Chapter 20:

Mitigation

A. INTRODUCTION

The technical analyses presented in Chapters 2 through 19 examine the potential for significant adverse impacts resulting from the proposed action. Where significant adverse impacts have been identified, measures are proposed to minimize or avoid them. This chapter discusses these mitigation measures in the areas of open space, historic resources, shadows, and traffic, transit, and pedestrians. In addition, this chapter analyzes the air quality effects of the proposed traffic mitigation measures.

B. OPEN SPACE

Chapter 5, "Open Space," identifies an indirect significant adverse impact on the active open space ratio in the residential study area in 2013. Because the proposed action could result in an indirect significant adverse impact on active open space, it is necessary to identify measures to mitigate these impacts to the greatest extent practicable. The *CEQR Technical Manual* lists potential on- and off-site mitigation measures. These measures include creating new public open spaces on-site or elsewhere in the study area of the type needed to serve the proposed population and offset their impact on existing open spaces in the study area, and improving existing open spaces in the study area. Absent any such measures, an unmitigated impact would result.

The proposed Flushing Commons project would create approximately 1.52 acres of passive public open space on the project site. As described in Chapter 1, "Project Description," one of the goals for redevelopment of the site, as reflected in the "Development Framework for Downtown Flushing," is to create a town square-style public open space that would be a center of community activity, which is currently missing from the urban fabric of Downtown Flushing, The main portion of the proposed open space would be an elliptical green opening onto 138th Street that is intended to respond to the community's desire for a central gathering place. It is expected to contain a terraced lawn, formal plaza, trees, tables and chairs, additional seating, and a water feature. The terraced lawn is also intended to function as an amphitheater for ceremonies and performances. The open space would be open to the public at all times and available for programming for public events. Due to the configuration of the proposed buildings and the below-grade parking, this open space would not be able to accommodate active open space uses and also meet the goal of providing a town square-style community gathering place.

As described in Chapter 5, the quantitative open space analysis does not account for the amenity space within the residential portion of the Flushing Commons project or the new YMCA space that would be provided. The residential portion of Flushing Commons would include several thousand square feet of amenity space, including exercise rooms and equipment, outdoor rooftop and terrace space, as well as a children's play space, that would serve the proposed population. In addition, Flushing Commons would house a proposed new YMCA, an approximately 62,000 square feet state-of-the art recreational facility. The existing YMCA facility in Downtown

Flushing is one of the oldest YMCA facilities in the City and is currently located on a lot that cannot accommodate any further expansion. The proposed new YMCA space in the Flushing Commons project would contain two indoor swimming pools, a full basketball court, classrooms and meeting rooms for youth, as well as standard exercise equipment. The YMCA is also considering developing programs whereby residents of the proposed project would be allowed to buy discounted memberships at the same price as "group" or "corporate" memberships. While these resources are not considered as public open space, the recreational space and the YMCA facility would each include a number of uses that would relieve future open space demands, particularly for active open space, created by the residential and worker populations introduced by the proposed action.

Absent the creation of additional active public open space resources, the proposed action would result in an unmitigated significant adverse impact on the active open space ratio.

C. HISTORIC RESOURCES

PROJECT SITE

ARCHAEOLOGICAL RESOURCES

The Flushing Commons project would require subsurface disturbance across the entire project site, including areas of potential archaeological sensitivity related to the Flushing Female Association School and 19th century home lots. Therefore, before construction of the Flushing Commons project, Stage 1B archaeological field testing would be undertaken for these areas of potential sensitivity to conclusively determine whether there are any resources present in these areas that could be disturbed by the proposed project. The protocol for the Stage 1B testing would be reviewed and approved by LPC. If resources are identified, an archaeological treatment plan would be developed and implemented in coordination with LPC to mitigate the project's effects on these resources. Any required mitigation would be determined based on the characteristics and significance of the resource, and could include archaeological excavation to record information about the find.

To preserve and respect potentially intact burials in the Macedonia African Methodist Episcopal (AME) Church area, the Flushing Commons project would establish a no-impact zone of at least 15 feet around the west and south perimeters of the extant Macedonia AME Church lot before and during construction activities for the proposed development. On the south side of the church lot, the protective buffer would not need to extend beyond the former roadway of 38th Avenue. However, if Flushing Commons' project-related subsurface excavations are necessary in this portion of the former 38th Avenue roadbed that would be deeded to the church, archaeological monitoring may be appropriate. In this scenario, a protocol for monitoring would be developed in coordination with and approved by LPC.

The Macedonia Plaza project by the Macedonia AME Church is anticipated to require excavation to the south, west, and north of the existing church structure. Since the Macedonia Plaza project—as presently designed—would not observe the recommended archaeological no-impact zones on the north, west, and south sides of the extant church lot, the redevelopment of this area could adversely affect areas of sensitivity for possible human remains. Therefore, as a condition of the disposition of this site, the Church would be required to coordinate with LPC and undertake archaeological monitoring and/or testing, as appropriate, before construction of the Macedonia Plaza project commences.

ARCHITECTURAL RESOURCES

As described in Chapter 7, "Historic Resources," the proposed Flushing Commons buildings would cast incremental shadows on the arched windows of the Macedonia AME Church on all four analysis days: March 21 (or September 21, which is approximately equivalent), the equinoxes; June 21, the summer solstice, the longest day of the year when shadows are shortest; May 6/August 6, the midpoints between the equinoxes and the solstice; and December 21. Incremental shadow durations would range from just over 4 hours in June to nearly 7 hours on the March 21/September 21 analysis day. The incremental shadow would significantly reduce the amount of direct sunlight that currently shines through these windows throughout the year and would cause a significant adverse impact for the users of this place of worship.

The Flushing Commons project sponsors would coordinate with the Macedonia AME Church to develop measures to offset the potential effect of the project's shadows on the arched windows. Such measures could include lighting the windows by a new light source that would be mounted on one of the proposed buildings. This light source could approximate sunlight conditions for the arched windows, without indirect light spillover to adjacent areas. Other options could be removing the existing protective coverings from the arched windows, cleaning the interior and exterior of the windows, and installing new transparent protective coverings of similar or greater durability; a stained glass restoration effort; and/or the implementation of some other mutually agreed-to measure.

Construction of the proposed Flushing Commons and Macedonia Plaza projects would occur within 90 feet of the Macedonia AME Church building. Therefore, it is expected that the Flushing Commons project would avoid potential adverse physical impacts on this resource through the implementation of a construction protection plan developed in consultation with LPC. For the Macedonia Plaza project, the disposition of this site would include a condition requiring the church and/or the future developer of this area to develop and implement a construction protection plan, reviewed and approved by LPC, to protect the adjacent church building.

D. SHADOWS

The only identified significant shadow impact of the proposed action is the impact on the arched windows of the Macedonia AME Church. Mitigation for this impact is discussed above, in "Historic Resources."

E. TRAFFIC AND PARKING

As described in Chapter 14, "Traffic and Parking," the proposed action is expected to result in significant adverse traffic impacts at 17 intersections during the weekday AM peak hour, 14 during the weekday midday peak hour, 20 during the weekday PM peak hour, and 21 during the Saturday midday peak hour. This section presents the potential transportation-related improvement measures that are being proposed to mitigate as many significant adverse traffic impacts resulting from the proposed action as possible. The *CEQR Technical Manual* requires that mitigation measures must show that the level of delay for the build condition can be reduced to or below the no build condition (or to acceptable levels), without creating impacts on other intersection approaches. As detailed below, standard mitigation measures, such as modifying signal timings and adding a new traffic signal, would fully mitigate the projected significant

adverse impacts at some of the study area intersections, while others would be partially mitigated as shown in Tables 20-3 to 20-6.

Of the 17 intersections with significant adverse traffic impacts during the weekday AM peak hour, 4 would be fully mitigated and 13 would be partially mitigated or remain unmitigated. Of the 14 intersections with significant adverse traffic impacts during the weekday midday peak hour, 3 would be fully mitigated and 11 would be partially mitigated or remain unmitigated. Of the 20 intersections with significant adverse traffic impacts during the weekday PM peak hour, 7 would be fully mitigated and 13 would be partially mitigated or remain unmitigated. Of the 21 intersections with significant adverse traffic impacts during the Saturday midday peak hour, 7 would be fully mitigated and 14 would be partially mitigated or remain unmitigated.

As mentioned in Chapter 14, "Traffic and Parking," NYCDOT is considering several scenarios to improve traffic and pedestrian conditions in Downtown Flushing as alternatives to the contraflow bus lanes, which is the scenario analyzed in this DEIS. The City continues to analyze other scenarios and it is possible that some unmitigated traffic impacts may be eliminated, although it is likely that numerous significant adverse traffic impacts would remain unmitigated.

ROOSEVELT AVENUE CORRIDOR

ROOSEVELT AVENUE/COLLEGE POINT BOULEVARD

• Re-allocate 1 second of green time from the east-west lead phase to the east-west lag phase during the weekday AM peak hour.

ROOSEVELT AVENUE/UNION STREET

• Re-allocate 1 second of green time from the north-south phase to the east-west phase during the weekday AM and PM peak hours.

ROOSEVELT AVENUE/BOWNE STREET

- Re-allocate 1 second of green time from the north-south phase to the east-west phase during the weekday AM peak hour.
- Re-allocate 2 seconds of green time from the north-south phase to the east-west phase during the weekday midday peak hour.
- Re-allocate 4 seconds of green time from the north-south phase to the east-west phase during the weekday PM peak hour.

ROOSEVELT AVENUE/PARSONS BOULEVARD

• Re-allocate 3 seconds of green time from the north-south phase to the east-west phase during the weekday midday peak hour.

NORTHERN BOULEVARD CORRIDOR

NORTHERN BOULEVARD/PRINCE STREET

• Re-allocate 2 seconds of green time from the east-west permissive phase to the east-west dual left-turn phase and 1 second from the east-west permissive phase to the eastbound shared through/left-turn phase during the weekday AM and midday peak hours.

• Re-allocate 3 seconds of green time from the east-west permissive phase to the east-west dual left-turn phase during the weekday PM peak hour.

NORTHERN BOULEVARD/MAIN STREET

• Re-allocate 4 seconds of green time from the east-west phase to the northbound phase during the weekday midday peak hour.

NORTHERN BOULEVARD/BOWNE STREET

• Re-allocate 2 seconds of green time from the east-west permissive phase to the east-west lagging phase during the weekday PM and Saturday midday peak hours.

UNION STREET CORRIDOR

UNION STREET/37TH AVENUE

- Re-allocate 2 seconds of green time from the north-south phase to the westbound phase during the weekday AM and Saturday midday peak hours.
- Re-allocate 4 seconds of green time from the north-south phase to the westbound phase during the weekday midday, PM, and Saturday midday peak hours.

UNION STREET/39TH AVENUE

• Re-allocate 3 seconds of green time from the north-south phase to the eastbound phase during the weekday midday, PM, and Saturday midday peak hours.

MAIN STREET CORRIDOR

MAIN STREET/37TH AVENUE

- Re-allocate 4 seconds of green time from the north-south phase to the westbound phase during the weekday AM, midday, and PM peak hours.
- Re-allocate 1 second of green time from the north-south phase to the westbound phase during the Saturday midday peak hour.

MAIN STREET/38TH AVENUE

- Re-allocate 2 seconds of green time from the north-south phase to the westbound phase during the weekday AM and PM peak hours.
- Re-allocate 3 seconds of green time from the north-south phase to the westbound phase during the weekday midday peak hour.
- Re-allocate 4 seconds of green time from the north-south phase to the westbound phase during the Saturday midday peak hour.

MAIN STREET/41ST AVENUE/KISSENA BLVD

• Re-allocate 2 seconds of green time from the north-south phase to the westbound phase during the weekday AM and PM peak hours.

MAIN STREET/SANFORD AVENUE

• Re-allocate 2 seconds of green time from the westbound phase to the north-south phase during the weekday PM and Saturday midday peak hours.

37TH AVENUE CORRIDOR

PRINCE STREET/37TH AVENUE

• Re-allocate 3 seconds of green time from the westbound phase to the north-south phase during the Saturday midday peak hour.

39TH AVENUE CORRIDOR

PRINCE STREET/39TH AVENUE

• Re-allocate 4 seconds of green time from the westbound phase to the north-south phase during the weekday PM and Saturday midday peak hours.

138TH STREET/39TH AVENUE

To mitigate the projected adverse traffic impact at this intersection, a traffic signal is proposed, as illustrated in Figure 20-1, at this currently unsignalized location to ensure safe and efficient movement of both vehicles and pedestrians. The proposed project would add a substantial amount of vehicular traffic as well as pedestrian volumes at this location. With the proposed traffic signal, the intersection is projected to operate at LOS D or better during all peak hours.

To justify the traffic signal, a preliminary signal warrant study was conducted. The Manual on Uniform Traffic Control Devices' (MUTCD) Pedestrian Volume Warrant 4 criterion of pedestrian volumes exceeding 190 during any one hour would be met under the future 2013 Build condition at this intersection.

The future Build condition pedestrian volumes were generated from existing pedestrian volumes by applying an annual background growth rate of 2.8 percent, and adding project generated volumes. The project generated pedestrian volumes were based on the pedestrian assignments for the Build scenario in each of the four peak hours. The estimated volumes projected for the 2013 Build condition are shown in Table 20-1. The high volume of pedestrian traffic projected to utilize the crosswalks at this intersection would exceed the MUTCD Warrant 4 criteria for pedestrian volumes of "100 or more for each of any 4 hours or 190 or more during any 1 hour" with volumes up to 704 in the weekday midday peak hour. Therefore, a traffic signal is warranted at this location.

It is recommended that the new signal at the intersection of 39th Avenue and 138th Street operate under a 90-second background cycle length, with three phases. Phase A would be for the eastbound 39th Avenue movement; Phase B would be for southbound 138th Street; and Phase C would be an all-pedestrian phase. Pedestrian crosswalks would be maintained on all legs at the intersection.

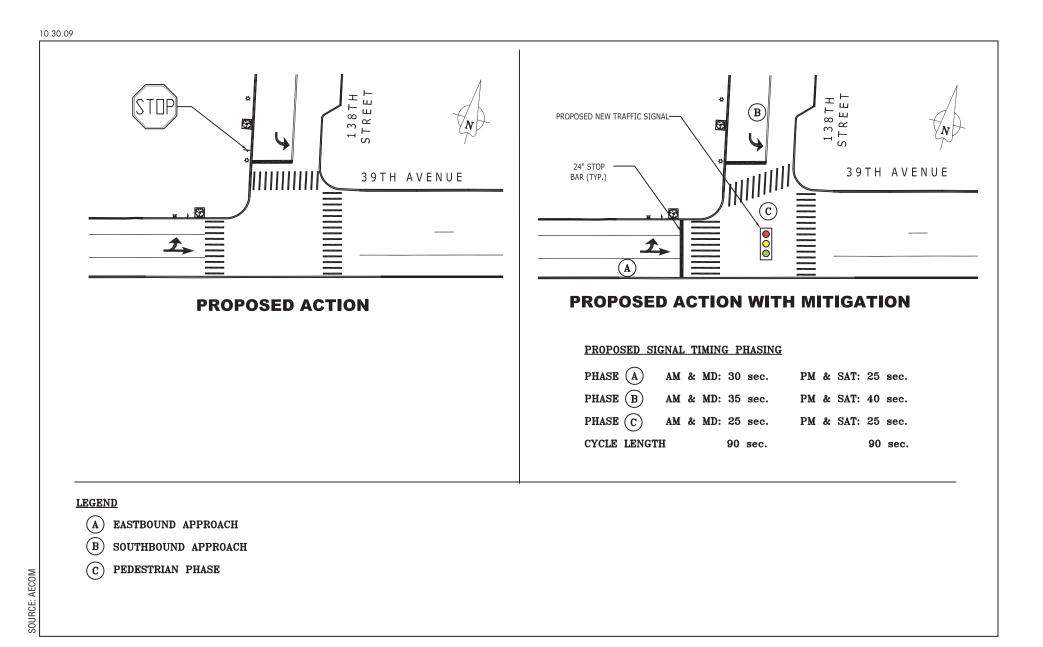


Table 20-2

Troffic Mitigation Summany

Volumes Defaults Vehicular Traffic Pedestrians All School/Elderly Date/ Major Minor* Scenario Time (39th Ave) (138th St) All SC/Elderly >100 >75 Build 2013 WD AM Peak Hour 296 207 148 ------Build 2013 WD MD Peak Hour 704 187 368 --------Build 2013 WD PM Peak Hour 138 272 568 ---------Build 2013 Sat MD Peak Hour 156 342 1156 Notes: * Currently, 138th Street is controlled by a stop sign and is therefore the "minor" street. However, in the 2013 Build condition, traffic volumes were projected to be higher on 138th Street than on 39th Avenue during all analysis peak hours

Table 20-12013 Build Volumes for MUTCD Signal Warrant 4

SANFORD AVENUE CORRIDOR

SANFORD AVENUE/BOWNE STREET

• Re-allocate 2 seconds of green time from the north-south phase to the east-west phase during the Saturday midday peak hour.

SANFORD AVENUE/PARSONS BOULEVARD

• Re-allocate 3 seconds of green time from the north-south phase to the east-west phase during the weekday PM peak hour.

SUMMARY OF TRAFFIC MITIGATION ANALYSIS RESULTS

Table 20-2 provides a summary of the numbers of intersections identified to have significant adverse impacts, intersections where impacts would be fully mitigated with the above mitigation measures, and those that would be partially mitigated or remain unmitigated.

		Iral	ne mugau	n Summary
		Analysis	Peak Hour	
Intersections	WD AM	WD Midday	WD PM	Sat Midday
With Significant Adverse Impacts	17	14	20	21
With All Impacts Fully Mitigated	4	3	7	7
With Impacts Partially Mitigated or Unmitigated	13	11	13	14

Of the 17 intersections with significant adverse traffic impacts during the weekday AM peak

- Of the 14 intersections with significant adverse traffic impacts during the weekday midday
 Of the 14 intersections with significant adverse traffic impacts during the weekday midday
- Of the 14 intersections with significant adverse traffic impacts during the weekday midday peak hour, 3 would be fully mitigated and 11 would be partially mitigated or remain unmitigated.
- Of the 20 intersections with significant adverse traffic impacts during the weekday PM peak hour, 7 would be fully mitigated and 13 would be partially mitigated or remain unmitigated.
- Of the 21 intersections with significant adverse traffic impacts during the Saturday midday peak hour, 7 would be fully mitigated and 14 would be partially mitigated or remain unmitigated.

Tables 20-3 through 20-6 compare the analysis results for the 2013 No Build, Build, and mitigated Build conditions during the weekday AM, weekday midday, weekday PM, and Saturday midday peak hours, respectively. Fully mitigated, partially mitigated, and unmitigated conditions are identified for each of the significantly impacted study area intersections. Figure 20-2 shows the locations of unmitigated intersections in one or more peak hours including those that were only partially mitigated.

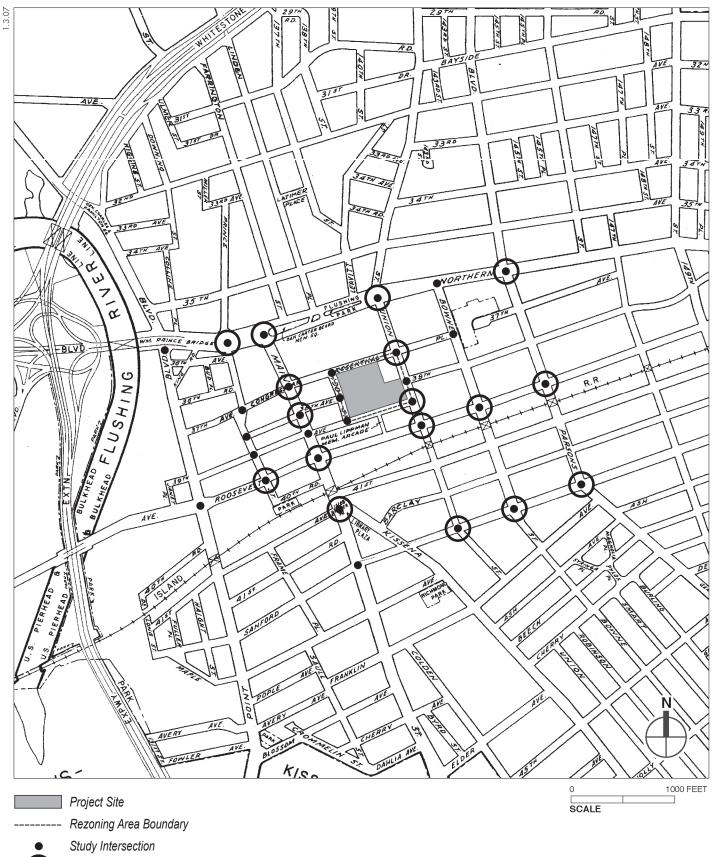
		Ŭ		No Build			Build		Mit	igated Buil	d	
				AVG.			AVG.			AVG.		Intersection
	LANE		V/C	DELAY		V/C	DELAY		V/C	DELAY		Impact
INTERSECTION	GROUP	MOVEMENT	RATIO	(sec/veh)	LOS	RATIO	(sec/veh)	LOS	RATIO	(sec/veh)	LOS	Mitigated?
			SIG	NALIZED II	NTERS	SECTION	IS					
	EB	LTR	0.57	23.8	С	0.57	23.8	С	0.58	24.6	С	
	LD	T after L	0.14	17.8	В	0.14	17.8	В	0.14	17.1	В	
	WB	LTR	0.53	32.1	С	0.55	32.5	С	0.55	32.5	С	
Roosevelt Ave /	WB	T after L	0.20	43.3	D	0.21	43.5	D	0.21	43.5	D	Fully
College Pt Blvd	NB	L	1.68	361.6	F	1.69	367.8	F	1.48	272.5	F	Mitigated
	IND	TR	0.80	31.1	С	0.80	31.1	С	0.78	29.5	С	
	SB	Т	0.67	43.8	D	0.67	43.8	D	0.67	43.8	D	
	30	R	0.40	40.9	D	0.40	40.9	D	0.40	40.9	D	
	Ov	erall		81.0	F		82.0	F		67.6	Е	
	EB	L	0.96	94.3	F	1.03	111.2	F	0.88	75.5	Е	
	Main Rd	Т	0.38	11.2	В	0.41	11.4	В	0.42	12.5	В	
	EB Serv Rd	TR	0.15	9.9	Α	0.16	10.0	Α	0.17	10.9	В	
Northern Blvd /	WB	L	1.33	255.8	F	1.47	312.4	F	1.16	183.9	F	Partially
Prince Street	Main Rd	Т	0.91	23.1	С	0.94	25.9	С	0.98	35.5	D	Mitigated
	WB Serv Rd	TR	0.22	15.6	В	0.22	15.6	В	0.23	17.3	В	5
	NB	LTR	3.21	1061.0	F	3.21	1061.0	F	3.21	1061.0	F	
	SB	LTR	0.86	62.9	Е	0.89	68.0	Е	0.89	68.0	Е	
	Ov	erall		98.4	F		99.7	F		99.7	F	
		DefL	0.85	55.4	Е	0.87	60.7	Е	0.87	60.7	Е	
Roosevelt Ave /	EB	TR	0.42	17.0	B	0.42	17.0	B	0.42	17.0	B	
Prince Street	WB	LTR	1.37	194.7	F	1.40	209.2	F	1.40	209.2	F	Unmitigated
	SB	LTR	0.82	51.6	D	0.87	56.5	Ē	0.87	56.5	E	oriningatoa
	-	erall	0.02	124.6	F	0.0.	134.3	F	0.07	134.3	F	
	EB	TR	0.68	28.1	С	0.72	28.9	С	0.72	28.9	С	
		1	0.00	27.0	č	0.07	27.0	C	0.07	27.0	C	
Northern Blvd /	WB	T after L	0.07	40.6	D	0.07	40.6	D	0.07	40.6	D	
Main Street		T	1.09	61.7	E	1.09	62.0	E	1.09	62.0	E	Unmitigated
		L	0.28	595.3	F	2.68	805.7	F	2.68	805.7	F	oriningatoa
	NB	R	1.46	255.7	F	1.66	339.8	F	1.66	339.8	F	
	Ov	erall	1.10	121.3	F	1.00	161.5	F	1.00	161.5	F	
	WB	TR	0.68	42.9	D	0.99	74.9	E	0.88	52.5	D	
37th Ave /	NB	LT	0.00	2.3	A	0.48	2.4	A	0.50	2.7	A	Partially
Main Street	SB	Т	0.04	8.7	A	0.40	8.7	A	0.04	10.4	В	Mitigated
Main Offeet	-	erall	0.04	14.6	B	0.04	28.9	C	0.04	21.0	C	Miligated
	EB	LTR	0.84	58.0	E	0.91	66.8	Ē	0.86	58.3	Ē	
38th Ave /		T	0.57	3.4	A	0.91	3.4	A	0.59	3.8	A	Fully
Main Street	NB	R	0.37	5.7	A	0.37	5.7	A	0.39	6.6	A	Mitigated
Wall Ou eeu	SB	T	0.04	10.7	B	0.04	10.7	B	0.40	11.6	B	Miligated
	-	erall	0.04	16.0	B	0.04	18.9	B	0.04	17.3	B	
	EB		1.25	160.2	F	1.26	165.0	F	1.26	165.0	F	
	WB	LTR	1.25	305.2	F	1.20	321.0	F	1.20	321.0	F	
Roosevelt Ave /		LIK	1.00	142.0	F	1.04	165.0	F	1.04	165.0	F	Unmitigated
Main Street	NB	R	0.52	32.0	C	0.67	45.7	D	0.67	45.7	г D	Ginnigated
Main Street	SB	LTR	0.52	20.6	<u>C</u>	0.67	20.7	C	0.67	20.7	C	
		erall	0.22	187.8	F	0.23	20.7	F	0.25	20.7	F	
L	-	TR	1.00		F	1 40		F	1.05		F	
	WB		1.08	90.8 26.1	F C	1.10	96.8	F C	1.05	80.3	F C	
41st Ave / Main St /	NB	L	0.59		-	0.59	26.1	C	0.61	28.5	-	Euller
		TR	0.80	30.4	C	0.84	33.2	-	0.87	37.1	D	Fully
Kissena Blvd	SB		0.88	102.7	F	0.90	109.1	F	0.83	88.3	F	Mitigated
		TR	0.03	14.3	В	0.03	14.3	B	0.03	15.3	В	
	Ov	erall		61.8	E		66.2	Е		34.8	С	

No Build, Build, and Mitigated Build LOS Comparison: Weekday AM Peak Hour

Table 20-3

/	. , .		<u></u>		2.0		.					<u>ak Hou</u>
				No Build			Build		Miti	gated Buil	d	
				AVG.			AVG.			AVG.		Intersection
	LANE		V/C	DELAY		V/C	DELAY		V/C	DELAY		Impact
INTERSECTION	GROUP	MOVEMENT	RATIO	(sec/veh)	LOS	RATIO	(sec/veh)	LOS	RATIO	(sec/veh)	LOS	Mitigated
			SIGN	IALIZED IN	ITERS	ECTION	IS (cont'd)					
		L	1.40	244.6	F	1.48	278.1	F	1.48	278.1	F	
	EB	Т	0.78	29.3	С	0.80	30.2	С	0.80	30.2	С	
		R	1.27	171.3	F	1.48	261.9	F	1.48	261.9	F	
Northern Blvd /		1	1.43	238.7	F	1.62	322.7	F	1.62	322.7	F	Unmitigat
Union Street	WB	TR	1.04	54.5	D	1.02	52.1	D	1.03	52.1	D	Ommaga
	NB	LTR	0.20	31.3	C	0.20	31.3	C	0.20	31.3	C	
	SB	LTR	0.20	56.9	E	0.20	61.2	E	0.20	61.2	E	
	-	Overall	0.31	84.4	F	0.34	105.9	F	0.34	105.9	F	
			4.04		F	4 77			4 57		F	
	WB		1.61	328.4		1.77	395.5	F	1.57	307.2		
37th Ave /	NB	T	0.12	13.1	B	0.12	13.1	B	0.12	14.3	В	Partially
Union Street	SB	T	0.80	11.8	B	0.65	8.5	<u>A</u>	0.68	10.5	В	Mitigate
	-	R	0.78	17.4	В	1.44	225.5	F	1.51	257.6	F	
	(Overall		81.7	F		168.5	F		161.3	F	
	EB	Т	0.84	27.4	С	0.85	28.1	С	0.85	28.1	С	
	ED	R	0.52	20.6	С	0.52	20.6	С	0.52	20.6	С	
Roosevelt Ave /	WB	LT	0.97	40.2	D	0.98	43.0	D	0.98	43.0	D	Unmitigat
Union Street	0.5	LT	0.56	19.7	В	0.74	23.6	С	0.74	23.6	С	J J
	SB	R	1.18	137.6	F	1.50	275.4	F	1.50	275.4	F	
	0	Overall		39.7	D		56.0	Е		56.0	Е	
	EB	TR	0.52	27.9	С	0.52	27.9	С	0.52	27.9	С	
	WB	LT	1.77	384.6	F	1.77	384.6	F	1.77	384.6	F	
Sanford Ave /	NB	LR	0.81	48.3	D	0.86	55.6	Ē	0.86	55.6	Ē	Unmitigat
Union Street	ND	LT	0.46	18.0	B	0.50	18.9	B	0.50	18.9	B	Unninga
Union Street	SB	R										
			0.92	34.1	<u>C</u>	0.97	42.4	D	0.97	42.4		
	C	Overall		138.5	F		138.9	F		138.9		
	EB	L	0.57	28.8	С	0.60	30.7	С	0.58	28.8	С	
		TR	0.45	20.1	С	0.64	25.2	С	0.63	24.3	С	
	WB	LTR	1.08	84.7	F	1.13	105.1	F	1.11	97.2	F	
Roosevelt Ave /	NB	L	0.42	31.2	С	0.42	31.2	С	0.43	32.4	С	Partially
Bowne Street	ND	TR	0.87	48.9	D	0.87	48.9	D	0.89	52.1	D	Mitigate
	00	L	0.38	34.8	С	0.38	34.8	С	0.41	37.6	D	_
	SB	TR	0.39	28.0	С	0.39	28.0	С	0.40	28.9	С	
	(Overall		52.8	D		59.6	Е		57.6	Е	
	EB	LTR	1.08	88.4	F	1.13	105.0	F	1.13	105.0	F	
		LT	0.81	25.7	Ċ	0.82	25.9	Ċ	0.82	25.9	Ċ	
Sanford Ave /	WB	R	0.29	12.4	B	0.02	12.4	B	0.29	12.4	В	
Bowne Street	NB	LTR	1.12	110.8	F	1.12	110.8	F	1.12	110.8	F	Unmitigat
DOMINE SURFE	IND		0.40	29.0	C	0.40		C		29.0	С	Unminga
	SB				D		29.0	D	0.40		D	
	-	TR	0.76	38.4	E	0.76	38.4	E	0.76	38.4	E	
		Overall	0.50	57.2		0.50	61.5		0.50	61.5		
	EB		0.50	48.6	D	0.50	48.6	D	0.50	48.6	D	
		TR	1.10	82.1	F	1.08	74.9	E	1.08	74.9	E	
	WB	L	0.33	35.7	D	0.33	34.6	С	0.33	34.6	С	
Northern Blvd /		TR	1.39	208.6	F	1.44	231.4	F	1.44	231.4	F	Unmitigat
Parsons Blvd	NB	L	0.80	68.7	Е	0.80	68.7	Е	0.80	68.7	Е	
		TR	0.43	35.4	D	0.43	35.4	D	0.43	35.4	D	
	SB	LTR	1.17	145.7	F	1.17	145.7	F	1.17	145.7	F	
	0	Overall		150.2	F		162.4	F		162.4	F	
	EB	LTR	0.65	31.9	С	0.86	46.8	D	0.86	46.9	D	
Roosevelt Ave /	WB	LTR	1.09	99.3	F	1.16	124.4	F	1.16	124.4	F	
Parsons Blvd	NB	LTR	1.56	296.8	F	1.56	296.8	F	1.56	296.8	F	Unmitigat
	SB	LTR	0.84	42.7	D	0.84	42.7	D	0.84	42.7	D	gu
		Dverall	0.01	137.6	F	0.01	141.2	F	0.01	141.2	F	
	·			NSIGNALI		JTEPSE					•	l
39th Ave /	SB		0.23	11.1	B	0.93	79.5	F	0.54	29.4	С	Fully
138th Street **	EB		0.25	8.9	A	0.93	16.6	C	0.34	28.1	C	Mitigate
100th Outcol		<u> </u>				ild scen		5	0.00	20.1	5	mayate

Table 20-3 (cont'd) No Build, Build, and Mitigated Build LOS Comparison: Weekday AM Peak Hour



Partially / Unmitigated Locations During One or More Peak Hours

Table 20-4

				No Build			Build		Miti	igated Buil	d	
			· ·	AVG.	1		AVG.		IVIIL	AVG.	u	Intersection
	LANE		V/C	DELAY		V/C	DELAY		V/C	DELAY		Impact
NTERSECTION	GROUP	MOVEMENT			105		(sec/veh)	105	RATIO	(sec/veh)	105	Mitigated?
	GROOP			SNALIZED				L03	NAIIO	(Sec/Veri)	103	Willigateu
	EB	1			E			Е	0.74	00.1		
			0.74	60.4		0.83	68.5		0.74	23.1	<u>C</u>	
	Main Rd	T	0.50	15.8	B	0.55	16.5	B	0.57	17.9	B	
	EB Serv Rd	TR	0.13	11.8	B	0.15	12.0	B	0.15	13.0	B	
Northern Blvd /	WB	L	1.40	285.9	F	1.63	382.6	F	1.28	229.2	F	Fully
Prince Street	Main Rd	T	0.61	22.2	C	0.68	23.5	C	0.72	26.8	C	Mitigated
	WB Serv Rd	TR	0.21	20.4	c	0.22	20.4	<u> </u>	0.23	22.3	<u> </u>	
	NB	LTR	1.71	387.5	F	1.71	387.5	F	1.71	387.5	F	
	SB	LTR	0.53	42.4	D	0.53	42.4	D	0.53	42.4	D	
	Ov	rerall		54.6	D		56.9	Е		51.8	D	
	EB	DefL	1.71	356.3	F	1.82	406.7	F	1.82	406.7	F	
Roosevelt Ave /		TR	0.78	20.6	С	0.78	20.6	С	0.78	20.6	С	
Prince Street	WB	LTR	1.40	204.6	F	1.47	235.9	F	1.47	235.9	F	Unmitigated
	SB	LTR	1.63	333.4	F	1.82	414.7	F	1.82	414.7	F	
	Ov	rerall		202.9	F		240.6	F		240.6	F	
	EB	TR	0.76	30.0	С	0.83	32.2	С	0.91	39.9	D	
		L	0.05	30.2	С	0.05	30.2	С	0.05	33.2	С	
Northern Blvd /	WB	T after L	0.06	40.4	D	0.06	40.4	D	0.06	40.4	D	Partially
Main Street		Т	0.68	12.9	В	0.66	12.6	В	0.70	16.1	В	Mitigated
		L	1.78	403.8	F	2.74	833.0	F	2.38	669.5	F	U
	NB	R	1.55	291.4	F	1.92	457.3	F	1.75	378.5	F	
	Ov	erall		96.4	F		182.5	F		512.3	F	
	WB	TR	0.69	27.6	Ċ	1.22	140.6	F	1.08	81.3	F	
37th Ave /	NB	LT	0.03	5.6	A	0.46	5.7	A	0.50	8.8	A	Partially
Main Street	SB	Т	0.43	11.4	B	0.40	11.4	B	0.00	13.6	B	Mitigated
Main Street	-	erall	0.02	15.1	B	0.02	76.5	E	0.05	46.8	D	miligateu
	-		0.04		D	0.00		E	0.00		_	
2046 4140 /	EB	LTR	0.81	51.9		0.92	65.9		0.86	53.6	D	E. III.
38th Ave /	NB	<u>T</u>	0.44	2.6	<u>A</u>	0.44	2.6	<u>A</u>	0.46	3.5	<u>A</u>	Fully
Main Street	05	R T	0.49	8.0	<u>A</u>	0.49	8.0	<u>A</u>	0.53	10.6	B	Mitigated
	SB		0.02	10.6	B	0.02	10.6	B	0.02	11.9	B	
		rerall		17.8	В		23.7	С		20.6	С	
	EB	LTR	1.77	379.3	F	1.80	390.4	F	1.80	390.4	F	
	WB	LTR	1.89	429.7	F	1.98	470.8	F	1.98	470.8	F	
Roosevelt Ave /	NB	LT	1.44	228.9	F	1.55	279.8	F	1.55	279.8	F	Unmitigated
Main Street		R	1.21	189.5	F	1.21	189.5	F	1.21	189.5	F	
	SB	LTR	0.09	16.5	В	0.09	16.5	В	0.09	16.5	В	
	Ov	rerall		325.0	F		359.4	F		359.4	F	
		L	1.29	186.1	F	1.35	206.8	F	1.35	206.8	F	
	EB	Т	0.75	29.3	С	0.79	30.5	С	0.79	30.5	С	
		R	1.36	211.4	F	1.74	375.2	F	1.74	375.2	F	
Northern Blvd /		L	1.25	159.4	F	1.57	297.7	F	1.57	297.7	F	Unmitigated
Union Street	WB	TR	0.84	31.5	С	0.80	29.7	С	0.80	29.7	С	-
	NB	LTR	0.08	28.7	С	0.08	28.7	С	0.08	28.7	С	
	SB	LTR	0.80	47.9	D	0.86	52.3	D	0.86	52.3	D	
		rerall		81.8	F		131.2	F		131.2	F	
	WB	LT	1.29	192.6	F	1.56	308.5	F	1.23	164.2	F	
37th Ave /	NB	T	0.04	10.6	B	0.04	10.6	B	0.04	12.7	B	Partially
Union Street		Ť	0.70	7.0	A	0.58	5.6	A	0.63	9.1	A	Mitigated
	SB	R	0.55	7.7	A	1.38	196.4	F	1.51	256.3	F	magatod
	0.4	rerall	0.00	42.9	D	1.50	136.7	F	1.01	133.1	F	
		-	0.07			0.10			0.06			
204h Arra /	EB	L	0.07	20.3	<u>C</u>	0.12	21.7	<u>C</u>	0.06	18.2	В	Derti-It
39th Ave /		R	0.32	23.0	C	1.19	134.0	F	1.08	87.8	F	Partially
Union Street	SB	Т	0.47	3.3	<u>A</u>	0.43	3.1	<u>A</u>	0.46	5.0	<u>A</u>	Mitigated
	Ov	rerall		6.6	Α	<u> </u>	55.0	E		37.9	D	

No Build, Build, and Mitigated Build LOS Comparison: Weekday MD Peak Hour

				No Build			Build		Mit	igated Buil	d	
				AVG.			AVG.			AVG.		Intersectio
	LANE		V/C	DELAY		V/C	DELAY		V/C	DELAY		Impact
INTERSECTION	GROUP	MOVEMENT	RATIO	(sec/veh)	LOS	RATIO	(sec/veh)	LOS	RATIO	(sec/veh)	LOS	Mitigated
	•		SIGN	IALIZED IN	ITERS	ECTION	S (cont'd)					-
	EB	Т	0.83	24.8	С	0.84	25.6	С	0.84	25.6	С	
	ED	R	0.64	24.4	С	0.64	24.4	С	0.64	24.4	С	
Roosevelt Ave /	WB	LT	0.86	28.5	С	0.88	29.9	С	0.88	29.9	С	Unmitigat
Union Street	SB	LT	0.68	22.0	С	0.88	29.9	С	0.88	29.9	С	
	30	R	1.70	360.9	F	3.31	1086.0	F	3.31	1086.0	F	
	(Overall		64.2	Е		149.9	F		149.9	F	
		L	0.52	15.8	В	0.56	17.5	В	0.52	15.0	В	
	EB	TR	0.77	20.9	С	1.05	63.5	Е	1.01	51.7	D	
	WB	LTR	0.92	32.4	С	1.00	49.0	D	0.96	39.1	D	
Roosevelt Ave /		L	0.39	33.2	С	0.39	33.2	С	0.44	37.7	D	Partially
Bowne Street	NB	TR	0.65	36.0	D	0.65	36.0	D	0.71	40.5	D	Mitigate
	00	L	0.15	26.2	С	0.15	26.2	С	0.17	28.5	С	, č
	SB	TR	0.54	32.6	С	0.54	32.6	С	0.59	36.0	D	
	(Overall		28.4	С		47.6	D		41.2	D	
	EB	L	0.55	53.2	D	0.55	54.2	D	0.55	54.2	D	
	ED	TR	1.04	62.6	Е	1.01	55.6	Е	1.01	55.6	Е	
	WB	L	0.32	37.3	D	0.31	35.7	D	0.31	35.7	D	
Northern Blvd /	VVB	TR	1.31	175.3	F	1.44	230.0	F	1.44	230.0	F	Unmitigat
Parsons Blvd	NB	L	0.62	49.0	D	0.62	49.0	D	0.62	49.0	D	-
	INB	TR	0.43	35.5	D	0.43	35.5	D	0.43	35.5	D	
	SB	LTR	1.04	103.2	F	1.04	103.2	F	1.04	103.2	F	
	(Overall		109.7	F		134.4	F		134.4	F	
	EB	LTR	1.47	250.3	F	1.93	453.4	F	1.77	377.1	F	
Roosevelt Ave /	WB	LTR	1.46	244.5	F	1.62	314.8	F	1.50	256.7	F	Partially
Parsons Blvd	NB	LTR	0.75	31.1	С	0.75	31.1	С	0.83	40.7	D	Mitigate
	SB	LTR	0.65	25.2	С	0.65	25.2	С	0.70	29.7	С	-
	(Overall		171.0	F		276.7	F		232.0	F	
			U	NSIGNALI	ZED IN	NTERSE	CTION		_			
39th Ave /	SB	L	0.69	29.6	D	109.50	50622.0	F	0.83	42.7	D	Fully
138th Street **	EB	LT	0.21	12.1	В	0.96	156.2	F	0.46	30.1	С	Mitigate

Table 20-4 (cont'd) No Build, Build, and Mitigated Build LOS Comparison: Weekday MD Peak Hour

Table 20-5

No Build, Build, and Mitigated Build LOS Comparison: Weekday PM Peak Hour

,	,			No Build			Build		Mit	ated Bui	d	
					1				IVIIU	9	u	
				AVG.			AVG.			AVG.		Intersection
	LANE		V/C	DELAY		V/C	DELAY		V/C	DELAY		Impact
INTERSECTION	GROUP	MOVEMENT	RATIO	(sec/veh)	LOS	RATIO	(sec/veh)	LOS	RATIO	(sec/veh)	LOS	Mitigated?
			SIC	GNALIZED	INTE	RSECTIO	ONS					
	EB	L	1.03	99.3	F	1.12	125.6	F	1.01	89.9	F	
	Main Rd	Т	0.93	28.8	С	0.97	34.9	С	1.01	47.0	D	I
	EB Serv Rd	TR	0.16	12.2	В	0.18	12.3	В	0.19	13.8	В	I
Northern Blvd /	WB	L	0.90	114.4	F	1.02	143.6	F	0.75	80.7	F	Partially
Prince Street	Main Rd	Т	0.81	31.1	С	0.87	33.9	С	0.90	41.2	D	Mitigated
	WB Serv Rd	TR	0.28	24.8	С	0.28	24.9	С	0.30	27.0	С	_
	NB	LTR	2.22	608.6	F	2.22	608.6	F	2.22	608.6	F	
	SB	LTR	0.67	46.5	D	0.69	48.3	D	0.69	48.3	D	
	Ov	erall		77.5	Е		79.0	Е		83.2	F	
	WB	LTR	0.40	15.4	В	0.45	16.3	В	0.56	23.0	С	
39th Ave /	NB	LT	1.24	145.8	F	1.25	152.2	F	0.90	35.7	D	Fully
Prince Street	SB	TR	0.85	29.3	С	0.85	29.3	С	0.72	18.4	В	Mitigated
1	Ov	erall		74.0	Е		75.6	Е		25.9	С	

Table 20-5 (cont'd)

No Build, Build, and Mitigated Build LOS Comparison: Weekday PM Peak Hour

				No Build			Build		Miti	gated Build	d	
				AVG.			AVG.			AVG.		Intersection
	LANE		V/C	DELAY		V/C	DELAY		V/C	DELAY		Impact
INTERSECTION	GROUP	MOVEMENT	RATIO	(sec/veh)	LOS	RATIO	(sec/veh)	LOS	RATIO	(sec/veh)	LOS	Mitigated?
			SIGNA	LIZED INT	ERSE	CTIONS	6 (cont'd)					
		DefL	1.81	413.8	F	1.90	458.0	F	1.90	458.0	F	
Roosevelt Ave /	EB	TR	1.13	101.5	F	1.13	101.5	F	1.13	101.5	F	
Prince Street	WB	LTR	1.82	398.3	F	1.89	429.1	F	1.89	429.1	F	Unmitigated
	SB	LTR	1.25	168.6	F	1.35	210.4	F	1.35	210.4	F	Oriningatot
	-	Overall	1.20	269.1	F	1.00	295.2	F	1.00	295.2	F	
		-	0.00			1.00			4.00			
	EB	TR	0.99	39.0	D	1.03	50.4	D D	1.03	50.4	D	
Nextleave Divid			0.07	38.0	<u>D</u>	0.07	38.0		0.07	38.0	D	
Northern Blvd /	WB	T after L	0.13	51.9	<u>D</u>	0.13	51.9	D	0.13	51.9	D	
Main Street		Т	0.76	14.4	B	0.74	14.1	B	0.74	14.1	В	Unmitigated
	NB	L	1.44	256.6	F	1.84	428.7	F	1.84	428.7	F	
		R	1.69	355.9	F	1.94	468.0	F	1.94	468.0	F	
	(Overall		101.9	F		146.6	F		146.6	F	
	WB	TR	1.16	129.8	F	1.65	342.2	F	1.45	250.9	F	
37th Ave /	NB	LT	0.49	2.7	Α	0.50	2.5	Α	0.53	2.8	Α	Partially
Main Street	SB	Т	0.03	8.7	Α	0.03	8.7	Α	0.03	10.3	В	Mitigated
	(Overall		53.5	D		160.1	F		118.0	F	
	EB	LTR	0.74	46.0	D	0.84	54.7	D	0.80	48.8	D	
38th Ave /	LD	Т	0.67	4.4	A	0.67	4.4	A	0.69	5.0	A	Fully
Main Street	NB	R	0.50	8.6	A	0.50	8.6	A	0.03	10.1	B	Mitigated
Main Sueer	SB	T								-		willigated
	-		0.04	10.7	B	0.04	10.7	B	0.04	11.6	B	
		Overall		13.7	В		16.7	В		15.8	В	
	EB	LTR	2.19	572.8	F	2.23	590.2	F	2.23	590.2	F	
	WB	LTR	2.21	581.8	F	2.28	616.3	F	2.28	616.3	F	
Roosevelt Ave /	NB	LT	1.31	179.1	F	1.37	204.4	F	1.37	204.4	F	Unmitigated
Main Street NB R	R	0.93	92.6	F	0.93	92.6	F	0.93	92.6	F		
	SB	LTR	0.27	21.7	С	0.27	21.8	С	0.27	21.8	С	
	(Overall		402.3	F		425.7	F		425.7	F	
	WB	TR	1.11	101.3	F	1.14	111.4	F	1.09	92.6	F	
		L	0.64	28.6	С	0.64	28.6	С	0.67	31.4	С	
41st Ave / Main St /	NB	TR	0.75	28.1	C	0.79	30.1	C	0.82	33.1	Č	Fully
Kissena Blvd		L	0.19	24.8	č	0.19	24.8	č	0.18	23.4	č	Mitigated
	SB	TR	0.02	14.2	B	0.02	14.2	B	0.02	15.2	В	miligated
	(Overall	0.02	62.5	E	0.02	67.6	E	0.02	32.4	C	
			0.70		_	0.70			0.74			
	WB	LTR	0.70	24.0	C	0.72	24.7	C	0.74	26.7	<u>C</u>	
Sanford Ave /	NB	LTR	0.94	53.5	D	0.98	61.5	E	0.94	52.0	D	Fully
Main Street	SB	TR	0.11	24.0	C	0.11	24.0	С	0.11	22.7	С	Mitigated
	(Overall		37.0	D		41.1	D		37.9	D	
		L	1.33	201.2	F	1.35	208.5	F	1.35	208.5	F	
	EB	Т	0.89	34.0	С	0.92	37.0	D	0.92	37.0	D	
		R	1.59	308.2	F	1.76	384.5	F	1.76	384.5	F	
Northern Blvd /		L	1.35	214.7	F	1.52	289.0	F	1.52	289.0	F	Unmitigated
Union Street	WB	TR	0.75	27.4	С	0.72	26.6	С	0.72	26.6	С	_
	NB	LTR	0.15	30.2	С	0.15	30.2	С	0.15	30.2	С	
	SB	LTR	0.81	48.3	D	0.84	50.4	D	0.84	50.4	D	1
		Overall	-	100.6	F	-	124.6	F	-	124.6	F	1
	WB	LT	1.17	146.4	F	1.32	205.4	F	1.06	98.7	F	
37th Ave /	NB	T	0.07	140.4	B	0.07	12.5	B	0.08	14.8	B	Partially
Union Street		T	0.07	12.5	B	0.07	12.5	B	0.08	14.8	B	Mitigated
Union Street	SB											willigated
	ļ	R	0.73	15.0	B	1.34	179.8	F	1.48	242.2	F	
	(Overall		38.2	D		97.8	F		104.4	F	
	EB	L	0.11	20.9	С	0.17	22.7	С	0.10	18.8	В	l
39th Ave /		R	0.34	23.2	С	1.05	80.5	F	0.94	48.6	D	Partially
Union Street	SB	Т	0.52	3.5	А	0.49	3.3	А	0.52	5.3	А	Mitigated
		Overall	1	7.1	Α		32.2	С		21.5	С	-

	,	and Mitig	, ,	No Build			Build			igated Buil		
				AVG.			AVG.			AVG.		Intersection
	LANE		V/C	DELAY		V/C	DELAY		V/C	DELAY		Impact
INTERSECTION		MOVEMENT			LOS		(sec/veh)	LOS			LOS	
				ALIZED IN						, ,		
		Т	1.06	63.2	E	1.07	67.1	E	1.07	67.1	Е	İ
	EB	R	0.73	26.3	C	0.73	26.3	c	0.73	26.3	C	
Roosevelt Ave /	WB	LT	1.12	93.0	F	1.14	99.0	F	1.14	99.0	F	Unmitigate
Union Street		LT	0.63	19.4	B	0.89	29.3	Ċ	0.89	29.3	Ċ	orningato
	SB	R	2.31	627.1	F	4.02	1401.0	F	4.02	1401.0	F	
	(Overall		134.2	F		245.3	F	-	245.3	F	
	EB	TR	0.63	32.9	С	0.63	32.9	С	0.63	32.9	С	
	WB	LT	1.10	106.6	F	1.10	106.6	F	1.10	106.6	F	
Sanford Ave /	NB	LR	1.09	117.9	F	1.25	177.6	F	1.25	177.6	F	Unmitigate
Union Street	05	LT	0.82	27.7	С	0.94	40.4	D	0.94	40.4	D	, J
	SB	R	1.08	70.8	Е	1.14	94.0	F	1.14	94.0	F	
	C	Overall		67.6	Е		84.3	F		84.3	F	
	EB	TR	0.85	17.4	В	0.88	18.8	В	0.90	22.1	С	
		L	0.75	59.0	Е	0.82	68.9	Е	0.65	49.8	D	
Northern Blvd /	WB	Т	0.47	3.0	Α	0.49	3.1	Α	0.49	3.1	Α	Fully
Bowne Street	NB	L	1.02	100.4	F	0.83	64.6	Е	0.83	64.6	Е	Mitigated
	IND	R	1.01	102.4	F	0.77	62.0	Е	0.77	62.0	Е	-
	(Overall		27.4	С		21.3	С		22.0	С	
	EB	L	0.57	27.4	С	0.59	28.7	С	0.53	23.1	С	
	ED	TR	1.03	72.0	Е	1.34	194.4	F	1.26	157.4	F	
	WB	LTR	1.04	73.6	Е	1.14	109.4	F	1.03	68.6	Е	
Roosevelt Ave /	NB	L	0.31	28.3	С	0.31	28.3	С	0.36	32.5	С	Partially
Bowne Street		TR	0.58	32.5	С	0.58	32.5	С	0.63	37.1	D	Mitigated
	SB	L	0.16	25.3	С	0.16	25.3	С	0.19	28.8	С	
		TR	0.42	28.7	С	0.42	28.7	С	0.46	32.3	С	
	(Overall		55.1	Е		108.5	F		85.1	F	
	EB	L	0.67	52.0	D	0.66	52.6	D	0.66	52.6	D	
	LD	TR	1.03	52.2	D	1.03	53.6	D	1.03	53.6	D	
	WB	L	0.42	46.1	D	0.42	46.1	D	0.42	46.1	D	
Northern Blvd /		TR	1.25	149.4	F	1.31	176.4	F	1.31	176.4	F	Unmitigate
Parsons Blvd	NB	L	0.53	54.6	D	0.53	45.6	D	0.53	45.6	D	
		TR	0.46	36.2	D	0.46	36.2	D	0.46	36.2	D	
	SB	LTR	1.26	180.5	F	1.26	180.5	F	1.26	180.5	F	
		Dverall	1.00	94.4	F		104.8	F	4.74	104.8	F	
	EB	LTR	1.33	496.5	F	1.74	375.1	F	1.74	375.1	F	
Roosevelt Ave /	WB	LTR	1.28	174.7		1.43	241.3	F F	1.43	241.3		I. I. and Maria ta
Parsons Blvd	NB SB	LTR LTR	1.18	135.1	F D	1.18 0.91	135.1	F D	1.18	135.1	F D	Unmitigate
			0.91	52.3	F	0.91	52.3	F	0.91	52.3	F	
		Dverall	0.07	144.1		1.00	227.4	F	0.00	227.4		
Sonford Ave /	EB WB	LTR LTR	0.97	56.6 36.3	E D	1.06 0.84	82.3 38.6	F D	0.99	57.8	E C	E. II.
Sanford Ave / Parsons Blvd	NB	LTR	0.82	29.0	C	0.84	<u>38.6</u> 29.0	C	0.77	29.6 38.8	D	Fully
	SB	LTR	0.78	29.0	<u>с</u>	0.78	29.0	<u>c</u>	0.85	<u>38.8</u> 31.7	C	Mitigated
	-	Dverall	0.73	25.1 37.6		0.73	<u>25.1</u> 46.7		0.80	40.8	D	
				NSIGNALI	_	ITEREE	-	U		40.0	U	
39th Ave /	SB	L	0.52	23.2	<u>ZED Ir</u> C	10.64	4610.0	F	0.53	24.7	С	Fully
138th Street **	EB	LT	0.52	13.2	B	0.34	124.4	F	0.55	33.1	<u>с</u>	Mitigated
		to be signaliz						I_	0.40	JJ. I	U	willyated

Table 20-5 (cont'd) No Build, Build, and Mitigated Build LOS Comparison: Weekday PM Peak Hour

Table 20-6

No Build, B	/	0		No Build			Build			gated Buil		
				AVG.			AVG.			AVG.	-	Intersection
	LANE		V/C	DELAY		V/C	DELAY		V/C	DELAY		Impact
INTERSECTION	GROUP	MOVEMENT	RATIO	(sec/veh)	LOS	RATIO	(sec/veh)	LOS	RATIO	(sec/veh)	LOS	Mitigated?
			SIGN	IALIZED II	NTER	SECTIO	NS					
	EB	L	0.99	92.3	F	1.14	139.2	F	1.14	139.2	F	
	Main Rd	Т	1.02	46.8	D	1.08	68.0	Е	1.08	68.0	Е	
	EB Serv Rd	TR	0.32	13.7	В	0.36	14.3	В	0.36	14.3	В	
Northern Blvd /	WB	L	1.89	478.8	F	2.21	623.3	F	2.21	623.3	F	
Prince Street	Main Rd	Т	0.96	34.6	С	1.02	47.8	D	1.02	47.8	D	Unmitigated
	WB Serv Rd	TR	0.46	24.0	С	0.47	24.1	С	0.47	24.1	С	
	NB	LTR	2.61	790.5	F	2.61	790.5	F	2.61	790.5	F	
	SB	LTR	0.68	48.1	D	0.68	48.1	D	0.68	48.1	D	
	_	erall		98.0	F		116.4	F		116.4	F	
	WB	LTR	0.62	19.9	В	0.62	19.9	В	0.72	26.2	С	
37th Ave /	NB	LT	0.37	12.3	В	0.38	12.3	В	0.34	10.1	В	Fully
Prince Street	SB	TR	0.99	47.4	D	1.10	81.1	F	0.99	44.1	D	Mitigated
		erall		32.5	С		51.6	D		32.6	С	
	WB	LTR	0.41	15.5	В	0.50	17.2	В	0.62	24.6	С	
39th Ave /	NB	LT	1.58	290.7	F	1.61	303.6	F	1.10	86.9	F	Fully
Prince Street	SB	TR	1.00	53.8	D	1.00	53.8	D	0.85	25.2	D	Mitigated
	Ov	erall		144.0	F		146.0	F		49.3	Е	
	EB	DefL	3.09	974.7	F	3.24	1044.0	F	3.24	1044.0	F	
Roosevelt Ave /		TR	1.33	175.4	F	1.33	175.4	F	1.33	175.4	F	
Prince Street	WB	LTR	2.03	487.2	F	2.12	524.5	F	2.12	524.5	F	Unmitigated
	SB	LTR	1.85	425.8	F	2.09	529.6	F	2.09	529.6	F	
	_	erall		451.5	F		493.7	F		493.7	F	
	EB	TR	0.77	28.7	С	0.81	29.6	С	0.81	29.6	С	
		L	0.02	23.1	C	0.02	23.1	C	0.02	23.1	С	
Northern Blvd /	WB	T after L	0.04	40.1	D	0.04	40.1	D	0.04	40.1	D	
Main Street		T	0.71	13.4	B	0.70	13.2	B	0.70	13.2	B	Unmitigated
	NB		2.08	537.2	F	2.56	754.2	F	2.56	754.2	F	
		R	1.49	264.6	F	1.74	373.9	F	1.74	373.9	F	
		erall		121.7	F		203.6	F		203.6	F	
0 7 /1 A /	WB	TR	0.66	26.7	C	0.95	48.6	D	0.92	42.8	D	
37th Ave /	NB	LT	0.61	6.9	<u>A</u>	0.64	7.3	A	0.66	8.2	A	Fully
Main Street	SB	Τ	0.02	11.4	B	0.02	11.4	B	0.02	11.9	B	Mitigated
		erall	4.47	13.5	В	4.00	23.4	C	4.00	21.7	C	
2046 Arra /	EB	LTR	1.17	139.2	F	1.39	228.0	F	1.26	171.9	F	Derti-II
38th Ave /	NB	T	0.60	3.5	<u>A</u>	0.60	3.5	A	0.63	5.4	<u>A</u>	Partially
Main Street		R	0.61	12.5	B	0.61	12.5	B	0.69	19.1	B	Mitigated
	SB	T	0.02	10.6	B	0.02	10.6	B	0.02	12.3	B	
		erall	0.00	45.3	D	0.00	80.5	F	0.00	63.2	E	
	EB	LTR	2.80	840.2	F	2.86	864.8	F	2.86	864.8	F	
Deservelt Arm /	WB	LTR	2.53	717.6	F	2.63	762.8		2.63	762.8	F	L la maiti
Roosevelt Ave /	NB		1.58	291.6	F	1.66	328.2	F D	1.66	328.2	F D	Unmitigated
Main Street	00	R	0.34	22.6	<u>C</u>	0.65	48.0		0.65	48.0		
	SB		0.14	17.1	<u> </u>	0.14	17.2	<u> </u>	0.14	17.2	<u> </u>	
		erall	4.00	584.3	F	4.00	616.7	F	4.00	616.7	F	
	WB	TR	1.26	153.4	F	1.30	168.7	F	1.30	168.7	F	
	NB		0.65	29.2	<u>C</u>	0.65	29.2	C	0.65	29.2	C	L la maitit
41st Ave / Main St /		TR	0.99	52.6	D	1.04	65.5	E	1.04	65.5	E	Unmitigated
Kissena Blvd	SB		0.20	19.0	B	0.21	19.5	B	0.21	19.5	B	
		TR	0.02	14.1	B	0.02	14.1	B	0.02	14.1	B	
	-	erall	0.00	98.3	F	0.00	110.5	F	0.01	110.5	F	
.	WB	LTR	0.80	22.7	C	0.80	23.0	C	0.84	26.1	С	
Sanford Ave /	NB	LTR	0.94	46.4	<u>D</u>	0.99	55.5	E	0.93	42.9	D	Fully
Main Street	SB	TR	0.10	18.9	B	0.10	18.9	B	0.09	17.5	B	Mitigated
	Ov	erall		32.3	С		36.5	D		33.0	С	

No Build, Build, and Mitigated Build LOS Comparison: Saturday MD Peak Hour

	ĺ ĺ	and Mitig	<u></u>	No Build			Build			igated Buil		
				AVG.			AVG.			AVG.	Ĩ	Intersection
	LANE		V/C	DELAY		V/C	DELAY		V/C	DELAY		Impact
INTERSECTION	GROUP	MOVEMENT		. ,				LOS	RATIO	(sec/veh)	LOS	Mitigated?
	i	i .		IALIZED IN				_	i			i
		L	1.43	253.2	F	1.52	290.5	F	1.52	290.5	F	ļ
	EB	Т	0.86	33.9	<u>C</u>	0.89	35.5	D	0.89	35.5	D	+
		R	1.60	315.1	F	1.82	413.4	F	1.82	413.4	F	
Northern Blvd /	WB		1.78	397.9	F	1.96	477.3	F	1.96	477.3	F	Unmitigate
Union Street	ND	TR	0.85	31.7	<u> </u>	0.83	30.6	<u>C</u>	0.83	30.6	<u> </u>	
	NB SB	LTR	0.08	28.8	<u>C</u>	0.08	28.8	<u>C</u>	0.08	28.8	<u>C</u>	
	-	LTR Overall	0.90	55.7 126.1	<u> </u>	0.94	60.8 159.5	<u> </u>	0.94	60.8 159.5	<u> </u>	
			4.04			1 40			4 4 4			
2746 4.10 /	WB	LT T	1.24	172.9	F	1.40	240.4	F	1.14	130.9	F	Dertielly
37th Ave /	NB	T	0.04	10.7	B	0.04	10.7	B	0.04	12.8	B	Partially
Union Street	SB	R	0.87	12.2 9.6	A	0.69	6.9	A F	0.76	11.3	B F	Mitigated
	-	Dverall	0.00	35.5	D	1.46	231.0 127.2	 	1.59	293.3 136.4	 	-
			0.00		C	0.00		Г С	0.00			
2046 Auro /	EB	L	0.06	20.2	-	0.06	20.2	F	0.06	18.2 238.5	B F	Partially
39th Ave /	00	R	0.59	28.3	<u>C</u>	1.64	325.5	-	1.45		-	,
Union Street	SB	T	0.60	4.0	<u>A</u>	0.50	3.4	<u>A</u> F	0.53	5.4	A F	Mitigated
	(Overall	0.07	9.3		0.00	145.3	-	0.00	108.1		
	EB	T	0.97	41.5	D	0.98	44.8	D	0.98	44.8	D	
D		R	0.76	30.4	C	0.76	30.4	<u> </u>	0.76	30.4	<u>C</u>	1.1
Roosevelt Ave /	WB		1.25	144.3	F	1.28	156.7	F	1.28	156.7	F	Unmitigate
Union Street	SB		0.76	22.5	C	0.97	39.7	D	0.97	39.7	D	
		R	1.70	358.5	F	3.26	1061.0	F	3.26	1061.0	F	
		Dverall	0.50	88.9	F	0.50	170.0	F	0.50	170.0	F	
	EB	TR LT	0.59	31.3	C F	0.59	31.3	C F	0.59	31.3	C	
Conford Ave /	WB		2.31	631.4	 F	2.31	631.4	 F	2.31	631.4	F F	Linnsitianata
Sanford Ave /	NB	LR	1.02	90.6		1.13	125.5	г С	1.13	125.5		Unmitigate
Union Street	SB	LT R	0.63	19.4 95.3	B F	0.71	22.0 108.9	F	0.71	22.0	C F	-
		Dverall	1.15	95.3 208.1	F F	1.18	212.3	F F	1.18	108.9 212.3	F	
			0.05		C	0.00	-	Г С	0.01			
	EB	TR	0.85	25.6	E	0.88	26.8	E	0.91	30.8	C D	
Northonn Dhud/	WB	L T		61.1		0.82	71.9		0.65	51.6		E. III.
Northern Blvd / Bowne Street		1	0.62	9.3 53.4	A D	0.65 0.65	9.7 42.8	A D	0.65	9.7 42.8	A D	Fully Mitigated
Downe Street	NB	R			E			D	0.00	-	D	willigateu
	0	Dverall	0.91	66.3 27.1	C	0.70	46.2 24.8	C	0.70	46.2 25.5	C	
			0.71		-	0.74		C	0.74			
	EB		0.71	24.8	<u>C</u>	0.74	28.0	-	0.74	28.0	<u>C</u>	
	WB	TR	0.89	29.9	C E	1.08	72.4	<u> </u>	1.08	72.4	<u> </u>	
Roosevelt Ave /	VVB	LTR	1.06 0.48	65.5 37.7	 D	1.13	89.9	 D	1.13 0.48	89.9	 D	Unmitigate
Bowne Street	NB		1.08	99.1	F	0.48	37.7	F	1.08	37.7	F	Unmiligale
Bowne Street		TR			 D		99.1	 D	0.52	99.1	 D	
	SB	L TR	0.52	50.0 37.2		0.52	50.0 37.2		0.52	50.0 37.2	D	
	-		0.00		E	0.00		E	0.00		E	
		Dverall	4.00	55.1		4.07	74.1		4.07	74.1		
	EB	LTR	1.28	162.8	F	1.37	201.0	F	1.27	159.2	F	
Conford Ave /	WB	LT	0.64	18.0	B	0.64	18.1	B	0.62	16.2	B	E. J.
Sanford Ave / Bowne Street	NB	R LTR	0.13	10.5	B C	0.13	10.5	B C	0.13	9.5	A D	Fully Mitigated
Downe Street	IND		0.69	32.8	<u>с</u>	0.69	32.8	<u>с</u>	0.78	40.8	C	iviligated
	SB	L TR	0.22	23.2	<u>с</u>	0.22	23.2	<u>с</u>	0.25	25.2		
		71	0.54	27.8	C	0.04	27.8	U	0.58	31.1	С	1

Table 20-6 (cont'd) No Build, Build, and Mitigated Build LOS Comparison: Saturday MD Peak Hour

				No Build			Build		Miti	gated Buil	d	
INTERSECTION		MOVEMENT	V/C RATIO	AVG. DELAY (sec/veh)	LOS	V/C RATIO	AVG. DELAY (sec/veh)	LOS	V/C RATIO	AVG. DELAY (sec/veh)	LOS	Intersectior Impact Mitigated?
	0.1001			ALIZED IN			· /			(000,101)		Jacoba
		L	0.47	50.1	D	0.47	50.1	D	0.47	45.5	D	
	EB	TR	1.26	151.0	F	1.24	141.1	F	1.24	141.1	F	
	WB	L	0.45	48.7	D	0.45	51.0	D	0.45	51.0	D	
Northern Blvd /	VVD	TR	1.38	203.9	F	1.46	238.2	F	1.46	238.2	F	Unmitigated
Parsons Blvd	NB	L	0.65	51.0	D	0.65	51.0	D	0.65	51.0	D	_
	IND	TR	0.52	37.1	D	0.52	37.1	D	0.52	37.1	D	
	SB	LTR	1.59	326.2	F	1.59	326.2	F	1.59	326.2	F	
	(Overall		171.0	F		182.1	F		182.1	F	
	EB	LTR	1.57	292.9	F	1.89	435.1	F	1.89	435.1	F	
Roosevelt Ave /	WB	LTR	1.33	187.3	F	1.44	236.0	F	1.44	236.0	F	
Parsons Blvd	NB	LTR	1.22	142.7	F	1.22	142.7	F	1.22	142.7	F	Unmitigated
	SB	LTR	0.81	33.7	С	0.81	33.7	С	0.81	33.7	С	
	(Overall		181.7	F		251.8	F		251.8	F	
			U	NSIGNALI	ZED IN	ITERSE	CTION					
39th Ave /	SB	L	0.51	17.3	С	12.51	5399.0	F	0.67	28.8	С	Fully
138th Street **	EB	LT	0.06	10.5	В	0.18	104.2	F	0.47	34.6	С	Mitigated

Table 20-6 (cont'd) No Build, Build, and Mitigated Build LOS Comparison: Saturday MD Peak Hour

F. TRANSIT AND PEDESTRIANS

This section describes the potential measures that would mitigate the significant adverse transit (bus) and pedestrian impacts resulting from the proposed action. These impacts are detailed in Chapter 15, "Transit and Pedestrians." With the recommended measures in place, all projected significant adverse impacts would be mitigated, except for one sidewalk and three street corners, where the projected impacts would remain unmitigated.

As mentioned in Chapter 14, "Traffic and Parking," NYCDOT is considering other scenarios to improve pedestrian safety in Downtown Flushing as alternatives to the one-way streets on Union and Main Streets with contra-flow bus lanes, which is the scenario analyzed in this DEIS.

TRANSIT – NYCT BUS LINE HAUL

As described in Chapter 15, significant adverse impacts are projected on local buses, including Q17, Q27, Q44/20, and Q48, as project-generated ridership would compound other growth projected on these and other routes by 2013. These significant impacts could be mitigated by the introduction of additional buses and related schedule adjustments. MTA/NYCT would evaluate these needs and make the necessary adjustments where warranted, subject to financial and operational constraints. There would be no impacts on the local bus system during the Saturday peak hour. The FEIS will provide updates of ridership data and operations of the newly added Q19 bus route on Main Street and other routes in Flushing.

PEDESTRIANS

As described in Chapter 15, the proposed action would result in significant adverse impacts at five crosswalks, three street corners, and three sidewalks during the weekday midday peak hour; at three crosswalks, three street corners, and two sidewalks during the weekday PM peak hour; and at three crosswalks, three street corners, and two sidewalks during the Saturday midday peak hour. There were no significant adverse pedestrian impacts projected for the weekday AM peak

hour. The measures outlined below are proposed to mitigate the significant adverse pedestrian impacts identified for the weekday midday, weekday PM, and Saturday midday peak hours.

CROSSWALKS

39th Avenue and Main Street

• Increase the width of the east crosswalk by 4 feet from 15.7 feet to 19.7 feet. This widening would fully mitigate the significant adverse impacts during the weekday midday, PM, and Saturday midday peak hours.

Roosevelt Avenue and Main Street

- Increase the width of the east crosswalk by 4.5 feet from 20.6 feet to 25.1 feet. This widening would fully mitigate the significant adverse impact during the weekday midday, PM, and Saturday midday peak hours.
- Increase the width of the west crosswalk by 2.5 feet from 16.0 feet to 18.5 feet. This widening would fully mitigate the significant adverse impact during the weekday midday peak hour.

37th Avenue and Union Street

• Increase the west crosswalk width by 2 feet from 13.3 feet to 15.3 feet. This would fully mitigate the significant adverse impacts during the weekday midday peak hour.

Roosevelt Avenue and Union Street

• Increase the west crosswalk width by 6 feet from 13.3 feet to 19.3 feet. This would fully mitigate the significant adverse impacts during the weekday midday, PM, and Saturday midday peak hours.

SIDEWALKS

Union Street and 39th Avenue

• Increase the effective width of the northwest sidewalk along 39th Avenue by adding pavers on the dirt around the tree trunk. This measure would fully mitigate the significant adverse impact during the weekday midday peak hour.

Roosevelt Avenue and Main Street

• Increase the effective width of the southeast sidewalk along Main Street by relocating the waste container and newspaper stands from being directly across from subway stairs to elsewhere on the sidewalk. This measure would fully mitigate the significant adverse impacts during the weekday midday, and PM, and Saturday midday peak hours.

Implementing the above measures would fully mitigate all significant adverse crosswalk and sidewalk impacts, with the exception of those identified for the northeast sidewalk along Main Street at Roosevelt Avenue. The projected impacts here during the weekday midday, PM, and Saturday PM peak hours would remain unmitigated. At the 39th Avenue/Main Street, Roosevelt Avenue/Main Street, and Roosevelt Avenue/Union Street intersections, all identified street corner impacts would also remain unmitigated. As stated above, the true one-way operation of Main Street northbound and Union Street southbound could yield wider sidewalks and street corners that may potentially eliminate these unmitigated pedestrian impacts. Tables 20-7 through

20-9 compare the results of the pedestrian analyses for the 2013 No Build, Build, and mitigated Build conditions during the weekday midday, weekday PM, and Saturday midday peak hours, respectively.

Table 20-7

No Build, Build, and Mitigated Build Pedestrians	Level of Service Comparison
	Weekday Midday Peak Hour

	CROSSW	/ALKS-SIGNAL	.IZED	INTERSECTION	S				
		Future No Bu	uild	Future Buil	d		Mitigated Cond	dition	
		CIRCULATION		CIRCULATION			CIRCULATION		
		AREA		AREA			AREA		
		PER PED.		PER PED.			PER PED.		
LOCATION	SIDE	(ft²/p)	LOS	(ft²/p)	LOS	IMPACT?	(ft²/p)	LOS	Mitigated?
39th Ave / Main Street	S	59.9	В	34.1	С				
	E	30.1	С	13.0	Е	yes	15.1	D	Mitigated
	N	36.2	С	29.4	С				
Roosevelt Ave /	S	31.3	С	26.0	С				
Main Street	E	21.0	D	9.7	Е	yes	15.3	D	Mitigated
	W	15.1	D	12.9	Е	yes	15.5	D	Mitigated
	N	32.1	С	32.1	С				
37th Ave /	S	44.0	В	26.6	С				
Union Street	E	38.4	С	19.3	D				
	W	20.7	D	12.8	Е	yes	15.1	D	Mitigated
	N	49.9	В	29.4	С				
Roosevelt Ave /	S	43.5	В	43.5	В				
Union Street	E	104.6	Α	26.6	С				
	W	27.7	С	9.4	Е	yes	15.0	D	Mitigated
		STREET CO	ORNE	RS					
		Future No Bu	uild	Future Buil	d		Mitigated Cond	dition	
		CIRCULATION		CIRCULATION			CIRCULATION		
		AREA		AREA			AREA		
		PER PED.		PER PED.			PER PED.		
LOCATION	DIRECTION	(ft²/p)	LOS	(ft²/p)	LOS	IMPACT?	(ft²/p)	LOS	Mitigated?
39th Ave / Main Street	NE	42.1	В	14.3	Е	yes	14.3	Е	Unmitigated
	NW	43.7	В	32.6	С				
Roosevelt Ave /	NE	35.9	С	14.4	Е	yes	14.4	Е	Unmitigated
Main Street	SW	38.9	С	30.3	С				
	SE	42.6	В	19.0	D				
	NW	74.8	Α	22.0	D				
Roosevelt Ave /	NE	35.1	С	7.9	F	yes	7.9	Е	Unmitigated
Union Street	SW	43.5	В	15.7	D				
	SE	52.0	В	21.9	D				
		SIDEW/	ALKS						
		Future No Bu	uild	Future Build			Mitigated Cond	dition	
		FLOW		FLOW			FLOW		
LOCATION	DIRECTION	(p/min/ft)	LOS	(p/min/ft)	LOS	IMPACT?	(p/min/ft)	LOS	Mitigated?
	NW sidewalk along Union St	0.9	В	1.7	В				
	NW sidewalk along 39th Ave	1.0	В	13.5	Е	yes	10.8	D	Mitigated
39th Ave /	SW sidewalk along Union St	2.1	В	6.0	С				
Union Street	SW sidewalk along 39th Ave	0.5	Α	1.0	В				
	East sidewalk along Union St North of 39th Ave	1.6	В	2.6	В				
	East sidewalk along Union St South of 39th Ave	1.4	В	2.3	В				
	NE sidewalk along Main St	11.8	Е	16.2	Е	yes	16.2	Е	Unmitigated
	NE sidewalk along Roosevelt Ave	10.6	D	12.1	Е				
Main Street /	NW sidewalk along Main St	9.2	D	9.2	D				
	NW sidewalk along Roosevelt Ave	8.9	D	8.9	D				
Roosevelt Avenue									Mitianted
Roosevelt Avenue	SE sidewalk along Main St	26.3	F	32.1	F	yes	13.4	E	Mitigated
Roosevelt Avenue	*	26.3 16.4 6.7	F E D	32.1 18.1 6.7	F F D	yes	13.4	E	Iviligated

Table 20-8 No Build, Build, and Mitigated Build Pedestrians Level of Service Comparison Weekday PM Peak Hour

	CROSS	/ALKS-SIGNAI	IZED	INTERSECTION	\$		uay I MI I		
	CR0334	Future No B		Future Buil		1	Mitigated Cond	lition	1
		CIRCULATION		CIRCULATION		•	CIRCULATION		
		AREA		AREA			AREA		
		PER PED.		PER PED.			PER PED.		
LOCATION	SIDE	(ft²/p)	LOS		LOS	IMPACT?	(ft²/p)	LOS	Mitigated?
	S	32.3	С	32.3	С		/		
39th Ave / Main Street	E	13.9	E	9.4	E	ves	12.9	Е	Mitigated
	Ν	29.4	С	26.0	С	,			Ŭ
Roosevelt Ave /	S	24.5	C	22.0	D				
Main Street	E	18.0	D	11.4	Е	ves	18.2	D	Mitigated
	W	21.7	D	19.2	D	,			
	Ν	37.9	С	27.7	С				
Roosevelt Ave /	S	35.3	C	35.3	C				
Union Street	Ē	90.0	Ā	37.2	C				
	W	28.1	С	14.0	E	ves	15.0	D	Mitigated
		STREET C	ORNE	RS					
		Future No B				Mitigated Condition			
		CIRCULATION		CIRCULATION		İ	CIRCULATION		
		AREA		AREA			AREA		
		PER PED.		PER PED.			PER PED.		
LOCATION	DIRECTION	(ft²/p)	LOS	(ft²/p)	LOS	IMPACT?	(ft²/p)	LOS	Mitigated?
39th Ave / Main Street	NE	17.9	D	11.6	Е	yes	11.6	Е	Unmitigated
	NW	37.6	С	31.2	С				
Roosevelt Ave /	NE	26.9	С	14.7	E	yes	14.7	Е	Unmitigated
Main Street	SW	38.0	С	31.9	С				
	SE	33.6	С	19.8	D				
	NW	64.4	Α	29.7	С				
Roosevelt Ave /	NE	32.5	С	12.1	Е	yes	12.1	Е	Unmitigated
Union Street	SW	40.4	В	21.6	D				
	SE	50.5	В	28.5	С				
		SIDEW	ALKS						
		Future No Build		Future Build			Mitigated Condition		
		FLOW		FLOW			FLOW		
LOCATION	DIRECTION	(p/min/ft)	LOS	(p/min/ft)	LOS	IMPACT?	(p/min/ft)	LOS	Mitigated?
	NE sidewalk along Main St	12.2	Е	14.8	Е	yes	14.8	Е	Unmitigated
	NE sidewalk along Roosevelt Ave	12.8	E	14.1	E				
	NW sidewalk along Main St	10.4	D	10.4	D				
Main Street /	NW sidewalk along Roosevelt Ave	7.0	D	7.0	D				
Roosevelt Avenue	SE sidewalk along Main St	27.1	F	30.7	F	yes	12.8	Е	Mitigated
	SE sidewalk along Roosevelt Ave	10.3	D	10.6	D				
	SW sidewalk along Main St	17.1	Е	18.3	F				
	SW sidewalk along Roosevelt Ave	5.4	С	5.4	С				

Table 20-9 No Build, Build, and Mitigated Build Pedestrians Level of Service Comparison Saturday Midday Peak Hour

	CROSS	VALKS-SIGNAL	IZED				viiuuay i		
T T	CRUSSV	Future No Bu		Future Buil		1	Mitigated Cond	lition	
		CIRCULATION		CIRCULATION			CIRCULATION		
		AREA		AREA			AREA		
		PER PED.		PER PED.			PER PED.		
LOCATION	SIDE	(ft ² /p)	LOS		1.05	IMPACT?	(ft ² /p)	1.05	Mitigated?
200, 11011	S	32.2	C	25.1	C		(11/10/	200	magatou .
39th Ave / Main Street	<u> </u>	20.9	D	13.1	E	ves	15.1	D	Mitigated
	N	27.5	C	24.6	C	yco	10.1	D	TVIlligatoa
Roosevelt Ave /	S	24.9	C	22.4	D				
Main Street	5 E	13.7	E	9.1	E	yes	12.9	Е	Mitigated
Wain Ou eeu	Ľ W	11.1	E	10.2	E	yes	12.5		willigated
	N	47.7	B	32.7	C				
Roosevelt Ave /	S	44.3	B	44.3	B				
Union Street	3 E	143.1	A	43.5	B				
UNION SUCCE	<u>E</u> W	33.6	C	43.5	E	ves	15.0	D	Mitigated
	VV	STREET C	-	-		yes	15.0	D	willigated
		Future No Bu	-	Future Buil	ld.	1	Mitigated Cond	lition	
		CIRCULATION		CIRCULATION		•	CIRCULATION	luon	
		AREA		AREA			AREA		
		PER PED.		PER PED.			PER PED.		
LOCATION	DIRECTION	(ft ² /p)	LOS		1.05	IMPACT?	(ft²/p)	1.05	Mitigated?
39th Ave / Main Street	NE	25.0	C	14.0	E	yes	14.0	E	Unmitigated
Sour Ave / Main Ou cet	NW	34.8	C	29.4	C	yco	17.0	-	Orinningatou
Roosevelt Ave /	NE	25.2	C	14.7	E	ves	14.7	Е	Unmitigated
Main Street	SW	31.5	C	27.2	C	yes	14.7		Onmigated
Ividii I Oli eel	SE	32.5	C	19.9	D				
	NW	86.9	A	33.4	C				
Roosevelt Ave /	NE	37.7	C	13.3	E	1/00	13.3	E	Unmitigated
Union Street	SW	57.1	В	25.7	C	yes	13.3	E	Unmiligated
Union Sueer	SE	56.2	B	29.7	C				
	<u>UL</u>	SIDEW	_	23.1	0				
T T		Future No Bu	-	Future Buil	d	1	Mitigated Cond	lition	
		FLOW		FLOW			FLOW		
LOCATION	DIRECTION	(p/min/ft)	LOS		105	IMPACT?	(p/min/ft)	1.05	Mitigated?
200/11011	BIREOHON	(primitic)			_		15.3	E	Unmitigated
	NE sidewalk along Main St	121	F	153	E				Uningated
l Ť	NE sidewalk along Main St	12.1 97	E	15.3 10.8	E	yes	10.5	-	
ļ	NE sidewalk along Roosevelt Ave	9.7	D	10.8	D	yes	15.5	-	
Main Street /	NE sidewalk along Roosevelt Ave NW sidewalk along Main St	9.7 11.5	D E	10.8 11.5	D E	yes	13.3		
Main Street /	NE sidewalk along Roosevelt Ave NW sidewalk along Main St NW sidewalk along Roosevelt Ave	9.7 11.5 9.4	D E D	10.8 11.5 9.4	D E D				Mitigated
Main Street / Roosevelt Avenue	NE sidewalk along Roosevelt Ave NW sidewalk along Main St NW sidewalk along Roosevelt Ave SE sidewalk along Main St	9.7 11.5 9.4 23.8	D E D F	10.8 11.5 9.4 28.1	D E D F	yes	11.7	E	Mitigated
	NE sidewalk along Roosevelt Ave NW sidewalk along Main St NW sidewalk along Roosevelt Ave	9.7 11.5 9.4	D E D	10.8 11.5 9.4	D E D				Mitigated

G. AIR QUALITY

Chapter 16, "Air Quality," predicts the maximum predicted carbon monoxide (CO) concentrations from traffic generated by the proposed action and concludes that the proposed action would not result in any significant adverse air quality impacts. Therefore, no air quality mitigation is required.

EFFECTS OF PROPOSED TRAFFIC MITIGATION MEASURES

The effects on air quality of the proposed action with implementation of the traffic mitigation measures discussed above were also considered. The results (presented in Appendix B) show that with the proposed traffic mitigation measures, future concentrations of pollutants with the proposed action would be below the National Ambient Air Quality Standards (NAAQS) and would not result in any significant adverse air quality impacts using the *de minimis* thresholds for CO impacts. Appendix B presents the tables summarizing these results.