5]. These measures could be supplemented with sediment filters in a downstream location.

The sediment traps, basins, and/or filters would stay in place until the construction activity is complete and the ground surface stabilized with vegetation. During their period of use, sediment traps require frequent maintenance; typically, when they are 50 percent or more full of silt, they must be cleaned. Silt intercepted by basins and filters must also be removed, especially after storms. Another important erosion-control measure is temporary seeding or the establishment of a temporary vegetative cover on disturbed areas by seeding with appropriate, rapidly growing non-invasive annual plants. This measure provides protection to bare soils exposed during construction until permanent vegetation or other erosion-control measures can be established.

In sum, measures that are proposed to be part of the construction documents for erosion and sedimentation control would include:

- Installation of construction-limiting fence;
- Use of portable sediment tanks during dewatering;
- Constructing temporary sediment traps and/or basins at the locations of proposed forebays and micropools to capture sediment from runoff and from water produced by dewatering operations with sediment filters at the exit channel to further treat sediment-laden water;
- Using block and gravel curb inlet sediment filters and gravel and wire mesh drop inlet sediment filters to protect existing stormwater inlets;
- Constructing a temporary sump pit;
- Controlling sediment from areas traversed by trucks and other heavy equipment by constructing temporary construction accessways covered with properly sized stone over filtering material; and,
- Prior to the start of construction activities, such as sewer installation, inspecting all erosion control measures, and continually monitoring them, especially after each storm event.

Conclusion.

NYCDEP's proposed natural area restoration and mitigation plan would include a comprehensive on-site and off-site mitigation program. The proposed 13.0 acres of on-site and off-site wetland enhancement/creation would exceed the desired 2:1 mitigation requirement for the loss of 3.1 acres of shrub swamp and floodplain forest wetlands on the Eastview Site. The approximate 38 acres of shrubland/grassland and indigenous meadow grass habitat creation on

[4] A temporary sediment trap is a temporary ponding area formed by constructing an earthen embankment with a stone outlet. The purpose is to detain sediment-laden runoff from small disturbed areas, generally less than three acres, long enough to allow the majority of the sediment to settle out.

[5] A temporary sediment basin is a temporary barrier or dam with a controlled stormwater release structure formed by constructing an embankment of compacted soil across a drainageway. The purpose is to detain sediment-laden runoff from disturbed areas larger than those upstream of traps, generally three acres or greater.

the north parcel under the UV Facility only scenario would more than fully mitigate the 34 acres of successional shrubland and successional old field habitat lost due to the UV Facility project. Due to the possible future development of the Eastview Site with the Catskill/Delaware Filtration Plant or other NYCDEP facilities and for security reasons, mitigation of tree and forested habitat loss associated with the project would be accomplished through reforestation of the off-site locations to provide both upland and wetland forested habitat as described above. The mitigation potential provided by the off-site location would mitigate for the tree and forested habitat loss associated with the proposed UV Facility. In conjunction with the on-site mitigation, the NYCDEP would accomplish its mitigation goal of providing a more diverse habitat replacement to the regional ecology.

6.2. OFF-SITE FACILITIES

6.2.1. Introduction

This section examines mitigation measures that have been developed in response to the potential significant or temporary adverse impacts that could result from the construction work proposed at the off-site facilities. As discussed in Section 5, Off-Site Facilities, these locations are associated with the proposed pressurization of the Catskill Aqueduct, from Kensico Reservoir to the Eastview Site, and with the proposed filling of the existing Catskill and Delaware Aerators at the Kensico campus. The various study areas defined in the individual technical analyses are the same for the analyses presented below, as for those presented in the separate sections of this Final EIS. Additionally, the methodologies used to prepare the analyses in this section are the same as those presented in Section 3, Data Collection and Impact Methodologies.

At the off-site facilities, it is anticipated that the proposed project could have potential temporary adverse impacts in the area of traffic and transportation. The following section summarizes the proposed mitigation measures that have been developed for each area.

6.2.2. Traffic and Transportation

6.2.2.1. Potential Construction Impacts and Mitigation

This section summarizes the mitigation measures that are recommended for the potential temporary adverse traffic impacts associated with the proposed trucking of excavated material from the Eastview Site to the NYCDEP Kensico campus, where the existing Aerators would be filled, graded and landscaped, and the traffic that would be generated by the pressurization of the Catskill Aqueduct and construction of the new screen chamber. Two separate studies were conducted: an analysis of 2006 conditions, when the Delaware Aerator would be filled; and an analysis of 2010, the peak year of construction activity at the Kensico Reservoir work sites, when all three components of the proposed work would be underway (filling of the Catskill Aerator, aqueduct pressurization, and construction of new screen chamber). A complete explanation of the traffic analyses undertaken for these off-site facilities is presented in Section 5.1, Kensico Reservoir Work Sites.

In responding to comments on the Draft EIS and based on field visits with NYSDOT in the time period between the issuance of the Draft EIS and Final EIS, two additional alternative routes for trucks transporting excavated materials from the Eastview Site to the Catskill and Delaware Aerators were analyzed. Option D reflects a reasonable direct route that minimizes left turns for trucks crossing at unsignalized intersections. Option E reflects a route that is on State and County roadways, but would require a much longer travel time per trip (when compared to Option D, about 30 minutes longer per truck trip back and forth from the Eastview to the Kensico sites). While the total amount of excavated material transferred to the Kensico site would remain the same among the five options, Option E would likely require the contractor to employ additional trucks due to the longer trip distances and travel times in comparison to routes for Options A through D. Option E would also likely result in a longer time period for transporting excavated

material from the Eastview site to the Kensico site, and thus, elongate the time period that the community is subjected to the trucking activities from this component of construction. In consideration of a) on-street safety, b) minimizing the duration of impacts on the local community that are related to the trucking of excavated material to the Kensico site, and c) Filtration Avoidance Determination (FAD) time restraints for completing construction of the project, NYCDEP has specified a preferred route (Option D), and would direct the contractor to utilize this route, unless circumstances require a temporary alternate route. Mitigation measures that would need to be applied for the preferred route (Option D) and various other routes are also identified in the EIS and the site preparation contract. These mitigation measures would ensure the safety of the general public, including school children, while these activities are underway.

6.2.2.1.1. 2006 Construction Conditions

Mitigation analyses have been prepared to develop measures that would restore traffic conditions (lane group and/or approach delays and level of service [LOS]) to Future No Build (FNB) levels or better. Where it has not been possible to identify measures that would return service conditions to FNB levels, when those levels were better than mid-point LOS D, (delays of 45 seconds or less for signalized intersections and delays of 30 seconds or less for unsignalized intersections), measures have been identified that would result in at least a Mitigation condition of mid-LOS D.

The assessments presented in the sections below rely mostly on a combination of new traffic signals, lane striping changes, and traffic signal retiming or phasing changes as the recommended mitigation measures. However, some of the measures that were investigated were more extraordinary, involving additional lane construction or street widening, to give a complete range of potential measures that could eliminate impacts.

Between the Draft and Final EIS, discussions were held between NYCDEP and the relevant agencies (e.g., NYSDOT, Westchester County DPW) and local representatives, to determine what level of mitigation measure would be appropriate to address the temporary adverse impacts identified for the project's construction.

In some instances, although specific measures have been identified in the traffic analyses that could mitigate impacts, implementation of these measures was not deemed necessary or appropriate by the relevant transportation agency with jurisdiction over particular roadways, either because of the short duration of impacts in some cases, or in deference to the coordinated long-term traffic management efforts/plans of other government agencies. Instead, a number of maintenance and protection of traffic (MPT) measures that would not involve physical improvements or changes have been investigated as measures to mitigate the short-term construction period impacts. The various MPT measures con be used singly or in combination, to establish MPT plans for individual intersections, or overall traffic systems. MPT plans may include one or more of the following:

- Use of Traffic Cones, Drums and Barricades
- Signage (Standard)
- Signage (Flashing)

• Flagperson
• Uniformed Police Officers
• Lane Narrowings
• Speed Cushions
• Pavement Markers
• Rumble Strips

Before being implemented, the various MPT elements would be reviewed by NYSDOT and/or Westchester County DPW for use at any given location. At times the MPT measures chosen for a particular location and condition may not fully mitigate a project impact from an analytical perspective (in accordance with *CEQR Technical Manual* guidelines), but would serve to address the pedestrian and vehicular safety considerations at a particular location.

A discussion related to the use of alternative MPT measures, for locations where new traffic signals or other physical improvements have been suggested, has been included in the description of potential mitigation measures for locations where the use of such measures has been deemed appropriate by NYSDOT, Westchester County DPW, and/or local representatives. The discussion identifies the measures that are anticipated to be used at the particular locations where impacts have been identified for the proposed project (as discussed in Section 5, Off-Site Facilities).

With respect to proposed signal re-timings or re-phasings, many of the traffic signals at the intersections included in the analyses (and at locations where signal timing improvements are suggested under "mitigation") have "actuated" signals. Instead of computing the re-optimization of the signal via the actuation process (which is a typical analysis approach from for projects undertaking comparable studies in Westchester County), the NYCDEP applied a rigorous methodology that did not take benefit of the natural, re-optimizing of the signal in the "Future With the Project" scenarios, and only demonstrated such benefits in the mitigation section.

For locations where the installation of a new traffic signal has been recommended as a mitigation measure, if requested by the agency(s) with jurisdiction over the particular intersection roadways involved, formal Signal Warrant Studies would be performed and submitted for review by the appropriate agency; in most cases NYSDOT.

All of the mitigation measures suggested below would serve to eliminate or reduce the predicted temporary adverse construction impacts of the proposed work at the Kensico campus. If the mitigation identified is not applied, the predicted temporary adverse construction traffic impacts identified would remain unmitigated. In the absence of implementing the mitigation measures proposed below, NYCDEP would consider other traffic management techniques, if approved by the governing roadway entity, to offset these significant adverse impacts, and ensure the smooth and safe operation of traffic.

Without Croton Project at Eastview Site

This analysis scenario compared a "pure" FNB condition in 2006 (i.e., without the proposed Aerator filling at the Kensico campus, and without construction of the Croton project at

the Eastview Site), to construction conditions in 2006 (with the proposed filling). For this comparison, five different truck route Options have been considered, resulting in five distinct 2006 Construction conditions (Options A, B, C, D, and E). The five truck route Options that were analyzed are described below:

- *Option A:* 100 percent of the trucks traveling on Lakeview Avenue.
- *Option B:* 100 percent of the trucks traveling on Grasslands Road (Route 100)/Commerce Street.
- *Option C:* An even 50/50 percent split between Lakeview Avenue and Grasslands Road (Route 100)/Commerce Street.
- *Option D (preferred route):* all trucks destined to Kensico from Eastview would make a left turn from Grasslands Road onto Bradhurst to Lakeview Avenue to Columbus to West Lake Drive, and return to Eastview by making a left turn from Lakeview onto Commerce Street with a right turn on Legion, followed by a right turn onto Grasslands Road.
- *Option E:* all trucks destined to Kensico from Eastview would use Walker Road to Dana Road to Route 9A to Route 141 (also known as Commerce Street between Elwood Avenue and Circular Road) to Kensico Road to Columbus Avenue to West Lake Drive. On the return trip, trucks would make a right turn onto Columbus Avenue to Kensico Road to Route 141 to Route 9A to Dana Road to Walker Road.

For locations where potential temporary adverse impacts were identified in the analyses presented in Section 5.1, Kensico Reservoir Work Sites, measures to mitigate these impacts have been identified. The results of the mitigation analyses undertaken for the five different truck route options, and a description of the measures recommended, without the Croton project included in the 2006 FNB conditions, are presented in the sections below.

With respect to proposed signal re-timings or re-phasings, many of the traffic signals at the intersections included in the analyses (and at locations where signal timing improvements are suggested under "mitigation") have "actuated" signals. Instead of computing the re-optimization of the signal via the actuation process (which is a typical analysis approach from for projects undertaking comparable studies in Westchester County), the NYCDEP applied a rigorous methodology that did not take benefit of the natural, re-optimizing of the signal in the "Future With the Project" scenarios, and only demonstrated such benefits in the mitigation section.

For locations where the installation of a new traffic signal has been recommended as a mitigation measure, if requested by the agency(s) with jurisdiction over the particular intersection roadways involved, formal Signal Warrant Studies would be performed and submitted for review by the appropriate agency; in most cases NYSDOT.

All of the mitigation measures suggested above would serve to eliminate construction-related impacts of the proposed project. If the mitigation identified is not applied, the predicted temporary adverse construction traffic impacts identified would remain unmitigated. In the absence of implementing the mitigation measures recommended above, NYCDEP would consider other MPT techniques (e.g., the use of traffic control officers, traffic cones, variable

message signs, etc.) if approved by the governing roadway entity, to offset these temporary adverse impacts, and ensure the smooth and safe operation of traffic.

Once the proposed work at the Kensico campus has commenced, the various agencies responsible for maintaining traffic flow and roadways in the study area would conduct field inspections of the operations of the various intersections to determine if the proposed mitigation measures are actually warranted (particularly because traffic from anticipated No Build projects or background growth may be less than analyzed in this report).

2006 Construction Option A Conditions

The traffic analyses compared the proposed UV Facility's 2006 Construction Option A conditions against the "pure" 2006 FNB (i.e., Future without the Croton project) conditions. Under these conditions in 2006, it was found that traffic from the trucks and the construction of the proposed UV Facility would be anticipated to result in 17 potential temporary adverse traffic impacts, (7 during the AM peak hour, 3 during the midday peak hour, and 7 during the PM peak hour). These impacts could be fully mitigated as described below; the resulting delays and LOS for these intersections, with the recommended mitigation applied, are compared to 2006 FNB and 2006 Construction Option A conditions (see Table 6.2-1).

The tables showing the results of applying the mitigation measures also indicate the specific measures recommended for each location. For many of the locations, more than one measure was identified that could be implemented that would reduce delays back to or below FNB conditions. The assessment presented here relies mostly on a combination of new traffic signals, lane striping changes, and traffic signal retiming or phasing changes as the recommended measures. However, some of the measures that were investigated were more extraordinary, involving additional lane construction or street widening, to give a complete range of potential measures that could eliminate impacts.

Bradhurst Avenue (Route 100) and Lakeview Avenue

During the AM peak hour, the westbound approach at this location would deteriorate from LOS D with 27.1 seconds of delay to LOS E with 42.3 seconds of delay. The installation of a traffic signal at this location could fully mitigate the AM peak hour impacts such that all of the movements would operate at LOS B or better.

Although no impacts were predicted at this intersection during the midday and PM peak hours, an analysis of the effects of installing a new traffic signal at the location to mitigate the AM peak hour impacts was conducted for these other peak hours. The analysis shows that the intersection approaches would all operate at LOS B or better during the midday (delays of 19.0 seconds or less), and at LOS C or better during the PM peak hour (delays of 21.3 seconds or less).

Based on discussions that occurred between the Draft and Final EIS among NYCDEP and NYSDOT, Westchester County DPW, and local representatives, an MPT solution is more likely at this location than the mitigation measures described in the Draft EIS. The MPT at this location would likely include the need for two additional flagpeople. One flagperson would be

located at the intersection, and another flagperson would need to be located further north on Bradhurst (after the bend in the road) with warning signage/cones to ensure that southbound drivers on Bradhurst slow down before turning the bend. These measures would allow Bradhurst Avenue traffic to be temporarily stopped, and allow westbound traffic (including trucks returning from the Aerators) on Lakeview Avenue to safely access Bradhurst Avenue.

Grasslands Road (Route 100C) and Bradhurst Avenue (Route 100)

During the AM peak hour, the eastbound left-turn movement would continue to operate at LOS F with a 66.9-second increase in delay; the southbound through/right movement would deteriorate from LOS E with 70.8 seconds of delay to LOS F with 115.7 seconds of delay. During the midday peak hour, the northbound left-turn movement would deteriorate from LOS D with 45.8 seconds of delay to LOS D with 51.8 seconds of delay; the southbound through/right movement would deteriorate from LOS E with 77.8 seconds of delay to a LOS F with 117.3 seconds of delay. During the PM peak hour, the eastbound left-turn movement would continue to operate at LOS F with delays increasing beyond 240 seconds, and the southbound through/right movement would continue to operate at LOS F with a 39.6-second increase in delay. A combination of measures is required to fully mitigate the AM, midday, and PM peak hour impacts at this location. The westbound approach would be restriped to accommodate two travel lanes (shared left-turn and through and shared through and right-turn). During the AM, midday, and PM peak hours, new signal timing and phasing plans for each peak hour would also be implemented as shown in Table 6.2-1.

During the AM and midday peak hours, these mitigation measures would result in below mid-LOS D or better for all of the traffic movements at this location with a maximum average vehicle delay of 43.9 seconds. During the PM peak hour, these mitigation measures would result in a decrease in delay on the eastbound left-turn movement and the southbound through/right movement of 121.9 seconds and 10.4 seconds, respectively, as compared to the future conditions without the fill operations. The remaining vehicle movements at this location would operate at or near their 2006 FNB Condition LOS.

Based on discussions that occurred between the Draft and Final EIS between NYCDEP and NYSDOT, an alternative restriping (change the westbound left-turn lane to a shared through left-turn lane) and revised signal plan to provide an eastbound/westbound phase is more suitable at this location than the mitigation measures described above. Although this measure does not fully mitigate the predicted traffic impacts at the intersection per the guidance in the *CEQR Technical Manual*, this revised mitigation would dramatically improve eastbound and westbound operations and reflect improved phasing of the signal operation. Overall intersection level-of-service would improve with the proposed improvement measure in place.

Grasslands Road (Route 100C) and Clearbrook Road/Walker Road

The westbound through/right movement would deteriorate from LOS D with 45.2 seconds of delay to LOS E with 61.7 seconds of delay during the AM peak hour. This impact would be mitigated by transferring 3 seconds of green time from the north-south signal phase to the westbound leading signal phase. As a result of this mitigation, the westbound through/right

movement would operate better than under FNB conditions, at LOS D with 42.0 seconds of delay. The remaining vehicle movements would continue to operate at their 2006 FNB Condition LOS with no significant changes in their average vehicle delays.

NYCDEP would submit this solution to the approval agency for approval. If the approval agency (NYSDOT) rejects this measure, the temporary adverse impact would remain unmitigated.

Grasslands Road (Route 100C) and Sprain Brook Parkway Northbound Ramp

The westbound approach would deteriorate from LOS D with 47.5 seconds of delay to LOS E with 58.9 seconds of delay during the PM peak hour. This impact would be mitigated by transferring 2 seconds of green time from the eastbound leading signal phase to the east-west signal phase. As a result of this mitigation, the westbound approach would operate better than under FNB conditions, at LOS D with 40.7 seconds of delay. The remaining vehicle movements would continue to operate at their 2006 FNB Condition LOS with no significant changes in their average vehicle delays.

NYCDEP would submit this solution to the approval agency for approval. If the approval agency (NYSDOT) rejects this measure, the temporary adverse impact would remain unmitigated.

Grasslands Road (Route 100) and Legion Drive

The southbound left-turn movement would continue to operate at LOS F with a 2.0-second increase in delay during the PM peak hour. This impact would be fully mitigated with the installation of a traffic signal at this location, which would result in LOS C or better for all of the vehicle movements and a maximum delay of 30.1 seconds per vehicle. A traffic signal would also improve the operation of this intersection during the AM and midday peak hours. During both of these periods, all of the vehicle movements at this location would operate at LOS C or better with a maximum vehicle delay of 27.4 seconds.

NYCDEP would recommend the installation of a signal at this intersection. However, based on discussions that occurred between the Draft and Final EIS among NYCDEP and NYSDOT, Westchester County DPW, and local representatives, an MPT solution is more likely at this location than the mitigation measures described above, because NYSDOT is planning to install a traffic signal at this intersection in the future, in coordination with planned NYSDOT design work for the corridor. NYCDEP and NYSDOT would coordinate the improvement of this intersection to ensure that adequate traffic flow occur during the proposed project's impact period.

Taconic State Parkway and Lakeview Avenue

During the AM peak hour, the eastbound approach would continue to operate at LOS F with an 82.5-second increase in delay; the westbound approach would continue to operate at LOS F with a 77.0-second increase in delay. During the midday peak hour, the eastbound

approach would deteriorate from LOS D with 43.9 seconds of delay to LOS F with 81.3 seconds of delay. During the PM peak hour, the eastbound approach would continue to operate at LOS F with a 109.9-second increase in delay; the westbound approach would continue to operate at LOS F with a 68.6-second increase in delay. A combination of measures is required to fully mitigate the AM, midday, and PM peak hour impacts at this location. The northbound and southbound approaches would be restriped to accommodate an exclusive left-turn lane, two through lanes, and an exclusive right-turn lane. During the AM, midday, and PM peak hours, new signal timings for each peak hour would also be implemented as shown in Table 6.2-1.

During the AM peak hour, these mitigation measures would result in a decrease in delay on the eastbound approach and the westbound approach of 43.7 seconds and 17.7 seconds, respectively, as compared to the 2006 FNB conditions. During the midday peak hour, these mitigation measures would result in a decrease in delay on the eastbound approach of 2.4 seconds as compared to the 2006 FNB conditions. During the PM peak hour, these mitigation measures would result in a decrease in delay on the eastbound approach and the westbound approach of 2.4 seconds and 2.2 seconds, respectively, as compared to the 2006 FNB conditions. The remaining vehicle movements at this location would operate at or near their 2006 FNB Condition LOS.

Based on discussions that occurred between the Draft and Final EIS between NYCDEP and NYSDOT, the measures proposed in the Draft EIS would not be implemented. NYSDOT does not believe that the proposed signal timing changes and lane movements are warranted given the short duration of the potential impact (approximately six months). Therefore, this potential temporary adverse impact would remain unmitigated.

Columbus Avenue and West Lake Drive

The westbound left-turn movement at this location would deteriorate from LOS D with 26.8 seconds of delay to LOS E with 43.2 seconds of delay during the AM peak hour and from LOS E with 38.9 seconds of delay to LOS F with 81.3 seconds of delay during the PM peak hour. The installation of a traffic signal at this location could fully mitigate the AM and PM peak hour impacts such that all of the movements would operate at LOS C or better. Although no impacts were identified during the midday peak at this location, an analysis of the effect of a new traffic signal at this location during the midday peak was performed. The results show that operation at this location during the midday would also be improved, and all movements would operate at LOS B, or better during the midday peak.

Based on discussions that occurred between the Draft and Final EIS among NYCDEP and Westchester County and local representatives, an MPT solution is more likely at this location than the mitigation measures described above. As part of the MPT plan, a uniformed police officer would be assigned to these intersections during school hours and any other hour deemed necessary. In coordination with the MPT plan at this intersection, at the immediately adjacent intersection of Columbus Avenue and Lakeview Avenue, a flagperson and temporary signage may be needed at the westbound approach of Lakeview Avenue to ensure that traffic stops at a set back distance from the intersection to ensure that trucks could adequately turn from southbound Columbus Avenue onto Lakeview Avenue.

TABLE 6.2-1.
LAKVIEW TRUCK ROUTE (OPTION A)
LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS:
2006 FUTURE CONDITIONS WITHOUT THE PROJECT, FUTURE CONDITIONS WITH THE PROJECT (WITHOUT THE CROTON PROJECT), AND MITIGATION CONDITIONS

			AM Peak Hour										
				2006 (1)			2006 Option A (2)*			2006 Mitigation			
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (3)
Bradhurst Avenue @	5	Southbound	LT	0.04	8.6	A	0.04	8.8	A	LT	0.04	8.8	A	MPT plan to be implemented.
Lakeview Avenue (E-W)		Westbound	LR	0.47	27.1	D	0.70	42.3 +	E	LR	0.70	42.3	E	Flagperson at intersection with signage and cones. Flagperson just north of intersection on Bradhurst Avenue (after bend in the road) with signage and cones.
		Intersection		Unsignalized			Unsignalized				Unsignalized			
Grasslands Road (E-W) @	6	Eastbound	L	1.14	128.8	F	1.31	195.7 +	F	L	0.85	41.0	D	Add protected left-turn phase, signal retiming, and westbound lane restriping from exclusive left-turn lane to shared left-turn through lane.
Bradhurst Avenue			T	1.00	68.8	E	1.00	68.8	E	T	0.92	43.9	D	
			R	0.36	16.4	B	0.36	16.4	B	R	0.43	21.3	C	
		Westbound	L	1.03	161.3	F	1.03	161.3	F	LTR	0.66	25.9	C	
			TR	0.66	31.0	C	0.66	31.0	C					
		Northbound	L	0.34	28.0	C	0.34	28.4	C	L	0.50	32.5	C	
			TR	0.29	25.3	C	0.29	25.3	C	TR	0.37	30.1	C	
		Southbound	L	0.55	40.5	D	0.55	40.5	D	L	0.37	24.2	C	
			TR	0.89	70.8	E	1.06	115.7 +	F	TR	0.72	38.9	D	
		Intersection			58.6	E		74.6	E			34.3	C	
Grasslands Road (Rt.100C) @	24	Eastbound	L	0.04	17.8	B	0.04	17.8	B	L	0.04	17.8	B	Shift 3 seconds of green time from northbound/southbound phase to westbound leading phase. To be reviewed and implemented if requested by the approving agency
Clearbrook Road/Walker Road			TR	0.90	34.5	C	0.90	34.5	C	TR	0.90	34.5	C	
		Westbound	L	0.88	48.3	D	0.88	48.3	D	L	0.78	36.0	D	
			TR	0.98	45.2	D	1.04	61.7 +	E	TR	0.97	42.0	D	
		Northbound	LT	0.22	28.9	C	0.22	29.0	C	LT	0.27	31.7	C	
		Southbound	LT	0.03	27.4	C	0.20	28.8	C	LT	0.23	31.4	C	
			R	0.01	27.3	C	0.01	27.3	C	R	0.01	29.7	C	
		Intersection			41.2	D		47.9	D			37.7	D	
Grasslands Road @	33	Eastbound	LT	0.11	9.4	A	0.11	9.4	A	LT	0.11	9.4	A	NYSDOT proposes to signalize this intersection in the future.
Legion Drive		Southbound	L	0.79	71.3	F	0.79	71.3	F	L	0.79	71.3	F	
			R	0.37	16.2	C	0.37	16.2	C	R	0.37	16.2	C	
		Intersection		Unsignalized			Unsignalized				Unsignalized			
Taconic State Parkway @	38	Eastbound	LTR	1.08	114.3	F	1.30	196.8 +	F	LTR	1.30	196.8	F	NYSDOT does not believe signal timing and restriping are warranted. Impact would remain unmitigated.
Lakeview Avenue (E-W)		Westbound	LTR	0.97	101.5	F	1.22	178.5 +	F	LTR	1.22	178.5	F	
		Northbound	L	0.21	5.0	A	0.21	5.0	A	L	0.21	5.0	A	
			TR	0.21	4.4	A	0.21	4.4	A	TR	0.21	4.4	A	
		Southbound	L	0.04	3.9	A	0.04	3.9	A	L	0.04	3.9	A	
			TR	0.57	6.6	A	0.57	6.6	A	TR	0.57	6.6	A	
		Intersection			26.4	C		48.7	D			48.7	D	
Columbus Avenue (N-S) @	41	Southbound	LT	0.14	9.4	A	0.15	9.7	A	LT	0.15	9.7	A	MPT plan and uniformed Police presence (with cones and other control devices if necessary) to direct traffic during school peak hours and other hours required.
West Lake Drive		Westbound	L	0.04	26.8	D	0.43	43.2 +	E	L	0.43	43.2	E	
			R	0.28	12.1	B	0.29	12.6	B	R	0.29	12.6	B	
		Intersection		Unsignalized			Unsignalized				Unsignalized			

Notes:

L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates Potential Adverse Impacts.

(1) 2006 Future Conditions without the Delaware Aerator Fill Operations

(2) 2006 Future Conditions with the Delaware Aerator Fill Operations

* Also referred to as Build Conditions

(3) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

TABLE 6.2-1 (Continued)
LAKEVIEW TRUCK ROUTE (OPTION A)
LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS:
2006 FUTURE CONDITIONS WITHOUT THE PROJECT, FUTURE CONDITIONS WITH THE PROJECT (WITHOUT THE CROTON PROJECT), AND MITIGATION CONDITIONS

			Midday Peak Hour											
				2006 (1)			2006 Option A (2)*			2006 Mitigation				
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (3)
Bradhurst Avenue @	5	Southbound	LT	0.01	7.7	A	0.01	7.8	A	LT	0.01	7.8	A	MPT plan to be implemented.
Lakeview Avenue (E-W)		Westbound	LR	0.17	11.9	B	0.26	13.1	B	LR	0.26	13.1	B	Flagperson at intersection with signage and cones. Flagperson just north of intersection on Bradhurst Avenue (after bend in the road) with signage and cones.
		Intersection		Unsignalized			Unsignalized				Unsignalized			
Grasslands Road (E-W) @	6	Eastbound	L	0.20	14.8	B	0.32	16.1	B	L	0.42	21.5	C	Add protected left-turn phase, signal retiming, and westbound lane restriping from exclusive left-turn lane to shared left-turn through lane.
Bradhurst Avenue			T	0.33	16.1	B	0.33	16.1	B	T	0.47	21.7	C	
			R	0.16	9.5	A	0.16	9.5	A	R	0.20	12.6	B	
		Westbound	L	0.06	13.6	B	0.06	13.6	B	LTR	0.35	20.3	C	
			TR	0.39	16.7	B	0.39	16.7	B					
		Northbound	L	0.52	45.8	D	0.60	51.8 +	D	L	0.34	24.1	C	
			TR	0.13	26.0	C	0.13	26.0	C	TR	0.10	12.9	B	
		Southbound	L	0.25	35.7	D	0.25	35.7	D	L	0.18	20.9	C	
			TR	0.96	77.8	E	1.09	117.3 +	F	TR	0.82	36.8	D	
		Intersection			33.9	C		45.0	D			24.1	C	
Grasslands Road @	33	Eastbound	LT	0.18	9.1	A	0.18	9.1	A	LT	0.18	9.1	A	NYSDOT proposes to signalize this intersection in the future.
Legion Drive		Southbound	L	1.13	172.8	F	1.13	172.8	F	L	1.13	172.8	F	
			R	0.28	12.9	B	0.28	12.9	B	R	0.28	12.9	B	
		Intersection		Unsignalized			Unsignalized				Unsignalized			
Taconic State Parkway @	38	Eastbound	LTR	0.71	43.9	D	0.96	81.3 +	F	LTR	0.96	81.3	F	NYSDOT does not believe signal timing and restriping are warranted. Impact would remain unmitigated.
Lakeview Avenue (E-W)		Westbound	LTR	0.45	35.1	D	0.67	42.1	D	LTR	0.67	42.1	D	
		Northbound	L	0.06	4.0	A	0.06	4.0	A	L	0.06	4.0	A	
			TR	0.63	7.4	A	0.63	7.4	A	TR	0.63	7.4	A	
		Southbound	L	0.12	4.4	A	0.12	4.4	A	L	0.12	4.4	A	
			TR	0.27	4.7	A	0.27	4.7	A	TR	0.27	4.7	A	
		Intersection			10.8	B		16.4	B			16.4	B	
Columbus Avenue (N-S) @	41	Southbound	LT	0.07	9.1	A	0.07	9.3	A	LT	0.07	9.3	A	MPT plan and uniformed Police presence (with cones and other control devices if necessary) to direct traffic during school peak hours and other hours required.
West Lake Drive		Westbound	L	0.02	20.3	C	0.28	26.4	D	L	0.28	26.4	D	
			R	0.18	11.4	B	0.18	11.8	B	R	0.18	11.8	B	
		Intersection		Unsignalized			Unsignalized				Unsignalized			

Notes:

L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates Potential Adverse Impacts.

(1) 2006 Future Conditions without the Delaware Aerator Fill Operations

(2) 2006 Future Conditions with the Delaware Aerator Fill Operations

* Also referred to as Build Conditions

(3) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

TABLE 6.2-1 (Continued)
LAKEVIEW TRUCK ROUTE (OPTION A)
LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS:
2006 FUTURE CONDITIONS WITHOUT THE PROJECT, FUTURE CONDITIONS WITH THE PROJECT (WITHOUT THE CROTON PROJECT), AND MITIGATION CONDITIONS

			PM Peak Hour										
			2006 (1)			2006 Option A (2)***			2006 Mitigation				
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (3)
Bradhurst Avenue @	5	Southbound	LT	0.01	8.0	A	0.01	8.1	A	LT	0.01	8.1	A	MPT plan to be implemented.
Lakeview Avenue (E-W)		Westbound	LR	0.40	17.0	C	0.53	20.8	C	LR	0.53	20.8	C	Flagperson at intersection with signage and cones. Flagperson just north of
		Intersection		Unsignalized			Unsignalized				Unsignalized			intersection on Bradhurst Avenue (after bend in the road) with signage and cones.
Grasslands Road (E-W) @	6	Eastbound	L	1.27	208.6	F	*	** +	F	L	0.97	86.7	F	Add protected left-turn phase, signal
Bradhurst Avenue			T	0.54	21.5	C	0.55	21.5	C	T	0.63	25.4	C	retiming, and westbound lane restriping
			R	0.25	11.9	B	0.25	11.9	B	R	0.27	13.8	B	from exclusive left-turn lane to shared
		Westbound	L	0.19	17.6	B	0.19	17.6	B	LTR	0.77	29.0	C	left-turn through lane.
			TR	0.92	42.5	D	0.92	42.8	D					
		Northbound	L	0.77	46.7	D	0.80	51.2	D	L	0.72	39.3	D	
			TR	0.18	16.2	B	0.18	16.2	B	TR	0.17	12.9	B	
		Southbound	L	0.28	24.8	C	0.28	24.8	C	L	0.25	20.8	C	
			TR	1.05	85.7	F	1.16	125.3 +	F	TR	1.03	75.3	E	
		Intersection			51.3	D		79.9	E			41.1	D	
Grassland Road (Rt.100C) @	27	Eastbound	L	0.46	15.1	B	0.52	15.8	B	L	0.59	18.0	B	Shift 2 seconds of green time from
Sprain Brook Pkwy NB Ramp	30		T	0.30	8.8	A	0.33	9.0	A	T	0.33	9.0	A	eastbound leading phase to
		Westbound	TR	0.99	47.5	D	1.03	58.9 +	E	TR	0.97	40.7	D	eastbound/westbound phase.
		Northbound	LT	0.68	28.8	C	0.68	28.8	C	LT	0.68	28.8	C	To be reviewed and implemented if
			R	0.33	22.9	C	0.33	22.9	C	R	0.33	22.9	C	requested by the approving agency
		Intersection			32.2	C		37.7	D			28.7	C	
Grasslands Road @	33	Eastbound	LT	0.22	10.5	B	0.22	10.5	B	LT	0.22	10.5	B	NYSDOT proposes to signalize this
Legion Drive														intersection in the future.
		Southbound	L	1.08	138.1	F	1.09	140.1 +	F	L	1.09	140.1	F	
			R	0.44	18.4	C	0.44	18.5	C	R	0.44	18.5	C	
		Intersection		Unsignalized			Unsignalized				Unsignalized			
Taconic State Parkway @	38	Eastbound	LTR	1.09	121.4	F	1.38	231.3 +	F	LTR	1.38	231.3	F	NYSDOT does not believe signal
Lakeview Avenue (E-W)		Westbound	LTR	1.02	106.1	F	1.23	174.7 +	F	LTR	1.23	174.7	F	timing and restriping are warranted.
		Northbound	L	0.15	4.4	A	0.15	4.4	A	L	0.15	4.4	A	Impact would remain unmitigated.
			TR	1.05	46.8	D	1.05	46.8	D	TR	1.05	46.8	D	
		Southbound	L	0.34	7.4	A	0.34	7.4	A	L	0.34	7.4	A	
			TR	0.41	5.4	A	0.41	5.4	A	TR	0.41	5.4	A	
		Intersection			44.3	D		59.9	E			59.9	E	
Columbus Avenue (N-S) @	41	Southbound	LT	0.12	10.9	B	0.13	11.2	B	LT	0.13	11.2	B	MPT plan and uniformed Police
West Lake Drive		Westbound	L	0.09	38.9	E	0.63	81.3 +	F	L	0.63	81.3	F	presence (with cones and other control
			R	0.41	16.6	C	0.43	17.4	C	R	0.43	17.4	C	devices if necessary) to direct traffic
														during school peak hours and other
		Intersection		Unsignalized			Unsignalized				Unsignalized			hours required.

Notes:

L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates Potential Adverse Impacts.

" * " indicates a v/c ratio greater than 1.50; " ** " indicates a calculated delay greater than 240 seconds.

(1) 2006 Future Conditions without the Delaware Aerator Fill Operations

(2) 2006 Future Conditions with the Delaware Aerator Fill Operations

*** Also referred to as Build Conditions

(3) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

2006 Construction Option B Conditions

The traffic analyses compared the proposed UV Facility's 2006 Construction Option B conditions against the 2006 FNB with Croton project conditions. Under these conditions in 2006, it was found that traffic from the trucks and the construction of the proposed UV Facility would be anticipated to result in 20 potential temporary adverse traffic impacts, (8 during the AM peak hour, 2 during the midday peak hour, and 10 during the PM peak hour). These impacts could be fully mitigated as described below; the resulting delays and LOS for these intersections, with the recommended mitigation applied, are compared to 2006 FNB with Croton project and 2006 Construction Option B conditions (see Table 6.2-2).

The tables showing the results of applying the mitigation measures also indicate the specific measures recommended for each location. For many of the locations, more than one measure was identified that could be implemented that would reduce delays back to or below FNB conditions. The assessment presented here relies mostly on a combination of new traffic signals, lane striping changes, and traffic signal retiming or phasing changes as the recommended measures. However, some of the measures that were investigated were more extraordinary, involving additional lane construction or street widening, to give a complete range of potential measures that could eliminate impacts.

Grasslands Road (Route 100C) and Bradhurst Avenue (Route 100)

During the AM peak hour, the eastbound left-turn movement would continue to operate at LOS F with a 109.3-second increase in delay; the eastbound through movement would deteriorate from LOS E with 68.8 seconds of delay to LOS F with 89.4 seconds of delay. During the PM peak hour, the eastbound left-turn movement would continue to operate at LOS F with delays increasing beyond 240 seconds; the westbound through/right movement would deteriorate from LOS D with 42.5 seconds of delay to LOS E with 58.0 seconds of delay. A combination of measures is required to fully mitigate the AM, midday, and PM peak hour impacts at this location. The westbound approach would be restriped to accommodate two travel lanes (shared left-turn and through and shared through and right-turn). The eastbound approach would be restriped to accommodate an exclusive left-turn lane, a through lane, and a shared through and right-turn lane. During the AM and PM peak hours, new signal phasing plans for each peak hour would also be implemented as shown in Table 6.2-2.

During the AM peak hour, these mitigation measures would result in a decrease in delay on the eastbound left-turn movement and on the eastbound through movement of 67.2 seconds and 34.2 seconds, respectively, as compared to 2006 FNB conditions. During the PM peak hour, these mitigation measures would result in a decrease in delay on the eastbound left-turn movement and on the westbound though/right movement of 182.4 seconds and 19.1 seconds, respectively, as compared to 2006 FNB conditions. The remaining vehicle movements at this location would operate at or near their 2006 FNB Condition LOS.

Based on discussions that occurred between the Draft and Final EIS between NYCDEP and NYSDOT, an alternative restriping (change the westbound left-turn lane to a shared through left-turn lane) and revised signal plan to provide an eastbound/westbound phase is more suitable at

this location than the mitigation measures described above. Although this measure does not fully mitigate the predicted traffic impacts at the intersection per the guidance in the *CEQR Technical Manual*, this revised mitigation would dramatically improve eastbound and westbound operations and reflect improved phasing of the signal operation. Overall intersection level-of-service would improve with the proposed improvement measure in place.

Grasslands Road (Route 100C) and Clearbrook Road/Walker Road

The westbound through/right movement would deteriorate from LOS D with 45.2 seconds of delay to LOS E with 61.7 seconds of delay during the AM peak hour. This impact would be mitigated by transferring 4 seconds of green time from the north-south signal phase to the westbound leading signal phase. As a result of this mitigation, the westbound through/right movement would operate better than under FNB conditions, at LOS D with 37.1 seconds of delay. The remaining vehicle movements would continue to operate at or near their 2006 FNB Condition LOS.

NYCDEP would submit this solution to the approval agency for approval. If the approval agency (NYSDOT) rejects this measure, the temporary adverse impact would remain unmitigated.

Grasslands Road (Route 100C) and Sprain Brook Parkway Northbound Ramp

The westbound approach would deteriorate from LOS D with 47.5 seconds of delay to LOS E with 58.9 seconds of delay during the PM peak hour. This impact would be mitigated by implementing the signal timing plan shown in Table 6.2-2. As a result of this mitigation, the westbound approach would operate better than under FNB conditions, at LOS D with 40.7 seconds of delay. The remaining vehicle movements would continue to operate at or near their 2006 FNB conditions LOS with no significant changes in their average vehicle delays.

NYCDEP would submit this solution to the approval agency for approval. If the approval agency (NYSDOT) rejects this measure, the temporary adverse impact would remain unmitigated.

Grasslands Road (Route 100) and Legion Drive

The southbound left-turn movement would continue to operate at LOS F with a 59.3-second, 110.6-second, and 92.4-second increase in delay during the AM, midday, and PM peak hours, respectively. These impacts would be fully mitigated with the installation of a traffic signal at this location, which would result in LOS D or better for all of the vehicle movements and a maximum delay of 37.8 seconds per vehicle.

TABLE 6.2-2
COMMERCE TRUCK ROUTE (OPTION B)
LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS:
2006 FUTURE CONDITIONS WITHOUT THE PROJECT, FUTURE CONDITIONS WITH THE PROJECT (WITHOUT THE CROTON PROJECT), AND MITIGATION CONDITIONS

			AM Peak Hour											
				2006 (1)			2006 Option A (2)*			2006 Mitigation				
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (3)
Grasslands Road (E-W) @	6	Eastbound	L	1.14	128.8	F	1.40	238.1 +	F	L	0.92	61.6	E	Add protected left-turn phase, signal
Bradhurst Avenue			T	1.00	68.8	E	1.07	89.4 +	F	TR	0.80	34.6	C	retiming, and westbound lane restriping
			R	0.36	16.4	B	0.36	16.4	B					from exclusive left-turn lane to shared left
		Westbound	L	1.03	161.3	F	1.03	161.3	F	LTR	0.76	34.7	C	turn through lane.
			TR	0.66	31.0	C	0.73	33.6	C					
		Northbound	L	0.34	28.0	C	0.34	28.0	C	L	0.35	28.1	C	
			TR	0.29	25.3	C	0.29	25.3	C	TR	0.29	25.3	C	
		Southbound	L	0.55	40.5	D	0.55	40.5	D	L	0.55	40.5	D	
			TR	0.89	70.8	E	0.89	70.8	E	TR	0.89	70.8	E	
		Intersection			58.6	E		77.5	E			40.7	D	
Grasslands Road (Rt.100C) @	24	Eastbound	L	0.04	17.8	B	0.04	17.8	B	L	0.04	17.8	B	Shift 4 seconds of green time from NB/SB
Clearbrook Road/Walker Road			TR	0.90	34.5	C	0.90	34.5	C	TR	0.90	34.5	C	phase to WB phase.
		Westbound	L	0.88	48.3	D	0.88	48.3	D	L	0.76	33.5	C	To be reviewed and implemented if
			TR	0.98	45.2	D	1.04	61.7 +	E	TR	0.95	37.1	D	requested by the approving agency.
		Northbound	LT	0.22	28.9	C	0.22	29.0	C	LT	0.30	32.8	C	
		Southbound	LT	0.03	27.4	C	0.20	28.8	C	LT	0.25	32.3	C	
			R	0.01	27.3	C	0.01	27.3	C	R	0.01	30.5	C	
		Intersection			41.2	D		47.9	D			35.2	D	
Grasslands Road (E-W) @	33	Eastbound	LT	0.11	9.4	A	0.17	9.7	A	LT	0.17	9.7	A	MPT plan and clear brush on southbound
Legion Drive														Grasslands Road to improve line of sight.
		Southbound	L	0.79	71.3	F	0.99	130.6 +	F	L	0.99	130.6	F	NYSDOT is planning to signalize this
		Southbound	R	0.37	16.2	C	0.47	18.1	C	R	0.47	18.1	C	intersection.
		Intersection		Unsignalized			Unsignalized				Unsignalized			
	35	Eastbound								TR	0.96	31.2	C	MPT plan will be implemented.
Grasslands Road (E-W) @		Westbound	LT	0.01	10.4	B	0.01	10.7	B	LT	0.45	7.4	A	
WCC West Gate Driveway		Northbound	L	0.80	72.9	F	0.93	109.0 +	F	L	0.39	30.4	C	
		Northbound	R	0.06	14.5	B	0.06	15.3	C	R	0.07	27.7	C	
		Intersection		Unsignalized			Unsignalized					24.0	C	
Taconic State Parkway @	38	Eastbound	LTR	1.08	114.3	F	1.30	196.8 +	F	LTR	1.30	196.8	F	NYSDOT does not believe signal timing
Lakeview Avenue (E-W)		Westbound	LTR	0.97	101.5	F	1.22	178.5 +	F	LTR	1.22	178.5	F	and restriping are warranted. Impact
		Northbound	L	0.21	5.0	A	0.21	5.0	A	L	0.21	5.0	A	would remain unmitigated.
			TR	0.21	4.4	A	0.21	4.4	A	TR	0.21	4.4	A	
		Southbound	L	0.04	3.9	A	0.04	3.9	A	L	0.04	3.9	A	
			TR	0.57	6.6	A	0.57	6.6	A	TR	0.57	6.6	A	
		Intersection			26.4	C		48.7	D			48.7	D	
Columbus Avenue (N-S) @	41													MPT plan and uniformed Police presence
West Lake Drive		Southbound	LT	0.14	9.4	A	0.15	9.7	A	LT	0.15	9.7	A	(with cones and other control devices if
		Westbound	L	0.04	26.8	D	0.43	43.2 +	E	L	0.43	43.2	E	necessary) to direct traffic during school
		Westbound	R	0.28	12.1	B	0.29	12.6	B	R	0.29	12.6	B	peak hours and other hours required.
		Intersection		Unsignalized			Unsignalized				Unsignalized			

Notes:

L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates Potential Adverse Impacts.

(1) 2006 Future Conditions without the Delaware Aerator Fill Operations

(2) 2006 Future Conditions with the Delaware Aerator Fill Operations

* Also referred to as Build Conditions

(3) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

TABLE 6.2-2 (Continued)
COMMERCE TRUCK ROUTE (OPTION B)
LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS:

2006 FUTURE CONDITIONS WITHOUT THE PROJECT, FUTURE CONDITIONS WITH THE PROJECT (WITHOUT THE CROTON PROJECT), AND MITIGATION CONDITIONS

			Midday Peak Hour											
				2006 (1)			2006 Option A (2)*			2006 Mitigation				
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (3)
Grasslands Road (E-W) @ Legion Drive	33	Eastbound	LT	0.18	9.1	A	0.22	9.3	A	LT	0.22	9.3	A	MPT plan and clear brush on southbound Grasslands Road to improve line of sight.
		Southbound	L	1.13	172.8	F	1.39	** +	F	L	1.39	**	F	NYSDOT is planning to signalize this intersection.
		Southbound	R	0.28	12.9	B	0.38	14.2	B	R	0.38	14.2	B	
		Intersection			Unsignalized			Unsignalized				Unsignalized		
Taconic State Parkway @ Lakeview Avenue (E-W)	38	Eastbound	LTR	0.71	43.9	D	0.96	81.3 +	F	LTR	0.96	81.3	F	NYSDOT does not believe signal timing and restriping are warranted. Impact would remain unmitigated.
		Westbound	LTR	0.45	35.1	D	0.67	42.1	D	LTR	0.67	42.1	D	
		Northbound	L	0.06	4.0	A	0.06	4.0	A	L	0.06	4.0	A	
			TR	0.63	7.4	A	0.63	7.4	A	TR	0.63	7.4	A	
		Southbound	L	0.12	4.4	A	0.12	4.4	A	L	0.12	4.4	A	
			TR	0.27	4.7	A	0.27	4.7	A	TR	0.27	4.7	A	
		Intersection			10.8	B		16.4	B			16.4	B	

Notes:

L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates Potential Adverse Impacts.

" ** " indicates a calculated delay greater than 240 seconds.

(1) 2006 Future Conditions without the Delaware Aerator Fill Operations

(2) 2006 Future Conditions with the Delaware Aerator Fill Operations

* Also referred to as Build Conditions

(3) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

TABLE 6.2-2 (Continued)
COMMERCE TRUCK ROUTE (OPTION B)
LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS:
2006 FUTURE CONDITIONS WITHOUT THE PROJECT, FUTURE CONDITIONS WITH THE PROJECT (WITHOUT THE CROTON PROJECT), AND MITIGATION CONDITIONS

			PM Peak Hour										
				2006 (1)			2006 Option A (2)***			2006 Mitigation				
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (3)
Grasslands Road (E-W) @	6	Eastbound	L	1.27	208.6	F	*	** +	F	L	0.60	26.2	C	Add protected left-turn phase, signal
Bradhurst Avenue			T	0.54	21.5	C	0.62	23.1	C	TR	0.49	20.3	C	retiming, and westbound lane restriping
			R	0.25	11.9	B	0.25	11.9	B					from exclusive left-turn lane to shared left
		Westbound	L	0.19	17.6	B	0.22	18.0	B	LTR	0.66	23.4	C	turn through lane.
			TR	0.92	42.5	D	0.99	58.0 +	E					
		Northbound	L	0.77	46.7	D	0.77	46.7	D	L	0.79	48.0	D	
			TR	0.18	16.2	B	0.18	16.2	B	TR	0.18	16.2	B	
		Southbound	L	0.28	24.8	C	0.28	24.8	C	L	0.28	24.8	C	
			TR	1.05	85.7	F	1.05	85.7	F	TR	1.05	85.7	F	
		Intersection			51.3	D		61.4	E			37.2	D	
Grassland Road (Rt.100C) @	27	Eastbound	L	0.46	15.1	B	0.52	15.8	B	L	0.55	16.5	B	Provide the intersection with a new signal
Sprain Brook Pkwy NB Ramp	30		T	0.30	8.8	A	0.33	9.0	A	T	0.32	8.5	A	plan as follows
		Westbound	TR	0.99	47.5	D	1.03	58.9 +	E	TR	0.97	40.7	D	EB: G/A/R = 11/4/0
		Northbound	LT	0.68	28.8	C	0.68	28.8	C	LT	0.71	30.8	C	EB/WB: G/A/R = 32/4/1
			R	0.33	22.9	C	0.33	22.9	C	R	0.34	23.7	C	NB: G/A/R = 22/4/2
		Intersection			32.2	C		37.7	D			28.8	C	C = 80 seconds
														To be reviewed and implemented if requested by the approving agency
Grasslands Road @	33	Eastbound	LT	0.22	10.5	B	0.29	10.9	B	LT	0.29	10.9	B	MPT plan and clear brush on southbound
Legion Drive														Grasslands Road to improve line of sight.
		Southbound	L	1.08	138.1	F	1.31	230.5 +	F	L	1.31	230.5	F	NYSDOT is planning to signalize this
		Southbound	R	0.44	18.4	C	0.56	22.1	C	R	0.56	22.1	C	intersection.
		Intersection		Unsignalized			Unsignalized			Unsignalized				
	35													MPT plan will be implemented.
Grasslands Road (E-W) @		Westbound	LT	0.11	9.0	A	0.12	9.2	A	LT	0.12	9.2	A	
WCC West Gate Driveway		Northbound	L	0.24	45.2	E	0.29	55.8 +	F	L	0.29	55.8	F	
		Northbound	R	0.46	17.3	C	0.50	19.3	C	R	0.50	19.3	C	
				Unsignalized			Unsignalized			Unsignalized				
Commerce Street @	36	Eastbound	LTR	0.05	8.4	A	0.10	8.6	A	LTR	0.10	8.6	A	MPT plan to be implemented.
Legion Drive (E-W)		Westbound	LTR	0.06	8.5	A	0.06	8.5	A	LTR	0.06	8.5	A	
		Northbound	LTR	0.43	26.4	D	0.55	38.1 +	E	LTR	0.55	38.1	E	
		Southbound	LTR	0.63	65.5	F	0.90	101.4 +	F	LTR	0.90	101.4	F	
		Intersection		Unsignalized			Unsignalized			Unsignalized				
Taconic State Parkway @	38	Eastbound	LTR	1.09	121.4	F	1.38	231.3 +	F	LTR	1.38	231.3	F	NYSDOT does not believe signal timing
Lakeview Avenue (E-W)		Westbound	LTR	1.02	106.1	F	1.23	174.7 +	F	LTR	1.23	174.7	F	and restriping are warranted. Impact
		Northbound	L	0.15	4.4	A	0.15	4.4	A	L	0.15	4.4	A	would remain unmitigated.
			TR	1.05	46.8	D	1.05	46.8	D	TR	1.05	46.8	D	
		Southbound	L	0.34	7.4	A	0.34	7.4	A	L	0.34	7.4	A	
			TR	0.41	5.4	A	0.41	5.4	A	TR	0.41	5.4	A	
		Intersection			44.3	D		59.9	E			59.9	E	
Columbus Avenue (N-S) @	41	Southbound	LT	0.12	10.9	B	0.13	11.2	B	LT	0.13	11.2	B	MPT plan and uniformed Police presence
West Lake Drive		Westbound	L	0.09	38.9	E	0.63	81.3 +	F	L	0.63	81.3	F	(with cones and other control devices if
		Westbound	R	0.41	16.6	C	0.43	17.4	C	R	0.43	17.4	C	necessary) to direct traffic during school
														peak hours and other hours required.
		Intersection		Unsignalized			Unsignalized			Unsignalized				

Notes:

L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates Potential Adverse Impacts.

" * " indicates a v/c ratio greater than 1.50; " ** " indicates a calculated delay greater than 240 seconds.

(1) 2006 Future Conditions without the Delaware Aerator Fill Operations

(2) 2006 Future Conditions with the Delaware Aerator Fill Operations

*** Also referred to as Build Conditions

(3) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

NYCDEP would recommend the installation of a signal at this intersection. However, based on discussions that occurred between the Draft and Final EIS among NYCDEP and NYSDOT, Westchester County DPW, and local representatives, an MPT solution is more likely at this location than the mitigation measures described above (in addition, brush would be cleared on the southbound Grasslands Road to improve line of sight), because NYSDOT is planning to install a traffic signal at this intersection in the future, in coordination with planned NYSDOT design work for the corridor. NYCDEP and NYSDOT would coordinate the improvement of this intersection to ensure that adequate traffic flow would occur during the proposed project's impact period.

Grasslands Road (Route 100C) and WCC West Gate

During the AM peak hour, the northbound left-turn movement would continue to operate at LOS F with a 36.1-second increase in delay. During the PM peak hour, the northbound left-turn movement would deteriorate from LOS E with 45.2 seconds of delay to LOS F with 55.8 seconds of delay. A traffic signal is recommended for this location to fully mitigate the project-generated impacts. As a result of this mitigation, all of the vehicle movements would operate at LOS C or better, compared to FNB conditions, during the AM and PM peak hours with a maximum vehicle delay of 32.5 seconds.

Between the Draft and Final EIS, NYCDEP reevaluated the proposed mitigation measures and decided to implement an MPT solution, a combination of a flagperson with cones and signage, in order to mitigate the temporary adverse impact occurring at this intersection during the approximately six month period trucks are traveling between the Eastview Site and the Kensico campus. NYCDEP would submit this solution to the approval agency for approval. If the approval agency rejects this measure, the temporary adverse impact would remain unmitigated.

Commerce Street and Legion Drive

The northbound approach would deteriorate from LOS D with 26.4 seconds of delay to LOS E with 38.1 seconds of delay during the PM peak hour. The southbound approach would continue to operate at LOS F with a 35.9-second increase in delay. These impacts would be fully mitigated with the installation of a traffic signal at this location, which would result in LOS C or better for all of the vehicle movements and a maximum delay of 26.0 seconds per vehicle.

Between the Draft and Final EIS, NYCDEP reevaluated the proposed mitigation measures and decided an MPT solution is more likely at this location than the mitigation measures described above. NYCDEP would submit this solution to the approval agency for approval. If the approval agency rejects this measure, the temporary adverse impact would remain unmitigated.

Taconic State Parkway and Lakeview Avenue

During the AM peak hour, the eastbound approach would continue to operate at LOS F with an 82.5-second increase in delay; the westbound approach would continue to operate at LOS F with a 77.0-second increase in delay. During the midday peak hour, the eastbound approach would deteriorate from LOS D with 43.9 seconds of delay to LOS F with 81.3 seconds

of delay. During the PM peak hour, the eastbound approach would continue to operate at LOS F with a 109.9-second increase in delay; the westbound approach would continue to operate at LOS F with a 68.6-second increase in delay. A combination of measures is required to fully mitigate the AM, midday, and PM peak hour impacts at this location. The northbound and southbound approaches would be restriped to accommodate an exclusive left-turn lane, two through lanes, and an exclusive right-turn lane. During the AM, midday, and PM peak hours, new signal timings for each peak hour would also be implemented as shown in Table 6.2-2.

During the AM peak hour, these mitigation measures would result in a decrease in delay on the eastbound approach and the westbound approach of 43.7 seconds and 17.7 seconds, respectively, as compared to the 2006 FNB conditions. During the midday peak hour, these mitigation measures would result in a decrease in delay on the eastbound approach of 5.4 seconds as compared to the 2006 FNB conditions. During the PM peak hour, these mitigation measures would result in a decrease in delay on the eastbound approach and the westbound approach of 23.6 seconds and 14.8 seconds, respectively, as compared to the 2006 FNB conditions. The remaining vehicle movements at this location would operate at or near their 2006 FNB conditions.

Based on discussions that occurred between the Draft and Final EIS between NYCDEP and NYSDOT, the measures proposed in the Draft EIS would not be implemented. NYSDOT does not believe that the proposed signal timing changes and lane movements are warranted given the short duration of the potential impact (approximately six months). Therefore, this potential temporary adverse impact would remain unmitigated.

Columbus Avenue and West Lake Drive

The westbound left-turn movement at this location would deteriorate from LOS D with 26.8 seconds of delay to LOS E with 43.2 seconds of delay during the AM peak hour and from LOS E with 38.9 seconds of delay to LOS F with 81.3 seconds of delay during the PM peak hour. The installation of a traffic signal at this location could fully mitigate the AM and PM peak hour impacts such that all of the movements would operate at LOS C or better.

Based on discussions that occurred between the Draft and Final EIS among NYCDEP, Westchester County, and local representatives, an MPT solution is more likely at this location than the mitigation measures described above. As part of the MPT plan, a uniformed police officer would be assigned to these intersections during school hours and any other hour deemed necessary. In coordination with the MPT plan at this intersection, at the immediately adjacent intersection of Columbus Avenue and Lakeview Avenue, a flagperson and temporary signage may be needed at the westbound approach of Lakeview Avenue to ensure that traffic stops at a set back distance from the intersection to ensure that trucks could adequately turn from southbound Columbus Avenue onto Lakeview Avenue.

All of the mitigation measures suggested above would serve to eliminate construction-related impacts of the proposed project. If the mitigation identified is not applied, the predicted temporary adverse construction traffic impacts identified would remain unmitigated. In the absence of implementing the mitigation measures recommended above, NYCDEP would

consider other MPT techniques (e.g., the use of traffic control officers, traffic cones, variable message signs, etc.) if approved by the governing roadway entity, to offset these temporary adverse impacts, and ensure the smooth and safe operation of traffic.

2006 Construction Option C Conditions

The traffic analyses compared the proposed UV Facility's 2006 Construction Option C conditions against the 2006 FNB with Croton project conditions. Under these conditions in 2006, it was found that traffic from the trucks and the construction of the proposed UV Facility would be anticipated to result in 23 potential temporary adverse traffic impacts, (10 during the AM peak hour, 3 during the midday peak hour, and 10 during the PM peak hour). These impacts could be fully mitigated as described below; the resulting delays and LOS for these intersections, with the recommended mitigation applied, are compared to 2006 FNB and 2006 Construction Option B conditions (see Table 6.2-3).

The tables showing the results of applying the mitigation measures also indicate the specific measures recommended for each location. For many of the locations, more than one measure was identified that could be implemented that would reduce delays back to or below FNB conditions. The assessment presented here relies mostly on a combination of new traffic signals, lane striping changes, and traffic signal retiming or phasing changes as the recommended measures. However, some of the measures that were investigated were more extraordinary, involving additional lane construction or street widening, to give a complete range of potential measures that could eliminate impacts.

Bradhurst Avenue (Route 100) and Lakeview Avenue

During the AM peak hour, the westbound approach at this location would deteriorate from a LOS D with 27.1 seconds of delay to LOS D with 32.8 seconds of delay. The installation of a traffic signal at this location could fully mitigate the AM peak hour impacts such that all of the movements would operate at LOS C or better.

Based on discussions that occurred between the Draft and Final EIS among NYCDEP and NYSDOT, Westchester County DPW, and local representatives, an MPT solution is more likely at this location than the mitigation measures described above. The MPT at this location would likely include the need for two additional Flagpeople. One flagperson would be located at the intersection, and another flagperson would need to be located further north on Bradhurst (after the bend in the road) with warning signage/cones to ensure that southbound drivers on Bradhurst slow down before turning the bend. These measures would allow Bradhurst Avenue traffic to be temporarily stopped, and allow westbound traffic (including trucks returning from the Aerators) on Lakeview Avenue to safely access Bradhurst Avenue.

Grasslands Road (Route 100C) and Bradhurst Avenue (Route 100)

During the AM peak hour, the eastbound left-turn movement would continue to operate at LOS F with an 86.9-second increase in delay; the eastbound through movement would continue to operate at LOS E with a 9.7-second increase in delay; the southbound through/right

movement would deteriorate from LOS E with 70.8 seconds of delay to LOS F with 91.2 seconds of delay. During the midday peak hour, the southbound through/right movement would deteriorate from LOS E with 77.8 seconds of delay to LOS F with 96.5 seconds of delay. During the PM peak hour, the eastbound left-turn movement would continue to operate at LOS F with delays increasing well beyond 240 seconds; the westbound through/right movement would deteriorate from LOS D with 42.5 seconds of delay to LOS D with 49.3 seconds of delay; the southbound through/right-turn movement would continue to operate at LOS F with an 18.6-second increase in delay. A combination of measures is required to fully mitigate the AM, midday, and PM peak hour impacts at this location. The westbound approach would be restriped to accommodate two travel lanes (shared left/through and shared through/right). The eastbound approach would be restriped to accommodate an exclusive left-turn lane, a through lane, and a shared through/right lane. During the AM, midday, and PM peak hours, new signal phasing and timing plans for each peak hour would also be implemented as shown in Table 6.2-3.

During the AM peak hour, these mitigation measures would result in a decrease in delay on the eastbound left-turn movement and on the eastbound through movement of 40.1 seconds and 30.7 seconds, respectively, as compared to the 2006 FNB conditions. During the midday peak hour, these mitigation measures would result in a decrease in delay on the westbound though/right movement of 19.8 seconds as compared to the 2006 FNB conditions. During the PM peak hour, these mitigation measures would result in a decrease in delay on the eastbound left-turn movement and on the southbound though/right movement of 65.6 seconds and 8.0 seconds, respectively, as compared to the 2006 FNB conditions; the westbound approach would operate acceptably at LOS D with a delay of 43.3 seconds. The remaining vehicle movements at this location would operate at or near their 2006 FNB condition LOS.

An alternative measure to improve traffic operations at this intersection would be the installation of a protected eastbound left-turn phase or an eastbound approach lead phase.

Based on discussions that occurred between the Draft and Final EIS between NYCDEP and NYSDOT, an alternative restriping (change the westbound left-turn lane to a shared through left-turn lane) and revised signal plan to provide an eastbound/westbound phase is more suitable at this location than the mitigation measures described above. Although this measure does not fully mitigate the predicted traffic impacts at the intersection per the guidance in the *CEQR Technical Manual*, this revised mitigation would dramatically improve eastbound and westbound operations and reflect improved phasing of the signal operation. Overall intersection level-of-service would improve with the proposed improvement measure in place.

TABLE 6.2-3
SPLIT LAKEVIEW/COMMERCE TRUCK ROUTE (OPTION C)
LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS:
2006 FUTURE CONDITIONS WITHOUT THE PROJECT, FUTURE CONDITIONS WITH THE PROJECT (WITHOUT THE CROTON PROJECT), AND MITIGATION CONDITIONS

			AM Peak Hour											
				2006 (1)			2006 Option A (2)*			2006 Mitigation				
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (3)
Bradhurst Avenue @	5	Southbound	LT	0.04	8.6	A	0.04	8.7	A	LT	0.04	8.7	A	MPT plan to be implemented. Flagperson
Lakeview Avenue (E-W)		Westbound	LR	0.47	27.1	D	0.58	32.8 +	D	LR	0.58	32.8 +	D	at intersection with signage and cones.
														Flagperson just north of intersection on
		Intersection		Unsignalized			Unsignalized				Unsignalized			Bradhurst Avenue (after bend in the road)
														with signage and cones.
Grasslands Road (E-W) @	6	Eastbound	L	1.14	128.8	F	1.35	215.7 +	F	L	1.02	88.7	F	Add protected left-turn phase, signal
Bradhurst Avenue			T	1.00	68.8	E	1.04	78.5 +	E	TR	0.82	38.1	D	retiming, and westbound lane restriping
			R	0.36	16.4	B	0.36	16.4	B					from exclusive left-turn lane to shared left
		Westbound	L	1.03	161.3	F	1.03	161.3	F	LTR	0.77	38.2	D	turn through lane.
			TR	0.66	31.0	C	0.70	32.2	C					
		Northbound	L	0.34	28.0	C	0.34	28.3	C	L	0.35	29.1	C	
			TR	0.29	25.3	C	0.29	25.3	C	TR	0.28	24.3	C	
		Southbound	L	0.55	40.5	D	0.55	40.5	D	L	0.51	38.1	D	
			TR	0.89	70.8	E	0.98	91.2 +	F	TR	0.85	61.8	E	
		Intersection			58.6	E		75.4	E			45.6	D	
Grasslands Road (Rt.100C) @	24	Eastbound	L	0.04	17.8	B	0.04	17.8	B	L	0.04	17.8	B	Shift 4 seconds of green time from NB/SB
Clearbrook Road/Walker Road			TR	0.90	34.5	C	0.90	34.5	C	TR	0.90	34.5	C	phase to WB phase.
		Westbound	L	0.88	48.3	D	0.88	48.3	D	L	0.76	33.5	C	To be reviewed and implemented if
			TR	0.98	45.2	D	1.04	61.7 +	E	TR	0.95	37.1	D	requested by the approving agency.
		Northbound	LT	0.22	28.9	C	0.23	29.0	C	LT	0.30	32.8	C	
		Southbound	LT	0.03	27.4	C	0.21	28.9	C	LT	0.25	32.3	C	
			R	0.01	27.3	C	0.01	27.3	C	R	0.01	30.5	C	
		Intersection			41.2	D		47.9	D			35.2	D	
Grasslands Road (E-W) @	33	Eastbound	LT	0.11	9.4	A	0.14	9.6	A	LT	0.14	9.6	A	MPT plan and clear brush on southbound
Legion Drive														Grasslands Road to improve line of sight.
		Southbound	L	0.79	71.3	F	0.89	96.7 +	F	L	0.89	96.7 +	F	NYSDOT is planning to signalize this
		Southbound	R	0.37	16.2	C	0.42	17.1	C	R	0.42	17.1	C	intersection.
		Intersection		Unsignalized			Unsignalized				Unsignalized			
Grasslands Road (E-W) @	35													MPT plan to be implemented.
WCC West Gate Driveway		Westbound	LT	0.01	10.4	B	0.01	10.5	B	LT	0.01	10.5	B	
		Northbound	L	0.80	72.9	F	0.86	88.9 +	F	L	0.86	88.9 +	F	
		Northbound	R	0.06	14.5	B	0.06	14.9	B	R	0.06	14.9	B	
		Intersection		Unsignalized			Unsignalized				Unsignalized			
Taconic State Parkway @	38	Eastbound	LTR	1.08	114.3	F	1.30	196.8 +	F	LTR	1.30	196.8 +	F	NYSDOT does not believe signal timing
Lakeview Avenue (E-W)		Westbound	LTR	0.97	101.5	F	1.22	178.5 +	F	LTR	1.22	178.5 +	F	and restriping are warranted. Impact
		Northbound	L	0.21	5.0	A	0.21	5.0	A	L	0.21	5.0	A	would remain unmitigated.
			TR	0.21	4.4	A	0.21	4.4	A	TR	0.21	4.4	A	
		Southbound	L	0.04	3.9	A	0.04	3.9	A	L	0.04	3.9	A	
			TR	0.57	6.6	A	0.57	6.6	A	TR	0.57	6.6	A	
		Intersection			26.4	C		48.7	D			48.7	D	
Columbus Avenue (N-S) @	41													MPT plan and uniformed Police presence
West Lake Drive		Southbound	LT	0.14	9.4	A	0.15	9.7	A	LT	0.15	9.7	A	(with cones and other control devices if
		Westbound	L	0.04	26.8	D	0.43	43.2 +	E	L	0.43	43.2 +	E	necessary) to direct traffic during school
		Westbound	R	0.28	12.1	B	0.29	12.6	B	R	0.29	12.6	B	peak hours and other hours required.
		Intersection		Unsignalized			Unsignalized				Unsignalized			

Notes:

L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates Potential Adverse Impacts.

(1) 2006 Future Conditions without the Delaware Aerator Fill Operations

(2) 2006 Future Conditions with the Delaware Aerator Fill Operations

* Also referred to as Build Conditions

(3) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

TABLE 6.2-3 (Continued)
SPLIT LAKEVIEW/COMMERCE TRUCK ROUTE (OPTION C)
LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS:
2006 FUTURE CONDITIONS WITHOUT THE PROJECT, FUTURE CONDITIONS WITH THE PROJECT (WITHOUT THE CROTON PROJECT), AND MITIGATION CONDITIONS

			Midday Peak Hour										
				2006 (1)			2006 Option A (2)*			2006 Mitigation			
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (3)
Grasslands Road (E-W) @	6	Eastbound	L	0.20	14.8	B	0.27	15.6	B	L	0.30	21.5	C	Add protected left-turn phase, signal
Bradhurst Avenue			T	0.33	16.1	B	0.36	16.4	B	TR	0.34	21.6	C	retiming, and westbound lane restriping
			R	0.16	9.5	A	0.17	9.5	A					from exclusive left-turn lane to shared left
		Westbound	L	0.06	13.6	B	0.06	13.6	B	LTR	0.31	21.2	C	turn through lane.
			TR	0.39	16.7	B	0.42	17.1	B					
		Northbound	L	0.52	45.8	D	0.58	49.2	D	L	0.39	37.1	D	
			TR	0.13	26.0	C	0.13	26.0	C	TR	0.11	19.7	B	
		Southbound	L	0.25	35.7	D	0.25	35.7	D	L	0.21	31.7	C	
			TR	0.96	77.8	E	1.03	96.5 +	F	TR	0.88	58.0	E	
		Intersection			33.9	C		38.6	D			31.6	C	
Grasslands Road (E-W) @	33	Eastbound	LT	0.18	9.1	A	0.20	9.2	A	LT	0.20	9.2	A	MPT plan and clear brush on southbound
Legion Drive														Grasslands Road to improve line of sight.
		Southbound	L	1.13	172.8	F	1.25	220.8 +	F	L	1.25	220.8 +	F	NYSDOT is planning to signalize this
		Southbound	R	0.28	12.9	B	0.33	13.5	B	R	0.33	13.5	B	intersection.
		Intersection		Unsignalized			Unsignalized				Unsignalized			
Taconic State Parkway @	38	Eastbound	LTR	0.71	43.9	D	0.96	81.3 +	F	LTR	0.96	81.3 +	F	NYSDOT does not believe signal timing
Lakeview Avenue (E-W)		Westbound	LTR	0.45	35.1	D	0.67	42.1	D	LTR	0.67	42.1	D	and restriping are warranted. Impact
		Northbound	L	0.06	4.0	A	0.06	4.0	A	L	0.06	4.0	A	would remain unmitigated.
			TR	0.63	7.4	A	0.63	7.4	A	TR	0.63	7.4	A	
		Southbound	L	0.12	4.4	A	0.12	4.4	A	L	0.12	4.4	A	
			TR	0.27	4.7	A	0.27	4.7	A	TR	0.27	4.7	A	
		Intersection			10.8	B		16.4	B			16.4	B	

Notes:

L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates Potential Adverse Impacts.

(1) 2006 Future Conditions without the Delaware Aerator Fill Operations

(2) 2006 Future Conditions with the Delaware Aerator Fill Operations

* Also referred to as Build Conditions

(3) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

TABLE 6.2-3 (Continued)
SPLIT LAKEVEIW/COMMERCE TRUCK ROUTE (OPTION C)
LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS:
2006 FUTURE CONDITIONS WITHOUT THE PROJECT, FUTURE CONDITIONS WITH THE PROJECT (WITHOUT THE CROTON PROJECT), AND MITIGATION CONDITIONS

			PM Peak Hour											
				2006 (1)			2006 Option A (2)***			2006 Mitigation				
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (3)
Grasslands Road (E-W) @	6	Eastbound	L	1.27	208.6	F	*	** +	F	L	1.10	143.0	F	Add protected left-turn phase, signal
Bradhurst Avenue			T	0.54	21.5	C	0.58	22.2	C	TR	0.60	30.0	C	retiming, and westbound lane restriping
			R	0.25	11.9	B	0.25	11.9	B					from exclusive left-turn lane to shared left
		Westbound	L	0.19	17.6	B	0.20	17.8	B	LTR	0.88	43.3	D	turn through lane.
			TR	0.92	42.5	D	0.96	49.3 +	D					
		Northbound	L	0.77	46.7	D	0.80	50.9	D	L	0.71	45.8	D	
			TR	0.18	16.2	B	0.18	16.2	B	TR	0.19	18.2	B	
		Southbound	L	0.28	24.8	C	0.28	24.8	C	L	0.24	25.2	C	
			TR	1.05	85.7	F	1.10	104.3 +	F	TR	1.02	77.7	E	
		Intersection			51.3	D		75.2	E			51.0	D	
Grassland Road (Rt.100C) @	27	Eastbound	L	0.46	15.1	B	0.52	15.8	B	L	0.55	16.5	B	Provide the intersection with a new signal
Sprain Brook Pkwy NB Ramp	30		T	0.30	8.8	A	0.33	9.0	A	T	0.32	8.5	A	plan as follows
		Westbound	TR	0.99	47.5	D	1.03	58.9 +	E	TR	0.97	40.7	D	EB: G/A/R = 11/4/0
		Northbound	LT	0.68	28.8	C	0.68	28.8	C	LT	0.71	30.8	C	EB/WB: G/A/R = 32/4/1
			R	0.33	22.9	C	0.33	22.9	C	R	0.34	23.7	C	NB: G/A/R = 22/4/2
		Intersection			32.2	C		37.7	D			28.8	C	C = 80 seconds
														To be reviewed and implemented if requested by the approving agency
Grasslands Road @	33	Eastbound	LT	0.22	10.5	B	0.26	10.7	B	LT	0.26	10.7	B	MPT plan and clear brush on southbound
Legion Drive														Grasslands Road to improve line of sight.
		Southbound	L	1.08	138.1	F	1.19	180.8 +	F	L	1.19	180.8 +	F	NYSDOT is planning to signalize this
		Southbound	R	0.44	18.4	C	0.50	20.1	C	R	0.50	20.1	C	intersection.
		Intersection		Unsignalized			Unsignalized				Unsignalized			
Grasslands Road (E-W) @	35													MPT plan to be implemented.
WCC West Gate Driveway		Westbound	LT	0.11	9.0	A	0.12	9.1	A	LT	0.12	9.1	A	
		Northbound	L	0.24	45.2	E	0.26	50.2 +	F	L	0.26	50.2 +	F	
		Northbound	R	0.46	17.3	C	0.48	18.3	C	R	0.48	18.3	C	
				Unsignalized			Unsignalized				Unsignalized			
Commerce Street @	36	Eastbound	LTR	0.05	8.4	A	0.08	8.5	A	LTR	0.08	8.5	A	MPT plan to be implemented.
Legion Drive (E-W)		Westbound	LTR	0.06	8.5	A	0.06	8.5	A	LTR	0.06	8.5	A	
		Northbound	LTR	0.43	26.4	D	0.49	31.2	D	LTR	0.49	31.2	D	
		Southbound	LTR	0.63	65.5	F	0.76	78.3 +	F	LTR	0.76	78.3 +	F	
		Intersection		Unsignalized			Unsignalized				Unsignalized			
Taconic State Parkway @	38	Eastbound	LTR	1.09	121.4	F	1.38	231.3 +	F	LTR	1.38	231.3 +	F	NYSDOT does not believe signal timing
Lakeview Avenue (E-W)		Westbound	LTR	1.02	106.1	F	1.23	174.7 +	F	LTR	1.23	174.7 +	F	and restriping are warranted. Impact
		Northbound	L	0.15	4.4	A	0.15	4.4	A	L	0.15	4.4	A	would remain unmitigated.
			TR	1.05	46.8	D	1.05	46.8	D	TR	1.05	46.8	D	
		Southbound	L	0.34	7.4	A	0.34	7.4	A	L	0.34	7.4	A	
			TR	0.41	5.4	A	0.41	5.4	A	TR	0.41	5.4	A	
		Intersection			44.3	D		59.9	E			59.9	E	
Columbus Avenue (N-S) @	41	Southbound	LT	0.12	10.9	B	0.13	11.2	B	LT	0.13	11.2	B	MPT plan and uniformed Police presence
West Lake Drive		Westbound	L	0.09	38.9	E	0.63	81.3 +	F	L	0.63	81.3 +	F	(with cones and other control devices if
		Westbound	R	0.41	16.6	C	0.43	17.4	C	R	0.43	17.4	C	necessary) to direct traffic during school
		Intersection		Unsignalized			Unsignalized				Unsignalized			peak hours and other hours required.

Notes:
L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates Potential Adverse Impacts.
" * " indicates a v/c ratio greater than 1.50; " ** " indicates a calculated delay greater than 240 seconds.
(1) 2006 Future Conditions without the Delaware Aerator Fill Operations
(2) 2006 Future Conditions with the Delaware Aerator Fill Operations
*** Also referred to as Build Conditions
(3) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

Grasslands Road (Route 100C) and Clearbrook Road/Walker Road

The westbound through/right movement would deteriorate from LOS D with 45.2 seconds of delay to LOS E with 61.7 seconds of delay during the AM peak hour. This impact would be mitigated by transferring 4 seconds of green time from the north-south signal phase to the westbound leading signal phase. As a result of this mitigation, the westbound through/right movement would operate better than under FNB conditions, at LOS D with 37.2 seconds of delay. The remaining vehicle movements would continue to operate at their 2006 FNB condition LOS with no significant changes in their average vehicle delays.

NYCDEP would submit this solution to the approval agency for approval. If the approval agency (NYSDOT) rejects this measure, the temporary adverse impact would remain unmitigated.

Grasslands Road (Route 100C) and Sprain Brook Parkway Northbound Ramp

The westbound approach would deteriorate from LOS D with 47.5 seconds of delay to LOS E with 58.9 seconds of delay during the PM peak hour. This impact would be mitigated by implementing the signal timing plan shown in Table 6.2-3. As a result of this mitigation, the westbound approach would operate better than under FNB conditions, at LOS D with 40.7 seconds of delay. The remaining vehicle movements would continue to operate at or near their 2006 FNB condition LOS with no significant changes in their average vehicle delays.

NYCDEP would submit this solution to the approval agency for approval. If the approval agency (NYSDOT) rejects this measure, the temporary adverse impact would remain unmitigated.

Grasslands Road (Route 100) and Legion Drive

The southbound left-turn movement would continue to operate at LOS F with 25.4-second, 48.0-second, and 42.7-second increases in delay during the AM, midday, and PM peak hours, respectively. These impacts would be fully mitigated with the installation of a traffic signal at this location, which would result in below mid-LOS D or better for all of the vehicle movements and a maximum delay of 37.8 seconds per vehicle.

NYCDEP would recommend the installation of a signal at this intersection. However, based on discussions that occurred between the Draft and Final EIS among NYCDEP, NYSDOT, Westchester County DPW, and local representatives, an MPT solution is more likely at this location than the mitigation measures described (in addition, brush would be cleared on the southbound Grasslands Road to improve line of sight), because NYSDOT is planning to install a traffic signal at this intersection in the future, in coordination with planned NYSDOT design work for the corridor. NYCDEP and NYSDOT would coordinate the improvement of this intersection to ensure that adequate traffic flow would occur during the proposed project's impact period.

Grasslands Road (Route 100C) and WCC West Gate

During the AM peak hour, the northbound left-turn movement would continue to operate at LOS F with a 16-second increase in delay. During the PM peak hour, the northbound left-turn movement would deteriorate from LOS E with 45.2 seconds of delay to LOS F with 50.2 seconds of delay. A traffic signal is recommended for this location to fully mitigate the project-generated impacts. As a result of this mitigation, all of the vehicle movements would operate at LOS C or better during the AM and PM peak hours compared to FNB conditions, with a maximum vehicle delay of 32.5 seconds.

Between the Draft and Final EIS, NYCDEP reevaluated the proposed mitigation measures and decided to implement an MPT solution, a combination of a flagperson with cones and signage, in order to mitigate the temporary adverse impact occurring at this intersection during the approximately six month period trucks are traveling between the Eastview Site and the Kensico campus. NYCDEP would submit this solution to the approval agency for approval. If the approval agency rejects this measure, the temporary adverse impact would remain unmitigated.

Commerce Street and Legion Drive

The southbound approach would continue to operate at LOS F with a 12.8-second increase in delay during the PM peak hour. These impacts would be fully mitigated with the installation of a traffic signal at this location, which would result in LOS C or better for all of the vehicle movements and a maximum delay of 26.0 seconds per vehicle.

Between the Draft and Final EIS, NYCDEP reevaluated the proposed mitigation measures and decided to implement an MPT solution, a combination of a flagperson with cones and signage, in order to mitigate the temporary adverse impact occurring at this intersection during the approximately six month period trucks are traveling between the Eastview Site and the Kensico campus. NYCDEP would submit this solution to the approval agency for approval. If the approval agency rejects this measure, the temporary adverse impact would remain unmitigated.

Taconic State Parkway and Lakeview Avenue

During the AM peak hour, the eastbound approach would continue to operate at LOS F with an 82.5-second increase in delay; the westbound approach would continue to operate at LOS F with a 77.0-second increase in delay. During the midday peak hour, the eastbound approach would deteriorate from LOS D with 43.9 seconds of delay to LOS F with 81.3 seconds of delay. During the PM peak hour, the eastbound approach would continue to operate at LOS F with a 109.9-second increase in delay; the westbound approach would continue to operate at LOS F with a 68.6-second increase in delay. A combination of measures is required to fully mitigate the AM, midday, and PM peak hour impacts at this location. The northbound and southbound approaches would be restriped to accommodate an exclusive left-turn lane, two through lanes, and an exclusive right-turn lane. During the AM, midday, and PM peak hours, new signal timings for each peak hour would also be implemented as shown in Table 6.2-3.

During the AM peak hour, these mitigation measures would result in a decrease in delay on the eastbound approach and the westbound approach of 43.7 seconds and 17.7 seconds, respectively, as compared to the 2006 FNB conditions. During the midday peak hour, these mitigation measures would result in a decrease in delay on the eastbound approach of 5.4 seconds as compared to the 2006 FNB conditions. During the PM peak hour, these mitigation measures would result in a decrease in delay on the eastbound approach and the westbound approach of 23.6 seconds and 14.8 seconds, respectively, as compared to the 2006 FNB conditions. The remaining vehicle movements at this location would operate at or near their 2006 FNB condition LOS.

Based on discussions that occurred between the Draft and Final EIS between NYCDEP and NYSDOT, the measures proposed in the Draft EIS would not be implemented. NYSDOT does not believe that the proposed signal timing changes and lane movements are warranted given the short duration of the potential impact (approximately six months). Therefore, this potential temporary adverse impact would remain unmitigated.

Columbus Avenue and West Lake Drive

The westbound left-turn movement at this location would deteriorate from LOS D with 26.8 seconds of delay to LOS E with 43.2 seconds of delay during the AM peak hour and from LOS E with 38.9 seconds of delay to LOS F with 81.3 seconds of delay during the PM peak hour. The installation of a traffic signal at this location could fully mitigate the AM and PM peak hour impacts such that all of the movements would operate at LOS C or better.

Based on discussions that occurred between the Draft and Final EIS among NYCDEP, Westchester County, and local representatives, an MPT solution is more likely at this location than the mitigation measures described above. As part of the MPT plan, a uniformed police officer would be assigned to these intersections during school hours and any other hour deemed necessary. In coordination with the MPT plan at this intersection, at the immediately adjacent intersection of Columbus Avenue and Lakeview Avenue, a flagperson and temporary signage may be needed at the westbound approach of Lakeview Avenue to ensure that traffic stops at a set back distance from the intersection to ensure that trucks could adequately turn from southbound Columbus Avenue onto Lakeview Avenue.

All of the mitigation measures suggested above would serve to eliminate construction-related impacts of the proposed project. If the mitigation identified is not applied, the predicted temporary adverse construction traffic impacts identified would not be mitigated. In the absence of implementing the mitigation measures recommended above, NYCDEP would consider other MPT techniques (e.g., the use of traffic control officers, traffic cones, variable message signs, etc.) if approved by the governing roadway entity, to offset these temporary adverse impacts, and ensure the smooth and safe operation of traffic.

2006 Construction Option D Conditions (Preferred Route)

The traffic analyses compared the proposed UV Facility's 2006 Construction Option D conditions against the "pure" 2006 FNB conditions. Under these conditions in 2006, it was found that traffic from the trucks and the construction of the proposed UV Facility would be anticipated to result in 15 (some lane groups/approaches are impacted for multiple time periods) potential temporary adverse traffic impacts, (6 during the AM peak hour, 1 during the midday peak hour, and 8 during the PM peak hour). Between the Draft and Final EIS, discussions were held between NYCDEP and the relevant agencies (e.g., NYSDOT, Westchester County DPW) and local representatives, to determine what level of mitigation measure would be appropriate to address the potential significant adverse impacts identified for the project's construction. These measures are reflected in Table 6.2-4.

Grasslands Road (Route 100C) and Bradhurst Avenue (Route 100)

During the AM peak hour, the eastbound left-turn movement would deteriorate from LOS F with 128.8 seconds of delay to LOS F with delay greater than 240.0 seconds. During the PM peak hour, the eastbound left-turn movement would deteriorate from LOS F with 208.6 seconds of delay to LOS F with delay greater than 240.0 seconds; the westbound through/right-turn movement would deteriorate from LOS D with 42.5 seconds of delay to LOS E with 58.0 seconds of delay.

Based on discussions that occurred between the Draft and Final EIS between NYCDEP and NYSDOT, a restriping (change the westbound left-turn lane to a shared through left-turn lane) and revised signal plan to provide a protected left-turn phase would be recommended for this intersection. Although this measure does not fully mitigate the predicted traffic impacts at the intersection per the guidance in the *CEQR Technical Manual*, this revised mitigation would dramatically improve eastbound and westbound operations and reflect improved phasing of the signal operation. Overall intersection level-of-service would improve with the proposed improvement measure in place.

Grasslands Road (Route 100C) and Clearbrook Road/Walker Road

The westbound through/right movement would deteriorate from LOS D with 45.2 seconds of delay to LOS E with 61.7 seconds of delay during the AM peak hour.

The westbound through/right movement would deteriorate from LOS D with 45.2 seconds of delay to LOS E with 61.7 seconds of delay during the AM peak hour. This impact would be mitigated by transferring 3 seconds of green time from the north-south signal phase to the westbound leading signal phase. As a result of this mitigation, the westbound through/right movement would operate better than under FNB conditions, at LOS D with 42.0 seconds of delay. The remaining vehicle movements would continue to operate at their 2006 FNB Condition LOS with no significant changes in their average vehicle delays.

NYCDEP would submit this solution to the approval agency for approval. If the approval agency (NYSDOT) rejects this measure, the temporary adverse impact would remain unmitigated.

Grasslands Road (Route 100C) and Sprain Brook Parkway Northbound Ramp

The westbound approach would deteriorate from LOS D with 47.5 seconds of delay to LOS E with 58.9 seconds of delay during the PM peak hour.

The westbound approach would deteriorate from LOS D with 47.5 seconds of delay to LOS E with 58.9 seconds of delay during the PM peak hour. This impact would be mitigated by transferring 2 seconds of green time from the eastbound leading signal phase to the east-west signal phase. As a result of this mitigation, the westbound approach would operate better than under FNB conditions, at LOS D with 40.7 seconds of delay. The remaining vehicle movements would continue to operate at their 2006 FNB Condition LOS with no significant changes in their average vehicle delays.

NYCDEP would submit this solution to the approval agency for approval. If the approval agency (NYSDOT) rejects this measure, the temporary adverse impact would remain unmitigated.

Grasslands Road (Route 100) and Legion Drive

The southbound left-turn movement would deteriorate from LOS F with 138.1 seconds of delay to LOS F with 140.1 seconds of delay during the PM peak hour.

NYCDEP would recommend the installation of a signal at this intersection. However, based on discussions that occurred between the Draft and Final EIS among NYCDEP and NYSDOT, Westchester County DPW, and local representatives, an MPT solution is more likely at this location than the mitigation measures described (in addition, brush would be cleared on the southbound Grasslands Road to improve line of sight), because NYSDOT is planning to install a traffic signal at this intersection in the future, in coordination with planned NYSDOT design work for the corridor. NYCDEP and NYSDOT would coordinate the improvement of this intersection to ensure that adequate traffic flow would occur during the proposed project's impact period.

Grasslands Road (Route 100) and Westchester Community College (WCC) West Gate Driveway

During the AM peak hour, the northbound left-turn movement would continue to operate at LOS F with a 16.0-second increase in delay. During the PM peak hour, the northbound left-turn movement would deteriorate from LOS E with 45.2 seconds of delay to LOS F with 50.2 seconds of delay.

NYCDEP proposes to implement an MPT solution, a combination of a flagperson with cones and signage, in order to mitigate the temporary adverse impact occurring at this intersection during the approximately six month period trucks are traveling between the Eastview Site and the Kensico campus. NYCDEP would submit this solution to the approval agency for approval. If the approval agency rejects this measure, the temporary adverse impact would remain unmitigated.

Taconic State Parkway and Lakeview Avenue

During the AM peak hour, the eastbound approach would continue to operate at LOS F with an 82.5-second increase in delay; the westbound approach would continue to operate at LOS F with a 77.0-second increase in delay. During the midday peak hour, the eastbound approach would deteriorate from LOS D with 43.9 seconds of delay to LOS F with 81.3 seconds of delay. During the PM peak hour, the eastbound approach would continue to operate at LOS F with a 109.9-second increase in delay; the westbound approach would continue to operate at LOS F with a 68.6-second increase in delay.

Based on discussions that occurred between the Draft and Final EIS between NYCDEP and NYSDOT, NYSDOT has indicated that no MPT or mitigation measures are required at this intersection given the short duration of the potential impact (approximately six months). Therefore, this potential adverse impact would remain unmitigated.

Columbus Avenue and West Lake Drive

The westbound left-turn movement at this location would deteriorate from LOS D with 26.8 seconds of delay to LOS E with 43.2 seconds of delay during the AM peak hour and from LOS E with 38.9 seconds of delay to LOS F with 81.3 seconds of delay during the PM peak hour.

Based on discussions that occurred between the Draft and Final EIS among NYCDEP and Westchester County and local representatives, an MPT solution is likely at this location. As part of the MPT plan, a uniformed police officer would be assigned to these intersections during school hours and any other hour deemed necessary. In coordination with the MPT plan at this intersection, at the immediately adjacent intersection of Columbus Avenue and Lakeview Avenue, a flagperson and temporary signage may be needed at the westbound approach of Lakeview Avenue to ensure that traffic stops at a set back distance from the intersection to ensure that trucks could adequately turn from southbound Columbus Avenue onto Lakeview Avenue.

TABLE 6.2-4
CIRCULAR LAKEVIEW/COMMERCE TRUCK ROUTE (OPTION D)
LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS:
2006 FUTURE CONDITIONS WITHOUT THE PROJECT, FUTURE CONDITIONS WITH THE PROJECT (WITHOUT THE CROTON PROJECT), AND MITIGATION CONDITIONS

			AM Peak Hour											
				2006 (1)			2006 Option D (2)*			2006 Mitigation				
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (3)
Grasslands Road (E-W) @	6	Eastbound	L	1.14	128.8	F	*	** +	F	L	0.65	29.1	C	Add protected left-turn phase, signal
Bradhurst Avenue			T	1.00	68.8	E	1.00	68.8	E	T	0.91	44.5	D	retiming, and westbound lane restriping
			R	0.36	16.4	B	0.36	16.4	B	R	0.41	21.5	C	from exclusive left-turn to shared left-
		Westbound	L	1.03	161.3	F	1.03	161.3	F	LTR	0.76	36.5	D	through lane.
			TR	0.66	31.0	C	0.73	33.6	C					
		Northbound	L	0.34	28.0	C	0.34	28.0	C	L	0.49	38.8	D	
			TR	0.29	25.3	C	0.29	25.3	C	TR	0.41	35.4	D	
		Southbound	L	0.55	40.5	D	0.55	40.5	D	L	0.58	42.5	D	
			TR	0.89	70.8	E	0.89	70.8	E	TR	0.89	70.8	E	
		Intersection			58.6	E		87.6	F			39.9	D	
Grasslands Road (Rt.100C) @	24	Eastbound	L	0.04	17.8	B	0.04	17.8	B	L	0.04	17.8	B	Shift 3 seconds of green time from
Clearbrook Road/Walker Road			TR	0.90	34.5	C	0.90	34.5	C	TR	0.90	34.5	C	northbound/southbound phase to
		Westbound	L	0.88	48.3	D	0.88	48.3	D	L	0.78	36.0	D	westbound leading phase
			TR	0.98	45.2	D	1.04	61.7 +	E	TR	0.97	42.0	D	
		Northbound	LT	0.22	28.9	C	0.22	29.0	C	LT	0.27	31.7	C	(To be reviewed and implemented if
		Southbound	LT	0.03	27.4	C	0.20	28.8	C	LT	0.23	31.4	C	requested by the approving agency)
			R	0.01	27.3	C	0.01	27.3	C	R	0.01	29.7	C	
		Intersection			41.2	D		47.9	D			37.7	D	
Grasslands Road @	33	Eastbound	LT	0.11	9.4	A	0.11	9.4	A	LT	0.11	9.4	A	MPT plan and clear brush on southbound
Legion Drive		Southbound	L	0.79	71.3	F	0.79	71.3	F	L	0.79	71.3	F	Grasslands Road to improve sight
			R	0.37	16.2	C	0.47	18.1	C	R	0.47	18.1	C	distance. NYSDOT is planning to
		Intersection		Unsignalized			Unsignalized				Unsignalized			signalize this intersection.
Grasslands Road (E-W) @	35	Westbound	LT	0.01	10.4	B	0.01	10.4	B	LT	0.01	10.4	B	MPT plan will be implemented.
WCC West Gate Driveway		Northbound	L	0.80	72.9	F	0.86	88.9 +	F	L	0.86	88.9 +	F	
			R	0.06	14.5	B	0.06	14.5	B	R	0.06	14.5	B	
		Intersection		Unsignalized			Unsignalized				Unsignalized			
Taconic State Parkway @	38	Eastbound	LTR	1.08	114.3	F	1.30	196.8 +	F	LTR	1.30	196.8 +	F	NYSDOT does not believe signal timing
Lakeview Avenue (E-W)		Westbound	LTR	0.97	101.5	F	1.22	178.5 +	F	LTR	1.22	178.5 +	F	and restriping are warranted. Impact
		Northbound	L	0.21	5.0	A	0.21	5.0	A	L	0.21	5.0	A	would remain unmitigated.
			TR	0.21	4.4	A	0.21	4.4	A	TR	0.21	4.4	A	
		Southbound	L	0.04	3.9	A	0.04	3.9	A	L	0.04	3.9	A	
			TR	0.57	6.6	A	0.57	6.6	A	TR	0.57	6.6	A	
		Intersection			26.4	C		48.7	D			48.7	D	
Columbus Avenue (N-S) @	41	Southbound	LT	0.14	9.4	A	0.15	9.7	A	LT	0.15	9.7	A	MPT plan and uniformed Police presence
West Lake Drive		Westbound	L	0.04	26.8	D	0.43	43.2 +	E	L	0.43	43.2 +	E	(with cones and other control devices if
			R	0.28	12.1	B	0.29	12.6	B	R	0.29	12.6	B	necessary) to direct traffic during school
		Intersection		Unsignalized			Unsignalized				Unsignalized			peak hours and other hours required.

Notes:

L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates Potential Adverse Impacts.

(1) 2006 Future Conditions without the Delaware Aerator Fill Operations

(2) 2006 Future Conditions with the Delaware Aerator Fill Operations

* Also referred to as Build Conditions

(3) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

TABLE 6.2-4 (Continued)
CIRCULAR LAKEVIEW/COMMERCE TRUCK ROUTE (OPTION D)
LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS:
2006 FUTURE CONDITIONS WITHOUT THE PROJECT, FUTURE CONDITIONS WITH THE PROJECT (WITHOUT THE CROTON PROJECT), AND MITIGATION CONDITIONS

			Midday Peak Hour											
				2006 (1)			2006 Option D (2)*			2006 Mitigation				
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (3)
Grasslands Road (E-W) @ Bradhurst Avenue	6	Eastbound	L	0.20	14.8	B	0.35	16.6	B	L	0.34	24.1	C	Add protected left-turn phase, signal retiming, and westbound lane restriping from exclusive left-turn to shared left-through lane. (No impact)
			T	0.33	16.1	B	0.33	16.1	B	T	0.45	26.7	C	
			R	0.16	9.5	A	0.16	9.5	A	R	0.23	21.0	C	
		Westbound	L	0.06	13.6	B	0.06	13.6	B	LTR	0.44	31.5	C	
			TR	0.39	16.7	B	0.44	17.4	B					
		Northbound	L	0.52	45.8	D	0.52	45.8	D	L	0.40	36.1	D	
			TR	0.13	26.0	C	0.13	26.0	C	TR	0.11	20.9	C	
		Southbound	L	0.25	35.7	D	0.25	35.7	D	L	0.20	29.5	C	
			TR	0.96	77.8	E	0.96	77.8	E	TR	0.76	43.0	D	
		Intersection			33.9	C		33.9	C			31.4	C	
Grasslands Road @ Legion Drive	33	Eastbound	LT	0.18	9.1	A	0.18	9.1	A	LT	0.18	9.1	A	MPT plan and clear brush on southbound Grasslands Road to improve sight distance (No impact). NYSDOT is planning to signalize this intersection.
		Southbound	L	1.13	172.8	F	1.13	172.8	F	L	1.13	172.8	F	
			R	0.28	12.9	B	0.38	14.2	B	R	0.38	14.2	B	
		Intersection			Unsignalized			Unsignalized				Unsignalized		
Grasslands Road (E-W) @ WCC West Gate Driveway	35	Westbound	LT	0.06	8.5	A	0.06	8.5	A	LT	0.06	8.5	A	MPT plan to be implemented.
		Northbound	L	0.08	20.5	C	0.09	21.9	C	L	0.09	21.9	C	
			R	0.43	15.3	C	0.43	15.3	C	R	0.43	15.3	C	
		Intersection			Unsignalized			Unsignalized				Unsignalized		
Taconic State Parkway @ Lakeview Avenue (E-W)	38	Eastbound	LTR	0.71	43.9	D	0.96	81.3 +	F	LTR	0.96	81.3 +	F	NYSDOT does not believe signal timing and restriping are warranted. Impact would remain unmitigated.
		Westbound	LTR	0.45	35.1	D	0.67	42.1	D	LTR	0.67	42.1	D	
		Northbound	L	0.06	4.0	A	0.06	4.0	A	L	0.06	4.0	A	
			TR	0.63	7.4	A	0.63	7.4	A	TR	0.63	7.4	A	
		Southbound	L	0.12	4.4	A	0.12	4.4	A	L	0.12	4.4	A	
			TR	0.27	4.7	A	0.27	4.7	A	TR	0.27	4.7	A	
		Intersection			10.8	B		16.4	B			16.4	B	
Columbus Avenue (N-S) @ West Lake Drive	41	Southbound	LT	0.07	9.1	A	0.07	9.3	A	LT	0.07	9.3	A	MPT plan and uniformed Police presence (with cones and other control devices if necessary) to direct traffic during school peak hours and other hours required.
		Westbound	L	0.02	20.3	C	0.28	26.4	D	L	0.28	26.4	D	
			R	0.18	11.4	B	0.18	11.8	B	R	0.18	11.8	B	
		Intersection			Unsignalized			Unsignalized				Unsignalized		

Notes:

L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates Potential Adverse Impacts.

(1) 2006 Future Conditions without the Delaware Aerator Fill Operations

(2) 2006 Future Conditions with the Delaware Aerator Fill Operations

* Also referred to as Build Conditions

(3) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

TABLE 6.2-4 (Continued)
CIRCULAR LAKEVIEW/COMMERCE TRUCK ROUTE (OPTION D)
LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS:
2006 FUTURE CONDITIONS WITHOUT THE PROJECT, FUTURE CONDITIONS WITH THE PROJECT (WITHOUT THE CROTON PROJECT), AND MITIGATION CONDITIONS

			PM Peak Hour											
				2006 (1)			2006 Option D (2)***			2006 Mitigation				
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (3)
Grasslands Road (E-W) @	6	Eastbound	L	1.27	208.6	F	*	** +	F	L	0.64	29.5	C	Add protected left-turn phase, signal
Bradhurst Avenue			T	0.54	21.5	C	0.55	21.5	C	T	0.73	33.6	C	retiming, and westbound lane restriping
			R	0.25	11.9	B	0.25	11.9	B	R	0.36	22.3	C	from exclusive left-turn to shared left-
		Westbound	L	0.19	17.6	B	0.19	17.6	B	LTR	1.02	73.6	E	through lane.
			TR	0.92	42.5	D	0.99	58.0 +	E					
		Northbound	L	0.77	46.7	D	0.77	46.7	D	L	0.71	40.8	D	
			TR	0.18	16.2	B	0.18	16.2	B	TR	0.18	15.0	B	
		Southbound	L	0.28	24.8	C	0.28	24.8	C	L	0.26	23.3	C	
			TR	1.05	85.7	F	1.05	85.7	F	TR	0.98	65.4	E	
		Intersection			51.3	D		88.0	F			50.3	D	
Grassland Road (Rt.100C) @	27	Eastbound	L	0.46	15.1	B	0.52	15.8	B	L	0.59	18.0	B	Shift 2 seconds of green time from
Sprain Brook Pkwy NB Ramp	30		T	0.30	8.8	A	0.33	9.0	A	T	0.33	9.0	A	eastbound leading phase to
		Westbound	TR	0.99	47.5	D	1.03	58.9 +	E	TR	0.97	40.7	D	eastbound/westbound phase
		Northbound	LT	0.68	28.8	C	0.68	28.8	C	LT	0.68	28.8	C	
			R	0.33	22.9	C	0.33	22.9	C	R	0.33	22.9	C	(To be reviewed and implemented if
		Intersection			32.2	C		37.7	D			28.7	C	requested by the approving agency)
Grasslands Road @	33	Eastbound	LT	0.22	10.5	B	0.22	10.5	B	LT	0.22	10.5	B	MPT plan and clear brush on southbound
Legion Drive		Southbound	L	1.08	138.1	F	1.09	140.1 +	F	L	1.09	140.1 +	F	Grasslands Road to improve sight
			R	0.44	18.4	C	0.56	22.1	C	R	0.56	22.1	C	distance. NYSDOT is planning to
		Intersection		Unsignalized			Unsignalized				Unsignalized			signalize this intersection.
Grasslands Road (E-W) @	35	Westbound	LT	0.11	9.0	A	0.11	9.0	A	LT	0.11	9.0	A	MPT plan to be implemented.
WCC West Gate Driveway		Northbound	L	0.24	45.2	E	0.26	50.2 +	F	L	0.26	50.2 +	F	
			R	0.46	17.3	C	0.46	17.3	C	R	0.46	17.3	C	
		Intersection		Unsignalized			Unsignalized				Unsignalized			
Taconic State Parkway @	38	Eastbound	LTR	1.09	121.4	F	1.38	231.3 +	F	LTR	1.38	231.3 +	F	NYSDOT does not believe signal timing
Lakeview Avenue (E-W)		Westbound	LTR	1.02	106.1	F	1.23	174.7 +	F	LTR	1.23	174.7 +	F	and restriping are warranted. Impact
		Northbound	L	0.15	4.4	A	0.15	4.4	A	L	0.15	4.4	A	would remain unmitigated.
			TR	1.05	46.8	D	1.05	46.8	D	TR	1.05	46.8	D	
		Southbound	L	0.34	7.4	A	0.34	7.4	A	L	0.34	7.4	A	
			TR	0.41	5.4	A	0.41	5.4	A	TR	0.41	5.4	A	
		Intersection			44.3	D		59.9	E			59.9	E	
Columbus Avenue (N-S) @	41	Southbound	LT	0.12	10.9	B	0.13	11.2	B	LT	0.13	11.2	B	MPT plan and uniformed Police presence
West Lake Drive		Westbound	L	0.09	38.9	E	0.63	81.3 +	F	L	0.63	81.3 +	F	(with cones and other control devices if
			R	0.41	16.6	C	0.43	17.4	C	R	0.43	17.4	C	necessary) to direct traffic during school
		Intersection		Unsignalized			Unsignalized				Unsignalized			peak hours and other hours required.

Notes:

L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates Potential Adverse Impacts.

" * " indicates a v/c ratio greater than 1.50; " ** " indicates a calculated delay greater than 240 seconds.

(1) 2006 Future Conditions without the Delaware Aerator Fill Operations

(2) 2006 Future Conditions with the Delaware Aerator Fill Operations

*** Also referred to as Build Conditions

(3) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

2006 Construction Option E Conditions

The traffic analyses compared the proposed UV Facility's 2006 Construction Option E conditions against the "pure" 2006 FNB conditions. Under these conditions in 2006, it was found that traffic from the trucks and the construction of the proposed UV Facility would be anticipated to result in 7 (some lane groups/approaches are impacted for multiple time periods) potential temporary adverse traffic impacts, (2 during the AM peak hour, 2 during the midday peak hour, and 3 during the PM peak hour).

Between the Draft and Final EIS, discussions were held between NYCDEP and the relevant agencies (e.g., NYSDOT, Westchester County DPW) and local representatives, to determine what level of mitigation measure would be appropriate to address the potential temporary adverse impacts identified for the project's construction. These measures are reflected in Table 6.2-5.

Columbus Avenue and West Lake Drive

The westbound left-turn movement would deteriorate from LOS D with 26.8 seconds of delay to LOS D with 32.7 seconds of delay, and from LOS E with 38.9 seconds of delay to LOS F with 50.5 seconds of delay during the AM and PM peak hours, respectively. These impacts would be fully mitigated with the installation of a traffic signal at this location, which would result in LOS C or better for all of the vehicle movements and a maximum delay of 26.5 seconds and 28.6 seconds per vehicle for the AM and PM peak hours, respectively. A traffic signal would also improve the operation of this intersection during the midday peak hour. During the midday peak hour, all of the vehicle movements at this location would operate at LOS C or better with a maximum vehicle delay of 20.2 seconds.

Based on discussions that occurred between the Draft and Final EIS among NYCDEP and Westchester County DPW, local representatives, an MPT solution is likely at this location. As part of the MPT plan, a uniformed police officer would be assigned to these intersections during school hours and any other hour deemed necessary.

Saw Mill River Road (Route 9A) and Saw Mill River Parkway (Northbound Ramp)

During the PM peak hour, the southbound through/right-turn movement would deteriorate from LOS D with 43.4 seconds of delay to LOS E with 56.0 seconds of delay. This impact would be mitigated by transferring 2 seconds of green time from the eastbound signal phase to the northbound/southbound signal phase. As a result of this mitigation, the southbound through/right-turn movement would operate better than under FNB conditions, at LOS D with 39.0 seconds of delay. The remaining vehicle movements would continue to operate at or near their 2006 FNB Condition LOS with no significant changes in their average vehicle delays.

NYCDEP would submit this solution to the approval agency for approval. If the approval agency (NYSDOT) rejects this measure, the temporary adverse impact would remain unmitigated.

Saw Mill River Road (Route 9A) and Dana Road

The westbound approach would deteriorate from LOS D with 40.7 seconds of delay to LOS D with 49.6 seconds of delay and from LOS D with 41.9 seconds of delay to LOS E with 71.6 seconds of delay during the midday and PM peak hours, respectively. These impacts would be mitigated by transferring 4 seconds of green time from the northbound/southbound signal phase to the eastbound/westbound signal phase. As a result of this mitigation, the westbound approach would operate better than under FNB conditions, at LOS D with 38.6 seconds of delay and 39.5 seconds of delay during the midday and PM peak hours, respectively. The remaining vehicle movements during both the midday and PM peak hours would continue to operate at or near their 2006 FNB Condition LOS with no significant changes in their average vehicle delays.

An analysis was also performed at this intersection assuming that the traffic improvements (and generated traffic) from the proposed Home Depot project are not in place at this intersection. The result of this analysis also indicated that allocation of signal timing to eastbound/westbound signal phase would eliminate any predicted temporary adverse impacts from the trucking activities.

NYCDEP would submit this solution to the approval agency for approval. If the approval agency (NYSDOT) rejects this measure, the temporary adverse impact would remain unmitigated.

Broadway (Route 141), Bradhurst Avenue, and Memorial Drive

The southbound approach would deteriorate from LOS E with 65.6 seconds of delay to LOS F with 85.3 seconds of delay during the AM peak hour. This impact would be mitigated by transferring 3 seconds of green time from the eastbound/westbound signal phase to the southbound signal phase. As a result of this mitigation, the southbound approach would operate better than under FNB conditions at LOS E with 59.6 seconds of delay. The remaining vehicle movements would continue to operate at or near their 2006 FNB Condition LOS with no significant changes in their average vehicle delays.

NYCDEP would submit this solution to the approval agency for approval. If the approval agency (NYSDOT) rejects this measure, the temporary adverse impact would remain unmitigated.

Broadway (Route 141) and Kensico Road/Marble Avenue

The northbound through/right-turn movement would deteriorate from LOS D with 42.1 seconds of delay to LOS D with 53.4 seconds of delay during the midday peak hour. This impact would be mitigated by transferring 4 seconds of green time from the eastbound/westbound signal phase to the northbound/southbound signal phase. As a result of this mitigation, the northbound through/right-turn movement would operate better than under FNB conditions at LOS D with 41.9 seconds of delay. The remaining vehicle movements would continue to operate at or near their 2006 FNB Condition LOS with no significant changes in their average vehicle delays.

NYCDEP would submit this solution to the approval agency for approval. If the approval agency (NYSDOT) rejects this measure, the temporary adverse impact would remain unmitigated.

TABLE 6.2-5.
ROUTE 9A/ROUTE 141/KENSICO ROAD/COLUMBUS AVENUE TRUCK ROUTE (OPTION E)
LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS:
2006 FUTURE CONDITIONS WITHOUT THE PROJECT, FUTURE CONDITIONS WITH THE PROJECT (WITHOUT THE CROTON PROJECT), AND MITIGATION CONDITIONS

Intersection	No.	Approach	2006 (1) Lane Group	2006 (1) v/c Ratio	2006 (1) Delay (sec)	2006 (1) LOS	2006 Option E (2)* v/c Ratio	2006 Option E (2)* Delay (sec)	2006 Option E (2)* LOS	2006 Mitigation Lane Group	2006 Mitigation v/c Ratio	2006 Mitigation Delay (sec)	2006 Mitigation LOS	FEIS Mitigation Measures (3)
AM Peak Hour														
Columbus Avenue @	41	Westbound	L	0.04	26.8	D	0.04	32.7 +	D	L	0.04	32.7 +	D	
West Lake Drive			R	0.28	12.1	B	0.37	13.1	B	R	0.37	13.1	B	MPT plan and uniformed Police presence
		Southbound	LT	0.14	9.4	A	0.19	9.8	A	LT	0.19	9.8	A	(with cones and other control devices if
		Intersection		Unsignalized			Unsignalized				Unsignalized			necessary) to direct traffic during school peak hours and other hours required.
Broadway (Rt. 141) @	46A	Eastbound	TR	0.32	31.4	C	0.32	31.4	C	TR	0.40	34.6	C	Shift 3 seconds of green time from
Bradhurst Avenue & Memorial Drive		Westbound	LT	0.31	31.4	C	0.31	31.4	C	LT	0.48	35.8	D	Eastbound/Westbound phase to
			R	0.27	2.1	A	0.31	2.2	A	R	0.31	2.2	A	Southbound phase
		Northbound	LTR	0.57	44.0	D	0.57	44.0	D	LTR	0.57	44.0	D	
		Southbound	LTR	1.07	65.6	E	1.12	85.3 +	F	LTR	1.06	59.6	E	(To be reviewed and implemented if
		Intersection			48.8	D		60.8	E			44.5	D	requested by the approving agency)
Midday Peak Hour														
Saw Mill River Road (Rt. 9A) @	20	Eastbound	LT	0.23	31.4	C	0.25	31.7	C	LT	0.21	28.4	C	Shift 4 seconds of green time from
Dana Road (4)			R	0.22	31.2	C	0.22	31.2	C	R	0.20	28.1	C	Northbound/Southbound phase to
		Westbound	LTR	0.68	40.7	D	0.81	49.6 +	D	LTR	0.70	38.6	D	Eastbound/Westbound phase. Same
		Northbound	L	0.27	9.2	A	0.27	9.2	A	L	0.29	11.1	B	mitigation measure with and without
			TR	0.50	10.9	B	0.50	10.9	B	TR	0.53	13.2	B	Home Depot.
		Southbound	L	0.15	8.3	A	0.35	10.1	B	L	0.39	12.5	B	
			TR	0.41	9.9	A	0.41	9.9	A	TR	0.43	12.0	B	(To be reviewed and implemented if
		Intersection			15.1	B		16.8	B			17.0	B	requested by the approving agency)
Columbus Avenue @	41	Westbound	L	0.02	20.3	C	0.03	24.1	C	L	0.03	24.1	C	
West Lake Drive			R	0.18	11.4	B	0.27	12.2	B	R	0.27	12.2	B	MPT plan and uniformed Police presence
		Southbound	LT	0.07	9.1	A	0.13	9.4	A	LT	0.13	9.4	A	(with cones and other control devices if
		Intersection		Unsignalized			Unsignalized				Unsignalized			necessary) to direct traffic during school peak hours and other hours required.
Broadway (Rt. 141) @	51	Eastbound	L	0.51	14.8	B	0.51	14.8	B	L	0.56	17.7	B	Shift 4 seconds of green time from
Kensico Road/Marble Avenue			TR	0.51	24.6	C	0.51	24.6	C	TR	0.56	27.9	C	Eastbound/Westbound phase to
		Westbound	L	0.10	12.9	B	0.24	13.6	B	L	0.27	15.8	B	Northbound/Southbound phase
			T	0.28	21.8	C	0.28	21.8	C	T	0.30	24.5	C	
			R	0.36	22.9	C	0.36	22.9	C	R	0.39	25.8	C	(To be reviewed and implemented if
		Northbound	L	0.67	35.2	D	0.67	35.2	D	L	0.57	27.3	C	requested by the approving agency)
			TR	0.62	42.1	D	0.80	53.4 +	D	TR	0.69	41.9	D	
		Southbound	L	0.47	27.1	C	0.55	29.0	C	L	0.47	24.9	C	
			TR	1.01	94.4	F	1.01	94.4	F	TR	0.86	56.4	E	
		Intersection			35.2	D		36.3	D			31.0	C	
PM Peak Hour														
Saw Mill River Road (Rt. 9A) @	4	Eastbound	L	0.49	28.8	C	0.49	28.8	C	L	0.56	31.7	C	Shift 2 seconds of green time from
Saw Mill River Parkway NB Ramps			LTR	0.15	25.8	C	0.15	25.8	C	LTR	0.16	27.5	C	Eastbound phase to
		Westbound	L	0.14	34.1	C	0.14	34.1	C	L	0.14	34.1	C	Northbound/Southbound phase
			LT	0.08	33.8	C	0.08	33.8	C	LT	0.08	33.8	C	
			R	0.04	33.5	C	0.04	33.5	C	R	0.04	33.5	C	(To be reviewed and implemented if
		Northbound	L	0.76	26.7	C	0.80	30.4	C	L	0.77	26.1	C	requested by the approving agency)
			TR	0.52	15.0	B	0.57	15.6	B	TR	0.54	14.0	B	
		Southbound	L	0.12	21.3	C	0.13	21.4	C	L	0.12	19.9	B	
			TR	0.92	43.4	D	0.99	56.0 +	E	TR	0.91	39.0	D	
		Intersection			28.9	C		34.3	C			27.0	C	
Saw Mill River Road (Rt. 9A) @	20	Eastbound	LT	0.34	26.7	C	0.40	27.5	C	LT	0.32	23.7	C	Shift 4 seconds of green time from
Dana Road (4)			R	0.31	26.1	C	0.31	26.1	C	R	0.26	22.9	C	Northbound/Southbound phase to
		Westbound	LTR	0.79	41.9	D	0.97	71.6 +	E	LTR	0.82	39.5	D	Eastbound/Westbound phase. Same
		Northbound	L	0.41	9.9	A	0.41	9.9	A	L	0.46	12.5	B	mitigation measure with and without
			TR	0.50	10.0	A	0.50	10.0	A	TR	0.54	12.5	B	Home Depot.
		Southbound	L	0.16	7.8	A	0.36	9.5	A	L	0.41	12.1	B	
			TR	0.44	9.5	A	0.44	9.5	A	TR	0.48	11.8	B	(To be reviewed and implemented if
		Intersection			15.0	B		19.9	B			17.0	B	requested by the approving agency)
Columbus Avenue @	41	Westbound	L	0.09	38.9	E	0.12	50.5 +	F	L	0.12	50.5 +	F	
West Lake Drive			R	0.41	16.6	C	0.52	19.2	C	R	0.52	19.2	C	MPT plan and uniformed Police presence
		Southbound	LT	0.12	10.9	B	0.20	11.5	B	LT	0.20	11.5	B	(with cones and other control devices if
		Intersection		Unsignalized			Unsignalized				Unsignalized			necessary) to direct traffic during school peak hours and other hours required.

Notes:

L = Left Turn, T = Through, R = Right Turn; LOS = Level of Service. "+" indicates Potential Adverse Impacts.

(1) 2006 Future Conditions without the Delaware Aerator Fill Operations

(2) 2006 Future Conditions with the Delaware Aerator Fill Operations

* Also referred to as "Build Conditions".

(3) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

(4) This intersections experiences impacts without Home Depot during the AM peak hour. These impacts can be mitigated by shifting 4 seconds of green time from the Northbound/Southbound phase to the Eastbound/Westbound phase.

With Croton Project at Eastview Site

This analysis scenario compares the FNB condition with construction of the Croton project at the Eastview Site (without the proposed Aerator filling at the Kensico campus), to construction conditions in 2006 (with the proposed filling). For this comparison, five different truck route Options have been considered, resulting in five distinct 2006 Construction conditions (Options A, B, C, D and E). The five truck route Options that were analyzed are described below:

- *Option A:* 100 percent of the trucks traveling on Lakeview Avenue.
- *Option B:* 100 percent of the trucks traveling on Grasslands Road (Route 100)/Commerce Street.
- *Option C:* An even 50/50 percent split between Lakeview Avenue and Grasslands Road (Route 100)/Commerce Street.
- *Option D (preferred route):* all trucks destined to Kensico from Eastview would make a left turn from Grasslands Road onto Bradhurst to Lakeview Avenue to Columbus to West Lake Drive. Return trips to Eastview would make a left turn from Lakeview onto Commerce Street with a right turn on Legion, followed by a right turn onto Grasslands Road.
- *Option E:* all trucks destined to Kensico from Eastview would use Walker Road to Dana Road to Route 9A to Route 141 (also known as Commerce Street between Elwood Avenue and Circular Road) to Kensico Road to Columbus Avenue to West Lake Drive. On the return trip, trucks would make a right turn onto Columbus Avenue to Kensico Road to Route 141 to Route 9A to Dana Road to Walker Road.

The analyses in the previous section dealt with conditions without the Croton project on the Eastview Site, examining routing Options A through E.

With respect to proposed signal re-timings or re-phasings, many of the traffic signals at the intersections included in the analyses (and at locations where signal timing improvements are suggested under "mitigation") have "actuated" signals. Instead of computing the re-optimization of the signal via the actuation process (which is a typical analysis approach for projects undertaking comparable studies in Westchester County), the NYCDEP applied a rigorous methodology that did not take benefit of the natural, re-optimizing of the signal in the "With the Project" scenarios, and only demonstrated such benefits in the mitigation section.

For locations where the installation of a new traffic signal has been recommended as a mitigation measure, if requested by the agency(s) with jurisdiction over the particular intersection roadways involved, formal Signal Warrant Studies would be performed and submitted for review by the appropriate agency; in most cases NYSDOT.

All of the mitigation measures suggested would serve to eliminate the predicted temporary adverse construction impacts of the proposed project. If the mitigation identified is not applied, the predicted temporary adverse construction traffic impacts identified would remain

unmitigated. In the absence of implementing the mitigation measures proposed, NYCDEP would consider other traffic management techniques, if approved by the governing roadway entity, to offset these temporary adverse impacts, and ensure the smooth and safe operation of traffic.

For locations where potential temporary adverse impacts were identified in the analyses presented in Section 5.1, Kensico Reservoir Work Sites, measures to mitigate these impacts have been identified. The results of the mitigation analyses undertaken for the five different truck route options, and a description of the measures recommended, with the Croton project included in the 2006 Construction conditions, are presented in the sections below.

2006 Construction Option A Conditions

The traffic analyses compared the proposed UV Facility's 2006 construction Option A conditions against 2006 FNB with the Croton project construction Option A conditions. Under these conditions in 2006, it was found that traffic from the trucks and the construction of the proposed UV Facility would be anticipated to result in 19 potential temporary adverse traffic impacts, (7 during the AM peak hour, 3 during the midday peak hour, and 9 during the PM peak hour). These impacts could be fully mitigated as described below; the resulting delays and LOS for these intersections, with the recommended mitigation applied, are compared to 2006 FNB and 2006 Construction (With Croton) Option A conditions (see Table 6.2-6).

The tables showing the results of applying the mitigation measures also indicate the specific measures recommended for each location. For many of the locations, more than one measure was identified that could be implemented that would reduce delays back to or below FNB conditions. The assessment presented here relies mostly on a combination of new traffic signals, lane striping changes, and traffic signal retiming or phasing changes as the recommended measures. However, some of the measures that were investigated were more extraordinary, involving additional lane construction or street widening, to give a complete range of potential measures that could eliminate impacts.

Once the proposed work at the Kensico campus has commenced,, the various agencies responsible for maintaining traffic flow and roadways in the study area would conduct field inspections of the operations of the various intersections to determine if the proposed mitigation measures are actually warranted (particularly because traffic from anticipated No Build projects or background growth may be less than analyzed in this report).

Bradhurst Avenue (Route 100) and Lakeview Avenue

During the AM peak hour, the westbound approach at this location would deteriorate from LOS D with 27.1 seconds of delay to LOS E with 42.3 seconds of delay. The installation of a traffic signal at this location could fully mitigate the AM peak hour impacts such that all of the movements would operate at LOS C or better.

Based on discussions that occurred between the Draft and Final EIS among NYCDEP and NYSDOT, Westchester County DPW, and local representatives, an MPT solution is more likely at this location than the mitigation measures described above. The MPT at this location would

likely include the need for two additional Flagpeople. One flagperson would be located at the intersection, and another flagperson would need to be located further north on Bradhurst (after the bend in the road) with warning signage/cones to ensure that southbound drivers on Bradhurst slow down before turning the bend. These measures would allow Bradhurst Avenue traffic to be temporarily stopped, and allow westbound traffic (including trucks returning from the Aerators) on Lakeview Avenue to safely access Bradhurst Avenue.

Grasslands Road (Route 100C) and Bradhurst Avenue (Route 100)

During the AM peak hour, the eastbound left-turn movement would continue to operate at LOS F with a 66.9-second increase in delay; the southbound through/right movement would deteriorate from LOS E with 70.8 seconds of delay to LOS F with 115.7 seconds of delay. During the midday peak hour, the northbound left-turn movement would deteriorate from LOS D with 45.8 seconds of delay to LOS D with 52.6 seconds of delay; the southbound through/right movement would deteriorate from LOS E with 77.8 seconds of delay to LOS F with 117.3 seconds of delay. During the PM peak hour, the eastbound left-turn movement would continue to operate at LOS F with delays increasing well beyond 240 seconds, and the southbound through/right movement would continue to operate at LOS F with a 39.6-second increase in delay; the northbound left-turn movement would deteriorate from LOS D with 46.7 seconds of delay to LOS D with 52.9 seconds of delay. A combination of measures is required to fully mitigate the AM, midday, and PM peak hour impacts at this location. The westbound approach would be restriped to accommodate two travel lanes (shared left/through and shared through/right). During the AM, midday, and PM peak hours, new signal timing and phasing plans for each peak hour would also be implemented as shown in Table 6.2-6.

During the AM peak hour, these mitigation measures would result in a decrease in delay on the eastbound left-turn movement and the southbound through/right movement of 57.6 seconds and 5.9 seconds, respectively, as compared to the 2006 FNB conditions. During the midday peak hour, these mitigation measures would result in a decrease in delay on the northbound left-turn movement and the southbound through/right movement of 6.7 seconds and 9.1 seconds, respectively, as compared to the 2006 FNB conditions. During the PM peak hour, these mitigation measures would result in a decrease in delay on the eastbound left-turn movement, the northbound left-turn movement, and the southbound through/right movement of 116.7 seconds, 6.4 seconds, and 1.2 seconds, respectively, as compared to the 2006 FNB conditions. The remaining vehicle movements at this location would operate at or near their 2006 FNB condition LOS.

Based on discussions that occurred between the Draft and Final EIS between NYCDEP and NYSDOT, an alternative restriping (change the westbound left-turn lane to a shared through left-turn lane) and revised signal plan to provide a lead eastbound/westbound phase is more suitable at this location than the mitigation measures described in the Draft EIS. Although this measure does not fully mitigate the predicted traffic impacts at the intersection per the guidance in the *CEQR Technical Manual*, this revised mitigation would dramatically improve eastbound and westbound operations and reflect improved phasing of the signal operation. When compared to the Future Without the Project without the Croton project, overall intersection level-of- service

would be equivalent or better than the Future Without the Project condition with the proposed improvement measure in place.

Grasslands Road (Route 100C) and Clearbrook Road/Walker Road

The westbound through/right movement would deteriorate from LOS D with 45.2 seconds of delay to LOS E with 61.7 seconds of delay during the AM peak hour. During the PM peak hour, the southbound left/through movement would deteriorate LOS C with 20.2 seconds of delay to LOS F with 89.6 seconds of delay. These impacts would be mitigated by implementing the new signal timing and phasing plans as shown in Table 6.2-6.

During the AM peak hour, these mitigation measures would result in the westbound through/right movement operating at LOS C with 33.0 seconds of delay. During the PM peak hour, these mitigation measures would result in the southbound left/through movement operating at LOS D with 35.3 seconds of delay. The remaining vehicle movements would continue to operate at their 2006 FNB condition LOS or at acceptable LOS levels.

NYCDEP would submit this solution to the approval agency for approval. If the approval agency (NYSDOT) rejects this measure, the temporary adverse impact would remain unmitigated.

Grasslands Road (Route 100C) and Sprain Brook Parkway Northbound Ramp

The westbound through/right movement would deteriorate from LOS D with 47.5 seconds of delay to LOS E with 60.5 seconds of delay during the PM peak hour. This impact would be mitigated by implementing the new signal plan shown in Table 6.2-6. As a result of this mitigation compared to FNB conditions, the westbound through/right movement would operate below mid-LOS D with 41.7 seconds of delay. The remaining vehicle movements would continue to operate at their 2006 FNB condition LOS or at acceptable LOS levels.

NYCDEP would submit this solution to the approval agency for approval. If the approval agency (NYSDOT) rejects this measure, the temporary adverse impact would remain unmitigated.

Grasslands Road (Route 100) and Legion Drive

The southbound left-turn movement would continue to operate at LOS F with a 4.1-second increase in delay during the PM peak hour. This impact would be fully mitigated with the installation of a traffic signal at this location, which would result in LOS C or better for all of the vehicle movements and a maximum delay of 34.0 seconds per vehicle.

NYCDEP would recommend the installation of a signal at this intersection. However, based on discussions that occurred between the Draft and Final EIS among NYCDEP and NYSDOT, Westchester County DPW, and local representatives, an MPT solution is more likely at this location than the mitigation measures described above, because NYSDOT is planning to install a traffic signal at this intersection in the future, in coordination with planned NYSDOT design

work for the corridor. NYCDEP and NYSDOT would coordinate the improvement of this intersection to ensure that adequate traffic flow occur during the proposed project's impact period.

Taconic State Parkway and Lakeview Avenue

During the AM peak hour, the eastbound approach would continue to operate at LOS F with an 82.5-second increase in delay; the westbound approach would continue to operate at LOS F with a 77.0-second increase in delay. During the midday peak hour, the eastbound approach would deteriorate from LOS D with 43.9 seconds of delay to LOS F with 81.3 seconds of delay. During the PM peak hour, the eastbound approach would continue to operate at LOS F with a 109.9-second increase in delay; the westbound approach would continue to operate at LOS F with a 68.6-second increase in delay. A combination of measures is required to fully mitigate the AM, midday, and PM peak hour impacts at this location. The northbound and southbound approaches would be restriped to accommodate an exclusive left-turn lane, two through lanes, and an exclusive right-turn lane. During the AM, midday, and PM peak hours, new signal timings for each peak hour would also be implemented as shown in Table 6.2-6.

During the AM peak hour, these mitigation measures would result in a decrease in delay on the eastbound approach and the westbound approach of 43.7 seconds and 17.7 seconds, respectively, as compared to the 2006 FNB conditions. During the midday peak hour, these mitigation measures would result in a decrease in delay on the eastbound approach of 5.4 seconds as compared to the 2006 FNB conditions. During the PM peak hour, these mitigation measures would result in a decrease in delay on the eastbound approach and the westbound approach of 23.6 seconds and 14.8 seconds, respectively, as compared to the 2006 FNB conditions. The remaining vehicle movements at this location would operate at or near their 2006 FNB condition LOS.

Based on discussions that occurred between the Draft and Final EIS between NYCDEP and NYSDOT, the measures proposed in the Draft EIS would not be implemented. NYSDOT does not believe that the proposed signal timing changes and lane movements are warranted given the short duration of the potential impact (approximately six months). Therefore, this potential temporary adverse impact would remain unmitigated.

Columbus Avenue and West Lake Drive

The westbound left-turn movement at this location would deteriorate from LOS D with 26.8 seconds of delay to LOS E with 43.2 seconds of delay during the AM peak hour and from LOS E with 38.9 seconds of delay to LOS F with 81.3 seconds of delay during the PM peak hour. The installation of a traffic signal at this location could fully mitigate the AM and PM peak hour impacts such that all of the movements would operate at LOS C or better.

Based on discussions that occurred between the Draft and Final EIS among NYCDEP, Westchester County, and local representatives, an MPT solution is more likely at this location than the mitigation measures described above. As part of the MPT plan, a uniformed police officer would be assigned to these intersections during school hours and any other hour deemed

necessary. In coordination with the MPT plan at this intersection, at the immediately adjacent intersection of Columbus Avenue and Lakeview Avenues, a flagperson and temporary signage may be needed at the westbound approach of Lakeview Avenue to ensure that traffic stops at a set back distance from the intersection to ensure that trucks could adequately turn from southbound Columbus Avenue onto Lakeview Avenue.

All of the mitigation measures suggested above would serve to eliminate construction-related impacts of the proposed project. If the mitigation identified is not applied, the predicted temporary adverse construction traffic impacts identified would remain unmitigated. In the absence of implementing the mitigation measures recommended above, NYCDEP would consider other MPT techniques (e.g., the use of traffic control officers, traffic cones, variable message signs, etc.), if approved by the governing roadway entity, to offset these temporary adverse impacts, and ensure the smooth and safe operation of traffic.

TABLE 6.2-6
LAKEVIEW TRUCK ROUTE (OPTION A)
LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS:
2006 FUTURE CONDITIONS WITHOUT THE PROJECT, FUTURE CONDITIONS WITH THE PROJECT (WITH THE CROTON PROJECT), AND MITIGATION CONDITIONS

			AM Peak Hour											
				2006 (1)			2006 Option A (2)*			2006 Mitigation				
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (3)
Bradhurst Avenue (Route 100) @	5	Southbound	LT	0.04	8.6	A	0.04	8.8	A	LT	0.04	8.8	A	MPT plan to be implemented. Flagperson at intersection with signage and cones. Flagperson just north of intersection on Bradhurst Avenue (after bend in the road) with signage and cones.
Lakeview Avenue		Westbound	LR	0.47	27.1	D	0.70	42.3 +	E	LR	0.70	42.3 +	E	
		Intersection		Unsignalized			Unsignalized				Unsignalized			
Grasslands Road (Route 100C) @	6	Eastbound	L	1.14	128.8	F	1.31	195.7 +	F	L	0.97	71.2	E	Add protected left-turn phase, signal retiming, and westbound lane restriping from exclusive left-turn lane to shared left-turn through lane.
Bradhurst Avenue (Route 100)			T	1.00	68.8	E	1.00	68.8	E	T	1.00	68.8	E	
			R	0.36	16.4	B	0.36	16.5	B	R	0.39	19.5	B	
		Westbound	L	1.03	161.3	F	1.03	161.3	F	LTR	0.76	35.0	C	
			TR	0.66	31.0	C	0.66	31.0	C					
		Northbound	L	0.34	28.0	C	0.35	28.5	C	L	0.40	31.5	C	
			TR	0.29	25.3	C	0.29	25.3	C	TR	0.29	25.3	C	
		Southbound	L	0.55	40.5	D	0.55	40.5	D	L	0.50	35.3	D	
			TR	0.89	70.8	E	1.06	115.7 +	F	TR	0.89	64.9	E	
		Intersection			58.6	E		74.5	E			49.7	D	
Grasslands Road (Route 100C) @	24	Eastbound	L	0.04	17.8	B	0.04	17.8	B	L	0.04	16.8	B	Shift 5 seconds of green time from the NB/SB phase to the EB/WB phase. To be reviewed and implemented if requested by the approving agency.
Clearbrook Road/Walker Road			TR	0.90	34.5	C	0.90	34.5	C	TR	0.80	23.1	C	
		Westbound	L	0.88	48.3	D	0.88	48.3	D	L	0.87	45.4	D	
			TR	0.98	45.2	D	1.04	61.7 +	E	TR	0.93	33.0	C	
		Northbound	LT	0.22	28.9	C	0.22	29.0	C	LT	0.32	33.9	C	
		Southbound	LT	0.03	27.4	C	0.20	28.8	C	LT	0.26	33.3	C	
			R	0.01	27.3	C	0.01	27.3	C	R	0.01	31.3	C	
		Intersection			41.2	D		47.9	D			31.9	C	
Taconic State Parkway @	38	Eastbound	LTR	1.08	114.3	F	1.30	196.8 +	F	LTR	1.30	196.8 +	F	NYSDOT does not believe signal timing and restriping are warranted. Impact would remain unmitigated.
Lakeview Avenue		Westbound	LTR	0.97	101.5	F	1.22	178.5 +	F	LTR	1.22	178.5 +	F	
		Northbound	L	0.21	5.0	A	0.21	5.0	A	L	0.21	5.0	A	
			TR	0.21	4.4	A	0.21	4.4	A	TR	0.21	4.4	A	
		Southbound	L	0.04	3.9	A	0.04	3.9	A	L	0.04	3.9	A	
			TR	0.57	6.6	A	0.57	6.6	A	TR	0.57	6.6	A	
		Intersection			26.4	C		48.7	D			48.7	D	
Columbus Avenue @	41	Southbound	LT	0.14	9.4	A	0.15	9.7	A	LT	0.15	9.7	A	MPT plan and uniformed Police presence (with cones and other control devices if necessary) to direct traffic during school peak hours and other hours required.
West Lake Drive		Westbound	L	0.04	26.8	D	0.43	43.2 +	E	L	0.43	43.2 +	E	
			R	0.28	12.1	B	0.29	12.6	B	R	0.29	12.6	B	
		Intersection		Unsignalized			Unsignalized				Unsignalized			

Notes:

L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates Potential Adverse Impacts.

(1) 2006 Future Conditions without the Delaware Aerator Fill Operations

(2) 2006 Future Conditions with the Delaware Aerator Fill Operations

* Also referred to as Build Conditions

(3) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

TABLE 6.2-6 (Continued)
LAKEVIEW TRUCK ROUTE (OPTION A)
LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS:
2006 FUTURE CONDITIONS WITHOUT THE PROJECT, FUTURE CONDITIONS WITH THE PROJECT (WITH THE CROTON PROJECT), AND

			Midday Peak Hour										
				2006 (1)			2006 Option A (2)*			2006 Mitigation			
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (3)
Grasslands Road (Route 100C) @ Bradhurst Avenue (Route 100)	6	Eastbound	L	0.20	14.8	B	0.32	16.1	B	L	0.36	22.2	C	Add protected left-turn phase, signal retiming, and westbound lane restriping from exclusive left-turn lane to shared left-turn through lane.
			T	0.33	16.1	B	0.33	16.1	B	T	0.40	22.4	C	
			R	0.16	9.5	A	0.17	9.5	A	R	0.18	11.7	B	
		Westbound	L	0.06	13.6	B	0.06	13.6	B	LTR	0.28	20.9	C	
			TR	0.39	16.7	B	0.39	16.7	B					
		Northbound	L	0.52	45.8	D	0.62	52.6 +	D	L	0.41	39.1	D	
			TR	0.13	26.0	C	0.13	26.0	C	TR	0.11	19.7	B	
		Southbound	L	0.25	35.7	D	0.25	35.7	D	L	0.21	31.7	C	
			TR	0.96	77.8	E	1.09	117.3 +	F	TR	0.94	68.7	E	
		Intersection			33.9	C		45.0	D			34.2	C	
Taconic State Parkway @ Lakeview Avenue	38	Eastbound	LTR	0.71	43.9	D	0.96	81.3 +	F	LTR	0.96	81.3 +	F	NYSDOT does not believe signal timing and restriping are warranted. Impact would remain unmitigated.
		Westbound	LTR	0.45	35.1	D	0.67	42.1	D	LTR	0.67	42.1	D	
		Northbound	L	0.06	4.0	A	0.06	4.0	A	L	0.06	4.0	A	
			TR	0.63	7.4	A	0.63	7.4	A	TR	0.63	7.4	A	
		Southbound	L	0.12	4.4	A	0.12	4.4	A	L	0.12	4.4	A	
			TR	0.27	4.7	A	0.27	4.7	A	TR	0.27	4.7	A	
		Intersection			10.8	B		16.4	B			16.4	B	

Notes:

L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates Potential Adverse Impacts.

(1) 2006 Future Conditions without the Delaware Aerator Fill Operations

(2) 2006 Future Conditions with the Delaware Aerator Fill Operations

* Also referred to as Build Conditions

(3) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

TABLE 6.2-6 (Continued)
LAKEVIEW TRUCK ROUTE (OPTION A)
LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS:
2006 FUTURE CONDITIONS WITHOUT THE PROJECT, FUTURE CONDITIONS WITH THE PROJECT (WITH THE CROTON PROJECT), AND

			PM Peak Hour										
				2006 (1)			2006 Option A (2)***			2006 Mitigation			
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (3)
Grasslands Road (Route 100C) @ Bradhurst Avenue (Route 100)	6	Eastbound	L	1.27	208.6	F	*	** +	F	L	0.98	91.9	F	Add protected left-turn phase, signal retiming, and westbound lane restriping from exclusive left-turn lane to shared left-turn through lane.
			T	0.54	21.5	C	0.55	21.7	C	T	0.63	26.7	C	
			R	0.25	11.9	B	0.26	12.0	B	R	0.28	13.7	B	
		Westbound	L	0.19	17.6	B	0.19	17.7	B	LTR	0.75	29.2	C	
			TR	0.92	42.5	D	0.92	43.2	D					
		Northbound	L	0.77	46.7	D	0.82	52.9 +	D	L	0.70	40.3	D	
			TR	0.18	16.2	B	0.18	16.2	B	TR	0.16	13.3	B	
		Southbound	L	0.28	24.8	C	0.28	24.8	C	L	0.25	22.5	C	
			TR	1.05	85.7	F	1.16	125.3 +	F	TR	1.05	84.5	F	
		Intersection			51.3	D		80.9	F			43.7	D	
Grasslands Road (Route 100C) @ Clearbrook Road/Walker Road	24	Eastbound	L	0.05	9.3	A	0.10	9.8	A	L	0.19	20.2	C	Provide the intersection with a new signal plan as follows EB/WB: G/A/R = 41/4/1 WB: G/A/R = 3/3/2 NB/SB: G/A/R = 33/4/1 SB: G/A/R = 3/3/2 C = 100 seconds To be reviewed and implemented if requested by the approving agency
			TR	0.69	16.1	B	0.69	16.1	B	TR	0.91	41.9	D	
		Westbound	L	1.13	122.0	F	1.13	122.0	F	L	0.99	102.1	F	
			TR	0.68	16.1	B	0.75	18.4	B	TR	0.83	28.8	C	
		Northbound	LT	0.22	20.2	C	0.49	23.9	C	LT	0.48	28.4	C	
		Southbound	LT	0.22	20.2	C	1.06	89.6 +	F	LT	0.81	35.3	D	
			R	0.01	18.5	B	0.19	19.9	B	R	0.16	18.7	B	
		Intersection			28.8	C		40.4	D			40.2	D	
Grasslands Road (Route 100C) @ Sprain Brook Parkway NB Ramp	27 30	Eastbound	L	0.46	15.1	B	0.78	30.0	C	L	0.83	36.4	D	Provide the intersection with a new signal plan as follows EB: G/A/R = 11/4/0 EB/WB: G/A/R = 32/4/1 NB: G/A/R = 22/4/2 C = 80 seconds To be reviewed and implemented if requested by the approving agency
			T	0.30	8.8	A	0.33	9.0	A	T	0.33	8.5	A	
		Westbound	TR	0.99	47.5	D	1.04	60.5 +	E	TR	0.97	41.7	D	
		Northbound	LT	0.68	28.8	C	0.68	28.8	C	LT	0.71	30.8	C	
			R	0.33	22.9	C	0.33	22.9	C	R	0.34	23.7	C	
		Intersection			32.2	C		39.0	D			30.8	C	
Grasslands Road (Route 100) @ Legion Drive	33	Eastbound	LT	0.22	10.5	B	0.23	10.5	B	LT	0.23	10.5	B	NYSDOT proposes to signalize this intersection in the future.
		Southbound	L	1.08	138.1	F	1.09	142.2 +	F	L	1.09	142.2 +	F	
			R	0.44	18.4	C	0.44	18.5	C	R	0.44	18.5	C	
		Intersection		Unsignalized			Unsignalized				Unsignalized			
Taconic State Parkway @ Lakeview Avenue	38	Eastbound	LTR	1.09	121.4	F	1.38	231.3 +	F	LTR	1.38	231.3 +	F	NYSDOT does not believe signal timing and restriping are warranted. Impact would remain unmitigated.
		Westbound	LTR	1.02	106.1	F	1.23	174.7 +	F	LTR	1.23	174.7 +	F	
		Northbound	L	0.15	4.4	A	0.15	4.4	A	L	0.15	4.4	A	
			TR	1.05	46.8	D	1.05	46.8	D	TR	1.05	46.8	D	
		Southbound	L	0.34	7.4	A	0.34	7.4	A	L	0.34	7.4	A	
			TR	0.41	5.4	A	0.41	5.4	A	TR	0.41	5.4	A	
		Intersection			44.3	D		59.9	E			59.9	E	
Columbus Avenue @ West Lake Drive	41	Southbound	LT	0.12	10.9	B	0.13	11.2	B	LT	0.13	11.2	B	MPT plan and uniformed Police presence (with cones and other control devices if necessary) to direct traffic during school peak hours and other hours required.
		Westbound	L	0.09	38.9	E	0.63	81.3 +	F	L	0.63	81.3 +	F	
			R	0.41	16.6	C	0.43	17.4	C	R	0.43	17.4	C	
		Intersection		Unsignalized			Unsignalized				Unsignalized			

Notes:

L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates Potential Adverse Impacts.

" * " indicates a v/c ratio greater than 1.50; " ** " indicates a calculated delay greater than 240 seconds.

(1) 2006 Future Conditions without the Delaware Aerator Fill Operations

(2) 2006 Future Conditions with the Delaware Aerator Fill Operations

*** Also referred to as Build Conditions

(3) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

2006 Construction Option B Conditions

The traffic analyses compared the proposed UV Facility's 2006 Construction Option B conditions against the 2006 FNB with the Croton project conditions. Under these conditions in 2006, it was found that traffic from the trucks and the construction of the proposed UV Facility would be anticipated to result in 21 potential temporary adverse traffic impacts, (8 during the AM peak hour, 2 during the midday peak hour, and 11 during the PM peak hour). These impacts could be fully mitigated as described below; the resulting delays and LOS for these intersections, with the recommended mitigation applied, are compared to 2006 FNB and 2006 Construction (with Croton) Option B conditions (see Table 6.2-7).

The tables showing the results of applying the mitigation measures also indicate the specific measures recommended for each location. For many of the locations, more than one measure was identified that could be implemented that would reduce delays back to or below FNB conditions. The assessment presented here relies mostly on a combination of new traffic signals, lane striping changes, and traffic signal retiming or phasing changes as the recommended measures. However, some of the measures that were investigated were more extraordinary, involving additional lane construction or street widening, to give a complete range of potential measures that could eliminate impacts.

Once construction of the proposed UV Facility has commenced, the various agencies responsible for maintaining traffic flow and roadways in the study area would conduct field inspections of the operations of the various intersections to determine if the proposed mitigation measures are actually warranted (particularly because traffic from anticipated No Build projects or background growth may be less than analyzed in this report).

Grasslands Road (Route 100C) and Bradhurst Avenue (Route 100)

During the AM peak hour, the eastbound left-turn movement would continue to operate at LOS F with a 109.3-second increase in delay; the eastbound through movement would deteriorate from LOS E with 68.8 seconds of delay to LOS F with 89.4 seconds of delay. During the PM peak hour, the eastbound left-turn movement would continue to operate at LOS F with delays increasing well beyond 240 seconds; the westbound through/right movement would deteriorate from LOS D with 42.5 seconds of delay to LOS E with 58.7 seconds of delay. A combination of measures is required to fully mitigate the AM and PM peak hour impacts at this location. The westbound approach would be restriped to accommodate two travel lanes (shared left/through and shared through/right). The eastbound approach would be restriped to accommodate an exclusive left-turn lane, a through lane, and a shared through/right lane. During the AM and PM peak hours, new signal phasing changes for each peak hour would also be implemented as shown in Table 6.2-7.

Based on discussions that occurred between the Draft and Final EIS between NYCDEP and NYSDOT, an alternative restriping (change the westbound left-turn lane to a shared through left-turn lane) and revised signal plan to provide a lead eastbound/westbound phase is more suitable

at this location than the mitigation measures described in the Draft EIS. Although this measure does not fully mitigate the predicted traffic impacts at the intersection per the guidance in the *CEQR Technical Manual*, this revised mitigation would dramatically improve eastbound and westbound operations and reflect improved phasing of the signal operation. When compared to the Future Without the Project with the Croton project, overall intersection level-of- service would be equivalent or better than the Future Without the Project condition with the proposed improvement measure in place.

Grasslands Road (Route 100C) and Clearbrook Road/Walker Road

The westbound through/right movement would deteriorate from LOS D with 45.2 seconds of delay to LOS E with 61.7 seconds of delay during the AM peak hour. During the PM peak hour, the southbound left/through movement would deteriorate from a LOS C with 20.2 seconds of delay to LOS F with 89.6 seconds of delay. These impacts would be mitigated by implementing the signal phase and timing changes shown in Table 6.2-7. As a result of this mitigation, the westbound through/right movement would operate better than under FNB conditions, at LOS D with 37.1 seconds of delay during the AM peak hour. During the PM peak hour, these mitigation measures would result in the southbound left/through movement operating acceptably, below mid-LOS D with 35.3 seconds of delay compared to FNB conditions. The remaining vehicle movements at this location during both the AM and PM peak hour would continue to operate at or near their 2006 FNB condition LOS, or at acceptable LOS levels.

NYCDEP would submit this solution to the approval agency for approval. If the approval agency (NYSDOT) rejects this measure, the temporary adverse impact would remain unmitigated.

Grasslands Road (Route 100C) and Sprain Brook Parkway Northbound Ramp

The westbound approach would deteriorate from LOS D with 47.5 seconds of delay to LOS E with 60.5 seconds of delay during the PM peak hour. This impact would be mitigated by implementing the signal timing plan shown in Table 6.2-7. As a result of this mitigation, the westbound approach would operate better than under FNB conditions, at LOS D with 41.7 seconds of delay. The remaining vehicle movements at this location would continue to operate at or near their 2006 FNB condition LOS, or at acceptable LOS levels.

NYCDEP would submit this solution to the approval agency for approval. If the approval agency (NYSDOT) rejects this measure, the temporary adverse impact would remain unmitigated.

Grasslands Road (Route 100) and Legion Drive

The southbound left-turn movement would continue to operate at LOS F with 57.0-second and 95.9-second increases in delay during the AM and PM peak hours, respectively. This movement would also continue to operate at LOS F during the midday peak hour, with delays increasing beyond 240 seconds These impacts would be fully mitigated with the installation of a

traffic signal at this location, which would result in LOS D or better for all of the vehicle movements and a maximum delay of 43.9 seconds per vehicle.

NYCDEP would recommend the installation of a signal at this intersection. However, based on discussions that occurred between the Draft and Final EIS among NYCDEP and NYSDOT, Westchester County DPW, and local representatives, an MPT solution is more likely at this location than the mitigation measures described above (in addition, brush would be cleared on the southbound Grasslands Road to improve line of sight), because NYSDOT is planning to install a traffic signal at this intersection in the future, in coordination with planned NYSDOT design work for the corridor. NYCDEP and NYSDOT would coordinate the improvement of this intersection to ensure that adequate traffic flow occur during the proposed project's impact period.

Grasslands Road (Route 100C) and WCC West Gate

During the AM peak hour, the northbound left-turn movement would continue to operate at LOS F with a 36.1-second increase in delay. During the PM peak hour, the northbound left-turn movement would deteriorate from LOS E with 45.2 seconds of delay to LOS F with 57.3 seconds of delay. A traffic signal is recommended for this location to fully mitigate the project-generated impacts. As a result of this mitigation, all of the vehicle movements would operate at LOS D or better during the AM and PM peak hours compared to FNB conditions, with a maximum vehicle delay of 39.6 seconds.

Between the Draft and Final EIS, NYCDEP reevaluated the proposed implementability of mitigation measures and decided to implement an MPT solution, a combination of a flagperson with cones and signage, in order to mitigate the temporary adverse impact occurring at this intersection during the period that trucks are traveling between the Eastview Site and the Kensico campus.

Commerce Street and Legion Drive

During the PM peak hour, the northbound approach would deteriorate from LOS D with 26.4 seconds of delay to LOS E with 38.1 seconds of delay; the southbound approach would continue to operate at LOS F with a 35.9-second increase in delay. These impacts would be fully mitigated with the installation of a traffic signal at this location, which would result in LOS C or better for all of the vehicle movements and a maximum delay of 26.0 seconds per vehicle.

Between the Draft and Final EIS, NYCDEP reevaluated the proposed implementability of mitigation measures and decided to implement an MPT solution, a combination of a flagperson with cones and signage, in order to mitigate the temporary adverse impact occurring at this intersection during the approximately six month period trucks are traveling between the Eastview Site and the Kensico campus.

Taconic State Parkway and Lakeview Avenue

During the AM peak hour, the eastbound approach would continue to operate at LOS F with an 82.5-second increase in delay; the westbound approach would continue to operate at LOS F with a 77.0-second increase in delay. During the midday peak hour, the eastbound approach would deteriorate from LOS D with 43.9 seconds of delay to LOS F with 81.3 seconds of delay. During the PM peak hour, the eastbound approach would continue to operate at LOS F with a 109.9-second increase in delay; the westbound approach would continue to operate at LOS F with a 68.6-second increase in delay. A combination of measures is required to fully mitigate the AM, midday, and PM peak hour impacts at this location. The northbound and southbound approaches would be restriped to accommodate an exclusive left-turn lane, two through lanes, and an exclusive right-turn lane. During the AM, midday, and PM peak hours, new signal timings for each peak hour would also be implemented as shown in Table 6.2-7.

During the AM peak hour, these mitigation measures would result in a decrease in delay on the eastbound approach and the westbound approach of 43.7 seconds and 17.7 seconds, respectively, as compared to the 2006 FNB conditions. During the midday peak hour, these mitigation measures would result in a decrease in delay on the eastbound approach of 5.4 seconds as compared to the 2006 FNB conditions. During the PM peak hour, these mitigation measures would result in a decrease in delay on the eastbound approach and the westbound approach of 23.6 seconds and 14.8 seconds, respectively, as compared to the 2006 FNB conditions. The remaining vehicle movements at this location would operate at or near their 2006 FNB condition LOS.

Based on discussions that occurred between the Draft and Final EIS between NYCDEP and NYSDOT, the measures proposed in the Draft EIS would not be implemented. NYSDOT does not believe that the proposed signal timing changes and lane movements are warranted given the short duration of the potential impact (approximately six months). Therefore, this potential temporary adverse impact would remain unmitigated.

Columbus Avenue and West Lake Drive

The westbound left-turn movement at this location would deteriorate from LOS D with 26.8 seconds of delay to LOS E with 43.2 seconds of delay during the AM peak hour and from LOS E with 38.9 seconds of delay to LOS F with 81.3 seconds of delay during the PM peak hour. The installation of a traffic signal at this location could fully mitigate the AM and PM peak hour impacts such that all of the movements would operate at LOS C or better.

Based on discussions that occurred between the Draft and Final EIS among NYCDEP, Westchester County, and local representatives, an MPT solution is more likely at this location than the mitigation measures described above. As part of the MPT plan, a uniformed police officer would be assigned to these intersections during school hours and any other hour deemed necessary. In coordination with the MPT plan at this intersection, at the immediately adjacent intersection of Columbus Avenue and Lakeview Avenue, a flagperson and temporary signage may be needed at the westbound approach of Lakeview Avenue to ensure that traffic stops at a

set back distance from the intersection to ensure that trucks could adequately turn from southbound Columbus Avenue onto Lakeview Avenue.

All of the mitigation measures suggested above would serve to eliminate construction-related impacts of the proposed project. If the mitigation identified is not applied, the predicted temporary adverse construction traffic impacts identified would not be mitigated. In the absence of implementing the mitigation measures recommended above, NYCDEP would consider other MPT techniques (e.g., the use of traffic control officers, traffic cones, variable message signs, etc.), if approved by the governing roadway entity, to offset these temporary adverse temporary impacts, and ensure the smooth and safe operation of traffic.

TABLE 6.2-7
COMMERCE TRUCK ROUTE (OPTION B)
LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS:
2006 FUTURE CONDITIONS WITHOUT THE PROJECT, FUTURE CONDITIONS WITH THE PROJECT (WITH THE CROTON PROJECT), AND MITIGATION CONDITIONS

			AM Peak Hour											
				2006 (1)			2006 Option A (2)*			2006 Mitigation				
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (3)
Grasslands Road (Route 100C) @ Bradhurst Avenue (Route 100)	6	Eastbound	L	1.14	128.8	F	1.40	238.1 +	F	L	0.92	61.6	E	Add protected left-turn phase, signal retiming, and westbound lane restriping from exclusive left-turn lane to shared left-turn through lane.
			T	1.00	68.8	E	1.07	89.4 +	F	TR	0.80	34.8	C	
			R	0.36	16.4	B	0.36	16.5	B					
		Westbound	L	1.03	161.3	F	1.03	161.3	F	LTR	0.76	34.8	C	
			TR	0.66	31.0	C	0.73	33.6	C					
		Northbound	L	0.34	28.0	C	0.35	28.1	C	L	0.35	28.1	C	
			TR	0.29	25.3	C	0.29	25.3	C	TR	0.29	25.3	C	
		Southbound	L	0.55	40.5	D	0.55	40.5	D	L	0.55	40.5	D	
			TR	0.89	70.8	E	0.89	70.8	E	TR	0.89	70.8	E	
		Intersection			58.6	E		77.4	E			40.7	D	
Grasslands Road (Route 100C) @ Clearbrook Road/Walker Road	24	Eastbound	L	0.04	17.8	B	0.04	17.8	B	L	0.04	17.8	B	Shift 4 seconds of green time from NB/SB phase to WB phase. To be reviewed and implemented if requested by the approving agency.
			TR	0.90	34.5	C	0.90	34.5	C	TR	0.90	34.5	C	
		Westbound	L	0.88	48.3	D	0.88	48.3	D	L	0.76	33.5	C	
			TR	0.98	45.2	D	1.04	61.7 +	E	TR	0.95	37.1	D	
		Northbound	LT	0.22	28.9	C	0.22	29.0	C	LT	0.30	32.8	C	
		Southbound	LT	0.03	27.4	C	0.20	28.8	C	LT	0.25	32.3	C	
			R	0.01	27.3	C	0.01	27.3	C	R	0.01	30.5	C	
		Intersection			41.2	D		47.9	D			35.2	D	
Grasslands Road (Route 100) @ Legion Drive	33	Eastbound	LT	0.11	9.4	A	0.17	9.7	A	LT	0.17	9.7	A	MPT plan and clear brush on southbound Grasslands Road to improve line of sight. NYSDOT is planning to signalize this intersection.
		Southbound	L	0.79	71.3	F	0.99	128.3 +	F	L	0.99	128.3 +	F	
			R	0.37	16.2	C	0.47	18.1	C	R	0.47	18.1	C	
		Intersection			Unsignalized			Unsignalized				Unsignalized		
Grasslands Road (Route 100) @ WCC West Gate	35													MPT plan to be implemented.
		Westbound	LT	0.01	10.4	B	0.01	10.7	B	LT	0.01	10.7	B	
		Northbound	L	0.80	72.9	F	0.93	109.0 +	F	L	0.93	109.0 +	F	
			R	0.06	14.5	B	0.06	15.3	C	R	0.06	15.3	C	
		Intersection			Unsignalized			Unsignalized				Unsignalized		
Taconic State Parkway @ Lakeview Avenue	38	Eastbound	LTR	1.08	114.3	F	1.30	196.8 +	F	LTR	1.30	196.8 +	F	NYSDOT does not believe signal timing and restriping are warranted. Impact would remain unmitigated.
		Westbound	LTR	0.97	101.5	F	1.22	178.5 +	F	LTR	1.22	178.5 +	F	
		Northbound	L	0.21	5.0	A	0.21	5.0	A	L	0.21	5.0	A	
			TR	0.21	4.4	A	0.21	4.4	A	TR	0.21	4.4	A	
		Southbound	L	0.04	3.9	A	0.04	3.9	A	L	0.04	3.9	A	
			TR	0.57	6.6	A	0.57	6.6	A	TR	0.57	6.6	A	
		Intersection			26.4	C		48.7	D			48.7	D	
Columbus Avenue @ West Lake Drive	41													MPT plan and uniformed Police presence (with cones and other control devices if necessary) to direct traffic during school peak hours and other hours required.
		Southbound	LT	0.14	9.4	A	0.15	9.7	A	LT	0.15	9.7	A	
		Westbound	L	0.04	26.8	D	0.43	43.2 +	E	L	0.43	43.2 +	E	
			R	0.28	12.1	B	0.29	12.6	B	R	0.29	12.6	B	
		Intersection			Unsignalized			Unsignalized				Unsignalized		

Notes:

L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates Potential Adverse Impacts.

(1) 2006 Future Conditions without the Delaware Aerator Fill Operations

(2) 2006 Future Conditions with the Delaware Aerator Fill Operations

* Also referred to as Build Conditions

(3) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

TABLE 6.2-7 (Continued)
COMMERCE TRUCK ROUTE (OPTION B)
LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS:
2006 FUTURE CONDITIONS WITHOUT THE PROJECT, FUTURE CONDITIONS WITH THE PROJECT (WITH THE CROTON PROJECT), AND MITIGATION CONDITIONS

			Midday Peak Hour										
				2006 (1)			2006 Option A (2)*			2006 Mitigation			
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (3)
Grasslands Road (Route 100) @ Legion Drive	33	Eastbound	LT	0.18	9.1	A	0.22	9.3	A	LT	0.22	9.3	A	MPT plan and clear brush on southbound Grasslands Road to improve line of sight. NYSDOT is planning to signalize this intersection.
		Southbound	L	1.13	172.8	F	1.39	** +	F	L	1.39	** +	F	
			R	0.28	12.9	B	0.38	14.2	B	R	0.38	14.2	B	
		Intersection		Unsignalized			Unsignalized				Unsignalized			
Taconic State Parkway @ Lakeview Avenue	38	Eastbound	LTR	0.71	43.9	D	0.96	81.3 +	F	LTR	0.96	81.3 +	F	NYSDOT does not believe signal timing and restriping are warranted. Impact would remain unmitigated.
		Westbound	LTR	0.45	35.1	D	0.67	42.1	D	LTR	0.67	42.1	D	
		Northbound	L	0.06	4.0	A	0.06	4.0	A	L	0.06	4.0	A	
			TR	0.63	7.4	A	0.63	7.4	A	TR	0.63	7.4	A	
		Southbound	L	0.12	4.4	A	0.12	4.4	A	L	0.12	4.4	A	
			TR	0.27	4.7	A	0.27	4.7	A	TR	0.27	4.7	A	
		Intersection			10.8	B		16.4	B			16.4	B	

Notes:
L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates Potential Adverse Impacts.
" ** " indicates a calculated delay greater than 240 seconds.
(1) 2006 Future Conditions without the Delaware Aerator Fill Operations
(2) 2006 Future Conditions with the Delaware Aerator Fill Operations
* Also referred to as Build Conditions
(3) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

TABLE 6.2-7 (Continued)
COMMERCE TRUCK ROUTE (OPTION B)
LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS:
2006 FUTURE CONDITIONS WITHOUT THE PROJECT, FUTURE CONDITIONS WITH THE PROJECT (WITH THE CROTON PROJECT), AND MITIGATION CONDITIONS

			PM Peak Hour											
				2006 (1)			2006 Option A (2)***			2006 Mitigation				
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (3)
Grasslands Road (Route 100C) @ Bradhurst Avenue (Route 100)	6	Eastbound	L	1.27	208.6	F	*	** +	F	L	0.60	26.2	C	Add protected left-turn phase, signal retiming, and westbound lane restriping from exclusive left-turn lane to shared left-turn through lane (see Technical Appendix).
			T	0.54	21.5	C	0.63	23.3	C	TR	0.50	20.4	C	
			R	0.25	11.9	B	0.26	12.0	B					
		Westbound	L	0.19	17.6	B	0.23	18.1	B	LTR	0.66	23.5	C	
			TR	0.92	42.5	D	0.99	58.7 +	E					
		Northbound	L	0.77	46.7	D	0.79	48.0	D	L	0.79	48.0	D	
			TR	0.18	16.2	B	0.18	16.2	B	TR	0.18	16.2	B	
		Southbound	L	0.28	24.8	C	0.28	24.8	C	L	0.28	24.8	C	
			TR	1.05	85.7	F	1.05	85.7	F	TR	1.05	85.7	F	
		Intersection			51.3	D		61.5	E			37.1	D	
Grasslands Road (Route 100C) @ Clearbrook Road/Walker Road	24	Eastbound	L	0.05	9.3	A	0.10	9.8	A	L	0.19	20.2	C	Shift 4 seconds of green time from NB/SB phase to WB phase.
			TR	0.69	16.1	B	0.69	16.1	B	TR	0.91	41.9	D	
		Westbound	L	1.13	122.0	F	1.13	122.0	F	L	0.99	102.1	F	To be reviewed and implemented if requested by the approving agency.
			TR	0.68	16.1	B	0.75	18.4	B	TR	0.83	28.8	C	
		Northbound	LT	0.22	20.2	C	0.49	23.9	C	LT	0.48	28.4	C	
		Southbound	LT	0.22	20.2	C	1.06	89.6 +	F	LT	0.81	35.3	D	
			R	0.01	18.5	B	0.19	19.9	B	R	0.16	18.7	B	
		Intersection			28.8	C		40.4	D			40.2	D	
Grasslands Road (Route 100C) @ Sprain Brook Parkway NB Ramp	27	Eastbound	L	0.46	15.1	B	0.78	30.0	C	L	0.83	36.4	D	Provide the intersection with a new signal plan as follows EB: G/A/R = 11/4/0 EB/WB: G/A/R = 32/4/1 NB: G/A/R = 22/4/2 C = 80 seconds To be reviewed and implemented if requested by the approving agency
	30		T	0.30	8.8	A	0.33	9.0	A	T	0.33	8.5	A	
		Westbound	TR	0.99	47.5	D	1.04	60.5 +	E	TR	0.97	41.7	D	
		Northbound	LT	0.68	28.8	C	0.68	28.8	C	LT	0.71	30.8	C	
			R	0.33	22.9	C	0.33	22.9	C	R	0.34	23.7	C	
		Intersection			32.2	C		39.0	D			30.8	C	
Grasslands Road (Route 100) @ Legion Drive	33	Eastbound	LT	0.22	10.5	B	0.29	10.9	B	LT	0.29	10.9	B	MPT plan and clear brush on southbound Grasslands Road to improve line of sight. NYSDOT is planning to signalize this intersection.
		Southbound	L	1.08	138.1	F	1.32	234.0 +	F	L	1.32	234.0 +	F	
			R	0.44	18.4	C	0.56	22.1	C	R	0.56	22.1	C	
		Intersection		Unsignalized			Unsignalized				Unsignalized			
Grasslands Road (Route 100) @ WCC West Gate	35	Westbound	LT	0.11	9.0	A	0.12	9.3	A	LT	0.12	9.3	A	MPT plan to be implemented.
		Northbound	L	0.24	45.2	E	0.29	57.3 +	F	L	0.29	57.3 +	F	
			R	0.46	17.3	C	0.51	19.6	C	R	0.51	19.6	C	
		Intersection		Unsignalized			Unsignalized				Unsignalized			
Commerce Street @ Legion Drive	36	Eastbound	LTR	0.05	8.4	A	0.10	8.6	A	LTR	0.10	8.6	A	MPT Plan to be implemented.
		Westbound	LTR	0.06	8.5	A	0.06	8.5	A	LTR	0.06	8.5	A	
		Northbound	LTR	0.43	26.4	D	0.55	38.1 +	E	LTR	0.55	38.1 +	E	
		Southbound	LTR	0.63	65.5	F	0.90	101.4 +	F	LTR	0.90	101.4 +	F	
		Intersection		Unsignalized			Unsignalized				Unsignalized			
Taconic State Parkway @ Lakeview Avenue	38	Eastbound	LTR	1.09	121.4	F	1.38	231.3 +	F	LTR	1.38	231.3 +	F	NYSDOT does not believe signal timing and restriping are warranted. Impact would remain unmitigated.
		Westbound	LTR	1.02	106.1	F	1.23	174.7 +	F	LTR	1.23	174.7 +	F	
		Northbound	L	0.15	4.4	A	0.15	4.4	A	L	0.15	4.4	A	
			TR	1.05	46.8	D	1.05	46.8	D	TR	1.05	46.8	D	
		Southbound	L	0.34	7.4	A	0.34	7.4	A	L	0.34	7.4	A	
			TR	0.41	5.4	A	0.41	5.4	A	TR	0.41	5.4	A	
		Intersection			44.3	D		59.9	E			59.9	E	
Columbus Avenue @ West Lake Drive	41	Southbound	LT	0.12	10.9	B	0.13	11.2	B	LT	0.13	11.2	B	MPT plan and uniformed Police presence (with cones and other control devices if necessary) to direct traffic during school peak hours and other hours required.
		Westbound	L	0.09	38.9	E	0.63	81.3 +	F	L	0.63	81.3 +	F	
			R	0.41	16.6	C	0.43	17.4	C	R	0.43	17.4	C	
		Intersection		Unsignalized			Unsignalized				Unsignalized			

Notes:
L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates Potential Adverse Impacts.
" * " indicates a v/c ratio greater than 1.50; " ** " indicates a calculated delay greater than 240 seconds.
(1) 2006 Future Conditions without the Delaware Aerator Fill Operations
(2) 2006 Future Conditions with the Delaware Aerator Fill Operations
*** Also referred to as Build Conditions
(3) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

2006 Construction Option C Conditions

The traffic analyses compared the proposed UV Facility's 2006 Construction Option C conditions against the 2006 FNB with Croton project conditions. Under these conditions in 2006, it was found that traffic from the trucks and the construction of the proposed UV Facility would be anticipated to result in 25 potential temporary adverse traffic impacts, (10 during the AM peak hour, 3 during the midday peak hour, and 12 during the PM peak hour). These impacts could be fully mitigated as described below; the resulting delays and LOS for these intersections, with the recommended mitigation applied, are compared to 2006 FNB with Croton project and 2006 Construction (with Croton project) Option C conditions (see Table 6.2-8).

The tables showing the results of applying the mitigation measures, also indicate the specific measures recommended for each location. For many of the locations, more than one measure was identified that could be implemented that would reduce delays back to or below FNB conditions. The assessment presented here relies mostly on a combination of new traffic signals, lane striping changes, and traffic signal retiming or phasing changes as the recommended measures. However, some of the measures that were investigated were more extraordinary, involving additional lane construction or street widening, to give a complete range of potential measures that could eliminate impacts.

Bradhurst Avenue (Route 100) and Lakeview Avenue

During the AM peak hour, the westbound approach at this location would deteriorate from LOS D with 27.1 seconds of delay to LOS D with 32.8 seconds of delay. The installation of a traffic signal at this location could fully mitigate the AM peak hour impacts such that all of the movements would operate at LOS C or better.

Based on discussions that occurred between the Draft and Final EIS among NYCDEP and NYSDOT, Westchester County DPW, and local representatives, an MPT solution is more likely at this location than the mitigation measures described above. The MPT at this location would likely include the need for two additional Flagpeople. One flagperson would be located at the intersection, and another flagperson would need to be located further north on Bradhurst (after the bend in the road) with warning signage/cones to ensure that southbound drivers on Bradhurst slow down before turning the bend. These measures would allow Bradhurst Avenue traffic to be temporarily stopped, and allow westbound traffic (including trucks returning from the Aerators) on Lakeview Avenue to safely access Bradhurst Avenue.

Grasslands Road (Route 100C) and Bradhurst Avenue (Route 100)

During the AM peak hour, the eastbound left-turn movement would continue to operate at LOS F with an 86.9-second increase in delay; the eastbound through movement would continue to operate at LOS E with a 9.7-second increase in delay; the southbound through/right movement would deteriorate from LOS E with 70.8 seconds of delay to LOS F with 91.2 seconds of delay. During the midday peak hour, the southbound through/right movement would deteriorate from LOS E with 77.8 seconds of delay to LOS F with 96.5 seconds of delay. During

the PM peak hour, the eastbound left-turn movement would continue to operate at LOS F with delays increasing well beyond 240 seconds; the westbound through/right movement would deteriorate from LOS D with 42.5 seconds of delay to LOS D with 49.8 seconds of delay; the northbound left-turn movement would deteriorate from LOS D with 46.7 seconds of delay to LOS D with 52.6 seconds of delay; the southbound through/right movement would continue to operate at LOS F with an 18.6-second increase in delay. A combination of measures is required to fully mitigate the AM, midday, and PM peak hour impacts at this location. The westbound approach would be restriped to accommodate two travel lanes (shared left/through and shared through/right lanes). The eastbound approach would be restriped to accommodate an exclusive left-turn lane, a through lane, and a shared through/right lane. During the AM, midday, and PM peak hours, new signal phasing and timing plans for each peak hour would also be implemented as shown in Table 6.2-8.

During the AM peak hour, these mitigation measures would result in a decrease in delay on the eastbound left-turn movement and on the eastbound through movement of 40.1 seconds and 30.7 seconds, respectively, as compared to the 2006 FNB conditions; the southbound though/right movement would experience a decrease in delay of 9.0 seconds. During the midday peak hour, these mitigation measures would result in a decrease in delay on the westbound though/right movement of 19.8 seconds as compared to the 2006 FNB conditions. During the PM peak hour, these mitigation measures would result in a decrease in delay on the eastbound left-turn movement, the northbound left-turn movement, and the southbound though/right movement of 62.6 seconds, 0.1 seconds, and 8.0 seconds, respectively, as compared to the 2006 FNB conditions; the westbound approach would operate acceptably at LOS D with a delay of 42.2 seconds. The remaining vehicle movements at this location would operate at or near their 2006 FNB condition LOS.

Based on discussions that occurred between the Draft and Final EIS between NYCDEP and NYSDOT, an alternative restriping (change the westbound left-turn lane to a shared through left-turn lane) and revised signal plan to provide an eastbound/westbound phase is more suitable at this location than the mitigation measures described above. Although this measure does not fully mitigate the predicted traffic impacts at the intersection per the guidance in the *CEQR Technical Manual*, this revised mitigation would dramatically improve eastbound and westbound operations and reflect improved phasing of the signal operation. Overall intersection level-of-service would improve with the proposed improvement measure in place.

Grasslands Road (Route 100C) and Clearbrook Road/Walker Road

The westbound through/right movement would deteriorate from LOS D with 45.2 seconds of delay to LOS E with 61.7 seconds of delay during the AM peak hour. During the PM peak hour, the southbound left/through movement would deteriorate from LOS C with 20.2 seconds of delay to LOS F with 89.6 seconds of delay. These impacts would be mitigated by implementing the signal timing and phasing changes shown in Table 6.2-8. As a result of this mitigation, the westbound through/right movement would operate better than under FNB conditions, at LOS D with 37.1 seconds of delay during the AM peak hour; the southbound left/through movement would operate at LOS D with 35.3 seconds of delay. The remaining vehicle movements would continue to operate at or near their 2006 FNB condition LOS.

NYCDEP would submit this solution to the approval agency for approval. If the approval agency (NYSDOT) rejects this measure, the temporary adverse impact would remain unmitigated.

Grasslands Road (Route 100C) and Sprain Brook Parkway Northbound Ramp

The westbound approach would deteriorate from LOS D with 47.5 seconds of delay to LOS E with 60.5 seconds of delay during the PM peak hour. This impact would be mitigated by implementing the signal timing plan shown in Table 6.2-8. As a result of this mitigation, the westbound approach would operate better than under FNB conditions, at LOS D with 41.7 seconds of delay. The remaining vehicle movements would continue to operate at or near their 2006 FNB condition LOS, or at acceptable LOS levels.

NYCDEP would submit this solution to the approval agency for approval. If the approval agency (NYSDOT) rejects this measure, the temporary adverse impact would remain unmitigated.

Grasslands Road (Route 100) and Legion Drive

The southbound left-turn movement would continue to operate at LOS F with a 23.8-second, 48.0-second, and 45.5-second increase in delay during the AM, midday, and PM peak hours, respectively. These impacts would be fully mitigated with the installation of a traffic signal at this location, which would result in low-level LOS D or better for all of the vehicle movements and a maximum delay of 37.8 seconds per vehicle.

NYCDEP would recommend the installation of a signal at this intersection. However, based on discussions that occurred between the Draft and Final EIS among NYCDEP and NYSDOT, Westchester County DPW, and local representatives, an MPT solution is more likely at this location than the mitigation measures described above (in addition, brush would be cleared on the southbound Grasslands Road to improve line of sight), because NYSDOT is planning to install a traffic signal at this intersection in the future, in coordination with planned NYSDOT design work for the corridor. NYCDEP and NYSDOT would coordinate the improvement of this intersection to ensure that adequate traffic flow would occur during the proposed project's impact period.

Grasslands Road (Route 100C) and WCC West Gate

During the AM peak hour, the northbound left-turn movement would continue to operate at LOS F with a 16-second increase in delay. During the PM peak hour, the northbound left-turn movement would decline from LOS E with 45.2 seconds of delay to LOS F with 51.3 seconds of delay. A traffic signal is recommended for this location to fully mitigate the project-generated impacts. As a result of this mitigation, all of the vehicle movements would operate at LOS C or better during the AM and PM peak hours compared to FNB conditions, with a maximum vehicle delay of 32.5 seconds.

NYCDEP would recommend the installation of a signal at this intersection. However, based on discussions that occurred between the Draft and Final EIS among NYCDEP and NYSDOT, Westchester County DPW, and local representatives, an MPT solution is more likely at this location than the mitigation measures described above, because NYSDOT is planning to install a traffic signal at this intersection in the future, in coordination with planned NYSDOT design work for the corridor. NYCDEP and NYSDOT would coordinate the improvement of this intersection to ensure that adequate traffic flow would occur during the proposed project's impact period.

Commerce Street and Legion Drive

The southbound approach would continue to operate at LOS F with a 12.8-second increase in delay during the PM peak hour. These impacts would be fully mitigated with the installation of a traffic signal at this location, which would result in LOS C or better for all of the vehicle movements and a maximum delay of 26.0 seconds per vehicle.

Between the Draft and Final EIS, NYCDEP reevaluated the proposed mitigation measures and decided an MPT solution is more likely at this location than the mitigation measures described above, NYCDEP would submit this solution to the approval agency for approval. If the approval agency rejects this measure, the temporary adverse impact would remain unmitigated.

Taconic State Parkway and Lakeview Avenue

During the AM peak hour, the eastbound approach would continue to operate at LOS F with an 82.5-second increase in delay; the westbound approach would continue to operate at LOS F with a 77.0-second increase in delay. During the midday peak hour, the eastbound approach would deteriorate from LOS D with 43.9 seconds of delay to LOS F with 81.3 seconds of delay. During the PM peak hour, the eastbound approach would continue to operate at LOS F with a 109.9-second increase in delay; the westbound approach would continue to operate at LOS F with a 68.6-second increase in delay. A combination of measures is required to fully mitigate the AM, midday, and PM peak hour impacts at this location. The northbound and southbound approaches would be restriped to accommodate an exclusive left-turn lane, two through lanes, and an exclusive right-turn lane. During the AM, midday, and PM peak hours, new signal timings for each peak hour would also be implemented as shown in Table 6.2-8.

During the AM peak hour, these mitigation measures would result in a decrease in delay on the eastbound approach and the westbound approach of 43.7 seconds and 17.7 seconds, respectively, as compared to the 2006 FNB conditions. During the midday peak hour, these mitigation measures would result in a decrease in delay on the eastbound approach of 5.4 seconds as compared to the 2006 FNB conditions. During the PM peak hour, these mitigation measures would result in a decrease in delay on the eastbound approach and the westbound approach of 23.6 seconds and 14.8 seconds, respectively, as compared to the 2006 FNB conditions. The remaining vehicle movements at this location would operate at or near their 2006 FNB condition LOS.

Based on discussions that occurred between the Draft and Final EIS between NYCDEP and NYSDOT, the measures proposed in the Draft EIS would not be implemented. NYSDOT does not believe that the proposed signal timing changes and lane movements are warranted given the short duration of the potential impact (approximately six months). Therefore, this potential temporary adverse impact would remain unmitigated.

Columbus Avenue and West Lake Drive

The westbound left-turn movement at this location would deteriorate from LOS D with 26.8 seconds of delay to LOS E with 43.2 seconds of delay during the AM peak hour and from LOS E with 38.9 seconds of delay to LOS F with 81.3 seconds of delay during the PM peak hour. The installation of a traffic signal at this location could fully mitigate the AM and PM peak hour impacts such that all of the movements would operate at LOS C or better.

Based on discussions that occurred between the Draft and Final EIS among NYCDEP, Westchester County, and local representatives, an MPT solution is more likely at this location than the mitigation measures described above. As part of the MPT plan, a uniformed police officer would be assigned to these intersections during school hours and any other hour deemed necessary. In coordination with the MPT plan at this intersection, at the immediately adjacent intersection of Columbus Avenue and Lakeview Avenue, a flagperson and temporary signage may be needed at the westbound approach of Lakeview Avenue to ensure that traffic stops at a set back distance from the intersection to ensure that trucks could adequately turn from southbound Columbus Avenue onto Lakeview Avenue.

TABLE 6.2-8
SPLIT LAKEVIEW/COMMERCE TRUCK ROUTE (OPTION C)
LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS:
2006 FUTURE CONDITIONS WITHOUT THE PROJECT, FUTURE CONDITIONS WITH THE PROJECT (WITH THE CROTON PROJECT), AND MITIGATION CONDITIONS

			AM Peak Hour											
				2006 (1)			2006 Option A (2)*			2006 Mitigation				
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (3)
Bradhurst Avenue (Route 100) @	5	Southbound	LT	0.04	8.6	A	0.04	8.7	A	LT	0.04	8.7	A	MPT plan to be implemented. Flagperson at intersection with signage and cones. Flagperson just north of intersection on Bradhurst Avenue (after bend in the road) with signage and cones.
Lakeview Avenue		Westbound	LR	0.47	27.1	D	0.58	32.8 +	D	LR	0.58	32.8 +	D	
		Intersection		Unsignalized			Unsignalized				Unsignalized			
Grasslands Road (Route 100C) @	6	Eastbound	L	1.14	128.8	F	1.35	215.7 +	F	L	1.02	88.7	F	Add protected left-turn phase, signal retiming, and westbound lane restriping from exclusive left-turn lane to shared left-turn through lane.
Bradhurst Avenue (Route 100)			T	1.00	68.8	E	1.04	78.5 +	E	TR	0.82	38.1	D	
			R	0.36	16.4	B	0.36	16.5	B					
		Westbound	L	1.03	161.3	F	1.03	161.3	F	LTR	0.77	38.2	D	
			TR	0.66	31.0	C	0.70	32.2	C					
		Northbound	L	0.34	28.0	C	0.35	28.4	C	L	0.35	29.1	C	
			TR	0.29	25.3	C	0.29	25.3	C	TR	0.28	24.3	C	
		Southbound	L	0.55	40.5	D	0.55	40.5	D	L	0.51	38.1	D	
			TR	0.89	70.8	E	0.98	91.2 +	F	TR	0.85	61.8	E	
		Intersection			58.6	E		75.3	E			45.6	D	
Grasslands Road (Route 100C) @	24	Eastbound	L	0.04	17.8	B	0.04	17.8	B	L	0.04	17.8	B	Shift 4 seconds of green time from NB/SB phase to WB phase. To be reviewed and implemented if requested by the approving agency.
Clearbrook Road/Walker Road			TR	0.90	34.5	C	0.90	34.5	C	TR	0.90	34.5	C	
		Westbound	L	0.88	48.3	D	0.88	48.3	D	L	0.76	33.5	C	
			TR	0.98	45.2	D	1.04	61.7 +	E	TR	0.95	37.1	D	
		Northbound	LT	0.22	28.9	C	0.22	29.0	C	LT	0.30	32.8	C	
		Southbound	LT	0.03	27.4	C	0.20	28.8	C	LT	0.25	32.3	C	
			R	0.01	27.3	C	0.01	27.3	C	R	0.01	30.5	C	
		Intersection			41.2	D		47.9	D			35.2	D	
Grasslands Road (Route 100) @	33	Eastbound	LT	0.11	9.4	A	0.14	9.6	A	LT	0.14	9.6	A	MPT plan and clear brush on southbound Grasslands Road to improve line of sight. NYSDOT is planning to signalize this intersection.
Legion Drive														
		Southbound	L	0.79	71.3	F	0.88	95.1 +	F	L	0.88	95.1 +	F	
			R	0.37	16.2	C	0.42	17.1	C	R	0.42	17.1	C	
		Intersection		Unsignalized			Unsignalized				Unsignalized			
Grasslands Road (Route 100) @	35													MPT plan to be implemented.
WCC West Gate		Westbound	LT	0.01	10.4	B	0.01	10.5	B	LT	0.01	10.5	B	
		Northbound	L	0.80	72.9	F	0.86	88.9 +	F	L	0.86	88.9 +	F	
			R	0.06	14.5	B	0.06	14.9	B	R	0.06	14.9	B	
		Intersection		Unsignalized			Unsignalized				Unsignalized			
Taconic State Parkway @	38	Eastbound	LTR	1.08	114.3	F	1.30	196.8 +	F	LTR	1.30	196.8 +	F	NYSDOT does not believe signal timing and restriping are warranted. Impact would remain unmitigated.
Lakeview Avenue		Westbound	LTR	0.97	101.5	F	1.22	178.5 +	F	LTR	1.22	178.5 +	F	
		Northbound	L	0.21	5.0	A	0.21	5.0	A	L	0.21	5.0	A	
			TR	0.21	4.4	A	0.21	4.4	A	TR	0.21	4.4	A	
		Southbound	L	0.04	3.9	A	0.04	3.9	A	L	0.04	3.9	A	
			TR	0.57	6.6	A	0.57	6.6	A	TR	0.57	6.6	A	
		Intersection			26.4	C		48.7	D			48.7	D	
Columbus Avenue @	41													MPT plan and uniformed Police presence (with cones and other control devices if necessary) to direct traffic during school peak hours and other hours required.
West Lake Drive		Southbound	LT	0.14	9.4	A	0.15	9.7	A	LT	0.15	9.7	A	
		Westbound	L	0.04	26.8	D	0.43	43.2 +	E	L	0.43	43.2 +	E	
			R	0.28	12.1	B	0.29	12.6	B	R	0.29	12.6	B	
		Intersection		Unsignalized			Unsignalized				Unsignalized			

Notes:
L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates Potential Adverse Impacts.
(1) 2006 Future Conditions without the Delaware Aerator Fill Operations
(2) 2006 Future Conditions with the Delaware Aerator Fill Operations
* Also referred to as Build Conditions
(3) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

TABLE 6.2-8 (Continued)
SPLIT LAKEVIEW/COMMERCE TRUCK ROUTE (OPTION C)
LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS:
2006 FUTURE CONDITIONS WITHOUT THE PROJECT, FUTURE CONDITIONS WITH THE PROJECT (WITH THE CROTON PROJECT), AND

			Midday Peak Hour										
				2006 (1)			2006 Option A (2)*			2006 Mitigation				
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (3)
Grasslands Road (Route 100C) @ Bradhurst Avenue (Route 100)	6	Eastbound	L	0.20	14.8	B	0.27	15.6	B	L	0.30	21.5	C	Add protected left-turn phase, signal retiming, and westbound lane restriping from exclusive left-turn lane to shared left-turn through lane.
			T	0.33	16.1	B	0.36	16.4	B	TR	0.34	21.6	C	
			R	0.16	9.5	A	0.17	9.5	A					
		Westbound	L	0.06	13.6	B	0.06	13.6	B	LTR	0.32	21.4	C	
			TR	0.39	16.7	B	0.42	17.1	B					
		Northbound	L	0.52	45.8	D	0.58	49.2	D	L	0.39	37.1	D	
			TR	0.13	26.0	C	0.13	26.0	C	TR	0.11	19.7	B	
		Southbound	L	0.25	35.7	D	0.25	35.7	D	L	0.21	31.7	C	
			TR	0.96	77.8	E	1.03	96.5 +	F	TR	0.88	58.0	E	
		Intersection			33.9	C		38.6	D			31.7	C	
Grasslands Road (Route 100) @ Legion Drive	33	Eastbound	LT	0.18	9.1	A	0.20	9.2	A	LT	0.20	9.2	A	MPT plan and clear brush on southbound Grasslands Road to improve line of sight. NYSDOT is planning to signalize this intersection.
		Southbound	L	1.13	172.8	F	1.25	220.8 +	F	L	1.25	220.8 +	F	
			R	0.28	12.9	B	0.33	13.5	B	R	0.33	13.5	B	
		Intersection		Unsignalized			Unsignalized				Unsignalized			
Taconic State Parkway @ Lakeview Avenue	38	Eastbound	LTR	0.71	43.9	D	0.96	81.3 +	F	LTR	0.96	81.3 +	F	NYSDOT does not believe signal timing and restriping are warranted. Impact would remain unmitigated.
		Westbound	LTR	0.45	35.1	D	0.67	42.1	D	LTR	0.67	42.1	D	
		Northbound	L	0.06	4.0	A	0.06	4.0	A	L	0.06	4.0	A	
			TR	0.63	7.4	A	0.63	7.4	A	TR	0.63	7.4	A	
		Southbound	L	0.12	4.4	A	0.12	4.4	A	L	0.12	4.4	A	
			TR	0.27	4.7	A	0.27	4.7	A	TR	0.27	4.7	A	
		Intersection			10.8	B		16.4	B			16.4	B	

Notes:

L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates Potential Adverse Impacts.

(1) 2006 Future Conditions without the Delaware Aerator Fill Operations

(2) 2006 Future Conditions with the Delaware Aerator Fill Operations

* Also referred to as Build Conditions

(3) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

TABLE 6.2-8 (Continued)
SPLIT LAKEVIEW/COMMERCE TRUCK ROUTE (OPTION C)
LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS:
2006 FUTURE CONDITIONS WITHOUT THE PROJECT, FUTURE CONDITIONS WITH THE PROJECT (WITH THE CROTON PROJECT), AND

			PM Peak Hour											
			2006 (1)				2006 Option A (2)***				2006 Mitigation				
Intersection	No.	Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)		LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	FEIS Mitigation Measures (3)
Grasslands Road (Route 100C) @ Bradhurst Avenue (Route 100)	6	Eastbound	L	1.27	208.6	F	*	**	+	F	L	1.11	146.0	F	Add protected left-turn phase, signal retiming, and westbound lane restriping from exclusive left-turn lane to shared left-turn through lane.
			T	0.54	21.5	C	0.59	22.4		C	TR	0.61	30.2	C	
			R	0.25	11.9	B	0.26	12.0		B					
		Westbound	L	0.19	17.6	B	0.21	17.9		B	LTR	0.89	44.2	D	
			TR	0.92	42.5	D	0.96	49.8	+	D					
		Northbound	L	0.77	46.7	D	0.82	52.6	+	D	L	0.73	46.6	D	
			TR	0.18	16.2	B	0.18	16.2		B	TR	0.19	18.2	B	
		Southbound	L	0.28	24.8	C	0.28	24.8		C	L	0.24	25.2	C	
			TR	1.05	85.7	F	1.10	104.3	+	F	TR	1.02	77.7	E	
		Intersection			51.3	D		75.2		E			51.5	D	
Grasslands Road (Route 100C) @ Clearbrook Road/Walker Road	24	Eastbound	L	0.05	9.3	A	0.10	9.8		A	L	0.19	20.2	C	Provide the intersection with a new signal plan as follows EB/WB: G/A/R = 41/4/1 WB: G/A/R = 3/3/2 NB/SB: G/A/R = 33/4/1 SB: G/A/R = 3/3/2 C = 100 seconds To be reviewed and implemented if requested by the approving agency
			TR	0.69	16.1	B	0.69	16.1		B	TR	0.91	41.9	D	
		Westbound	L	1.13	122.0	F	1.13	122.0		F	L	0.99	102.1	F	
			TR	0.68	16.1	B	0.75	18.4		B	TR	0.83	28.8	C	
		Northbound	LT	0.22	20.2	C	0.49	23.9		C	LT	0.48	28.4	C	
		Southbound	LT	0.22	20.2	C	1.06	89.6	+	F	LT	0.81	35.3	D	
			R	0.01	18.5	B	0.19	19.9		B	R	0.16	18.7	B	
		Intersection			28.8	C		40.4		D			40.2	D	
Grasslands Road (Route 100C) @ Sprain Brook Parkway NB Ramp	27 30	Eastbound	L	0.46	15.1	B	0.78	30.0		C	L	0.83	36.4	D	Provide the intersection with a new signal plan as follows EB: G/A/R = 11/4/0 EB/WB: G/A/R = 32/4/1 NB: G/A/R = 22/4/2 C = 80 seconds To be reviewed and implemented if requested by the approving agency.
			T	0.30	8.8	A	0.33	9.0		A	T	0.33	8.5	A	
		Westbound	TR	0.99	47.5	D	1.04	60.5	+	E	TR	0.97	41.7	D	
		Northbound	LT	0.68	28.8	C	0.68	28.8		C	LT	0.71	30.8	C	
			R	0.33	22.9	C	0.33	22.9		C	R	0.34	23.7	C	
		Intersection			32.2	C		39.0		D			30.8	C	
Grasslands Road (Route 100) @ Legion Drive	33	Eastbound	LT	0.22	10.5	B	0.26	10.7		B	LT	0.26	10.7	B	MPT plan and clear brush on southbound Grasslands Road to improve line of sight. NYSDOT is planning to signalize this intersection.
		Southbound	L	1.08	138.1	F	1.20	183.6	+	F	L	1.20	183.6	+ F	
			R	0.44	18.4	C	0.50	20.1		C	R	0.50	20.1	C	
		Intersection		Unsignalized			Unsignalized					Unsignalized			
Grasslands Road (Route 100) @ WCC West Gate	35	Westbound	LT	0.11	9.0	A	0.12	9.2		A	LT	0.12	9.2	A	MPT plan to be implemented.
		Northbound	L	0.24	45.2	E	0.27	51.3	+	F	L	0.27	51.3	+ F	
			R	0.46	17.3	C	0.49	18.6		C	R	0.49	18.6	C	
		Intersection		Unsignalized			Unsignalized					Unsignalized			
Commerce Street @ Legion Drive	36	Eastbound	LTR	0.05	8.4	A	0.08	8.5		A	LTR	0.08	8.5	A	MPT Plan to be implemented.
		Westbound	LTR	0.06	8.5	A	0.06	8.5		A	LTR	0.06	8.5	A	
		Northbound	LTR	0.43	26.4	D	0.49	31.2		D	LTR	0.49	31.2	D	
		Southbound	LTR	0.63	65.5	F	0.76	78.3	+	F	LTR	0.76	78.3	+ F	
		Intersection		Unsignalized			Unsignalized					Unsignalized			
Taconic State Parkway @ Lakeview Avenue	38	Eastbound	LTR	1.09	121.4	F	1.38	231.3	+	F	LTR	1.38	231.3	+ F	NYSDOT does not believe signal timing and restriping are warranted. Impact would remain unmitigated.
		Westbound	LTR	1.02	106.1	F	1.23	174.7	+	F	LTR	1.23	174.7	+ F	
		Northbound	L	0.15	4.4	A	0.15	4.4		A	L	0.15	4.4	A	
			TR	1.05	46.8	D	1.05	46.8		D	TR	1.05	46.8	D	
		Southbound	L	0.34	7.4	A	0.34	7.4		A	L	0.34	7.4	A	
			TR	0.41	5.4	A	0.41	5.4		A	TR	0.41	5.4	A	
		Intersection			44.3	D		59.9		E			59.9	E	
Columbus Avenue @ West Lake Drive	41	Southbound	LT	0.12	10.9	B	0.13	11.2		B	LT	0.13	11.2	B	MPT plan and uniformed Police presence (with cones and other control devices if necessary) to direct traffic during school peak hours and other hours required.
		Westbound	L	0.09	38.9	E	0.63	81.3	+	F	L	0.63	81.3	+ F	
			R	0.41	16.6	C	0.43	17.4		C	R	0.43	17.4	C	
		Intersection		Unsignalized			Unsignalized					Unsignalized			

Notes:
L = Left Turn, T = Through, R = Right Turn, Def = Defacto Left Turn; LOS = Level of Service. "+" indicates Potential Adverse Impacts.
" * " indicates a v/c ratio greater than 1.50; " ** " indicates a calculated delay greater than 240 seconds.
(1) 2006 Future Conditions without the Delaware Aerator Fill Operations
(2) 2006 Future Conditions with the Delaware Aerator Fill Operations
*** Also referred to as Build Conditions
(3) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

2006 Construction Option D Conditions

The traffic analyses compared the proposed UV Facility's 2006 Construction Option D conditions against the 2006 FNB with Croton project conditions. Under these conditions in 2006, it was estimated that traffic from the trucks and the construction of the proposed UV Facility would result in 15 (some lane groups/approaches are impacted for multiple time periods) potential temporary adverse traffic impacts, (6 during the AM peak hour, 1 during the midday peak hour, and 8 during the PM peak hour).

Between the Draft and Final EIS, discussions were held between NYCDEP and the relevant agencies (e.g., NYSDOT, Westchester County DPW) and local representatives, to determine what level of mitigation measure would be appropriate to address the potential significant adverse impacts identified for the project's construction. The mitigation measures under this scenario would be comparable to the Option D mitigation for the Future with the Project without the Croton project.

2006 Construction Option E Conditions

The traffic analyses compared the proposed UV Facility's 2006 Construction Option E conditions against the 2006 FNB with Croton project conditions. Under these conditions in 2006, it was estimated that traffic from the trucks and the construction of the proposed UV Facility would result in 7 (some lane groups/approaches are impacted for multiple time periods) potential temporary adverse traffic impacts, (2 during the AM peak hour, 2 during the midday peak hour, and 3 during the PM peak hour).

Between the Draft and Final EIS, discussions were held between NYCDEP and the relevant agencies (e.g., NYSDOT, Westchester County DPW) and local representatives, to determine what level of mitigation measure would be appropriate to address the potential temporary adverse impacts identified for the project's construction. The mitigation measures under this scenario would be comparable to the Option D mitigation for the Future with the Project without the Croton project.

6.2.2.1.2. 2010 Construction Conditions

The traffic analyses for this scenario compared the 2010 Future Without the Project (i.e., without construction at the Kensico Reservoir work sites) against the 2010 Future With the Project, which would include the filling of the Catskill Aerator, construction of the new screen chamber, and rehabilitation work associated with the Catskill Aqueduct pressurization. Under the Future With the Project conditions in 2010, it was found that traffic from the proposed construction would be anticipated to result in 3 potential temporary adverse traffic impacts (1 during the late AM peak hour and 2 during the PM peak hour), plus those impacts identified above for the 2006 Future With the Project scenario. (The filling of the two Aerators—Delaware Aerator in 2006 and Catskill Aerator in 2010—would have similar effects on the road network, resulting in 17 to 26 temporary adverse impacted lane groups/approaches (not including the impacts at intersections at Columbus Avenue and West Lake Drive, and Columbus Avenue (southbound) and Stevens Avenue, described below), depending on which truck route option is

chosen. However, the impacts would occur for a relatively short period of two to four months.). The three temporary adverse impacts could be fully mitigated as described below; the resulting delays and LOS for these intersections, with the proposed mitigation applied, are compared to 2010 Future Without the Project (see Table 6.2-9). Mitigation for predicted impacts at other intersections is summarized above, under the 2006 scenario.

The tables showing the results of applying the mitigation measures also indicate the specific measures recommended for each location. The assessment presented in this section relies on a combination of new traffic signals, lane striping changes, and traffic signal retiming or phasing changes as the recommended measures. Once the off-site construction and filling operations have commenced, the various agencies responsible for maintaining traffic flow and roadways in the study area would conduct field inspections of the operations of the various intersections to determine if the proposed mitigation measures are actually warranted (particularly because traffic from anticipated No Build projects or background growth may be less than analyzed in this report).

Columbus Avenue and West Lake Drive

The westbound left-turn movement at this location would deteriorate from a LOS D with 29.8 seconds of delay to a LOS F with 53.9 seconds of delay and from a LOS E with 45.8 seconds of delay to a LOS F with 147.6 seconds of delay during the late AM and PM peak hours, respectively. The installation of a traffic signal at this location could fully mitigate the late AM and PM peak hour impacts such that all of the movements would operate at LOS C or better, compared to Future Without the Project conditions.

Based on discussions that occurred between the Draft and Final EIS among NYCDEP, Westchester County, and local representatives, an MPT solution is more likely at this location than the mitigation measures described above. As part of the MPT plan, a uniformed police officer would be assigned to these intersections during school hours and any other hour deemed necessary. In coordination with the MPT plan at this intersection, at the immediately adjacent intersection of Columbus Avenue and Lakeview Avenue, a flagperson and temporary signage may be needed at the westbound approach of Lakeview Avenue to ensure that traffic stops at a set back distance from the intersection to ensure that trucks could adequately turn from southbound Columbus Avenue onto Lakeview Avenue.

Columbus Avenue (Southbound) and Stevens Avenue

The westbound left-turn and through movement at this location would continue to operate at LOS F with a 9.7-second increase in delay during the PM peak hour. This impact would be mitigated by transferring 1 second of green time from the southbound signal phase to the eastbound/westbound signal phase. During the PM peak hour, these mitigation measures would result in a decrease in delay on the westbound left/through movement of 28.8 seconds as compared to the 2010 Future Without the Project traffic. The remaining vehicle movements at this location would operate at their 2010 Future Without the Project LOS with no significant changes in their average vehicle delays.

All of the mitigation measures suggested above would serve to eliminate construction-related impacts of the proposed project. If the mitigation identified is not applied, the predicted temporary adverse construction traffic impacts identified would not be mitigated. In the absence of implementing the mitigation measures recommended above, NYCDEP would consider other MPT techniques (e.g., the use of traffic control officers, traffic cones, variable message signs, etc.), if approved by the governing roadway entity, to offset these temporary adverse impacts, and ensure the smooth and safe operation of traffic.

NYCDEP would submit this solution to the approval agency for approval. If the approval agency (NYSDOT) rejects this measure, the temporary adverse impact would remain unmitigated.

TABLE 6.2-9.

KENSICO LEVEL-OF-SERVICE ANALYSIS RESULTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS: 2010 NO BUILD, BUILD (OPERATION), AND BUILD WITH MITIGATION CONDITIONS

Intersection	No.	Approach	Lane Group	2010 No Build v/c Ratio	2010 No Build Delay (sec)	2010 No Build LOS	2010 Build v/c Ratio	2010 Build Delay (sec)	2010 Build LOS	2010 Mitigation v/c Ratio	2010 Mitigation Delay (sec)	2010 Mitigation LOS	FEIS Mitigation Measures (1)
6:30 - 7:30 AM													
Columbus Avenue @ West Lake Drive (Unsignalized)	41	Southbound	LT	0.09	8.4	A	0.21	9.0	A	0.21	9.0	A	MPT plan and uniformed Police presence (with cones and other control devices if necessary) to direct traffic during school peak hours and other hours required (for Construction only).
		Westbound	L	0.00	16.7	C	0.01	25.8	D	0.01	25.8	D	
			R	0.17	10.2	B	0.18	10.3	B	0.18	10.3	B	
		Intersection		Unsignalized			Unsignalized			Unsignalized			
8:00 - 9:00 AM													
Columbus Avenue @ West Lake Drive (Unsignalized)	41	Southbound	LT	0.15	9.7	A	0.16	10.0	B	0.16	10.0	B	MPT plan and uniformed Police presence (with cones and other control devices if necessary) to direct traffic during school peak hours and other hours required (for Construction only).
		Westbound	L	0.04	29.8	D	0.51	53.9 +	F	0.51	53.9 +	F	
			R	0.31	12.6	B	0.32	13.2	B	0.32	13.2	B	
		Intersection		Unsignalized			Unsignalized			Unsignalized			
3:30 - 4:30 PM													
Columbus Avenue @ West Lake Drive (Unsignalized)	41	Southbound	LT	0.14	11.4	B	0.15	11.7	B	0.15	11.7	B	MPT plan and uniformed Police presence (with cones and other control devices if necessary) to direct traffic during school peak hours and other hours required (for Construction only).
		Westbound	L	0.12	45.8	E	0.91	147.6 +	F	0.91	147.6 +	F	
			R	0.46	18.1	C	0.71	28.7	D	0.71	28.7	D	
		Intersection		Unsignalized			Unsignalized			Unsignalized			
Columbus Avenue @ Stevens Avenue (Signalized)	43	Eastbound	TR	0.47	16.5	B	0.47	16.5	B	0.45	15.5	B	Shift 1 second of green time from southbound to eastbound/westbound phase. To be reviewed and implemented if requested by the approving agency.
		Westbound	LT	1.22	132.7	F	1.24	142.4 +	F	1.15	103.9	F	
		Southbound	LTR	0.34	11.1	B	0.34	11.1	B	0.35	11.8	B	
		Intersection			67.8	E		73.3	E		55.3	E	

Notes:

L = Left Turn, T = Through, R = Right Turn; LOS = Level of Service. "+" indicates significant impacts.

(1) FEIS Mitigation derived based on meetings with Review Agencies (e.g., NYSDOT, Westchester County DPW, and Town Representatives).

6.2.3. Air Quality

Without Croton Project

Since the proposed traffic mitigation measures would largely improve traffic level of service when compared to the Future with the Project without mitigation at the Kensico Reservoir work sites, localized air quality impacts from the proposed filling of the Aerators in 2006, with the traffic mitigation measures would be comparable to or less than those projected without the mitigation. However, in order to determine the potential air quality impacts that may result from the potential traffic mitigation in 2006 at the intersection of Bradhurst Avenue (Route 100) and Grasslands Road (Route 100C) (restriping to change the westbound left-turn lane to a shared through left-turn lane and revised signal plan to provide an eastbound/westbound phase) an assessment for PM_{10} and $PM_{2.5}$ was performed at the intersection. The results of this analysis indicated that there would be no significant adverse air quality impacts with the proposed filling of the Aerators in 2006, with the proposed traffic mitigation in place. Results for the Future With the Project without the Croton project at the Kensico Reservoir work sites during the peak year for 2006 are presented in Tables 6.2-10 through 6.2-15 for PM_{10} and $PM_{2.5.}$ Truck route options that are predicted to have similar impacts are presented jointly.

For the proposed traffic mitigation in 2006 and 2010 for the Final EIS, no intersections affected by the proposed truck routes to Kensico would have a new traffic signal implemented. Potential air quality impacts at other locations under this scenario are anticipated to be equal or less than those projected at the intersection of Route 100C and Bradhurst Avenue.

TABLE 6.2-10. PREDICTED PM10 24-HOUR AND ANNUAL CONCENTRATIONS WITHOUT CROTON PROJECT WITH MITIGATION FOR TRUCK ROUTE OPTION A (µg/m^3)

Intersection	Averaging Period	Ambient AQ Background	Model Results	Total Predicted Conc.[1]	Standard
Construction Year 2006					
Route 100C at Bradhurst Avenue	24 hour	45	50.01	95	150
	Annual	21	15.44	36	50

Notes: [1]Ambient AQ Background + Model Results (Future With Project [with fill operation] without Croton) = Total Predicted Concentration.

TABLE 6.2-11. PREDICTED PM_{10} 24-HOUR AND ANNUAL CONCENTRATIONS WITHOUT CROTON PROJECT WITH MITIGATION FOR TRUCK ROUTE OPTIONS B AND C ($\mu g/m^3$)

Intersection	Averaging Period	Ambient AQ Background	Model Results	Total Predicted Conc.[1]	Standard
Construction Year 2006					
Route 100C at Bradhurst Avenue	24 hour	45	49.91	95	150
	Annual	21	15.49	36	50

Notes: [1]Ambient AQ Background + Model Results (Future With Project [with fill operation] without Croton) = Total Predicted Concentration.

TABLE 6.2-12. PREDICTED PM_{10} 24-HOUR AND ANNUAL CONCENTRATIONS WITHOUT CROTON PROJECT WITH MITIGATION FOR TRUCK ROUTE OPTION D ($\mu g/m^3$)

Intersection	Averaging Period	Ambient AQ Background	Model Results	Total Predicted Conc.[1]	Standard
Construction Year 2006					
Route 100C at Bradhurst Avenue	24 hour	45	49.91	95	150
	Annual	21	15.47	36	50

Notes: [1]Ambient AQ Background + Model Results (Future With Project [with fill operation] without Croton) = Total Predicted Concentration.

TABLE 6.2-13. PREDICTED $PM_{2.5}$ 24-HOUR AND ANNUAL CONCENTRATIONS WITHOUT CROTON PROJECT WITH MITIGATION FOR TRUCK ROUTE OPTION A ($\mu g/m3$)

Intersection	Averaging Time	Predicted Conc.[1]		Project Increment[2]	Interim Guidance
		With Project	Without Project		
Construction Year 2006					
Route 100C at Bradhurst Avenue	24-hour	8.97	8.73	0.24	5
	Annual	0.38	0.35	0.03	0.1

Notes: [1] Annual impacts are for neighborhood receptors.

[2]The increment was calculated by subtracting $PM_{2.5}$ concentrations for the Future Without the Project (without fill operation) without Croton from the $PM_{2.5}$ concentrations for the Future With the Project (with fill operation) without Croton.

TABLE 6.2-14. PREDICTED $PM_{2.5}$ 24-HOUR AND ANNUAL CONCENTRATIONS WITHOUT CROTON PROJECT WITH MITIGATION FOR TRUCK ROUTE OPTIONS B, AND C (μg/m3)

Intersection	Averaging Time	Predicted Conc.[1]		Project Increment[2]	Interim Guidance
		With Project	Without Project		
Construction Year 2006					
Route 100C at Bradhurst Avenue	24-hour	8.92	8.73	0.19	5
	Annual	0.38	0.35	0.03	0.1

Notes:
[1] Annual impacts are for neighborhood receptors.
[2]The increment was calculated by subtracting $PM_{2.5}$ concentrations for the Future Without the Project (without fill operation) without Croton from the $PM_{2.5}$ concentrations for the Future With the Project (with fill operation) without Croton.

TABLE 6.2-15. PREDICTED $PM_{2.5}$ 24-HOUR AND ANNUAL CONCENTRATIONS WITHOUT CROTON PROJECT WITH MITIGATION FOR TRUCK ROUTE OPTION D (μg/m3)

Intersection	Averaging Time	Predicted Conc.[1]		Project Increment[2]	Interim Guidance
		With Project	Without Project		
Construction Year 2006					
Route 100C at Bradhurst Avenue	24-hour	8.93	8.73	0.20	5
	Annual	0.37	0.35	0.02	0.1

Notes:
[1] Annual impacts are for neighborhood receptors.
[2]The increment was calculated by subtracting $PM_{2.5}$ concentrations for the Future Without the Project (without fill operation) without Croton from the $PM_{2.5}$ concentrations for the Future With the Project (with fill operation) without Croton.

With Croton Project

Since the proposed traffic mitigation measures would largely improve traffic level of service when compared to the Future with the Project without mitigation at the Kensico Reservoir work sites, localized air quality impacts from the proposed filling of the Aerators, with the traffic mitigation measures would be comparable to or less than those projected without the mitigation. However, in order to determine the potential air quality impacts that may result from the potential traffic mitigation in 2006 at the intersection of Bradhurst Avenue (Route 100) and Grasslands Road (Route 100C) (restriping to change the westbound left-turn lane to a shared through left-turn lane and revised signal plan to provide an eastbound/westbound phase) an assessment for PM_{10} and $PM_{2.5}$ was performed at the intersection. The results of this analysis indicated that there would be no significant adverse air quality impacts with the proposed filling of the Aerators in 2006, with the proposed traffic mitigation in place. Results for the Future With the Project with the Croton project at the Kensico Reservoir work sites during the peak year for 2006 are presented in Tables 6.2-16 through 6.2-19 for PM_{10} and $PM_{2.5}$.

TABLE 6.2-16. PREDICTED PM_{10} 24-HOUR AND ANNUAL CONCENTRATIONS WITH CROTON PROJECT WITH MITIGATION FOR TRUCK ROUTE OPTION A ($\mu g/m^3$)

Intersection	Averaging Period	Ambient AQ Background	Model Results	Total Predicted Conc.[1]	Standard
Construction Year 2006					
Route 100C at Bradhurst Avenue	24 hour	45	50.07	95	150
	Annual	21	15.46	36	50

Notes: [1]Ambient AQ Background + Model Results (Future With Project [with fill operation] with Croton) = Total Predicted Concentration.

TABLE 6.2-17. PREDICTED PM_{10} 24-HOUR AND ANNUAL CONCENTRATIONS WITH CROTON PROJECT WITH MITIGATION FOR TRUCK ROUTE OPTIONS B, C AND D ($\mu g/m^3$)

Intersection	Averaging Period	Ambient AQ Background	Model Results	Total Predicted Conc.[1]	Standard
Construction Year 2006					
Route 100C at Bradhurst Avenue	24 hour	45	49.96	95	150
	Annual	21	15.51	37	50

Notes: [1]Ambient AQ Background + Model Results (Future With Project [with fill operation] with Croton) = Total Predicted Concentration.

TABLE 6.2-18. PREDICTED $PM_{2.5}$ 24-HOUR AND ANNUAL CONCENTRATIONS WITH CROTON PROJECT WITH MITIGATION FOR TRUCK ROUTE OPTION A ($\mu g/m3$)

Intersection	Averaging Time	Predicted Conc.[1]		Project Increment[2]	Interim Guidance
		With Project	Without Project		
Construction Year 2006					
Route 100C at Bradhurst Avenue	24-hour	8.99	8.76	0.23	5
	Annual	0.38	0.35	0.03	0.1

Notes:
[1] Annual impacts are for neighborhood receptors.
[2]The increment was calculated by subtracting $PM_{2.5}$ concentrations for the Future Without the Project (without fill operation) with Croton from the $PM_{2.5}$ concentrations for the Future With the Project (with fill operation) with Croton.

TABLE 6.2-19. PREDICTED $PM_{2.5}$ 24-HOUR AND ANNUAL CONCENTRATIONS WITH CROTON PROJECT WITH MITIGATION FOR TRUCK ROUTE OPTIONS B, C, AND D (μg/m3)

Intersection	Averaging Time	Predicted Conc.[1]		Project Increment[2]	Interim Guidance
		With Project	Without Project		
Construction Year 2006					
Route 100C at Bradhurst Avenue	24-hour	8.90	8.71	0.19	5
	Annual	0.38	0.35	0.03	0.1

Notes:
[1] Annual impacts are for neighborhood receptors.
[2]The increment was calculated by subtracting $PM_{2.5}$ concentrations for the Future Without the Project (without fill operation) with Croton from the $PM_{2.5}$ concentrations for the Future With the Project (with fill operation) with Croton.