### A. INTRODUCTION

This chapter examines the potential for impacts of the proposed project on the study area's roadway network. To facilitate street improvements at Peck Slip, the New York City Department of Transportation (NYCDOT) has proposed a directional change for Peck Slip between Water and Pearl Streets from a two-way street to a westbound only street. In addition, NYCDOT proposes to change the direction of Beekman Street, one block south of Peck Slip, from a westbound to an eastbound street.

The primary purpose of the proposed changes at Peck Slip is to simplify vehicular operations in the South Street Seaport area. The directional change on Beekman Street will serve to accommodate traffic displaced by the elimination of eastbound Peck Slip between Water and Pearl Streets. The Proposed Action would also close Peck Slip to through traffic along Front Street. This would split Front Street into two one block segments, between Dover Street and Peck Slip, westbound, and between Peck Slip eastbound and Beekman Street. These measures would result in the redistribution of vehicle trips at the study area intersections, rather than inducing new trips to the area.

In addition to the directional changes the Proposed Action would eliminate 58 off-street parking spaces currently occupying the median of Peck Slip between South and Water Streets. The elimination of this parking on local parking conditions was also examined.

### B. METHODOLOGY

In accordance with the *New York City Environmental Quality Review (CEQR) Technical Manual*, the operation of the signalized and unsignalized intersections in the study area were assessed using methodologies presented in the *2000 Highway Capacity Manual (HCM)*. A description of the principles of each of these methodologies is provided below.

### SIGNALIZED INTERSECTIONS

The level-of-service (LOS) for a signalized intersection is based on the average control delay per vehicle for the various lane groups (grouping of movements in one or more travel lanes). The levels of service are defined below:

Although the HCM methodology calculates a volume-to-capacity (v/c) ratio, there is no strict relationship between v/c ratios and LOS as defined in the HCM. A high v/c ratio indicates substantial traffic passing through an intersection, but a high v/c ratio combined with low average delay actually represents the most efficient condition in terms of traffic engineering standards, where an approach or the whole intersection processes traffic close to its theoretical maximum with minimal delay. However, very high v/c ratios—especially those approaching or greater than 1.0—are often correlated with a deteriorated LOS. Other important variables affecting delay include cycle length, progression, and green time. LOS A and B indicate good

operating conditions with minimal delay. At LOS C, the number of vehicles stopping is higher, but congestion is still fairly light. LOS D describes a condition where congestion levels are more noticeable and individual cycle failures (a condition where motorists may have to wait for more than one green phase to clear the intersection) can occur. Conditions at LOS E and F reflect poor service levels, and cycle failures are frequent. The *HCM* methodology provides for a summary of the total intersection operating conditions by identifying the two critical movements (the worst case from each roadway) and calculating a summary of critical v/c ratio, delay, and LOS.

LOS Criteria for Signalized Intersections

Level-of-Service (LOS)	Delay
Α	≤ 10.0 seconds
В	> 10.0 and ≤ 20.0 seconds
С	> 20.0 and ≤ 35.0 seconds
D	> 35.0 and ≤ 55.0 seconds
E	> 55.0 and ≤ 80.0 seconds
F	> 80.0 seconds
<b>Source:</b> Transportation Resea 2000.	rch Board. Highway Capacity Manual,

### UNSIGNALIZED INTERSECTIONS

For unsignalized intersections, the total delay is defined as the total elapsed time from which a vehicle stops at the end of the queue until the vehicle departs from the stop line. This includes the time required for the vehicle to travel from the last-in-queue to the first-in-queue position. The average total delay for any particular minor movement is a function of the service rate or capacity of the approach and the degree of saturation. The LOS criteria for unsignalized intersections are summarized as follows:

**LOS Criteria for Unsignalized Intersections** 

LOS	Average Delay
Α	≤ 10.0 seconds
В	> 10.0 and ≤15.0 seconds
С	> 15.0 and ≤ 25.0 seconds
D	> 25.0 and ≤ 35.0 seconds
E	> 35.0 and ≤ 50.0 seconds
F	> 50.0 seconds
<b>Source</b> : Transportation Researce 2000.	ch Board. Highway Capacity Manual,

The LOS thresholds for unsignalized intersections are different from those for signalized intersections. The primary reason is that drivers expect different levels of performance from different types of transportation facilities. The expectation is that a signalized intersection is designed to carry higher traffic volumes than an unsignalized intersection. In addition, certain driver behavioral considerations combine to make delays at signalized intersections less onerous than at unsignalized intersections. For example, drivers at signalized intersections are able to relax during the red interval, whereas drivers on minor approaches to unsignalized intersections must remain attentive to identifying acceptable gaps and vehicle conflicts. Also, there is often much more variability in the amount of delay experienced by individual drivers at unsignalized

intersections. For these reasons, the total overall scale of delay thresholds for unsignalized intersections is lower than that of signalized intersections.

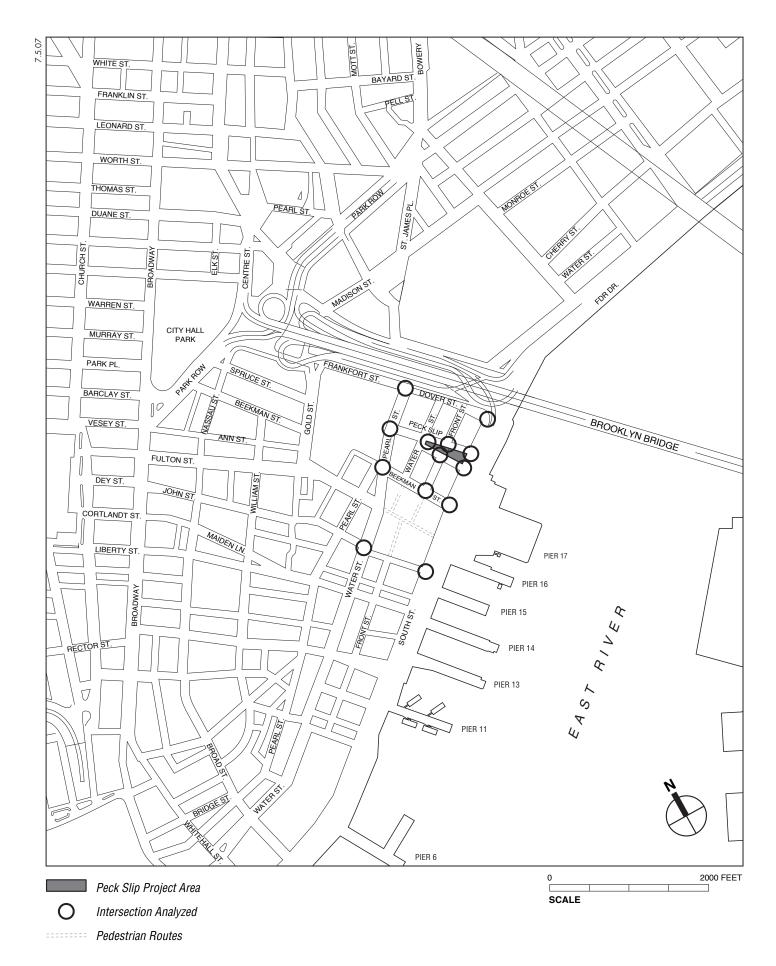
# C. EXISTING CONDITIONS

#### ROADWAY NETWORK

To assess potential traffic impacts associated with the Proposed Action, thirteen intersections were identified that would most likely be affected by the project-related roadway changes (see Figure 2E-1). These include the signalized intersections of: Pearl Street at Frankfort/Dover Streets, Pearl Street at Peck Slip, Pearl/Water Streets at Beekman Street, Water Street at John Street and South Street at Dover Street. Unsignalized intersections included in the analysis are: Water Street at Peck Slip; Front Street at Peck Slip Westbound, Peck Slip Eastbound and Beekman Street; and South Street at Peck Slip Westbound, Peck Slip Eastbound, Beekman Street and John Street.

The following describes the characteristics and operation of the roadways within the study area.

- South Street: South Street is a two-way north-south arterial located beneath and immediately adjacent to the elevated portion of the FDR Drive between Whitehall Street in the south and Montgomery Street in the north. There are signalized intersections at most of the major cross streets while the less traveled locations are unsignalized. Within the study area, South Street features two northbound lanes and one southbound lane. Parking and pedestrian areas are located under the FDR Drive bordering the northbound lanes, and there is parallel parking adjacent to the southbound lane.
- Pearl Street within the study area functions primarily as a two-way, north-south roadway, with two lanes and adjacent parking in each direction. The two-directional section of Pearl Street extends from north of the Brooklyn Bridge, where it meets St. James Place, to Beekman Street, where it joins with the southern section of Water Street. At the Pearl/Water/Beekman intersection Pearl Street veers right and continues as a southbound-only street to Battery Park.
- Water Street is a north-south street that is also split into two sections while traversing the study area. The southern section serves as a continuation of Pearl Street from Beekman Street to Battery Park, and generally contains two travel lanes and an adjacent parking lane in each direction. The Water/Pearl Street corridor, which provides access to the Brooklyn Bridge and FDR Drive at Frankfort/Dover Streets, functions as a main access route to the eastern section of Lower Manhattan. The northern section of Water Street is a one-way northbound bound roadway carrying a single lane of traffic with parking on both sides between Beekman and Dover Streets. This section of Water Street is stop-controlled at Peck Slip. South of Beekman Street, Water Street is closed to traffic and serves as part of the Fulton Street pedestrian network.
- Front Street is a one-way southbound street which extends from Dover Street in the north to Old Slip in the south. The section between Beekman and John Streets is, however closed to traffic and serves as part of the Fulton street pedestrian network. Front Street operates in the study area with a single lane of traffic and with parking on both sides, and is stop-controlled at Peck Slip and Beekman Streets.



- Peck Slip is a two-way, local, cobble-stone paved street which extends from Pearl Street on the west to South Street on the east. Between Water and Pearl Streets the roadway operates as a two-way street, with a single traffic lane and an adjacent parking lane in each direction. East of Water Street, Peck Slip is divided with a 30 to 40 foot wide roadway in each direction, separated by one or two rows of right angle parking. Although the roadway is wide enough for several lanes, field observations indicate it operates with a single traffic lane in each direction due to light traffic volumes and double parking. Peck Slip is controlled by a traffic signal at Pearl Street and a stop sign at South Street.
- Beekman Street is a one-way westbound street, approximately 28 feet wide, which extends from South Street to Pearl/Water Streets, and operates with a single traffic lane and truck loading on the north curb. The intersections at South, Front and Water Streets are unsignalized, while the intersection at Pearl/Water Streets is signalized.

#### TRAFFIC CONDITIONS

Existing traffic volumes in the study area were established based on field counts conducted during the weekday morning (7:30 to 9:30 AM) and evening (4:30 to 6:30 PM) time periods in October 2006. In addition to the manual counts, Automatic Traffic Recorder (ATR) counts and vehicle classification counts were performed on Pearl and South Streets to supplement the field data. Field inventories of roadway geometry, traffic control, bus stop presence, and parking regulations/activities were also conducted to provide the appropriate inputs to the operational analyses. Official signal timings obtained from NYCDOT were used in the analysis for all of the signalized intersections. Figures 2E-2 and 2E-3 show the existing traffic volumes for the weekday peak hours, which were determined to be 8:30 to 9:30 AM and 5 PM to 6 PM.

### LEVELS OF SERVICE

Tables 2E-1 and 2E-2 present the service conditions for the study area intersections at signalized and unsignalized intersections respectively. The analysis results indicate that all intersections but one operate at acceptable Levels of Service during both peak hours. Intersection approaches/lane groups which experience congested conditions during the two peak hours include:

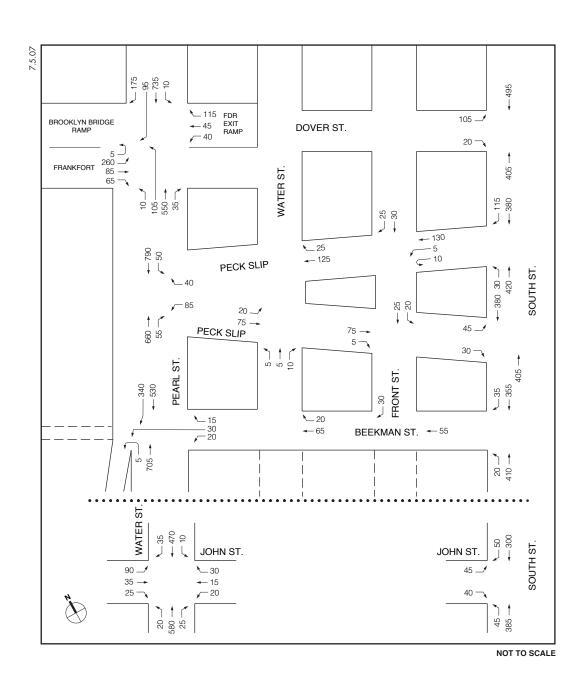
Pearl Street and Dover/Frankfort Streets

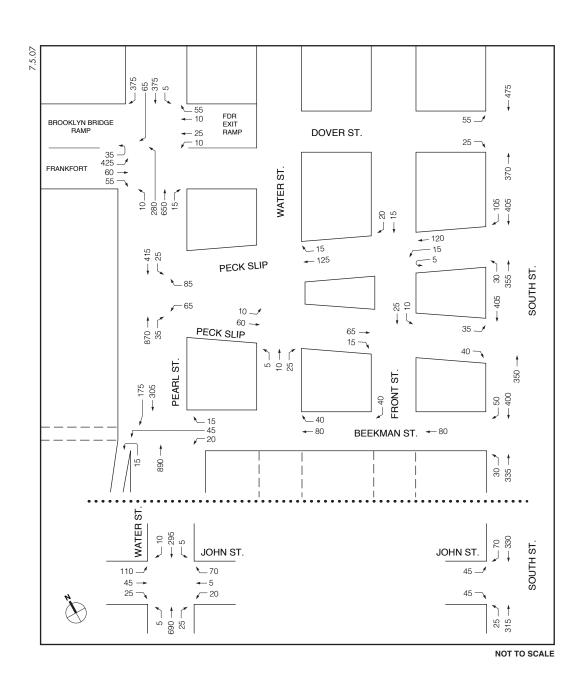
- The eastbound defacto left-turn movement, which operates at LOS F in the AM and PM peak hours:
- The northbound defacto left-turn movement, which operates at LOS F in the PM peak hour;

It should be noted that Traffic Enforcement Agents are stationed at this location during the AM and PM peak hours, and allocate additional time to specific movements where necessary. As a result, delays on the intersection's constrained movements tend to be lower than indicated by HCS analysis.

# **PARKING**

For off-street parking, a study area was developed for the area within ½-mile of the project. As shown in Figure 2E-4, this study area includes a total of 24 parking lots and garages with a total capacity of 2,839 spaces. Table 2E-3 shows the capacity and utilization of these parking lots and garages. Presently, these facilities are 64, 80 and 63, per cent occupied during the AM, midday, and PM peak periods, respectively.





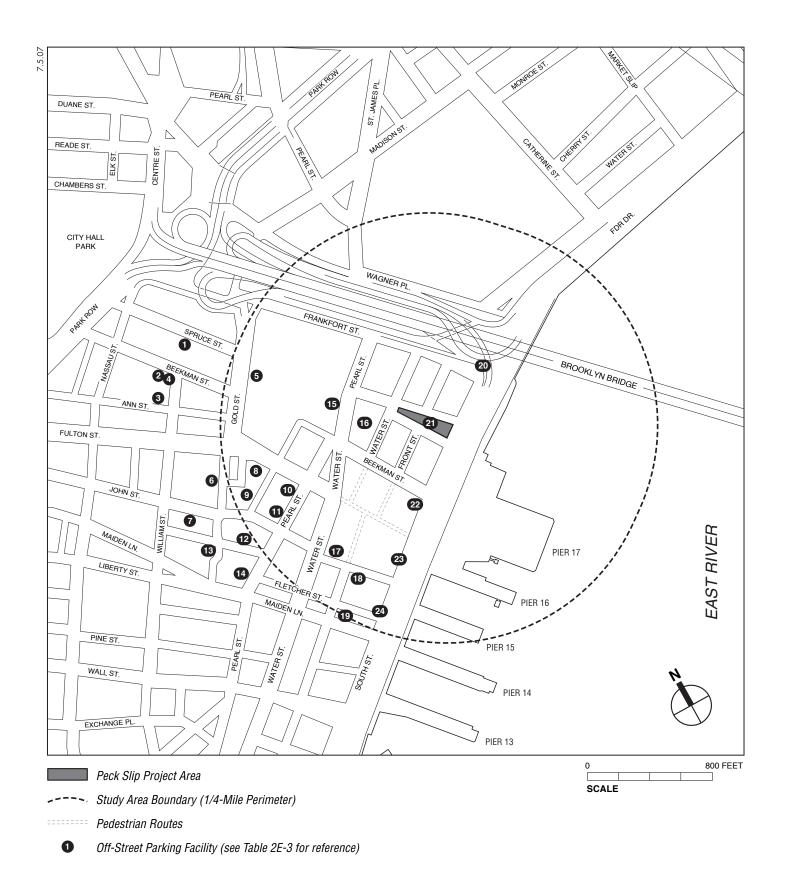


Table 2E-1 2006 Existing Level of Service for Signalized Intersections

Intersections Pearl & Dover/Frankfort/BB Eastbound Westbound Northbound Southbound Pearl Street / Peck Slip Westbound Northbound Southbound Southbound Southbound	Lane Group  DefL TR LTR  LTR  LTR Interse	AM Peal v/c Ratio  1.05 0.54 0.55 0.80	Delay (spv) 100.1 33.4 31.9	F C	Lane Group DefL TR	PM Peak v/c Ratio	Delay (spv)	LOS
Pearl & Dover/Frankfort/BB Eastbound  Westbound Northbound  Southbound  Pearl Street / Peck Slip  Westbound  Northbound	DefL TR LTR LTR LTR	1.05 0.54 0.55	(spv) 100.1 33.4	F C	<b>Group</b> DefL	Ratio	(spv)	LOS
Pearl & Dover/Frankfort/BB Eastbound  Westbound Northbound  Southbound  Pearl Street / Peck Slip  Westbound  Northbound	DefL TR LTR LTR LTR	1.05 0.54 0.55	100.1 33.4	F C	DefL			LUS
Eastbound  Westbound  Northbound  Southbound  Pearl Street / Peck Slip  Westbound  Northbound	TR LTR LTR LTR	0.54 0.55	33.4	C		1.05	1	
Westbound Northbound Southbound Pearl Street / Peck Slip Westbound Northbound	TR LTR LTR LTR	0.54 0.55	33.4	C		1.05	~~ 4	
Northbound  Southbound  Pearl Street / Peck Slip  Westbound  Northbound	LTR LTR LTR	0.55					87.1	F
Northbound  Southbound  Pearl Street / Peck Slip  Westbound  Northbound	LTR LTR		31.9			0.45	31.0	С
Southbound  Pearl Street / Peck Slip  Westbound  Northbound	LTR	0.80		С	LTR	0.32	26.8	С
Pearl Street / Peck Slip Westbound Northbound	LTR	0.80			DefL	1.05	84.8	F
Pearl Street / Peck Slip Westbound Northbound			20.3	С	TR	0.76	19.1	В
Westbound Northbound	Inters	0.67	14.4	В	LTR	0.69	15.5	В
Westbound Northbound		ection	29.5	С	Interse	ection	39.7	D
Northbound								
	LR	0.51	35.0+	D	LR	0.57	36.9	D
Southbound	TR	0.42	8.5	Α	TR	0.47	8.9	Α
	LT	0.56	10.4	В	LT	0.32	7.7	Α
	Inters	ection	11.8	В	Intersection		11.8	В
Pearl & Water Streets / Beekman St.	•			•				,
Westbound	LR	0.24	28.9	С	LR	0.37	30.9	С
Northbound	LT	0.47	9.2	Α	LT	0.63	11.3	В
Southbound	Т	0.60	10.9	В	Τ	0.35	8.0	Α
	Inters	ection	11.0	В	Interse	ection	11.8	В
Water Street / John Street	•			•				,
Eastbound	LTR	0.53	30.0	С	LTR	0.59	31.1	С
Westbound	LTR	0.25	22.7	С	LTR	0.26	22.7	С
Northbound	LTR	0.47	13.6	В	LTR	0.48	13.7	В
Southbound	LTR	0.39	12.6	В	LTR	0.22	11.0	В
	Inters	ection	15.7	В	Interse	ection	16.4	В
South St. / Dover St.			-				_	
Eastbound	LR	0.34	24.1	С	LR	0.28	23.1	С
Northbound	T	0.35	12.2	В	Т	0.30	11.7	В
Southbound	T	0.73	21.0	C	T	0.62	17.5	В
	Inters							. –
Notes: L = Left Turn, T = Through, R = Right Turn, I		ction	17.9	В	Interse	ection	15.8	В

Table 2E-2 2006 Existing Level of Service for Unsignalized Intersections

	2000 LAI			ci vice	tor Onsig	,		-tions
		AM Peak	Hour			PM Peak	Hour	
	Lane	v/c	Delay		Lane	v/c	Delay	
Intersections	Group	Ratio	(spv)	LOS	Group	Ratio	(spv)	LOS
Water St. / Peck Slip								
Eastbound	LT	0.02	8.2	Α	LT	0.01	8.2	Α
Northbound	LTR	0.06	13.0	В	LTR	0.11	13.2	В
Front St. / Beekman St.								
Southbound	R	0.08	11.3	В	R	0.12	12.9	В
Front St. / Peck Slip EB								
Southbound	LT	0.15	13.3	В	LT	0.12	13.9	В
Front St. / Peck Slip WB								
Westbound	LT	0.01	7.7	Α	LT	0.02	7.8	Α
Southbound	TR	0.19	14.2	В	TR	0.12	14.1	В
South St. / Peck Slip EB	_					_		
Eastbound	LR	0.23	18.5	С	LR	0.32	22.0	С
South St. / Peck Slip WB								
Northbound	LT	0.04	9.8	Α	LT	0.04	9.4	Α
South St. / Beekman St.								
Northbound	LT	0.03	10.0-	Α	LT	0.04	9.9	Α
South St. / John St.								
Eastbound	LR	0.34	25.0-	С	LR	0.37	24.5	С
Northbound	LT	0.06	9.4	Α	LT	0.03	9.4	Α
Notes: L = Left Turn, T = Through, R =	Right Turn	, LOS = L	evel of Se	rvice.	-			

Table 2E-3 2006 Existing Off-Street Parking Utilization

			Licensed	Uti	lization Ra	ate	Uti	lized Space	es	Ava	ilable Spac	es
Map #	Name/Operator and Address/Location	License #	Capacity	AM	Midday	PM	АМ	Midday	PM	AM	Midday	PM
1	Spruce Street Garage	1182276	25	65%	80%	65%	16	20	16	9	5	9
2	Rapid Park Industries / 25 Beekman Street	367147	149	20%	70%	50%	30	104	75	119	45	74
3	Ann Park LLC / 57 Ann Street	1154973	276	40%	70%	70%	110	193	193	166	83	83
4	CPS / 169 William Street	958863	52	10%	67%	25%	5	35	13	47	17	39
5	Ropetmar Garage Inc. / 80 Gold Street	692160	351	50%	50%	50%	176	176	176	175	175	175
6	GMC / 85 John Street	1192299	32	100%	10%	40%	32	3	13	0	29	19
7	100 William Garage Corporation / 72 John Street	1197266	25	100%	100%	100%	25	25	25	0	0	0
8	Marlo Towers Garage Corporation / 56 Fulton Street	1098937	280	60%	85%	85%	168	238	238	112	42	42
9	Cliff Parking LLC / 99 John Street	178641	87	50%	75%	33%	44	65	29	43	22	58
10	GMC / 251 Pearl Street	1102765	92	80%	80%	50%	74	74	46	18	18	46
11	Pearl Parking LLC	1068098	80	100%	80%	75%	80	64	60	0	16	20
12	Central Parking Systems / 100 John Street	1104794	41	100%	100%	100%	41	41	41	0	0	0
13	McParking LLC / 13 Gold Street	1040786	19	25%	75%	75%	5	14	14	14	5	5
14	Imperial Parking Systems / 2 Gold Street	198215	98	100%	100%	100%	98	98	98	0	0	0
15	Ropetmar Garage Inc. / 299 Pearl Street	693022	30	100%	100%	100%	30	30	30	0	0	0
16	Central Parking Systems / 288 - 294 Pearl Street	367803	36	100%	90%	70%	36	32	25	0	4	11
		367802	25	100%	90%	70%	25	23	18	0	2	7
		978091	105	100%	90%	70%	105	95	74	0	10	31
		693811	120	100%	90%	70%	120	108	84	0	12	36
17	Central Parking Systems / 199 Water Street	1099611	99	100%	100%	80%	99	99	79	0	0	20
18	Edison NY Parkfast LLC / 165-175 Front Street	926763	72	50%	100%	50%	36	72	36	36	0	36
19	Edison Park Fast	369121	70	68%	80%	70%	48	56	49	22	14	21
20	Propark Lot 5 / Columns 33 - 43	1213666	315	50%	90%	30%	158	284	95	157	31	220
21	Propark Lot 4 / Peck Slip Front Street to South Street	1213660	58	100%	95%	75%	58	55	44	0	3	14
22	Propark Lot 3 / Columns 26 - 32	1213663	194	50%	95%	70%	97	184	136	97	10	58
23	Propark Lot 2 / Columns 26 - 32		48	85%	85%	75%	41	41	36	7	7	12
24	Propark Lot 1 / Columns 19 - 21	1213656	60	85%	75%	65%	51	45	39	9	15	21
			2839	64%	80%	63%	1808	2274	1782	1031	565	1057

### Notes:

Italics denote facilities scheduled for removal during the No Build Condition **Bold** denotes a facility to be removed by the Proposed Action

# D. THE FUTURE WITHOUT THE PROPOSED ACTION

Vehicular traffic and parking conditions in the future without the Proposed Action (No Build condition) were assessed to establish a baseline against which to evaluate the potential impacts of the Proposed Action.

### TRAFFIC CONDITIONS

Local projects scheduled for completion before 2010 (the build year for the Proposed Action) and which have the potential to generate vehicle trips at the study area intersections were identified. All traffic generated by projects within ½ mile of the Proposed Action was distributed on the local roadway network. In addition, given the importance of the Pearl/Water Street corridor in accessing the east side of Lower Manhattan, twenty percent of the trips generated by projects located south of the study area, east of William Street and north of Old Slip were added to the corridor volumes, while 5% of these project's trips were added to volumes at the South Street intersections. To the north of the study area, ten percent of the trips generated by No Build projects on South Street between the Brooklyn Bridge and Montgomery Street were also added to the South Street corridor's volumes. No Build projects used in trip generation estimates are shown in Table 2E-4. The future without the Proposed Action also includes general background traffic growth of 0.5 percent per year, as specified in the *CEQR Technical Manual*.

Table 2E-4 Projects to be Completed by 2010

Map Number	Name	Address	Use
1	East River Esplanade	South Street from Battery Park To Montgomery Street	Linear park with pavilions
31		85 South Street	50 DU
32		80 South Street	24 DU
42		119 Fulton Street	19 DU
44		250 Water Street	300 DU, 175,000 SF institutional
45	NYU Downtown Hospital	Between Spruce and Beekman Streets	720 DU, 24,000 ambulatory care facility, 2,400 sf retail, 630-Seat K-8 School
47		246 Front Street	9 DU, 3,000 SF Retail
51	Pier 17 Tin Building		additional 25,000 sf retail space
52	Former Fulton Market fish stalls	North side of South Street between Fulton and Beekman Streets	40,000 sf retail
56		254 Front Street	Approx. 20 DU and approx. 4,200 sf retail
		North of Project Area	
48	New York Post	Catherine Slip on Water Street	650 DU
50	Basketball City	Part of Pier 36	6 indoor basketball courts, workout room, locker room, administrative offices
		South of Project Area	
21		50 Pine Street	20 DU
27		79 Maiden Lane	400 DU
28		90 William Street	128 DU
30		201 Pearl St.	315 DU, 30,000 SF retail
33	Five Nine John Lofts	59 John Street	74 DU (Conversion)
10	Cipriani Residences / Wall Street Regent Hotel	55 Wall Street	200 DU (Conversion)
12		67 Wall Street	357 DU (Conversion)
13		20 Exchange Place	369 DU (Conversion); 133,000 sf retail; 335,000 sf office (office already exists)
14	Cocoa Exchange	1 Wall St Court (82 Beaver St)	124 DU (conversion)
18		75 Wall Street	347 DU, 300 hotel rooms

Projects anticipated for the No Build condition will also replace several parking lots in the study area. Peak hour in/out volumes at these locations were re-distributed to locations with available parking. Details regarding parking utilization under No Build conditions are discussed below. In addition, the No Build analysis reflects geometric changes to the intersections along South Street that would be implemented during the East River Esplanade project. Within the project area, South Street would operate with one traffic lane in each direction, separated by a stripped median with left turn pockets where appropriate, and parking or drop-off/pick-up areas along the eastern curb.

#### LEVELS OF SERVICE

Traffic volumes from general background growth and trips associated with new developments were overlaid onto the existing conditions traffic networks to project 2010 volumes absent the Proposed Action (see Figures 2E-5 and 2E-6). As shown in Tables 2E-5 and 2E-6, most traffic movements within the study area will operate at mid-LOS D or better (45.0 seconds of delay or less) in the future without the Proposed Action. The following intersections will operate with delays exceeding mid-LOS D, and experience service level declines under No Build conditions:

# Pearl Street and Dover/Frankfort Streets

- The westbound approach, which would deteriorate from LOS C to F during the AM peak hour;
- The northbound approach, which would deteriorate from LOS C to E during the AM peak hour:

# Pearl Street and Peck Slip

• The westbound approach, which would continue to operate at LOS D during the AM peak hour, with delays increasing from 35.0+ seconds per vehicle (spv) to 46.0 spv;

### South Street and Peck Slip (Eastbound)

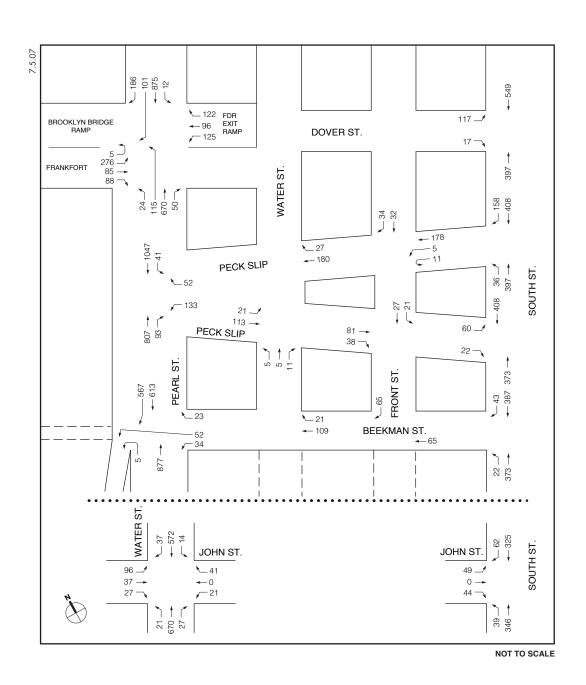
• The eastbound approach, which would deteriorate from LOS C to E during the PM peak hour, and;

#### South Street and John Street

• The eastbound approach, which would deteriorate from LOS C to D and E during the AM and PM peak hours, respectively.

### **PARKING**

In the No Build condition, approximately 900 existing off-street spaces would be removed from within ¼ mile of the project. It is unclear at this point how many new spaces would be provided by the proposed No Build projects. Table 2E-7 shows the projected off-street parking utilization in the study area under No Build conditions if no new spaces are provided. As shown, there would be unmet parking demands of approximately 250, 760 and 190 spaces within a ¼ mile radius during the AM, Midday and PM peak periods under No Build conditions. Drivers unable to secure parking in the immediate area would either: (1) use facilities outside the study area with excess capacity or (2) shift their mode of travel in the future.



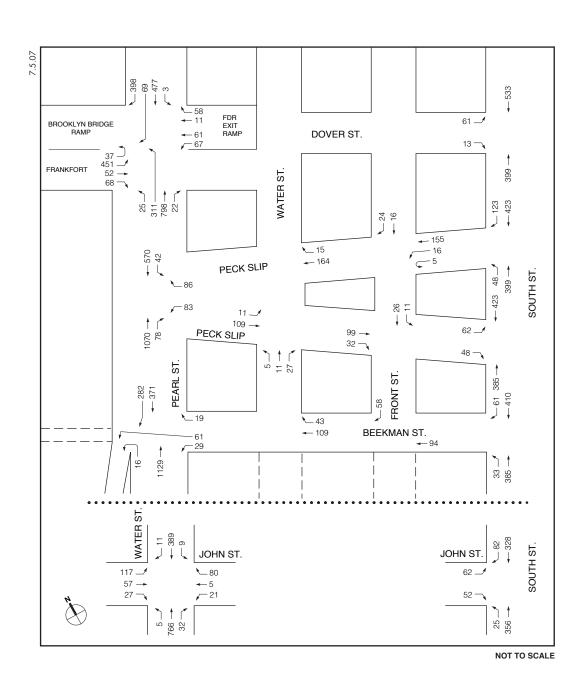


Table 2E-5 2006 Existing and 2010 No Build Level of Service for Signalized Intersections

				AM Pea	k Hour		<b>-</b>					PM Peak Hour					
		2006 Ex	isting	_		2010 No	Build			2006 Ex	isting			2010 No	Build		
	Lane	v/c	Delay		Lane	v/c	Delay		Lane	v/c	Delay		Lane	v/c	Delay		
Intersections	Group	Ratio	(spv)	LOS	Group	Ratio	(spv)	LOS	Group	Ratio	(spv)	LOS	Group	Ratio	(spv)	LOS	
Pearl & Dover/Frankfort/BB																	
Eastbound	DefL	1.05	100.1	F	DefL	1.32	200.8	F	DefL	1.05	87.1	F	DefL	1.12	108.5	F	
	TR	0.54	33.4	С	TR	0.64	37.8	D	TR	0.45	31.0	С	TR	0.49	32.4	С	
Westbound	LTR	0.55	31.9	С	LTR	1.13	117.1	F	LTR	0.32	26.8	С	LTR	0.74	39.7	D	
Northbound									DefL	1.05	84.8	F	DefL	1.51	267.0	F	
	LTR	0.80	20.3	С	LTR	1.09	74.2	Е	TR	0.76	19.1	В	TR	0.94	34.6	С	
Southbound	LTR	0.67	14.4	В	LTR	0.78	17.8	В	LTR	0.69	15.5	В	LTR	0.80	19.4	В	
	Interse	ection	29.5	С	Interse	ection	69.8	Е	Interse	ection	39.7	D	Interse	ection	68.5	Е	
Pearl Street / Peck Slip																	
Westbound	LR	0.51	35.0+	D	LR	0.75	46.0	D	LR	0.57	36.9	D	LR	0.64	39.5	D	
Northbound	TR	0.42	8.5	Α	TR	0.54	9.8	Α	TR	0.47	8.9	Α	TR	0.60	10.6	В	
Southbound	LT	0.56	10.4	В	LT	0.71	13.3	В	LT	0.32	7.7	Α	LT	0.48	9.4	Α	
	Interse	ection	11.8	В	Interse	ection	15.2	В	Interse	ection	11.8	В	Interse	ection	13.2	В	
Pearl & Water Streets / Beekman	St.																
Westbound	LR	0.24	28.9	С	LR	0.40	32.0	С	LR	0.37	30.9	С	LR	0.50	33.9	С	
Northbound	LT	0.47	9.2	Α	LT	0.59	10.7	В	LT	0.63	11.3	В	LT	0.80	15.6	В	
Southbound	Т	0.60	10.9	В	Τ	0.81	16.5	В	Т	0.35	8.0	Α	Τ	0.48	9.2	Α	
	Interse	ection	11.0	В	Interse	ection	15.1	В	Interse	ection	11.8	В	Interse	ection	15.0	В	
Water Street / John Street																	
Eastbound	LTR	0.53	30.0	С	LTR	0.57	31.5	С	LTR	0.59	31.1	С	LTR	0.66	34.1	С	
Westbound	LTR	0.25	22.7	С	LTR	0.27	23.2	С	LTR	0.26	22.7	С	LTR	0.30	23.2	С	
Northbound	LTR	0.47	13.6	В	LTR	0.54	14.7	В	LTR	0.48	13.7	В	LTR	0.54	14.6	В	
Southbound	LTR	0.39	12.6	В	LTR	0.47	13.6	В	LTR	0.22	11.0	В	LTR	0.30	11.7	В	
	Interse	ection	15.7	В	Interse	ection	16.5	В	Interse	ection	16.4	В	Interse	ection	17.3	В	
South St. / Dover St.																	
Eastbound	LR	0.34	24.1	С	LR	0.36	24.5	С	LR	0.28	23.1	С	LR	0.25	22.7	С	
Northbound	Т	0.35	12.2	В	Т	0.68	20.1	С	Т	0.30	11.7	В	Т	0.65	18.9	В	
Southbound	Т	0.73	21.0	С	Т	0.78	23.2	С	Т	0.62	17.5	В	Т	0.73	21.3	С	
	Interse	ection	17.9	В	Interse	ection	22.2	С	Interse	ection	15.8	В	Interse	ection	20.5	С	
Notes: L = Left Turn, T = Through,	R = Right	Turn, LOS	S = Level o	of Service	е.												

Table 2E-6 2006 Existing and 2010 No Build Level of Service for Unsignalized Intersections

				AM Pea	k Hour							PM Pea	k Hour			
		2006 Ex	isting			2010 No	Build			2006 Ex	isting			2010 No	Build	
1.4	Lane	v/c	Delay		Lane	v/c	Delay		Lane	v/c	Delay		Lane	v/c	Delay	
Intersections	Group	Ratio	(spv)	LOS	Group	Ratio	(spv)	LOS	Group	Ratio	(spv)	LOS	Group	Ratio	(spv)	LOS
Water St. / Peck Slip																
Eastbound	LT	0.02	8.2	Α	LT	0.02	8.4	Α	LT	0.01	8.2	Α	LT	0.01	8.4	Α
Northbound	LTR	0.06	13.0	В	LTR	0.07	13.9	В	LTR	0.11	13.2	В	LTR	0.13	14.2	В
Front St. / Beekman St.																
Southbound	R	0.08	11.3	В	R	0.18	12.2	В	R	0.12	12.9	В	R	0.18	13.7	В
Front St. / Peck Slip EB																
Southbound	LT	0.15	13.3	В	LT	0.16	14.0	В	LT	0.12	13.9	В	LT	0.14	14.9	В
Front St. / Peck Slip WB																
Westbound	LT	0.01	7.7	Α	LT	0.01	7.7	Α	LT	0.02	7.8	Α	LT	0.02	7.8	Α
Southbound	TR	0.19	14.2	В	TR	0.24	15.5	С	TR	0.12	14.1	В	TR	0.15	14.9	В
South St. / Peck Slip EB																
Eastbound	LR	0.23	18.5	С	LR	0.34	25.9	D	LR	0.32	22.0	С	LR	0.67	48.7	Е
South St. / Peck Slip WB							_					_				
Northbound	LT	0.04	9.8	Α	لــ	0.05	10.1	В	LT	0.04	9.4	Α	Ш	0.06	9.7	Α
South St. / Beekman St.																
Northbound	LT	0.03	10.0-	Α	L	0.04	9.9	Α	LT	0.04	9.9	Α	L	0.05	9.9	Α
South St. / John St.																
Eastbound	LR	0.33	24.7	С	LR	0.42	31.0	D	LR	0.36	24.3	С	LR	0.54	35.1	Е
Northbound	LT	0.06	9.4	Α	L	0.06	9.4	Α	LT	0.03	9.3	Α	L	0.03	9.3	Α
Notes: L = Left Turn, T = T	hrough, R	= Right T	urn, LOS	= Level	of Service	e.										

Table 2E-7 Off-Street Parking Utilization in the 2010 No Build Condition

	AM Peak	Midday Peak	PM Peak
2010 No Build Parking Supply	1,936	1,936	1,936
2010 No Build Parking Demand			
2006 Existing Parking Demand	1,808	2,274	1,782
Background Growth	36	45	36
Demand from New Development	342	375	309
Total Parking Demand	2,186	2,649	2,127
2010 No Build Parking Utilization	113%	139%	110%
2010 No Build Parking Surplus/(Shortfall)	(250)	(758)	(191)

# E. PROBABLE IMPACTS OF THE PROPOSED ACTION

The Proposed Action, including proposed roadway changes, would result in changes in the local traffic pattern. The action would also eliminate 58 parking spaces located in the median of Peck Slip. This section evaluates whether the combination of these changes would result in significant adverse impacts.

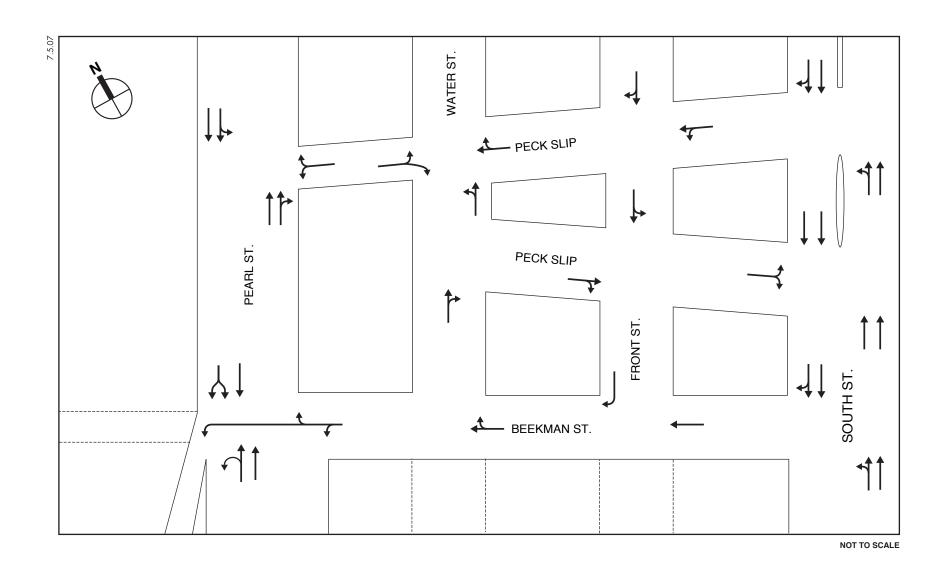
#### **ROADWAY CHANGES**

Currently, the eastbound and westbound directional flows on Peck Slip are separated by a median of varying widths between Water and South Streets, on which is located a licensed off-street parking facility with two rows of cars on the eastern block and a single row of parked cars on the western block. The directional flows merge for the one-block section between Pearl and Water Streets and Peck Slip carries two-way traffic, with a single travel lane and curbside parking in both directions. Parking in the westbound lane is reserved for U.S. Postal Service vehicles, and, although there are No Parking regulations posted on the eastbound lane, the curb here is also occupied by parked vehicles, most with U.S. Postal Service permits displayed. The intersection of Peck Slip and Pearl Street is signalized, and Peck Slip eastbound is stop-controlled at South Street. Front and Water Streets are both stop-controlled at Peck Slip.

Beekman Street is currently a single-lane one-way westbound street. On-street parking is, in general, either restricted or reserved for truck loading activities. The intersection of Beekman Street and Pearl Street is signalized, and Front Street is stop-controlled at Beekman Street. The intersections of Beekman Street with Water and South Streets are not controlled. The existing roadway configuration is illustrated in Figure 2E-7.

With the proposed Action, the following Street changes would be implemented.

- Convert Peck Slip between Pearl and Water Streets to a one-way westbound street. The 36.5-foot-wide roadway in this section was assumed, for analysis purposes, to provide two 11 foot-wide travel lanes, with parking along both sides of the street.
- Retain the existing configuration on Peck Slip between Water and South Streets. In order to
  provide a conservative analysis, Peck Slip was analyzed with one travel lane in each
  direction through this section. The intersection of Pearl Street and Peck Slip remains
  signalized, while the intersections of Peck Slip at Water, Front and South Streets remain



unsignalized, with Water and Front Streets stop-controlled at Peck Slip, and Peck Slip stop-controlled at South Street.

- Convert Beekman Street to a one-way eastbound configuration to accommodate some of the diverted eastbound traffic currently using Peck Slip. For analysis purposes Beekman Street was assumed to remain a single lane-street with the same parking and truck loading restrictions as currently exist. The intersection at Pearl/Water Streets remains signalized, while the intersections at Front and South Streets remain unsignalized, with Front Street stop-controlled at Beekman Street. South Street at Beekman Street was analyzed under Build conditions as a one-lane unsignalized intersection with a stop-control on Beekman Street.
- Eliminate through movements on Front Street across the Peck Slip median.

# TRIP ASSIGNMENT

Traffic turning onto eastbound Peck Slip was removed from the network and re-assigned based on destination and roadway direction changes. Most eastbound Peck Slip vehicles were reassigned to Beekman Street, except for those currently turning left at Water Street. These were routed via Dover Street, as was 25 per cent of the traffic currently traveling through Peck Slip without turning to South Street. The remaining 75 per cent of through vehicles from Peck Slip were routed to Beekman Street.

All Beekman Street traffic was removed from the network and re-assigned to either Peck Slip or John Street, depending on the trip destinations. Northbound South Street traffic currently using Beekman Street to access Water Street or destined for Beekman Street west of Front Street was routed via John and Pearl Streets. Northbound South Street traffic destined for Beekman Street east of Front Street was routed to Peck Slip. Traffic approaching Beekman from the north was also routed to Peck Slip.

With Front Street closed through the Peck Slip median, all southbound traffic approaching Peck Slip along Front Street would, therefore, turn right onto Peck Slip westbound. Traffic that currently crosses the median was reassigned based on the above configuration.

Figure 2E-8 shows the proposed roadway network. Figures 2E-9 and 2E-10 show the traffic increments during the AM and PM peak hours respectively, while Figures 2E-11 and 2E-12 show the total Build condition volumes during the same time periods.

# LEVEL OF SERVICE

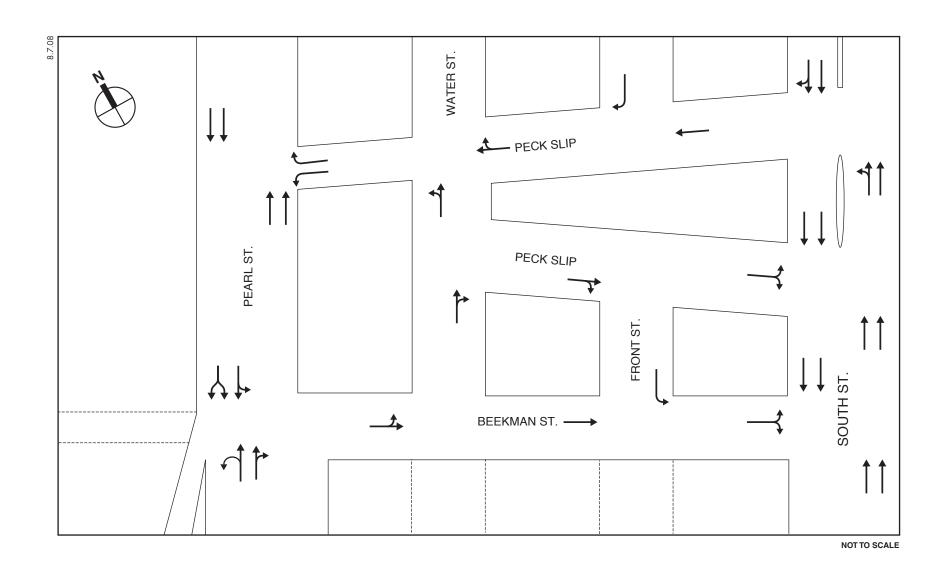
Level of service was calculated and the results for the No Build and Build conditions displayed in Tables 2E-8 and 2E-9. Based on the criteria previously mentioned, the following four study area intersections would experience traffic impacts due to the Proposed Action.

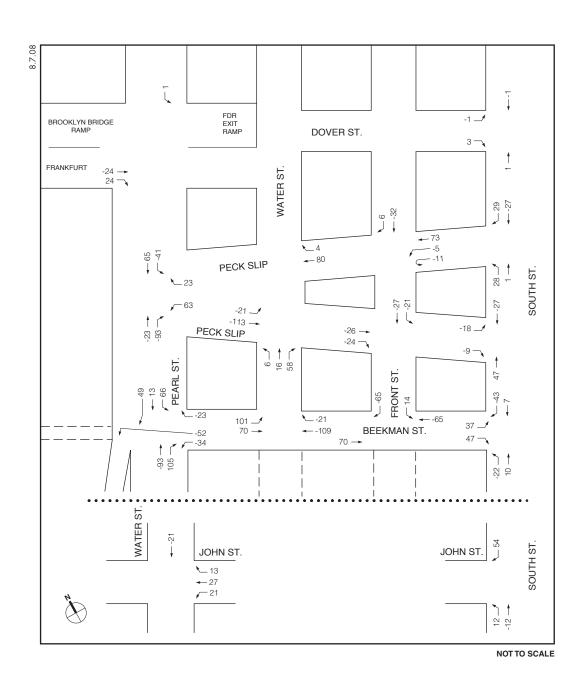
Pearl Street and Dover/Frankfort Streets/Brooklyn Bridge entrance

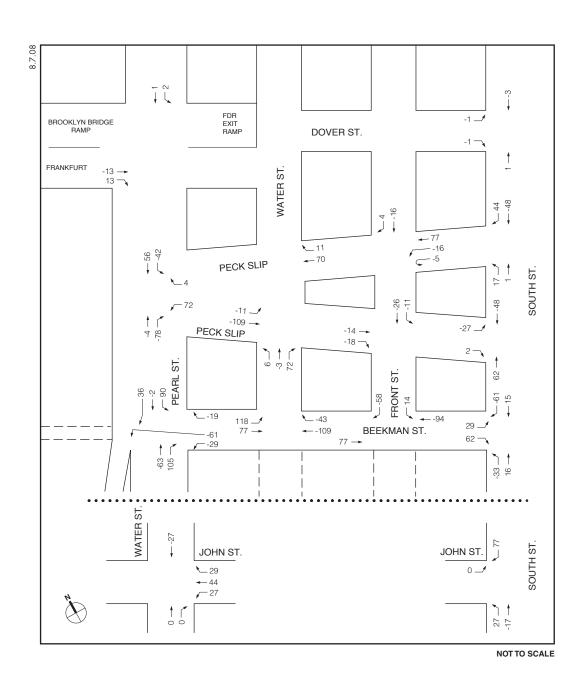
• The northbound de-facto left turn movement during the PM peak hour.

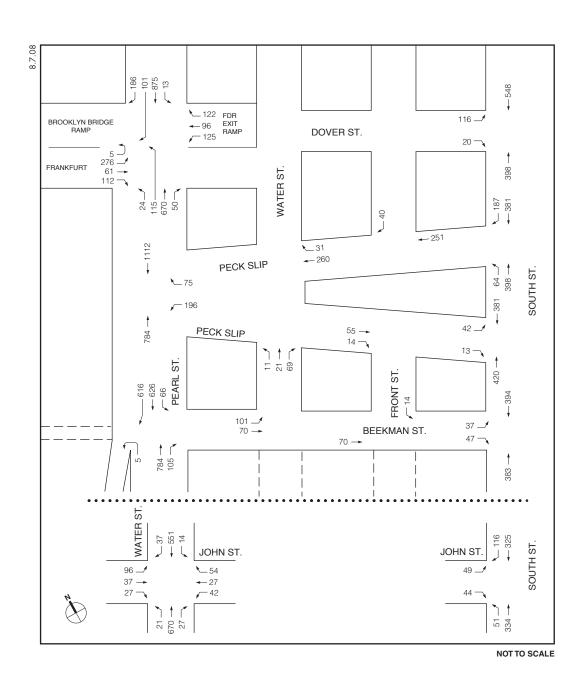
### Pearl Street and Peck Slip

• The westbound left turn movement during the AM peak hour.









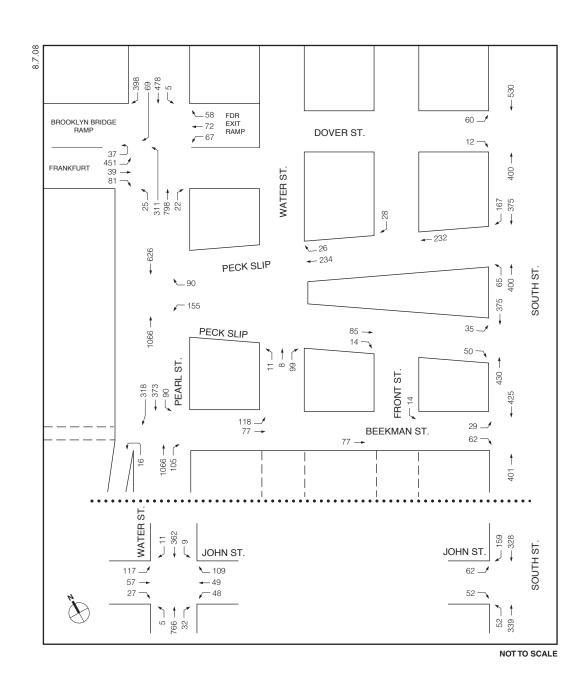


Table 2E-8 2010 No Build and Build Level of Service for Signalized Intersections

				AM P	eak Hour							PM P	eak Hour			
		2010 No	Build			201	0 Build			2010 No	Build			2010	) Build	
Intersections	Lane Group	v/c Ratio	Delay (spv)	LOS	Lane Group	v/c Ratio	Delay (spv)	LOS	Lane Group	v/c Ratio	Delay (spv)	LOS	Lane Group	v/c Ratio	Delay (spv)	LOS
Pearl & Dover/Frank	fort/BB		/													
Eastbound	DefL	1.32	200.8	F	DefL	1.32	200.8	F	DefL	1.12	108.5	F	DefL	1.12	108.5	F
	TR	0.64	37.8	D	TR	0.67	40.0	D	TR	0.49	32.4	С	TR	0.51	33.6	С
Westbound	LTR	1.13	117.1	F	LTR	1.13	117.1	F	LTR	0.74	39.7	D	LTR	0.74	39.7	D
Northbound									DefL	1.51	267.0	F	DefL	1.51	269.8	F -
	LTR	1.09	74.2	Е	LTR	1.09	74.2	E	TR	0.94	34.6	С	TR	0.94	34.6	С
Southbound	LTR	0.78	17.8	В	LTR	0.79	17.9	В	LTR	0.80	19.4	В	LTR	0.81	19.5	В
	Inters	ection	69.8	Е	Interse	ection	70.0	E	Inters	ection	68.5	Е	Inters	ection	68.8	Е
Pearl Street / Peck S	lip															
Westbound	LR	0.75	46.0	D	L	1.10	121.4	F +	LR	0.64	39.5	D	L	0.58	37.0	D
					R	0.35	31.6	С					R	0.37	31.8	С
Northbound	TR	0.54	9.8	Α	Т	0.46	8.9	Α	TR	0.60	10.6	В	Т	0.54	9.8	Α
Southbound	LT	0.71	13.3	В	Т	0.64	11.4	В	LT	0.48	9.4	Α	Т	0.39	8.3	Α
	Inters	ection	15.2	В	Interse	ection	23.2	С	Inters	ection	13.2	В	Inters	ection	13.0	В
Pearl & WaterStreets	s / Beekman	St.	•	•	•		•		•		•		•			
Westbound	LR	0.40	32.0	С					LR	0.50	33.9	С				
Northbound	LT	0.59	10.7	В	LTR	0.61	11.2	В	LT	0.80	15.6	В	LTR	0.85	18.2	В
Southbound	Т	0.81	16.5	В	LT	1.09	69.5	E +	Т	0.48	9.2	Α	LT	0.96	35.3	D
	Inters	ection	15.1	В	Interse	ection	46.7	D	Inters	ection	15.0	В	Inters	ection	24.9	С
Water Street / John S	Street		•	•	•		•		•		•		•			
Eastbound	LTR	0.57	31.5	С	LTR	0.59	32.5	С	LTR	0.66	34.1	С	LTR	0.77	43.9	D
Westbound	LTR	0.27	23.2	С	LTR	0.50	28.0	С	LTR	0.30	23.2	С	LTR	0.56	28.9	С
Northbound	LTR	0.54	14.7	В	LTR	0.54	14.6	В	LTR	0.54	14.6	В	LTR	0.54	14.6	В
Southbound	LTR	0.47	13.6	В	LTR	0.45	13.4	В	LTR	0.30	11.7	В	LTR	0.28	11.5	В
	Inters	ection	16.5	В	Interse	ection	17.4	В	Inters	ection	17.3	В	Inters	ection	19.9	В
South St. / Dover St.																
Eastbound	LR	0.36	24.5	С	LR	0.37	24.7	С	LR	0.25	22.7	С	LR	0.25	22.6	С
Northbound	Т	0.68	20.1	С	Т	0.68	20.2	С	Т	0.65	18.9	В	Т	0.65	19.0	В
Southbound	Т	0.78	23.2	С	Т	0.78	23.1	С	Т	0.73	21.3	С	Т	0.73	21.1	С
	Inters	ection	22.2	С	Interse	ection	22.2	С	Interse	ection	20.5	С	Interse	ection	20.4	С
Notes: L = Left Tur	n. T = Throu	ah. R = Ri	aht Turn I	OS = Lev	el of Servic	e. + = Imr	act requirir	na improveme	nts		•	•	•			

Table 2E-9 2010 No Build and Build Level of Service for Unsignalized Intersections

				AM P	eak Hour							PM P	eak Hour			
		2010 No	Build			2010	Build			2010 No	Build			2010	) Build	
Intersections	Lane Group	v/c Ratio	Delay (spv)	LOS	Lane Group	v/c Ratio	Delay (spv)	LOS	Lane Group	v/c Ratio	Delay (spv)	LOS	Lane Group	v/c Ratio	Delay (spv)	LOS
Water St. / Peck Slip	)															
Eastbound	LT	0.02	8.4	Α					LT	0.01	8.4	Α				
Northbound	LTR	0.07	13.9	В	LTR	0.29	14.4	В	LTR	0.13	14.2	В	LTR	0.29	13.9	В
Front St. / Beekman	St.			_	_	_			_			_	_			
Southbound					L	0.04	11.7	В					L	0.04	12.5	В
Eastbound	R	0.18	12.2	В					R	0.18	13.7	В				
Front St. / Peck Slip	EB															
Southbound	LT	0.16	14.0	В	No Opp	osing Tra	iffic Move	ments	LT	0.14	14.9	В	No Opp	osing Tra	ıffic Move	nents
Front St. / Peck Slip	WB															
Westbound	LT	0.01	7.7	Α					LT	0.02	7.8	Α				
Southbound	TR	0.24	15.5	С	R	0.15	14.6	В	TR	0.15	14.9	В	R	0.11	14.9	В
South St. / Peck Slip	EB															
Eastbound	LR	0.34	25.9	С	LR	0.24	24.1	С	LR	0.67	48.7	Е	LR	0.45	29.9	D
South St. / Peck Slip	) WB															
Northbound	L	0.05	10.1	В	L	0.10	10.4	В	L	0.06	9.7	Α	L	0.09	9.8	Α
South St. / Beekmar	n St.															
Eastbound					LR	0.36	26.9	D					LR	0.51	35.0+	Е
Northbound	L	0.04	9.9	Α					L	0.05	9.9	Α				
South St. / John St.				•								•				
Eastbound	LR	0.42	31.0	D	LR	0.45	34.3	D	LR	0.54	35.1	Е	LR	0.62	45.1	Е
Northbound	L	0.06	9.4	Α	L	0.08	9.7	Α	L	0.03	9.3	Α	L	0.07	9.9	Α
Notes: L = Left Turn	, T = Throu	ugh, R = I	Right Turi	n, LOS =	Level of	Service.				•						

South Street and Beekman Street

• The eastbound approach during the PM peak hour. (This movement did not exist under No Build conditions)

South Street and John Street

• The eastbound approach during the PM peak hour.

In order to avoid these impacts the Proposed Action includes the traffic improvement plan shown in Table 2E-10

Table 2E-10 Proposed Improvements

		Proposed Improvement Measures												
Intersections	AM Peak I	Hour			PM Peak Ho	ur								
Pearl Street and Dover/Frankfort	Add a leading northbound the following phasing plan		to deve	elop	Add a leading northbound ph the following phasing plan.	ase to	devel	эр						
Streets/Brooklyn Bridge	Phase	G	Α	R	Phase	G	Α	R						
Entrance	Pearl Street NB	26	3	2	Pearl Street NB	26	3	2						
(Note: AM changes instituted to conform to	Pearl Street NB and SB	5	3	0	Pearl Street NB and SB	5	3	0						
required PM improvements).	Dover/Frankfort/BB EB and WB	46	3	2	Dover/Frankfort/BB EB and WB	46	3	2						
	Cycle Length		90		Cycle Length		90							
Pearl Street and Peck Slip	Shift 7 seconds of green to phase to the WB phase.	Shift 7 seconds of green time from the NB/SB No improvements necessary. Shase to the WB phase.												
Pearl/Water Streets and Beekman Street		Shift 4 seconds of green time from the pedestrian phase to the NB/SB phase.  No improvements necessary.												
South Street and Beekman Street	No improvements necessa	ary.			Restrict parking for 50 feet all curb of Beekman Street, to all the eastbound approach as a	llow op	eratio	n of						
South Street and John Street	Provide a signalized inters location with the following				Provide a signalized intersect location with the following phase									
	Phase	G	Α	R	Phase	G	Α	R						
	South Street NB and SB	49	3	2	South Street NB and SB	49	3	2						
	Beekman Street WB	31	3	2	Beekman Street WB	31	3	2						
	Cycle Length		90		Cycle Length		90							
Note: G = Green; A = Ambe	er; R = Red													

The improvement at the Pearl/Dover/Frankfort Street intersection involves the creation of a leading northbound phase during the PM peak to facilitate northbound left turns. Although this change is not required during the AM peak, the change would be instituted at all times. The improvement at Pearl Street and Peck Slip consists of signal retiming during the AM peak hour, but no change is needed during the PM peak. Changes in parking regulations are proposed form the PM peak hour at the intersections on South Street at Beekman Street, and at South Street and John Streets, signal timing modifications are proposed/ Creation of a flared approach at Beekman Street during the PM peak period would allow more efficient processing of traffic on this intersection's eastbound approach. A signalized intersection is proposed at South and John

Streets due to an anticipated playground at Burling Slip, which will result in the narrowing of John Street.

Tables 2E-11 and 2E-12 present the comparison of No Build, Build and Build with Improvements conditions for the AM and PM peak hours, respectively. With the improvement plan in place, all of the intersection approaches and lane groups presented above that exist under current conditions would operate at the same or at better service conditions than during the No Build conditions and new movements would operate at acceptable service levels.

### **PARKING**

The Proposed Action would result in the removal of 58 off-street parking spaces currently located in the central area of Peck Slip, between South and Water Streets (see Table 2E-13). Removal of these spaces would increase the study area's parking shortfall to 308, 816 and 249 spaces during the AM, Midday and PM periods, assuming no new parking accommodations are built during the No Build period. As under No Build conditions, drivers unable to find parking in the immediate area would have to either park farther away or shift their mode of travel.

### PEDESTRIAN SAFETY

The CEQR Technical Manual considers a location to be a high-pedestrian-accident location if it has 5 or more pedestrian accidents in any 12 months within the most recent three year period. Data on reportable traffic accidents at the study area intersections were compiled from New York State Department of Transportation (NYSDOT) records for the period of January 2003 through December 2005. Table 2E-14 presents a summary of the number of reportable accidents, fatalities, and injuries as well as a yearly breakdown of pedestrian-related accidents at each intersection in the study area. Based on this information, no high-pedestrian-accident locations were identified within the study area.

Table 2E-11 2010 No Build, Build, and Build with Improvements Level of Service for Signalized Intersections

					AIV	Peak He	our						
		2010 No	Build							2010 F	Suild wit	h Improve	monte
	Lane	v/c	Delay	I	2010 Build Lane v/c Delay					Lane	v/c	Delay	emems
Intersections	Group	Ratio	(spv)	LOS	Lane Group	Ratio	Delay (spv)	LOS		Group	Ratio	(spv)	LOS
Pearl & Dover/			(0)-7		0.000		(96.7			U. U. I.		(551)	
Eastbound	DefL	1.32	200.8	F	DefL	1.32	200.8	F		DefL	1.32	200.8	F
	TR	0.64	37.8	D	TR	0.67	40	D		TR	0.67	40.0	D
Westbound	LTR	1.13	117.1	F	LTR	1.13	117.1	F		LTR	1.13	117.1	F
Northbound				•				· ·					•
	LTR	1.09	74.2	Е	LTR	1.09	74.2	Е		LTR	1.07	67.5	Е
Southbound	LTR	0.78	17.8	В	LTR	0.79	17.9	В		LTR	0.93	33.5	C
	Interse		69.8	Ē	Interse		70	Ē		Interse		73.6	Ē
Pearl Street / P													
Westbound	LR	0.75	46.0	D	L	1.10	121.4	F	+	L	0.79	44.9	D
Northbound					R	0.35	31.6	С		R	0.26	24.3	C
Southbound	TR	0.54	9.8	Α	T	0.46	8.9	A		Т	0.52	13.2	В
	LT	0.71	13.3	В	Т	0.64	11.4	В		Т	0.73	17.3	В
	Interse		15.2	В	Interse		23.2	C		Interse		19.1	В
Pearl & WaterS				•									
Westbound	LR	0.4	32.0	С									
Northbound	LT	0.59	10.7	В	LTR	0.61	11.2	В		LTR	0.57	8.6	Α
Southbound	Т	0.81	16.5	В	LT	1.09	69.5		+	LT	1.02	42.9	D
	Interse	ection	15.1	В	Interse	ection	46.7	D		Interse	ection	29.5	С
South Street /	John Stree	et			•								
Eastbound										LR	0.20	21.7	С
										L	0.21	12.1	В
Northbound	1.	Incianali-			Unsignalized under Unsignalized under								
Northbound								r		T	0.60	17.7	В
Northbound Southbound		Jnsignaliz No Build c					llized unde conditions	r		T TR			B B
								r			0.60 0.63	17.7	
					PM		conditions	er .		TR	0.60 0.63	17.7 18.1	В
		No Build c	onditions		PM	Build o	our	er ————————————————————————————————————		TR Interse	0.60 0.63 ection	17.7 18.1 17.9	B B
	١	No Build c	onditions  Build			Build o	our D Build	r		TR Interse	0.60 0.63 ection	17.7 18.1 17.9 h Improve	B B
Southbound	Lane	2010 No	Build Delay	LOS	Lane	Build of Peak He 2010	our D Build Delay	LOS		TR Interse	0.60 0.63 ection Build wit	17.7 18.1 17.9 h Improve	B B
Southbound	Lane Group	2010 No	onditions  Build	LOS		Build o	our D Build			TR Interse	0.60 0.63 ection	17.7 18.1 17.9 h Improve	B B ements
Southbound  Intersections Pearl & Dover/	Lane Group Frankfort/E	2010 No v/c Ratio	Build Delay (spv)		Lane Group	Peak Ho 2010 v/c Ratio	Dur D Build Delay (spv)			TR Interse 2010 E Lane Group	0.60 0.63 ection  Build wit v/c Ratio	17.7 18.1 17.9 h Improve Delay (spv)	B B ements
Southbound	Lane Group Frankfort/E	2010 No V/c Ratio	Build Delay (spv)	LOS F C	Lane	Peak Ho 2010 v/c Ratio	Dur D Build Delay (spv)	LOS		TR Interse 2010 E Lane Group DefL	0.60 0.63 ection  Build wit v/c Ratio	17.7 18.1 17.9 h Improve Delay (spv)	B B ements
Southbound  Intersections Pearl & Dover/ Eastbound	Lane Group Frankfort/E	2010 No v/c Ratio	Build Delay (spv)	F	Lane Group	Peak Ho 2010 v/c Ratio	Dur D Build Delay (spv)	LOS		TR Interse 2010 E Lane Group	0.60 0.63 ection  Build wit v/c Ratio	17.7 18.1 17.9 h Improve Delay (spv)	B B ements LOS
Intersections Pearl & Dover/ Eastbound Westbound	Lane Group Frankfort/E DefL TR LTR	2010 No V/c Ratio 3B 1.12 0.49 0.74	Build Delay (spv)	F C	Lane Group  DefL TR LTR	Peak Ho 2010 v/c Ratio	Dur Delay (spv)  108.5 33.6	LOS F C D	+	TR Interse  2010 E Lane Group  DefL TR	0.60 0.63 ection  Build wit v/c Ratio  1.12 0.51	17.7 18.1 17.9 h Improve Delay (spv)	B B Coments LOS F C
Southbound  Intersections Pearl & Dover/ Eastbound	Lane Group Frankfort/E DefL TR	2010 No V/c Ratio 3B 1.12 0.49	Build Delay (spv)  108.5 32.4 39.7	F C D	Lane Group DefL TR	Peak Ho 2010 v/c Ratio  1.12 0.51 0.74	Dur Delay (spv)  108.5 33.6 39.7	LOS F C D	+	TR Interse  2010 E Lane Group  DefL TR LTR	0.60 0.63 ection <b>Build wit</b> v/c Ratio 1.12 0.51 0.74	17.7 18.1 17.9 h Improve Delay (spv) 108.5 33.6 39.7	B B Coments LOS F C D
Southbound  Intersections Pearl & Dover/ Eastbound Westbound Northbound	Lane Group Frankfort/E DefL TR LTR DefL	2010 No Ratio BB 1.12 0.49 0.74 1.51	Delay (spv)  108.5 32.4 39.7 267	F C D	Lane Group  DefL TR LTR DefL	Peak Ho 2010 v/c Ratio  1.12 0.51 0.74 1.51	Dur Delay (spv)  108.5 33.6 39.7 269.8	LOS  F C D F	+	TR Interse  2010 E Lane Group  DefL TR LTR DefL	0.60 0.63 ection  Build wit v/c Ratio  1.12 0.51 0.74 1.40	17.7 18.1 17.9 h Improve Delay (spv) 108.5 33.6 39.7 231.1	B B Coments LOS F C D F
Southbound  Intersections Pearl & Dover/ Eastbound Westbound Northbound	Lane Group Frankfort/E DefL TR LTR DefL TR	2010 No V/c Ratio 3B 1.12 0.49 0.74 1.51 0.94 0.8	Delay (spv)  108.5 32.4 39.7 267 34.6	F C D F C	Lane Group  DefL TR LTR DefL TR	Peak Ho 2010 v/c Ratio  1.12 0.51 0.74 1.51 0.94 0.81	Dur Delay (spv)  108.5 33.6 39.7 269.8 34.6	LOS  F C D F C	+	Z010 E Lane Group  DefL TR LTR DefL TR	0.60 0.63 ection  Build wit v/c Ratio  1.12 0.51 0.74 1.40 0.94 0.97	17.7 18.1 17.9 h Improve Delay (spv) 108.5 33.6 39.7 231.1 34.7	B B Coments Los F C D F C
Intersections Pearl & Dover/ Eastbound Westbound Northbound Southbound	Lane Group Frankfort/E DefL TR LTR DefL TR LTR	2010 No V/c Ratio 3B 1.12 0.49 0.74 1.51 0.94 0.8	Delay (spv)  108.5 32.4 39.7 267 34.6 19.4	F C D F C B	Lane Group  DefL TR LTR DefL TR LTR DefL TR LTR	Peak Ho 2010 v/c Ratio  1.12 0.51 0.74 1.51 0.94 0.81	Dur Delay (spv)  108.5 33.6 39.7 269.8 34.6 19.5	LOS  F C D F C B	+	TR Interse  2010 E Lane Group  DefL TR LTR DefL TR LTR LTR LTR	0.60 0.63 ection  Build wit v/c Ratio  1.12 0.51 0.74 1.40 0.94 0.97	17.7 18.1 17.9 h Improve Delay (spv) 108.5 33.6 39.7 231.1 34.7 42.9	B B B Ements  LOS  F C D F C D F C D
Intersections Pearl & Dover/ Eastbound Westbound	Lane Group Frankfort/E DefL TR LTR DefL TR LTR	2010 No V/c Ratio 3B 1.12 0.49 0.74 1.51 0.94 0.8	Delay (spv)  108.5 32.4 39.7 267 34.6 19.4	F C D F C B	Lane Group  DefL TR LTR DefL TR LTR DefL TR LTR	Peak Ho 2010 v/c Ratio  1.12 0.51 0.74 1.51 0.94 0.81	Dur Delay (spv)  108.5 33.6 39.7 269.8 34.6 19.5	LOS  F C D F C B	+	TR Interse  2010 E Lane Group  DefL TR LTR DefL TR LTR LTR LTR	0.60 0.63 ection  Build wit v/c Ratio  1.12 0.51 0.74 1.40 0.94 0.97	17.7 18.1 17.9 h Improve Delay (spv) 108.5 33.6 39.7 231.1 34.7 42.9	B B B Ements  LOS  F C D F C D F C D
Intersections Pearl & Dover/ Eastbound Westbound Northbound Southbound	Lane Group Frankfort/E DefL TR LTR DefL TR LTR	2010 No V/c Ratio 3B 1.12 0.49 0.74 1.51 0.94 0.8	Delay (spv)  108.5 32.4 39.7 267 34.6 19.4	F C D F C B	Lane Group  DefL TR LTR DefL TR LTR DefL TR LTR	Peak Ho 2010 v/c Ratio  1.12 0.51 0.74 1.51 0.94 0.81 ection	Dur Delay (spv)  108.5 33.6 39.7 269.8 34.6 19.5 68.8	LOS  F C D F C B E		TR Interse  2010 E Lane Group  DefL TR LTR DefL TR LTR Interse	0.60 0.63 ection  Build wit v/c Ratio  1.12 0.51 0.74 1.40 0.94 0.97	17.7 18.1 17.9 h Improve Delay (spv) 108.5 33.6 39.7 231.1 34.7 42.9	B B B Cos
Southbound  Intersections Pearl & Dover/ Eastbound Westbound Northbound Southbound Pearl Street / F Westbound Northbound	Lane Group Frankfort/E DefL TR LTR DefL TR LTR	2010 No V/c Ratio 3B 1.12 0.49 0.74 1.51 0.94 0.8	Delay (spv)  108.5 32.4 39.7 267 34.6 19.4	F C D F C B	Lane Group  DefL TR LTR DefL TR LTR Interse	Peak Ho 2010 v/c Ratio  1.12 0.51 0.74 1.51 0.94 0.81 ection	Dur Delay (spv)  108.5 33.6 39.7 269.8 34.6 19.5 68.8	LOS  F C D F C B E		TR Interse  2010 E Lane Group  DefL TR LTR DefL TR LTR Interse	0.60 0.63 ection  Build wit v/c Ratio  1.12 0.51 0.74 1.40 0.94 0.97	17.7 18.1 17.9 h Improve Delay (spv) 108.5 33.6 39.7 231.1 34.7 42.9	B B B Cos
Southbound  Intersections Pearl & Dover/ Eastbound Westbound Northbound Southbound Pearl Street / F Westbound Northbound Southbound Pearl & Waters	Lane Group Frankfort/E DefL TR LTR DefL TR LTR DefL TR LTR OefL TR LTR	2010 No V/c Ratio 3B 1.12 0.49 0.74 1.51 0.94 0.8 ection	Delay (spv)  108.5 32.4 39.7 267 34.6 19.4 68.5	F C D F C B	Lane Group  DefL TR LTR DefL TR LTR Interse	Peak Ho 2010 v/c Ratio  1.12 0.51 0.74 1.51 0.94 0.81 ection	Dur Delay (spv)  108.5 33.6 39.7 269.8 34.6 19.5 68.8	LOS  F C D F C B E		TR Interse  2010 E Lane Group  DefL TR LTR DefL TR LTR Interse	0.60 0.63 ection  Build wit v/c Ratio  1.12 0.51 0.74 1.40 0.94 0.97	17.7 18.1 17.9 h Improve Delay (spv) 108.5 33.6 39.7 231.1 34.7 42.9	B B B Cos
Intersections Pearl & Dover/ Eastbound Westbound Northbound Southbound Pearl Street / F Westbound Northbound Southbound Pearl & Waters Westbound	Lane Group Frankfort/E DefL TR LTR DefL TR LTR DefL TR LTR OefL TR LTR	2010 No V/c Ratio 3B 1.12 0.49 0.74 1.51 0.94 0.8 ection	Delay (spv)  108.5 32.4 39.7 267 34.6 19.4 68.5	F C D F C B E	Lane Group  DefL TR LTR DefL TR LTR Interse	1.12 0.51 0.74 1.51 0.94 0.81 ection	Dur Delay (spv)  108.5 33.6 39.7 269.8 34.6 19.5 68.8  uired Durin	F C D F C B E	( Peri	TR Interse  2010 E Lane Group  DefL TR LTR DefL TR LTR DefL TR LTR interse	0.60 0.63 ection  Build wit v/c Ratio  1.12 0.51 0.74 1.40 0.94 0.97	17.7 18.1 17.9 h Improve Delay (spv) 108.5 33.6 39.7 231.1 34.7 42.9	B B B Ements  LOS  F C D F C D F C D
Southbound  Intersections Pearl & Dover/ Eastbound Westbound Northbound Southbound Pearl Street / F Westbound Northbound Southbound Pearl & Waters Westbound Northbound	Lane Group Frankfort/E DefL TR LTR DefL TR LTR DefL TR LTR OefL TR LTR	2010 No V/c Ratio 3B 1.12 0.49 0.74 1.51 0.94 0.8 ection	Delay (spv)  108.5 32.4 39.7 267 34.6 19.4 68.5	F C D F C B E	Lane Group  DefL TR LTR DefL TR LTR Interse	1.12 0.51 0.74 1.51 0.94 0.81 ection	Dur Delay (spv)  108.5 33.6 39.7 269.8 34.6 19.5 68.8  uired Durin	F C D F C B E	( Peri	TR Interse  2010 E Lane Group  DefL TR LTR DefL TR LTR DefL TR LTR interse	0.60 0.63 ection  Build wit v/c Ratio  1.12 0.51 0.74 1.40 0.94 0.97	17.7 18.1 17.9 h Improve Delay (spv) 108.5 33.6 39.7 231.1 34.7 42.9	B B B Cos
Southbound  Intersections Pearl & Dover/ Eastbound Westbound Northbound Southbound Pearl Street / F Westbound Northbound Southbound Pearl & Waters Westbound Northbound Southbound Southbound Southbound Southbound Southbound	Lane Group Frankfort/E DefL TR LTR DefL TR LTR DefL TR LTR Seck Slip	2010 No V/c Ratio 38B 1.12 0.49 0.74 1.51 0.94 0.8 ection	Delay (spv)  108.5 32.4 39.7 267 34.6 19.4 68.5	F C D F C B E	Lane Group  DefL TR LTR DefL TR LTR Interse	1.12 0.51 0.74 1.51 0.94 0.81 ection	Dur Delay (spv)  108.5 33.6 39.7 269.8 34.6 19.5 68.8  uired Durin	F C D F C B E	( Peri	TR Interse  2010 E Lane Group  DefL TR LTR DefL TR LTR DefL TR LTR interse	0.60 0.63 ection  Build wit v/c Ratio  1.12 0.51 0.74 1.40 0.94 0.97	17.7 18.1 17.9 h Improve Delay (spv) 108.5 33.6 39.7 231.1 34.7 42.9	B B B Cos
Intersections Pearl & Dover/ Eastbound Westbound Westbound Southbound Pearl Street / F Westbound Northbound Southbound Pearl & Waters Westbound Northbound Southbound Southbound Southbound Southbound Southbound Southbound	Lane Group Frankfort/E DefL TR LTR DefL TR LTR DefL TR LTR Seck Slip	2010 No V/c Ratio 38B 1.12 0.49 0.74 1.51 0.94 0.8 ection	Delay (spv)  108.5 32.4 39.7 267 34.6 19.4 68.5	F C D F C B E	Lane Group  DefL TR LTR DefL TR LTR Interse	1.12 0.51 0.74 1.51 0.94 0.81 ection	Dur Delay (spv)  108.5 33.6 39.7 269.8 34.6 19.5 68.8  uired Durin	F C D F C B E	( Peri	TR Interse  2010 E Lane Group  DefL TR LTR DefL TR LTR DefL TR LTR interse	0.60 0.63 ection  Build wit v/c Ratio  1.12 0.51 0.74 1.40 0.94 0.97	17.7 18.1 17.9 h Improve Delay (spv) 108.5 33.6 39.7 231.1 34.7 42.9	B B B Cos
Southbound  Intersections Pearl & Dover/ Eastbound Westbound Westbound Southbound Pearl Street / F Westbound Northbound Southbound Pearl & Waters Westbound Northbound Southbound Southbound Southbound Southbound Southbound	Lane Group Frankfort/E DefL TR LTR DefL TR LTR DefL TR LTR Seck Slip	2010 No V/c Ratio 38B 1.12 0.49 0.74 1.51 0.94 0.8 ection	Delay (spv)  108.5 32.4 39.7 267 34.6 19.4 68.5	F C D F C B E	Lane Group  DefL TR LTR DefL TR LTR Interse	1.12 0.51 0.74 1.51 0.94 0.81 ection	Dur Delay (spv)  108.5 33.6 39.7 269.8 34.6 19.5 68.8  uired Durin	F C D F C B E	( Peri	TR Interse  2010 E Lane Group  DefL TR LTR DefL TR LTR DefL TR LTR interse	0.60 0.63 ection  Build wit v/c Ratio  1.12 0.51 0.74 1.40 0.94 0.97 ection	17.7 18.1 17.9 h Improve Delay (spv) 108.5 33.6 39.7 231.1 34.7 42.9 71.6	B B B Coments Los F C D F C D E
Southbound  Intersections Pearl & Dover/ Eastbound Westbound Northbound Southbound Pearl Street / F Westbound Northbound Southbound Pearl & Waters Westbound Northbound Southbound Southbound Southbound Southbound Southbound Southbound	Lane Group Frankfort/E DefL TR LTR DefL TR LTR OefL TR LTR Interse Peck Slip  Streets / Be	2010 No V/c Ratio 3B 1.12 0.49 0.74 1.51 0.94 0.8 ection	108.5 32.4 39.7 267 34.6 19.4 68.5	F C D F C B E	Lane Group  DefL TR LTR DefL TR LTR Interse	Peak He   2010   v/c   Ratio   1.12   0.51   0.74   1.51   0.94   0.81   ection   ement Req	Dur Delay (spv)  108.5 33.6 39.7 269.8 34.6 19.5 68.8  uired Durin	FCDFCBBE	( Peri	TR Interse  2010 E Lane Group  DefL TR LTR DefL TR LTR interse	0.60 0.63 ection  Build wit v/c Ratio  1.12 0.51 0.74 1.40 0.94 0.97 ection	17.7 18.1 17.9 h Improve (spv) 108.5 33.6 39.7 231.1 34.7 42.9 71.6	B B B Coments  LOS  F C D F C D E
Southbound  Intersections Pearl & Dover/ Eastbound  Westbound  Westbound  Southbound  Pearl Street / F Westbound  Northbound Southbound  Pearl & Waters  Westbound  Northbound Southbound  Southbound  Southbound  Southbound  Southbound  Southbound  Southbound  South Street / F  Eastbound	Lane Group Frankfort/E DefL TR LTR DefL TR LTR Interse Peck Slip  Streets / Be	2010 No V/c Ratio 3B 1.12 0.49 0.74 1.51 0.94 0.8 ection	Delay (spv)  108.5 32.4 39.7 267 34.6 19.4 68.5	F C D F C B E	Lane Group  DefL TR LTR DefL TR LTR Interse	Peak Ho 2010 v/c Ratio  1.12 0.51 0.74 1.51 0.94 0.81 ection ement Req Unsigna	Dur Delay (spv)  108.5 33.6 39.7 269.8 34.6 19.5 68.8  uired Durin  uired Durin	FCDFCBBE	( Peri	TR Interse  2010 E Lane Group  DefL TR LTR DefL TR LTR interse iod  LR LR L T	0.60 0.63 ection  Build wit v/c Ratio  1.12 0.51 0.74 1.40 0.94 0.97 ection	17.7 18.1 17.9 h Improve Delay (spv) 108.5 33.6 39.7 231.1 34.7 42.9 71.6	B B B Coments  LOS  F C D F C D E  C B B
Southbound  Intersections Pearl & Dover/ Eastbound  Westbound  Westbound  Southbound  Pearl Street / F Westbound  Northbound Southbound  Pearl & Waters  Westbound  Northbound Southbound  Southbound  Southbound  Southbound  Southbound  Southbound  Southbound  South Street / F  Eastbound	Lane Group Frankfort/E DefL TR LTR DefL TR LTR Interse Peck Slip  Streets / Be	2010 No V/c Ratio 3B 1.12 0.49 0.74 1.51 0.94 0.8 ection	Delay (spv)  108.5 32.4 39.7 267 34.6 19.4 68.5	F C D F C B E	Lane Group  DefL TR LTR DefL TR LTR Interse	Peak Ho 2010 v/c Ratio  1.12 0.51 0.74 1.51 0.94 0.81 ection ement Req Unsigna	Dur Delay (spv)  108.5 33.6 39.7 269.8 34.6 19.5 68.8  uired Durin	FCDFCBBE	( Peri	TR Interse  2010 E Lane Group  DefL TR LTR DefL TR LTR interse iod	0.60 0.63 ection  Build wit v/c Ratio  1.12 0.51 0.74 1.40 0.94 0.97 ection  0.30 0.23	17.7 18.1 17.9 h Improve (spv) 108.5 33.6 39.7 231.1 34.7 42.9 71.6	B B B Coments  LOS  F C D F C D E  C B

Table 2E-12 2010 No Build, Build and Build with Improvements Level of Service for Unsignalized Intersections

					AM Pe	ak Hour								
	2010 No Build					2010 Build					2010 Build with Improvements			
Intersections	Lane Group	v/c Ratio	Delay (spv)	LOS	Lane Group	v/c Ratio	Delay (spv)	LOS	Lane Group	v/c Ratio	Delay (spv)	LOS		
South St. / Beek	man St.													
Eastbound					LR	0.36	26.9	D	No Improvement Required During A					
Northbound	L	0.04	9.9	Α					·	Peak F	Period	•		
South St. / John	St.													
Eastbound	LR	0.42	31.0	D	LR	0.45	34.3	D	Signalized under Build conditions					
Northbound	L	0.06	9.4	А	L	0.08	9.7	Α		with Impro				
					PM Pe	ak Hour								
		2010 No	o Build		2010 Build				2010 Build with Improvements					
Intersections	Lane Group	v/c Ratio	Delay (spv)	LOS	Lane Group	v/c Ratio	Delay (spv)	LOS	Lane Group	v/c Ratio	Delay (spv)	LOS		
South St. / Beek	man St.													
Eastbound					LR	0.51	35.0+	E+	LR	0.27	26.0	D		
Northbound	L	0.05	9.9	Α										
South St. / John	St.													
Eastbound	LR	0.54	35.1	Е	LR	0.62	45.1	E+	Signalized under Build conditions					
Northbound		0.03	9.3	Α		0.07	9.9	Α	with Improvements					

**Notes:** L = Left Turn, T = Through, R = Right Turn, DefL = Defacto Left Turn; LOS = Level of Service.

Table 2E-13 Off-Street Parking Supply and Demand in the 2010 Build Condition

	AM Peak	Midday Peak	PM Peak
2010 Build Parking Supply	1,878	1,878	1,878
2010 Build Parking Demand	2,186	2,694	2,127
2010 No Build Parking Utilization	113%	139%	110%
2010 No Build Parking Surplus/(Shortfall)	(308)	(816)	(249)

<sup>+ =</sup> Impact requiring improvements

Table 2E-14 Pedestrian-Related Accidents by Year and Location

Inte	rsection	Number of Reportable Accidents									
North-South	Total			Pedestrian – Related							
Roadway	East-West Roadway	Reportable	<b>Fatalities</b>	Injuries	Total	2003	2004	2005			
Pearl Street.	Dover/Frankfort Sts.	17		14	4	2	2				
Pearl Street	Peck Slip	5		8	1			1			
Pearl /Water Streets	Beekman Street	3		5	0						
Water Street	John Street	4		4	2	1		1			
South Street	Dover Street	1		1	1		1				
South Street	Peck Slip	2		1	1		1				
South Street	Beekman Street	0									
South Street	John Street	2		2	1			1			
Water Street	Peck Slip	0									
Front Street	Peck Slip	3		5	1	1		•			
Front Street	Beekman Street	0		_							
Source: NYCDO7	Source: NYCDOT										

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