

A. INTRODUCTION

As described in the previous chapters of this Environmental Impact Statement, the Proposed Actions have the potential to result in significant adverse impacts on traffic. The following section describes measures to fully mitigate these impacts.

B. TRAFFIC

As discussed in Chapter 15, "Traffic and Parking," the Proposed Actions would result in significant adverse impacts at four intersections during the 2013 Build AM, midday, and PM analysis peak hours. To mitigate these impacts, low-cost and readily implementable measures were explored, as detailed below. With these mitigation measures in place, the projected significant adverse traffic impacts would be fully mitigated.

RECOMMENDED MITIGATION MEASURES

Measures explored to mitigate the projected significant adverse traffic impacts involve retiming of signal controls to increase green time for impacted movements, modifying existing regulations, and daylighting curb lanes at intersection approaches to provide additional travel lanes or turn pockets. The operational changes incorporated into the mitigation analyses are presented in **Table 21-1**.

Table 21-1
Recommended Mitigation Measures

Intersection	Mitigation Measure		
	AM Peak Hour	Midday Peak Hour	PM Peak Hour
10th Avenue & West 42nd Street	Shift one (1) second of green time from NB to EB/WB	Shift one (1) second of green time from NB to EB/WB	Shift one (1) second of green time from NB to EB/WB
10th Avenue & West 45th Street	Shift two (2) seconds of green time from NB to WB	Shift two (2) seconds of green time from NB to WB	Shift three (3) seconds of green time from NB to WB
11th Avenue & West 44th Street	Shift two (2) seconds of green time from SB to EB (during Mon-Fri 8:00am - 9:00am period only)	Shift one (1) second of green time from SB to EB (during All Other Times (AOT) Phasing)	Shift two (2) seconds of green time from SB to EB (during All Other Times (AOT) Phasing)
11th Avenue & West 45th Street	Daylight south curb lane on westbound approach for 100 feet to create an exclusive left-turn lane	Daylight south curb lane on westbound approach for 100 feet to create an exclusive left-turn lane	Daylight south curb lane on westbound approach for 100 feet to create an exclusive left-turn lane

Operating conditions with the above measures in place and comparisons to the future 2013 No Build and Build conditions are presented in **Table 21-2**, for the weekday AM, weekday midday and weekday PM peak periods.

Table 21-2

2013 No Build, Build, and Mitigated Build Level of Service Analysis

Intersection / Approach	No Build				Build				Mitigated Build			
	Lane Group	V/C Ratio	Delay (SPV)	LOS	Lane Group	V/C Ratio	Delay (SPV)	LOS	Lane Group	V/C Ratio	Delay (SPV)	LOS
AM PEAK HOUR												
Tenth Avenue and West 42nd Street												
Eastbound	LT	1.66	341.2	F	LT	1.70	359.7	F +	LT	1.61	319.8	F
Westbound	T	0.41	26.0	C	T	0.41	26.0	C	T	0.40	25.1	C
	R	1.16	129.4	F	R	1.18	137.2	F +	R	1.14	118.4	F
Northbound	LT	0.82	17.7	B	LT	0.83	18.0	B	LT	0.85	19.5	B
	R	0.35	13.7	B	R	0.35	13.7	B	R	0.36	14.6	B
Intersection			77.5	E			82.2	F			75.0	E
Tenth Avenue and West 45th Street												
Westbound	TR	0.96	60.4	E	TR	1.01	73.6	E +	TR	0.95	56.4	E
Northbound	LT	0.89	17.4	B	LT	0.92	19.5	B	LT	0.96	25.5	C
Intersection		0.00	24.4	C			28.4	C			30.6	C
Eleventh Avenue and West 44th Street												
Eastbound	LTR	0.98	67.3	E	LTR	1.04	84.3	F +	LTR	0.95	64.8	E
Southbound	L	0.16	7.5	A	L	0.18	7.7	A	L	0.19	8.9	A
	T	0.85	18.1	B	T	0.88	19.9	B	T	0.92	24.9	C
Intersection			28.9	C			34.2	C			33.1	C
Eleventh Avenue and West 45th Street												
Westbound	LTR	1.02	76.3	E	LTR	1.19	134.6	F +	L	0.58	27.0	C
									TR	0.61	28.0	C
Northbound	L	0.06	12.9	B	L	0.11	14.6	B	L	0.11	14.6	B
	T	0.07	11.7	B	T	0.07	11.8	B	T	0.07	11.8	B
Southbound	T	0.88	23.7	C	T	0.89	24.6	C	T	0.89	24.6	C
	R	0.20	10.4	B	R	0.20	10.4	B	R	0.20	10.4	B
Intersection			35.1	D			52.8	D			23.9	C
MD PEAK HOUR												
Tenth Avenue and West 42nd Street												
Eastbound	LT	2.06	529.5	F	LT	2.14	562.7	F +	LT	1.92	465.3	F
Westbound	TR	1.23	145.8	F	TR	1.24	151.2	F +	TR	1.20	131.4	F
Northbound	LTR	0.79	16.7	B	LTR	0.80	17.0	B	LTR	0.82	18.3	B
Intersection			102.4	F			108.4	F			94.0	F
Tenth Avenue and West 45th Street												
Westbound	TR	0.89	50.0	D	TR	0.94	58.7	E +	TR	0.88	46.9	D
Northbound	LT	0.90	18.5	B	LT	0.93	21.0	C	LT	0.97	28.0	C
Intersection			23.5	C			27.0	C			31.0	C
Eleventh Avenue and West 44th Street												
Eastbound	LTR	0.90	60.1	E	LTR	0.95	68.7	E +	LTR	0.91	59.4	E
Southbound	L	0.06	6.1	A	L	0.08	6.1	A	L	0.08	6.5	A
	T	0.74	13.6	B	T	0.76	14.1	B	T	0.77	15.1	B
Intersection			22.5	C			24.7	C			23.6	C
Eleventh Avenue and West 45th Street												
Westbound	LTR	1.16	133.6	F	LTR	1.29	185.4	F +	L	0.70	44.8	D
									TR	0.70	42.6	D
Northbound	L	0.03	6.2	A	L	0.05	6.5	A	L	0.05	6.5	A
	T	0.01	5.7	A	T	0.01	5.7	A	T	0.01	5.7	A
Southbound	TR	0.77	14.7	B	TR	0.78	15.0	B	TR	0.78	15.0	B
Intersection			40.6	D			54.8	D			21.5	C

Table 21-2 (cont'd)
2013 No Build, Build, and Mitigated Build Level of Service Analysis

Intersection / Approach	No Build				Build				Mitigated Build			
	Lane Group	V/C Ratio	Delay (SPV)	LOS	Lane Group	V/C Ratio	Delay (SPV)	LOS	Lane Group	V/C Ratio	Delay (SPV)	LOS
PM PEAK HOUR												
Tenth Avenue and West 42nd Street												
Eastbound	LT	1.79	400.6 F		LT	1.82	415.1 F +		LT	1.70	362.5 F	
Westbound	T	0.53	27.7 C		T	0.53	27.7 C		T	0.51	26.7 C	
	R	0.60	35.1 D		R	0.63	36.3 D		R	0.60	33.9 C	
Northbound	L	0.18	10.1 B		L	0.20	10.5 B		L	0.21	11.2 B	
	T	0.66	14.0 B		T	0.66	14.1 B		T	0.68	15.1 B	
	R	0.35	13.4 B		R	0.35	13.4 B		R	0.36	14.3 B	
Intersection			70.2 E				73.1 E				66.1 E	
Tenth Avenue and West 45th Street												
Westbound	TR	1.12	113.4 F		TR	1.22	151.2 F +		TR	1.11	105.1 F	
Northbound	L	0.16	7.7 A		L	0.31	9.9 A		L	0.33	12.3 B	
	T	0.73	12.4 B		T	0.73	12.5 B		T	0.78	15.8 B	
Intersection			28.7 C				35.8 D				30.7 C	
Eleventh Avenue and West 44th Street												
Eastbound	LTR	1.10	110.0 F		LTR	1.17	135.0 F +		LTR	1.07	97.9 F	
Southbound	L	0.08	6.2 A		L	0.10	6.3 A		L	0.10	7.1 A	
	T	0.84	17.0 B		T	0.85	17.6 B		T	0.88	20.7 C	
Intersection			34.8 C				40.8 D				35.7 D	
Eleventh Avenue and West 45th Street												
Westbound	LTR	1.22	157.9 F		LTR	1.35	212.6 F +		L	0.83	56.8 E	
									TR	0.58	37.3 D	
Northbound	L	0.04	6.4 A		L	0.06	6.8 A		L	0.06	6.8 A	
	T	0.02	5.8 A		T	0.02	5.8 A		T	0.02	5.8 A	
Southbound	T	0.78	15.0 B		T	0.79	15.2 B		T	0.79	15.2 B	
	R	0.03	5.9 A		R	0.03	5.9 A		R	0.03	5.9 A	
Intersection			43.1 D				57.1 E				21.9 C	
Notes: L = Left-Turn; T = Through; R = Right-Turn; V/C = Volume to Capacity; SPV = Seconds per Vehicle; LOS = Level of Service + Indicates a significant adverse impact												

AM PEAK HOUR

Tenth Avenue and West 42nd Street: Impacts on the eastbound and westbound approaches could be mitigated by shifting one second of green time from the northbound phase to the eastbound/westbound phase.

Tenth Avenue and West 45th Street: Impacts on the westbound approach could be mitigated by shifting two seconds of green time from the northbound phase to the westbound phase.

Eleventh Avenue and West 44th Street: Impacts on the eastbound approach could be mitigated by shifting two seconds of green time from the southbound phase to the eastbound phase (during the Monday-Friday 8:00am-9:00am time period only).

Eleventh Avenue and West 45th Street: Truck loading and unloading is currently permitted on both sides of the westbound approach during the respective peak hours. The impact identified on the westbound approach could be mitigated by daylighting the south curb with No Standing Anytime regulations for 100 feet to create an exclusive left-turn lane.

MIDDAY PEAK HOUR

Tenth Avenue and West 42nd Street: Impacts on the eastbound and westbound approaches could be mitigated by shifting one second of green time from the northbound phase to the eastbound/westbound phase.

Tenth Avenue and West 45th Street: Impacts on the westbound approach could be mitigated by shifting two seconds of green time from the northbound phase to the westbound phase.

Eleventh Avenue and West 44th Street: Impacts on the eastbound approach could be mitigated by shifting one second of green time from the southbound phase to the eastbound phase (during the All Other Times (AOT) period).

Eleventh Avenue and West 45th Street: Truck loading and unloading is currently permitted on both sides of the westbound approach during the respective peak hours. The impact identified on the westbound approach could be mitigated by daylighting the south curb with No Standing Anytime regulations for 100 feet to create an exclusive left-turn lane.

PM PEAK HOUR

Tenth Avenue and West 42nd Street: Impacts on the eastbound approach could be mitigated by shifting one second of green time from the northbound phase to the eastbound/westbound phase.

Tenth Avenue and West 45th Street: Impacts on the westbound approach could be mitigated by shifting three seconds of green time from the northbound phase to the westbound phase.

Eleventh Avenue and West 44th Street: Impacts on the eastbound approach could be mitigated by shifting two seconds of green time from the southbound phase to the eastbound phase (during the All Other Times (AOT) period).

Eleventh Avenue and West 45th Street: Truck loading and unloading is currently permitted on both sides of the westbound approach during the respective peak hours. The impact identified on the westbound approach could be mitigated by daylighting the south curb with No Standing Anytime regulations for 100 feet to create an exclusive left-turn lane. *