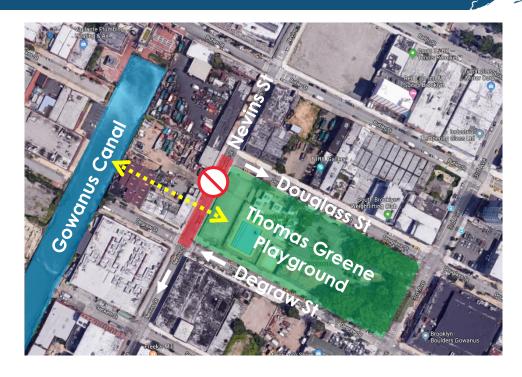


Introduction

- The purpose of this analysis is to test how the closure of Nevins St between Douglass St and Degraw St for better connection between Thomas Greene Playground and waterfront site would affect the street network in Gowanus.
- 2 scenarios are analyzed for future Nevins Closure to test a range of different routes vehicles would take as alternatives:
 - Existing Condition
 - Future Scenario
 - With Improvements
 - Nevins Closure (50&50 Scenario)
 - Nevins Closure (Mixed Scenario)
- Analysis Time Period:
 - Weekday AM Peak (Less Affected*)
 - Weekday PM Peak (Focus)
- Intersection Level of Service (LOS) Definition:

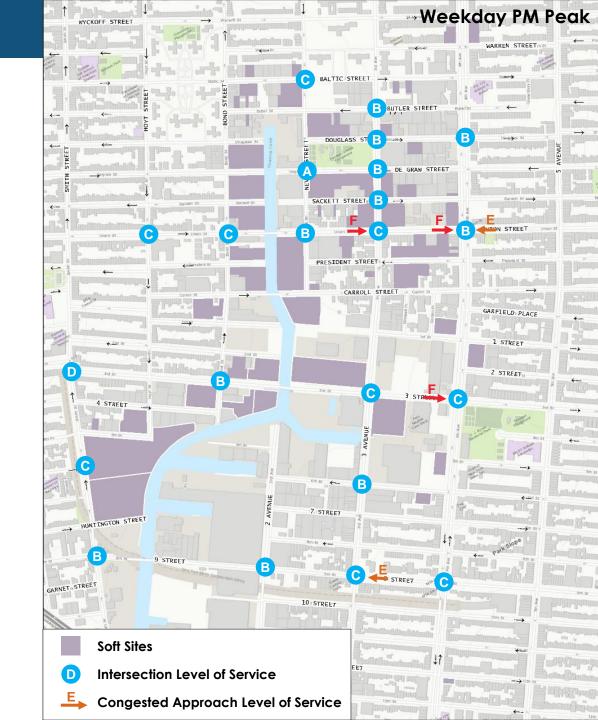


LOS	Delay (seconds/vehicle)	Congestion Level
Α	Less than 10.1	Law
В	10.1 to 20.0	Low
С	20.1 to 35.0	Madium
D	35.1 to 55.0	Medium
Е	55.1 to 80.0	CE-d-
F	Greater than 80.0	High

^{*} Traffic analyses are completed for the weekday AM peak but the results are only shown in the appendix simply because the street network will not be affected much by the closure due to the low volume (72 vehs/hr) of SB through traffic for Nevins St @ Douglass St during AM Peak.

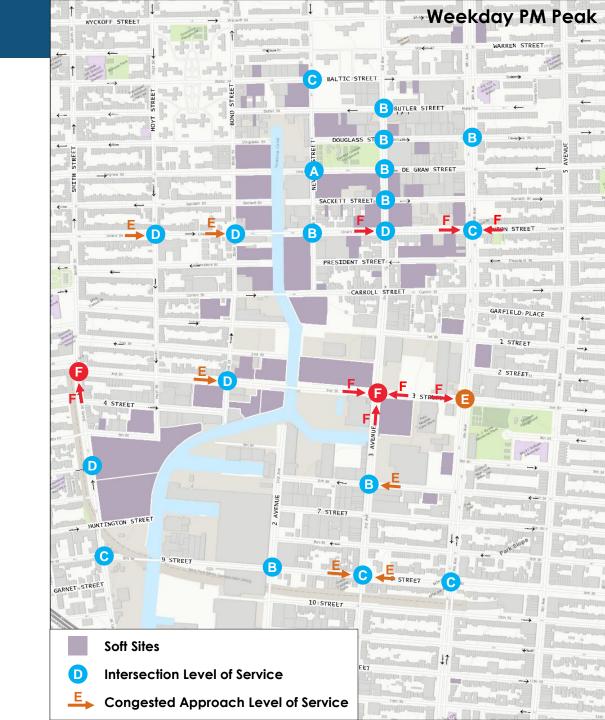
Existing Condition

- 19 signalized intersections, 3 unsignalized intersections, and 1 uncontrolled intersection
- 16 DEP traffic counts collected in 2016 and 7 DCP traffic counts collected in 2017
- Focus on weekday PM peak for this analysis
- Intersections with congested approaches:
 - 4th Ave @ Union St (EB & WB)
 - 4th Ave @ 3rd St (EB)
 - 3rd Ave @ Union St (EB)
 - 3rd Ave @ 9th St (WB)



Future Scenario

- With future background growth and projected land development after rezoning
- Intersections with congested approaches:
 - 4th Ave @ Union St (EB & WB)
 - 4th Ave @ 3rd St (EB)
 - 3rd Ave @ Union St (EB)
 - 3rd Ave @ 3rd St (EB & WB & NB)
 - 3rd Ave @ 6th St (WB)
 - 3rd Ave @ 9th St (EB & WB)
 - Bond St @ Union St (EB)
 - Bond St @ 3rd St (EB)
 - Hoyt St @ Union St (EB)
 - Smith St @ 3rd St (NB)



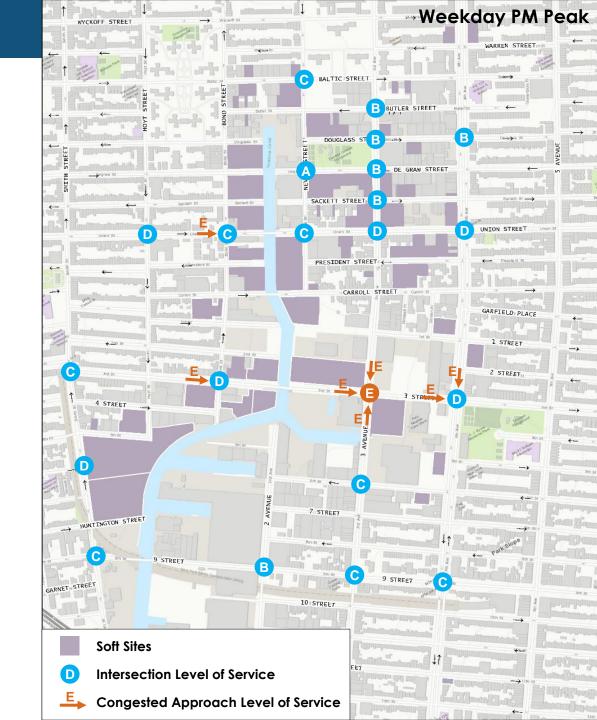
With Improvements

Improvements:

- Change signal timings
- Eliminate left turns
- Daylight corners to add exclusive right-turn lanes
- Divert 25% 3rd St EB traffic to Union St

Intersections with congested approaches:

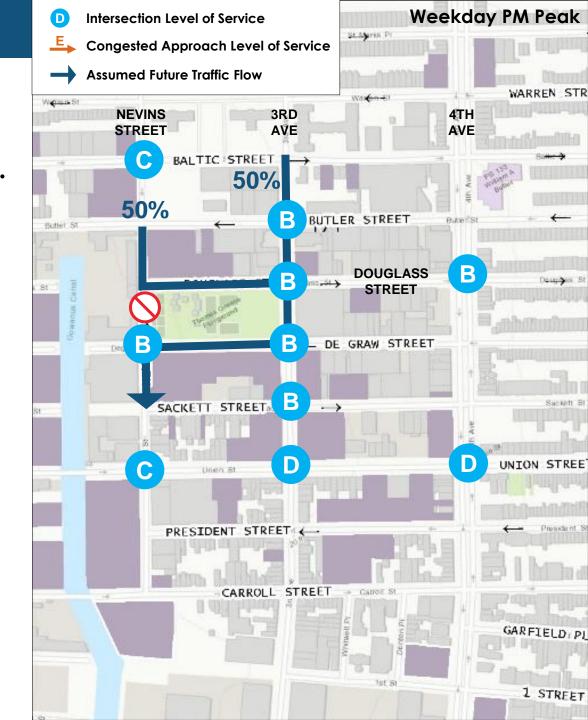
- 4th Ave @ 3rd St (EB & SB)
- 3rd Ave @ 3rd St (EB & NB & SB)
- Bond St @ Union St (EB)
- Bond St @ 3rd St (EB)



Nevins Closure (50&50 Scenario)

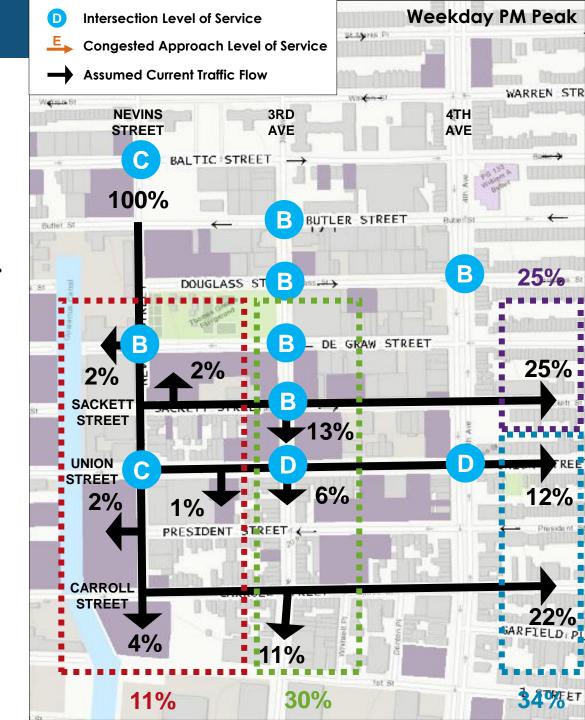
- Closing Nevins St between Douglass St and Degraw St will require redirecting <u>280 vehs/hr SB</u> <u>through traffic</u> for Nevins St @ Douglass St during PM peak in the future With Improvements scenario.
- The <u>50&50 Scenario</u> assumes in the future:
 - 50% of vehicles will zigzag
 (Nevins=>Douglass=>3rd=>Degraw=>Nevins).
 - <u>50% of vehicles will use 3rd Ave</u> (3rd=>Degraw=>Nevins).
- 3rd Ave @ Douglass St EB will need improvements due to the street closure:
 - Daylight SW corner to add an EB exclusive right-turn lane.





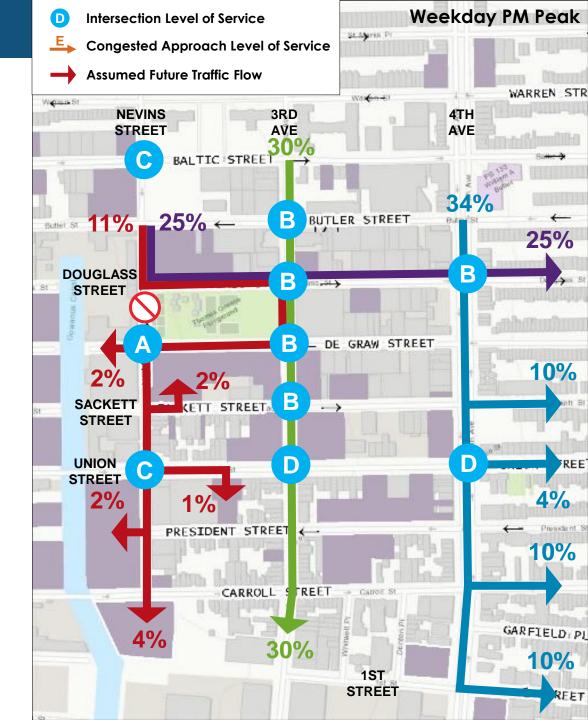
Nevins Closure (Mixed Scenario)

- Closing Nevins St between Douglass St and Degraw St will require redirecting <u>280 vehs/hr SB</u> <u>through</u> traffic for Nevins St @ Douglass St during PM peak in the future With Improvements scenario.
- The Mixed Scenario first made assumptions on the <u>current traffic flow</u> based on the traffic data, development scenario, and origin-destination data:
 - 11% is accessing sites along Nevins St
 - 30% is ultimately turning to 3rd Ave to head south
 - 25% is going east along Sackett St
 - 34% is heading east through Union St and Carroll St



Nevins Closure (Mixed Scenario)

- Based on the assumptions of current traffic flow, vehicles will be redirected to different routes:
 - 11% will zigzag to access sites along Nevins St (Nevins=>Douglass=>3rd=>Degraw=>Nevins)
 - 30% will use 3rd Ave to head south instead of through Nevins St
 - <u>25% will turn to east from Nevins St along Douglass St instead of Sackett St</u>
 - 34% will make left turns at various intersections (Sackett St, Union St, Carroll St, and 1st St) on 4th Ave to head east
- 3rd Ave @ Douglass St EB will need improvements due to the street closure:
 - Daylight SW corner to add an EB exclusive right-turn lane



Conclusion



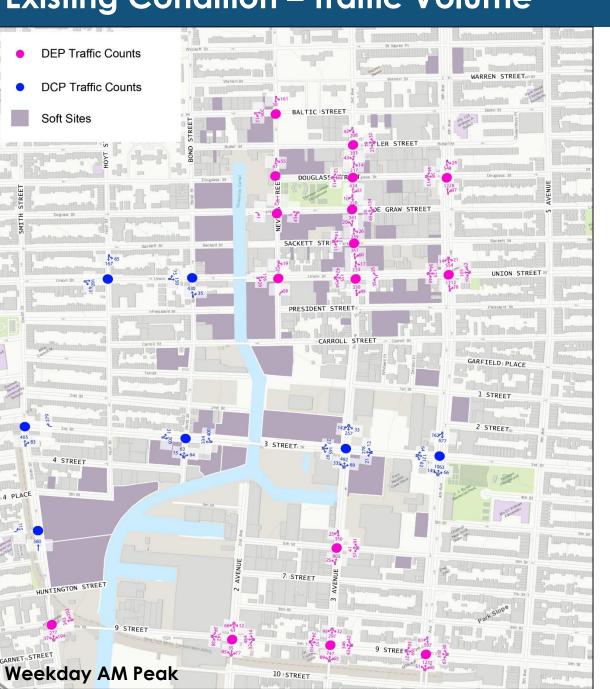
- There are lower traffic volumes on Nevins during Weekday AM Peak compared to Weekday PM Peak.
- No Weekday Midday or Weekend data is available for DEP traffic counts, but in general there are lower traffic volumes during those two periods within the study area based on DCP traffic counts.
- 3rd Ave @ Douglass St is the most affected intersection by the Nevins closure.
 - Needs improvements such as daylighting.
 - Some other intersections might also be affected, especially left turns on 4th Ave, in addition to the intersections analyzed.
- The Nevins closure is generally feasible, but the benefit gained for pedestrian may not necessarily beat the impact on traffic.
 - Side streets around Thomas Greene Playground (especially Douglass St) may suffer from extra traffic, which will also affect the user experience of the park.
 - Alternatives like temporary closure on weekends, Play Streets, shared street, or other traffic calming options might be preferred.
 - Closure should happen after the reconstruction of the playground and the redevelopment of the waterfront site.

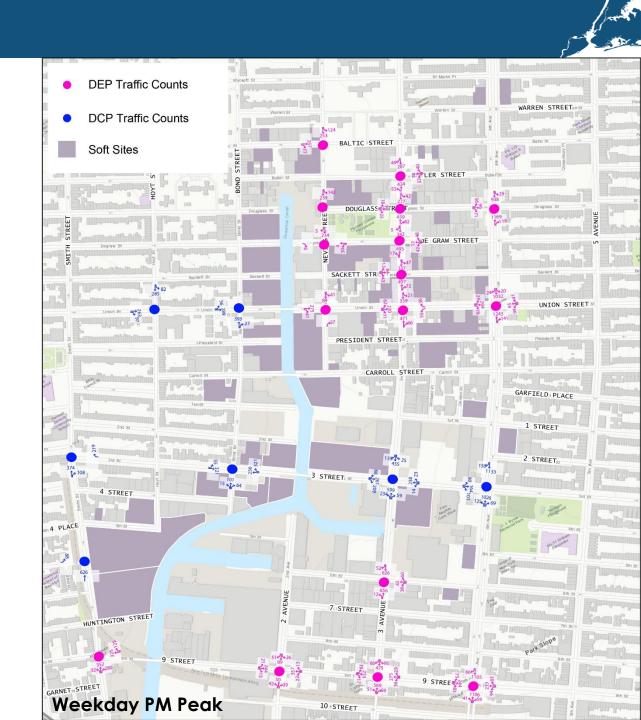




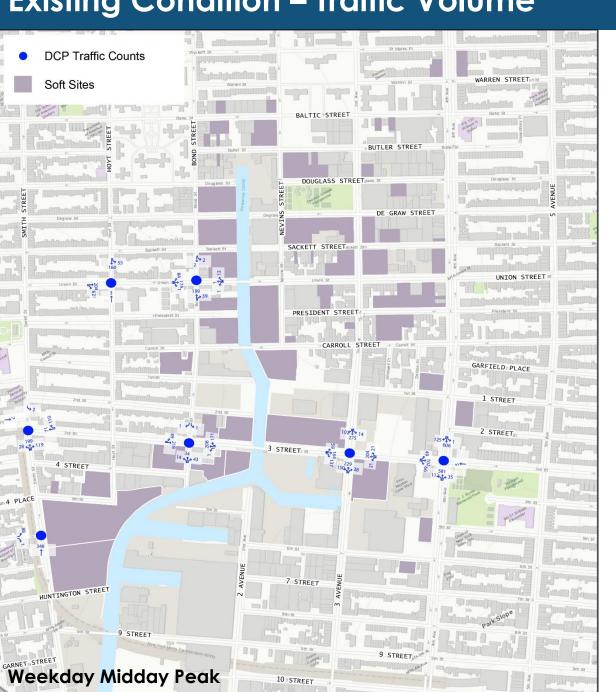


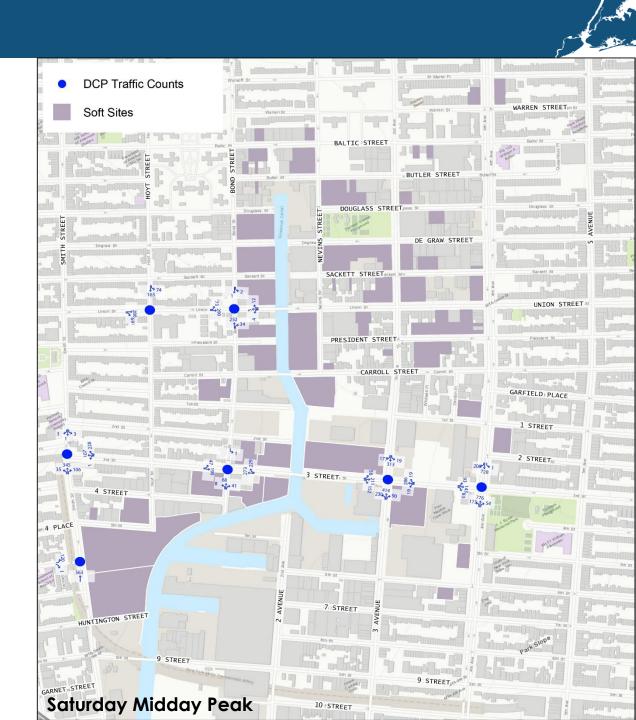
Existing Condition – Traffic Volume





Existing Condition – Traffic Volume

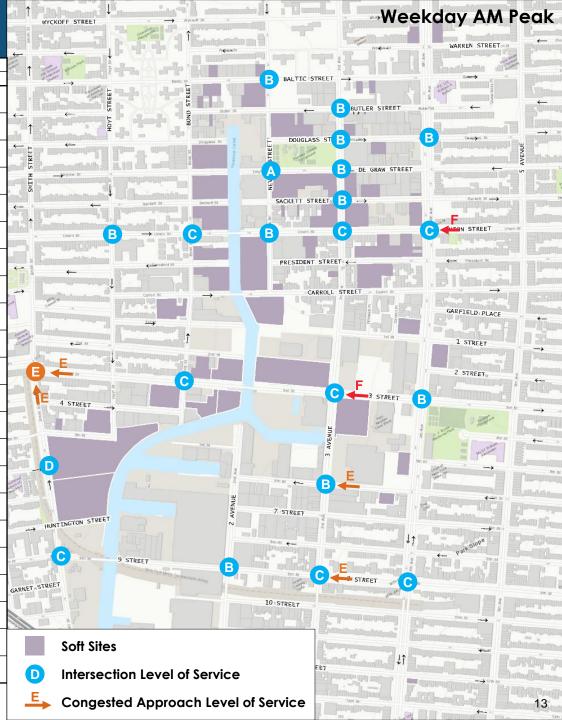




Existing Condition – AM LOS

LAISIIII		Idii			WV							
		Eastbound	i	١	<i>Nestbound</i>	d	N	Iorthboun	d	S	outhboun	d
Intersection	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
4th Ave @ Douglass St (Signalized)	(0.1)** 8)**	C (0.03)		-		-	(O.		C (0.26)	B (0.42)	-
4th Ave @ Union St (Signalized)		D (0.77)			F (0.97)		-	(0.5)		B (0.16)	(O.3	
4th Ave @ 3rd St (Signalized)		D (0.74)			-		B (0.45)	(0. <i>c</i>		-	(0.6	53)
4th Ave @ 9th St (Signalized)	D (0.42)	D (0.42)	C (0.09)	D (0.30)	D (0.71)	D (0.38)	B (0.16)	(O.7		-	(0.5	
3rd Ave @ Butler St (Signalized)		-			C (0.30)			B 39)	-	-	(0.4	
3rd Ave @ Douglass St (Signalized)		C (0.10)			-		-	(O.3			2 40)	-
3rd Ave @ Degraw St (Signalized)		-			C (0.54)			B 27)	-	-	(O.3	
3rd Ave @ Sackett St (Signalized)		C (0.11)		D	-		-	(O.3	30)	(0.	3 42)	-
3rd Ave @ Union St (Signalized)		D (0.61) D D (0.37) (0.70)				C 12)	-	(O.4	47)	(0.	3 31)	-
3rd Ave @ 3rd St (Signalized)	D D				F (1.03)		C (0.76)	(0.0		A (0.10)	(O.4	42)
3rd Ave @ 6th St (Signalized)	-				E (0.74)		(0.	47)	-	-	(O.4	42)
3rd Ave @ 9th St (Signalized)	E (0.52)) 42)	D F D (0.23) (0.95) (0.17)			B (0.24)	(0.4		B (0.16)	E (0.4	
Nevins St @ Baltic St (Unsignalized)		B (0.36)		-				-			B (0.32)	
Nevins St @ Degraw St (Unsignalized)		A (0.00)			A (0.08)		-				A (0.07)	
Nevins St @ Union St (Signalized)	-		34)		-			-	B (0.17)		3 14)	-
2nd Ave @ 9th St (Signalized)	B (0.20)	(0.	32)	B (0.12)	(0.	C 81)		B (0.37)			B (0.28)	
Bond St @ Union St (Signalized)	(0.		-		-	Γ	-	(0.7			-	
Bond St @ 3rd St (Signalized)	_	- /	-	-	B (0.45)	C (0.89)		B (0.38)			-	
Hoyt St @ Union St (Signalized)	(0.43) C - (0.69)			-			-			3 45)	-	
Smith St @ 3rd St (Signalized)	-			-	E (0.99)	_ E (1.01)				-		
Smith St @ Luquer St (Unsignalized)		D (0.43)			-		-			-		
Smith St @ 9th St (Signalized)		-		-	B (0.72)	D (0.84)	B C (0.60)			-		
* Lano Croup Lovel of S	onico Isi	مم مانحم ط۱	/ Total La	0010101	of Convice	Ulpsianal	i=0.d1					

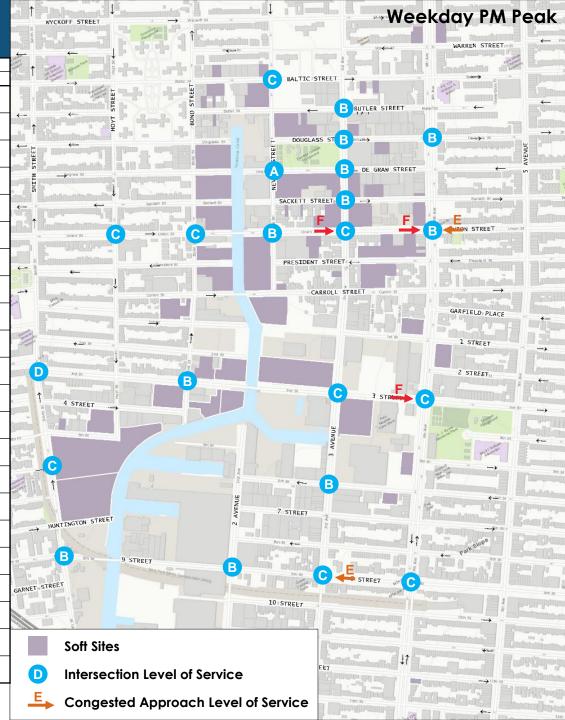
^{*} Lane Group Level of Service (Signalized) / Total Lane Level of Service (Unsignalized) ** Lane Group v/c Ratio (Signalized) / Degree of Utilization (Unsignalized)



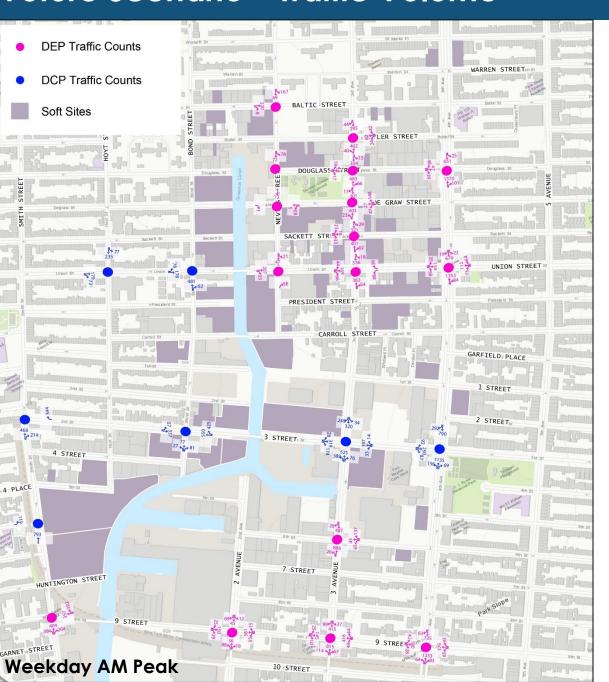
Existing Condition – PM LOS

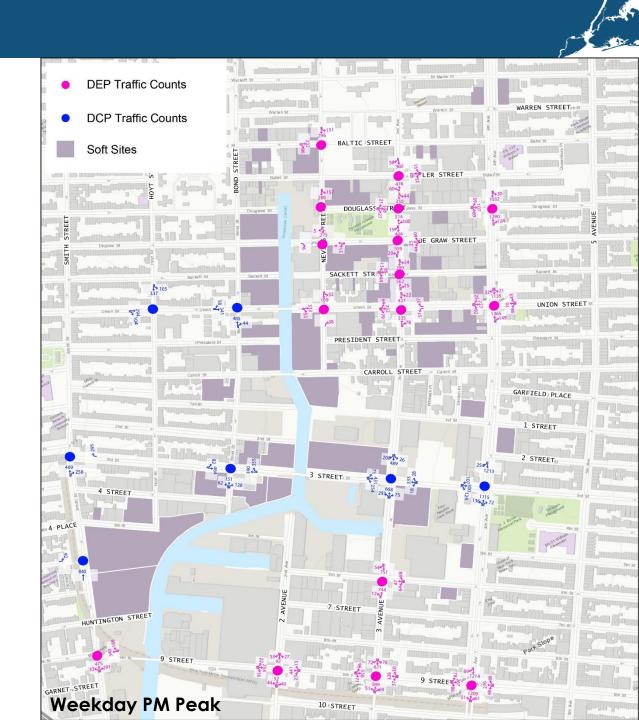
		. 4.11			// .	. • •						
Interes alien		Eastbound	t	\	<i>Nestboun</i>	d	N	Iorthboun	d	S	outhboun	d
Intersection	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
4th Ave @ Douglass St (Signalized))* 2)**	C (0.21)		-		-	(O.:		B (0.22)	A (0.55)	-
4th Ave @ Union St	(0.1	E	(0.21)		F			(O.C		В		4
(Signalized)		(0.88)			(0.98)		-	(0.3	57)	(0.17)	(0.	56)
4th Ave @ 3rd St		F			-		B (0.40)	E (0.		_		3
(Signalized)		(0.97)					(0.48) C	(0.3			(0.8	
4th Ave @ 9th St (Signalized)	D (0.48)	D (0.56)	D (0.31)	D (0.63)	D (0.57)	(0.37)	(0.15)	(0.7		-	(0.5	
3rd Ave @ Butler St	(0.40)		(0.01)	(0.00)	D	(0.57)		3	, 1)		•	/ / /
(Signalized)		-			(0.57)			60)	-	-	(0.4	-
3rd Ave @ Douglass St		D			_		_	E			4	
(Signalized)		(0.44)					ļ .	(0.	53)	(0.	42)	
3rd Ave @ Degraw St (Signalized)		-			D (0.38)			3 50)	-	-	(0.3	381 3
3rd Ave @ Sackett St		D			•		(0.	E	3	,	<u> </u>	30)
(Signalized)		(0.49)			-		-	(0.5			51)	-
3rd Ave @ Union St		F		D		0	_	Е			4	
(Signalized)		(1.00)		(0.55)		12)		(0.3			39)	
3rd Ave @ 3rd St (Signalized)	D (0.38)	(O.	<u> </u>		D (0.66)		D (0.86)	3.0)		B (0.18)	(O.	3 431
3rd Ave @ 6th St	(0.30)	(0.	071		(0.00) D		_ `	3	55)	(0.10)	(0.6	
(Signalized)		-			(0.50)			39)	-	-	(0.5	
3rd Ave @ 9th St	D			D	Е	D	В	E		В	P	
(Signalized)	(0.39)		71)	(0.39)	(0.76)	(0.09)	(0.13)	.0)	39)	(0.28)	(0.	51)
Nevins St @ Baltic St		B (0.54)			-			-			C (0.40)	
(Unsignalized) Nevins St @ Degraw St		(0.56) A			Α						(0.62) A	
(Unsignalized)		(0.01)			(0.05)			-			(0.31)	
Nevins St @ Union St			3		,				В	E	3	
(Signalized)	-	(0.			-		•	-	(0.10)		35)	-
2nd Ave @ 9th St	В (2.22)	· -	3	B		В		B			B	
(Signalized) Bond St @ Union St	(0.09)	[(0)	41) 	(0.07)	(0.	56)		(0.32))		(0.37)	
(Signalized)	(0.		-		-		-	(0.7			-	
Bond St @ 3rd St		3			Α	В		В	• ,			
(Signalized)	(0.	64)	-	-	(0.37)	(0.70)		(0.41)				
Hoyt St @ Union St	_				_			_			3	_
(Signalized)		(0.	95)					_		(0.	62)	
Smith St @ 3rd St (Signalized)		-			-	C (0.68)	-	D (0.9)			-	
Smith St @ Luquer St		С				[0.00]		₁ (0.)	<i>/</i> ~ <i>)</i>			
(Unsignalized)		(0.29)			-			-			-	
Smith St @ 9th St				_	В	В	(С		_	
(Signalized)					(0.61)	(0.33)	(0.	64)	(0.71)			
* Lane Group Level of S	ervice (Sid	analized)	/ Total La	ne Level d	of Service	(Unsignal	ized)					

^{*} Lane Group Level of Service (Signalized) / Total Lane Level of Service (Unsignalized) ** Lane Group v/c Ratio (Signalized) / Degree of Utilization (Unsignalized)



Future Scenario – Traffic Volume

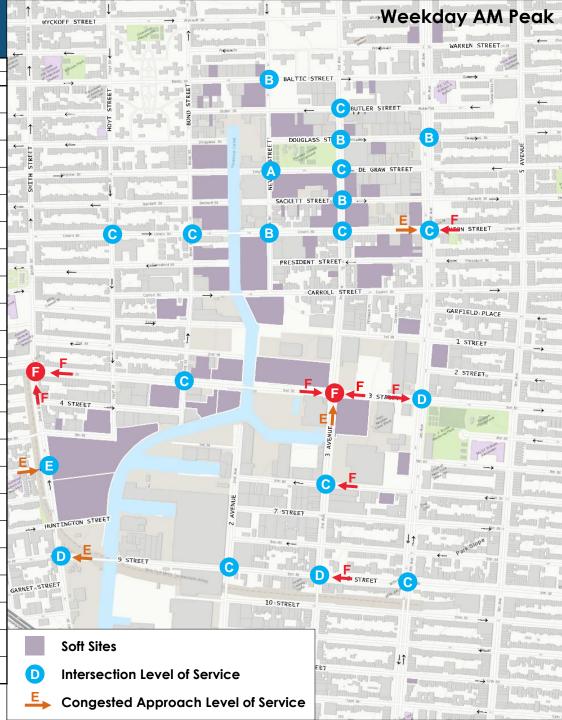




Future Scenario – AM LOS

101016 30	<i>-</i> C11	MIT	,		LO	J						
		Eastbound		١ .	Westbound	ł	N	Iorthboun	d	S	outhboun	d
Intersection	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
4th Ave @ Douglass St (Signalized))* 20)**	C (0.07)		-		-	(0.:		C (0.34)	B (0.49)	-
4th Ave @ Union St (Signalized)		E (0.94)			F (1.11)		-	(0.0	A 61)	B (0.20)	B (0.4	
4th Ave @ 3rd St (Signalized)		F (1.27)			-		C (0.59)	(0.0		-	(0.8	
4th Ave @ 9th St (Signalized)	E (0.62)	D (0.44)	C (0.10)	D (0.32)	E (0.84)	D (0.39)	C (0.22)	E (0.8		-	(0.0	
3rd Ave @ Butler St (Signalized)		-			C (0.29)			B 45)	-	-	(0.0	
3rd Ave @ Douglass St (Signalized)		C (0.14)			-		-	(O.		(0.	56)	-
3rd Ave @ Degraw St (Signalized)		-			D (0.60)			B 32)	-	-	(O.	
3rd Ave @ Sackett St (Signalized)		C (0.32)			-		ı	(O.:		(0.	55)	-
3rd Ave @ Union St (Signalized)		D (0.74)		D (0.50)	(0.		-	(O.			3 43)	-
3rd Ave @ 3rd St (Signalized)	E (0.58)	f (1.3	= 39)		F (5.28)		F (1.23)	(0.	4 69)	A (0.11)	(O.	
3rd Ave @ 6th St (Signalized)		-			F (0.97)			۹ 51)	-	ı	(O.5	
3rd Ave @ 9th St (Signalized)	E (0.55)	[.0)) 44)	D (0.25)	F (1.14)	D (0.18)	B (0.40)	(0.s		B (0.20)	(O.	
Nevins St @ Baltic St (Unsignalized)		B (0.37)			-			=			B (0.37)	
Nevins St @ Degraw St (Unsignalized)		A (0.00)			A (0.14)			-			A (0.11)	
Nevins St @ Union St (Signalized)	-	_	3 44)		-			-	B (0.18)		3 19)	-
2nd Ave @ 9th St (Signalized)	B (0.24)	(0.3	34)	B (0.12)	2.0)			B (0.38)			B (0.29)	
Bond St @ Union St (Signalized)	(0.	C 78)	-		-		-	(0.8			-	
Bond St @ 3rd St (Signalized)		C 84)	-	-	B (0.74)	D (0.95)		C (0.50)			-	
Hoyt St @ Union St (Signalized)	-	(0.	78)		-			-			3 60)	-
Smith St @ 3rd St (Signalized)		-			-	F (1.22)	-	F (1.3	: 52)		-	
Smith St @ Luquer St (Unsignalized)		E (0.62)			-			-			-	
Smith St @ 9th St (Signalized)		-		-	C (0.80)	F (1.13)		C 79)	C (0.63)		-	

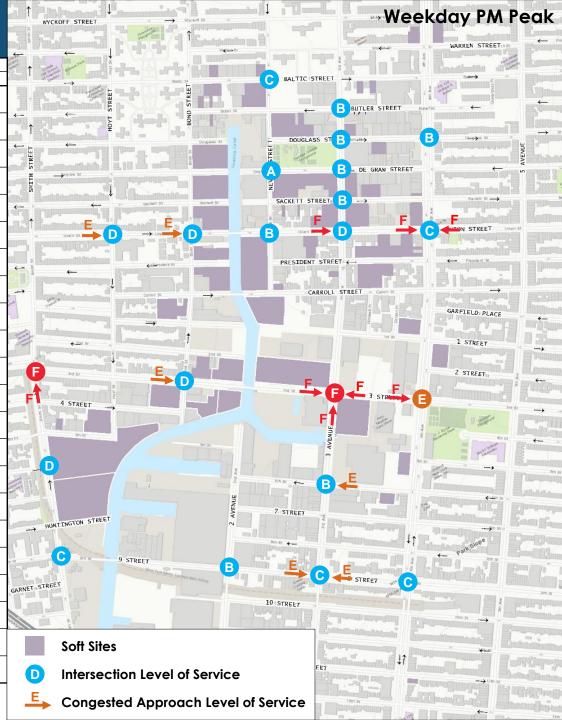
^{*} Lane Group Level of Service (Signalized) / Total Lane Level of Service (Unsignalized)
** Lane Group v/c Ratio (Signalized) / Degree of Utilization (Unsignalized)



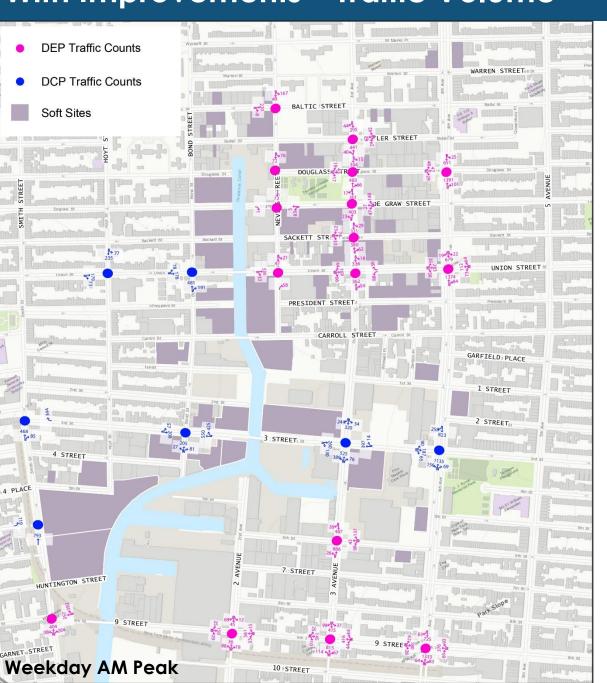
Future Scenario – PM LOS

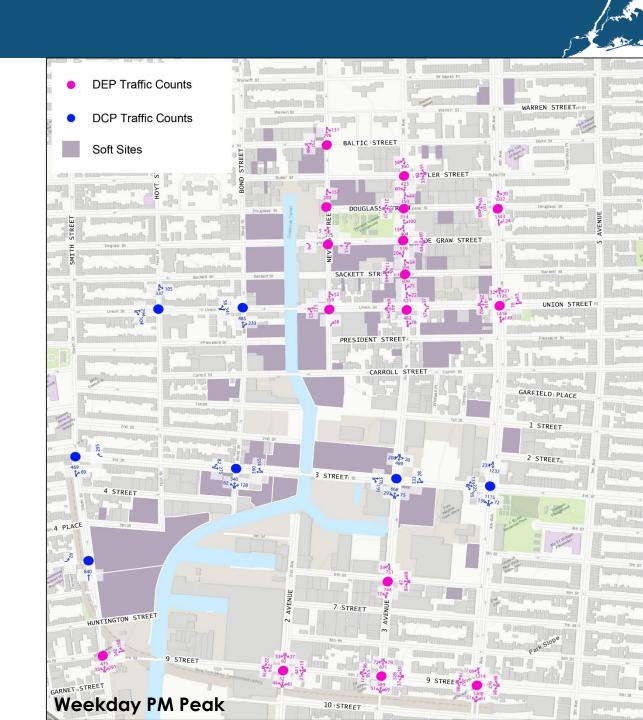
101016 30	<i>-</i> C	MII		. / ۷ ۱	LO	J						
Indones a Para		Eastbound	t	١	<i>Nestbound</i>	d	N	lorthboun	d	S	outhboun	d
Intersection	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
4th Ave @ Douglass St (Signalized))* 6)**	C (0.26)		-		-	(O.:		B (0.27)	A (0.60)	-
4th Ave @ Union St (Signalized)		F (0.99)			F (1.12)		-	(O.		B (0.21)	(0.c	53)
4th Ave @ 3rd St (Signalized)		F (1.47)			-		C (0.60)	(O.		-	(0.9	
4th Ave @ 9th St (Signalized)	D (0.58)	D (0.61)	D (0.32)	E (0.71)	D (0.68)	D (0.38)	C (0.20)	(0.1		-	(0.8	
3rd Ave @ Butler St (Signalized)		-			D (0.69)			B 69)	=	-	(0.5)	
3rd Ave @ Douglass St (Signalized)		D (0.44)			-		-	(O.		,A (0.	4 42)	-
3rd Ave @ Degraw St (Signalized)		-			D (0.47)			B 58)	-	-	A (0.4	
3rd Ave @ Sackett St (Signalized)		D (0.49)		E	-		-	(O.	64)	(0.		-
3rd Ave @ Union St (Signalized)		(1.11) D F (0.54) (1.26)				C 12)	-	(0.		(0.	4 45)	-
3rd Ave @ 3rd St (Signalized)					F (1.41)		F (1.42)	(0.9		B (0.28)	(O.7	75)
3rd Ave @ 6th St (Signalized)		-			E (0.72)		(0.	B 44)	-	-	E (0.8	36)
3rd Ave @ 9th St (Signalized)	E (0.56)	(0.	∃ 74)	D (0.43)	E (0.91)	D (0.10)	B (0.24)	(O.	-	B (0.38)	E (0.	
Nevins St @ Baltic St (Unsignalized)		B (0.55)			-			-			C (0.70)	
Nevins St @ Degraw St (Unsignalized)		(0.01)			A (0.06)			-			A (0.37)	
Nevins St @ Union St (Signalized)	-	(0.	3 64)		-			-	B (0.10)	(O.	44)	-
2nd Ave @ 9th St (Signalized)	B (0.12)	(0.	3 43)	B (0.07)		3 69)		B (0.33)			B (0.38)	
Bond St @ Union St (Signalized)	(1.	E 02) -	-		-	Г _	-	(0.9			-	
Bond St @ 3rd St (Signalized)		E 06)	-	-	B (0.56)	C (0.77)		C (0.81)			-	
Hoyt St @ Union St (Signalized)	-	E (1.	= 05)		-			-			3 74)	-
Smith St @ 3rd St (Signalized)	-			-	D (0.91)	-	f (1.8	52)		-		
Smith St @ Luquer St (Unsignalized)		D (0.41)			-		-				-	
Smith St @ 9th St (Signalized)		-		-	B (0.67)	B (0.49)	C C (0.84) (0.74)			-		
* Lano Croup Lovel of S	onico Isi	analizadl	/ Total La		of Convice	Uncianal	lizod)					

^{*} Lane Group Level of Service (Signalized) / Total Lane Level of Service (Unsignalized) ** Lane Group v/c Ratio (Signalized) / Degree of Utilization (Unsignalized)



With Improvements – Traffic Volume





With Improvements – AM LOS

will illip		CII				' -						
Intersection	E	astbound		1	<i>Nestbound</i>		N	lorthboun		S	outhboun	d
	Left	Through		Left	Through	Right	Left	Through		Left	Through	Right
4th Ave @ Douglass St (Signalized)	(0.2		C (0.07)		-		-	(O.7		C (0.36)	B (0.49)	-
4th Ave @ Union St (Signalized)		D (0.67)			D (0.52)		-	(0.d		B (0.21)	(0.4	
4th Ave @ 3rd St (Signalized)		D (0.83)			-		C (0.71)	(O.7		-	3.0)	
4th Ave @ 9th St (Signalized)	E (0.62)	D (0.44)	C (0.10)	D (0.32)	E (0.84)	D (0.39)	C (0.22)	E (0.8	-	-	(0.0	
3rd Ave @ Butler St (Signalized)		-			C (0.29)			3 43)	-	-	(0.	
3rd Ave @ Douglass St (Signalized)		C (0.14)			-		-	(O.4			56)	-
3rd Ave @ Degraw St (Signalized)		-			D (0.60)		-	3 32)	-	-	(O.	
3rd Ave @ Sackett St (Signalized)		C (0.32)		С	-		-	(O.3	33)	(0.	55)	-
3rd Ave @ Union St (Signalized)		D (0.82)			(0.		-	(0.60)		(0.	50)	-
3rd Ave @ 3rd St (Signalized)					E (0.88)		F (1.10)	(O.7		C (0.16)	(O.S	96)
3rd Ave @ 6th St (Signalized)	-				D (0.77)		(0.		-	-	(0.6	56)
3rd Ave @ 9th St (Signalized)	D (0.31)	(0.	C 32)	C D C (0.17) (0.83) (0.12)			C (0.56)	(O.		C (0.26)	(0.7	
Nevins St @ Baltic St (Unsignalized)		B (0.37)			-			-			B (0.37)	
Nevins St @ Degraw St (Unsignalized)		A (0.00)			A (0.14)		-				A (0.11)	
Nevins St @ Union St (Signalized)	-	(0.	3 66)		-			-	B (0.18)		3 19)	-
2nd Ave @ 9th St (Signalized)	B (0.24)	(0.	34)	B (0.12)	(0.			B (0.38)			B (0.29)	
Bond St @ Union St (Signalized)	(0.1	78)	-		-		-	B (0.72)	B (0.40)		-	
Bond St @ 3rd St (Signalized)	(O.		-	-	B (0.74)	D (0.95)		C (0.80)			-	
Hoyt St @ Union St (Signalized)	-	(0.01) T			-			-			3 60)	-
Smith St @ 3rd St (Signalized)		-			-	D (0.96)	-	D (0.97)	B (0.35)		-	
Smith St @ Luquer St (Unsignalized)		E (0.62)			-			-			-	
Smith St @ 9th St (Signalized)		-		-	C (0.77)	F (1.08)	(0.	C 83)	C (0.67)		-	
* Lane Group Level of S	ervice (Sig	gnalized)	/ Total La	ne Level (of Service	(Unsignal	ized)					

^{*} Lane Group Level of Service (Signalized) / Total Lane Level of Service (Unsignalized)

** Lane Group v/c Ratio (Signalized) / Degree of Utilization (Unsignalized)



9 STREET

4 STREET

Soft Sites

→Weekday AM Peak

GARFIELD PLACE

1 STREET

2 STREET

BALTIC STREET

CARROLL STREE

7 STREET

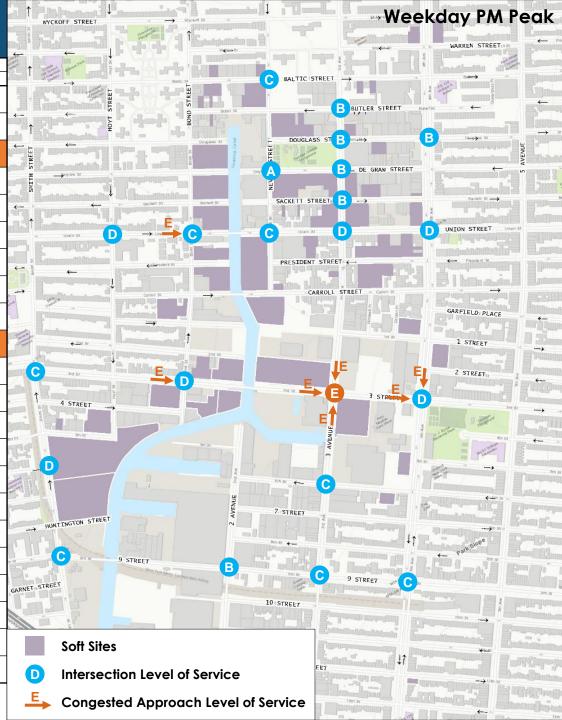
E E 3 STREET

DE GRAW STREET

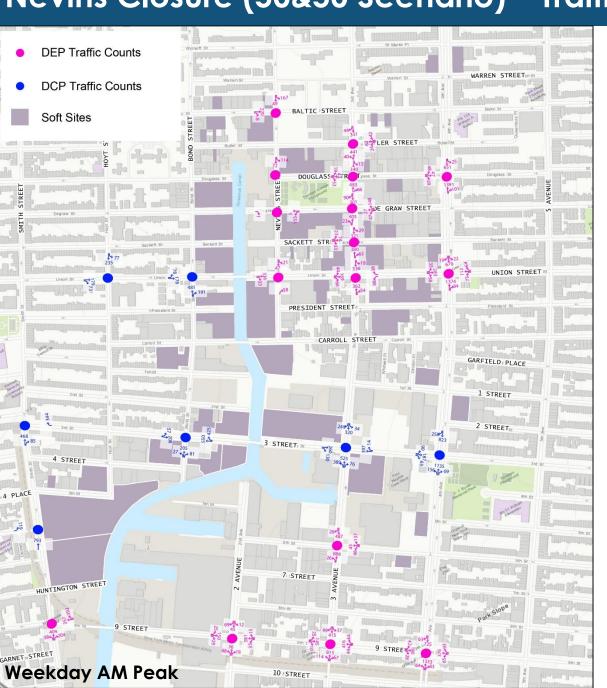
With Improvements – PM LOS

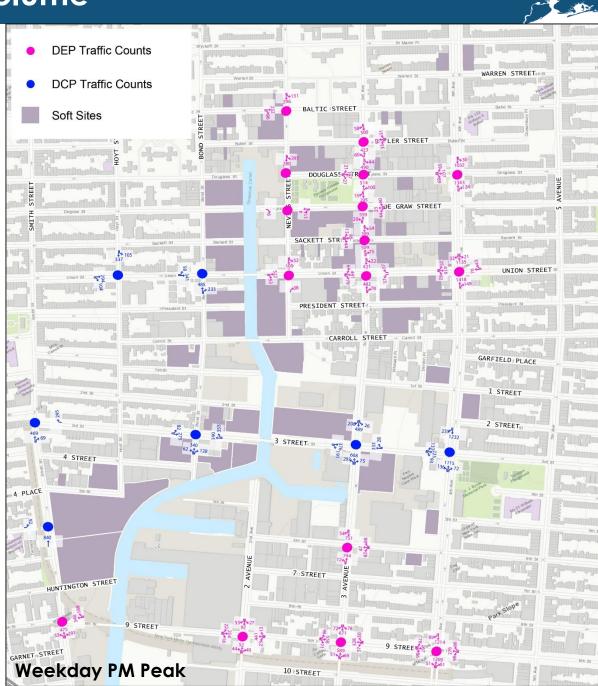
will illip				13								
ludous o ali su	1	astbound	d	V	Vestboun	d	N	Iorthboun	d	S	outhboun	d
Intersection	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
4th Ave @ Douglass St (Signalized)	(0.4		C (0.27)		-		-		3 60)	B (0.30)	A (0.60)	-
4th Ave @ Union St (Signalized)		D (0.95)			B (0.20)		-) 98)	D (0.43)	(0.9	
4th Ave @ 3rd St (Signalized)		E (0.94)			-		D (0.70)		3 69)	-	E (1.0	E 08)
4th Ave @ 9th St (Signalized)	D (0.58)	D (0.61)	D (0.32)	E (0.71)	D (0.68)	D (0.38)	C (0.20)		77)	-	(0.8	
3rd Ave @ Butler St (Signalized)		-			D (0.69)			3 63)	-	-	(0.	
3rd Ave @ Douglass St (Signalized)		D (0.48)			-		-		3 60)		4 51)	-
3rd Ave @ Degraw St (Signalized)		-			D (0.47)			3 58)	-	-	(0.	
3rd Ave @ Sackett St (Signalized)		D (0.49)			-		-	(0.		(0.	4 60)	-
3rd Ave @ Union St (Signalized)		C (0.83)		B (0.26)	(0.	3 06)	-	(0.9	91)) 82)	-
3rd Ave @ 3rd St (Signalized)	-		E 97)		D (0.68)		F (1.08)) 92)	C (0.24)	(1.0	
3rd Ave @ 6th St (Signalized)		-			D (0.69)		(0.	3 46)	-	-	(0.9	90)
3rd Ave @ 9th St (Signalized)	D (0.39)	(0.) 65)	D (0.31)	E (0.80)	C (0.08)	B (0.27)		3 46)	C (0.41)	(0.	3 63)
Nevins St @ Baltic St (Unsignalized)		B (0.55)			-			-			C (0.70)	
Nevins St @ Degraw St (Unsignalized)		A (0.01)			A (0.06)			-			A (0.37)	
Nevins St @ Union St (Signalized)	-	(0.	94)		-			-	B (0.10)		3 44)	-
2nd Ave @ 9th St (Signalized)	B (0.12)		3 43)	B (0.07)		3 69)		B (0.33)			B (0.38)	
Bond St @ Union St (Signalized)	(0.		-		-		-	C (0.86)	B (0.44)		-	
Bond St @ 3rd St (Signalized)	(0.	_	-	-	B (0.64)	D (0.90)		D (0.96)			-	
Hoyt St @ Union St (Signalized)	-) 95)		-			-		(0.	C 80)	-
Smith St @ 3rd St (Signalized)		-			-	D (0.91)	-	C (0.76)	B (0.21)		-	
Smith St @ Luquer St (Unsignalized)		D (0.41)			-			-			-	
Smith St @ 9th St (Signalized)		-		-	B (0.67)	B (0.49)		S 84)	C (0.74)		-	
* Lane Group Level of S	ervice (Sig	gnalized)	/ Total La	ne Level d	of Service	(Unsignal	lized)					

^{*}Lane Group Level of Service (Signalized) / Total Lane Level of Service (Unsignalized)
** Lane Group v/c Ratio (Signalized) / Degree of Utilization (Unsignalized)



Nevins Closure (50&50 Scenario) – Traffic Volume

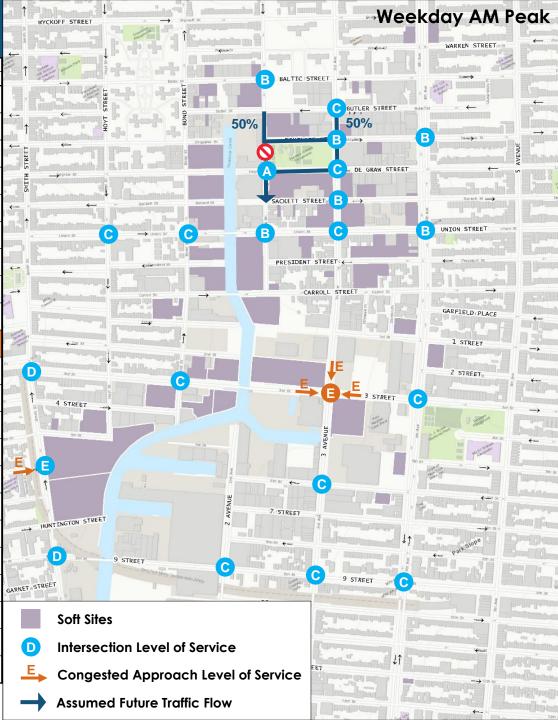




Nevins Closure (50&50 Scenario) – AM LOS

			1									
Intersection	Eastbound Left Through Right C* C			\	Nestboun	d	N	Iorthboun	d	S	outhboun	t
			Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
4th Ave @ Douglass St					_		_		3	С	В	_
(Signalized)	(0.2	0)**	(0.07)					,	77)	(0.36)	(0.49)	
4th Ave @ Union St (Signalized)		D (0.67)			D (0.52)		-		4 62)	B (0.21)	B (0.4	
4th Ave @ 3rd St		(0.67) D			(0.52)		С	,	<u>8</u>	(0.21)	(0.2	
(Signalized)		(0.83)			-		(0.71)		74)	-	(0.8	
4th Ave @ 9th St	Е	D	С	D	Е	D	C		3		(1	,
(Signalized)	(0.62)	(0.44)	(0.10)	(0.32)	(0.84)	(0.39)	(0.22)	(0.	81)	-	(0.6	
3rd Ave @ Butler St		_			С			3	_	_	C	
(Signalized)					(0.29)		(0.				(0.6	56)
3rd Ave @ Douglass St (Signalized)	(0.	200	C (0.12)		-		-		3 43)	(0.		-
3rd Ave @ Degraw St	(0.	10)	(0.12)		D			<u> (∪.</u> 3	43)	(0.	02)	
(Signalized)		-			(0.60)		(0.3		-	-	(0.6	
3rd Ave @ Sackett St		С			(0.00)		(3	(/
(Signalized)		(0.32)			-		-	(0.	33)	(0.		-
3rd Ave @ Union St		D		C (0.46)			_		3	(_
(Signalized)		(0.82) E - (0.89)			•	10)	-	,	60)	(0.		
3rd Ave @ 3rd St	-	E (0.89)			E (0.88)		F (1.10)	l	3 41	C (0.17)	(0.9	
(Signalized) 3rd Ave @ 6th St		(0.89)			(0.88) D		(1.10)	<u>(∪.</u> 3	74) 	(0.16)	(0.9	
(Signalized)		-			(0.77)		(0.		-	-	(0.6	
3rd Ave @ 9th St	D	(C	CDC			C (5.		3	С	(0.0	,
(Signalized)	(0.31)		32)	(0.17) (0.83) (0.12)			(0.56)	(0.	60)	(0.26)	(0.7	' 1)
Nevins St @ Baltic St		В		-				_			B (0.37)	
(Unsignalized)		(0.37)										
Nevins St @ Degraw St		A (0.00)			A (0.24)			-				
(Unsignalized) Nevins St @ Union St		(0.00)	В		(0.24)				В		3	
(Signalized)	-		66)		-		-	-	(0.18)	(0.		-
2nd Ave @ 9th St	В		В	В)		В	(01.0)	(0.	В В	
(Signalized)	(0.24)	(0.	34)	(0.12)	(0.	97)		(0.38)			(0.29)	
Bond St @ Union St			_		_		_	В	В		_	
(Signalized)	(0.				1			(0.72)	(0.40)			
Bond St @ 3rd St		3	-	_	B (0.74)	D (0.05)		C (0.00)			-	
(Signalized) Hoyt St @ Union St	(0.]]		(0.74)	(0.95)		(0.80)		<u> </u>	<u> </u>	
(Signalized)	-	l "			-			-		(0.		-
Smith St @ 3rd St		(0.	. 01			D		D	В	(0.	/	
(Signalized)				·		(0.96)		(0.97)	(0.35)			
Smith St @ Luquer St		Е					, (0.77)					
(Unsignalized)		(0.62)			-		-			-		
Smith St @ 9th St		_		_	C (0.77)	F (1.00)	C C (0.67)			_		
(Signalized)			(T 1 1 1	<u> </u>	(0.77)	(1.08)	, , ,	გ პ)	(0.67)	-		

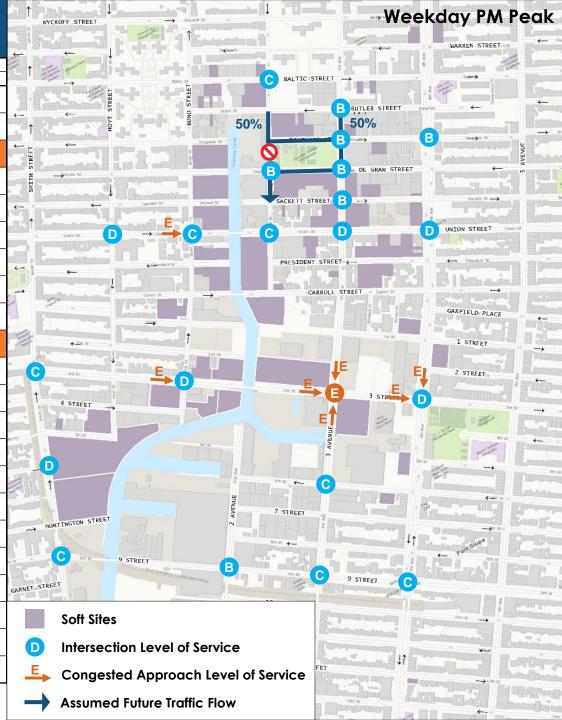
^{*}Lane Group Level of Service (Signalized) / Total Lane Level of Service (Unsignalized)
** Lane Group v/c Ratio (Signalized) / Degree of Utilization (Unsignalized)



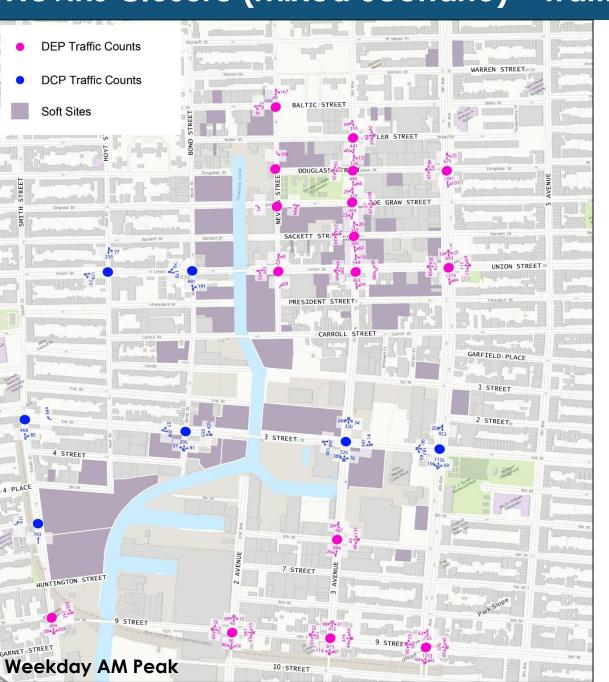
Nevins Closure (50&50 Scenario) – PM LOS

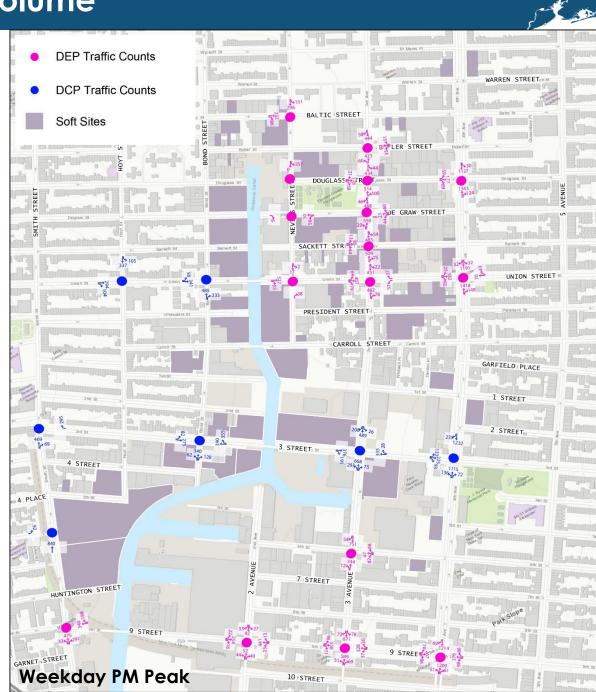
110 11115			(0)				. G. I	•	/ \			
Intersection		Eastbounc	t	V	Vestboun	d	N	lorthboun	d	S	outhboun	d
	Left	Through		Left	Through	Right	Left	Through	Right	Left	Through	Right
4th Ave @ Douglass St			C (2.07)		_		-	E		В	Α	_
(Signalized) 4th Ave @ Union St	(0.4	-6)** D	(0.27)		В			(0.e		(0.30)	(0.60)	
4in Ave @ union Si (Signalized)		(0.95)			(0.20)		-	(0.9		D (0.43)	(0.9	
4th Ave @ 3rd St		(0.70) E			` ′		D	(O.			(0.7	
(Signalized)		(0.94)			-		(0.70)	(0.6		-	(1.0	
4th Ave @ 9th St	D	D	D	Е	D	D	С			_		
(Signalized)	(0.58)	(0.61)	(0.32)	(0.71)	(0.68)	(0.38)	(0.20)	(0.	77)		3.0)	
3rd Ave @ Butler St (Signalized)		-			D (0.69)			3 65)	-	-	(0.7	
3rd Ave @ Douglass St	Г)	D		(0.69)		(0.	63) E	R.		A	(4)
(Signalized)	_	41)	(0.61)		-		-		, 60)		67)	-
3rd Ave @ Degraw St	(,	(2.2.)		D		l l	3	,	(E	3
(Signalized)					(0.47)		(0.	59)	-	-	3.0)	38)
3rd Ave @ Sackett St		D			_		_	E			Α	_
(Signalized)		(0.49)		D				(0.			60)	
3rd Ave @ Union St (Signalized)		C (0.83)		B (0.26)		B 06)	-	2.0)) 82)	-
3rd Ave @ 3rd St			=	(0.20)	D (0.	00)	F	[0.		C (0.	02)	
(Signalized)	-	(0.9			(0.68)		(1.08)	(0.9		(0.24)	(1.0	
3rd Ave @ 6th St			,		D		[_	_	C	
(Signalized)		_			(0.69)			46)	_		(0.9	,
3rd Ave @ 9th St	D (0.39)	0.0)		D (0.31)	E (0.80)	C (0.08)	B (0.27)	(O.4		C (0.41)	(0.d	
(Signalized) Nevins St @ Baltic St	(0.39)	В (О.	63)	(0.31)	(0.60)	(0.06)	(0.27)	[(0.4	40)	(0.41)	C (0.6	55)
(Unsignalized)		(0.55)			-			-			(0.70)	
Nevins St @ Degraw St		A			В						(=)	
(Unsignalized)		(0.01)			(0.46)			-			-	
Nevins St @ Union St	_				_			_	В		В	_
(Signalized)	-		94)						(0.10)	(0.	44)	
2nd Ave @ 9th St (Signalized)	B (0.12)		3 43)	B (0.07)		B 69)		B (0.33)			B (0.38)	
Bond St @ Union St	, ,	[(0.2	Ú	(0.07)	(0.	07]		(0.55) C	В		(0.50)	
(Signalized)	(0.		-		-		-	(0.86)	(0.44)		-	
Bond St @ 3rd St			_	_	В	D		D			_	
(Signalized)	(0.		_	-	(0.64)	(0.90)		(0.96)				
Hoyt St @ Union St	-	[[) 95)		_			-			C 80)	-
(Signalized) Smith St @ 3rd St		[(0.	93)			D		С	В	(0.	80)	
(Signalized)		-		-	-	(0.91)	-	(0.76)	(0.21)		-	
Smith St @ Luquer St		D				1 (0.7.1)		(0., 0)	(0.21)			
(Unsignalized)		(0.41)			-			<u> </u>			<u> </u>	
Smith St @ 9th St		_			В	В		: .	С			
(Signalized)				<u> </u>	(0.67)	(0.49)	,	84)	(0.74)			
* Lane Group Level of S	ervice (Sid	analized)	/ Total Lai	ne Level c	of Service	(Unsignal	lized)					

^{*} Lane Group Level of Service (Signalized) / Total Lane Level of Service (Unsignalized)
** Lane Group v/c Ratio (Signalized) / Degree of Utilization (Unsignalized)



Nevins Closure (Mixed Scenario) – Traffic Volume

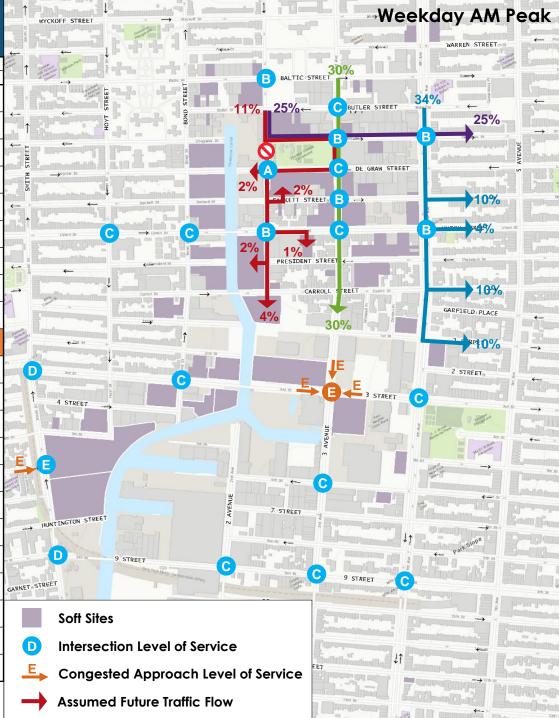




Nevins Closure (Mixed Scenario) – AM LOS

													١
		Eastboun	d	V	Vestboun	d	N	Iorthboun	d	S	outhboun	d	0.000
Intersection	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right	1
4th Ave @ Douglass St			С		_		_	· -	3	С	В	_	ı
(Signalized)	(0.	24)	(0.07)					(0.		(0.36)	(0.51)		4
4th Ave @ Union St (Signalized)		D (0.66)			D (0.52)			(0.	4 621	B (0.24)	(0.4		ľ
4th Ave @ 3rd St		(0.00) 					С	•	3		10.2		t
(Signalized)		(0.83)			-		(0.71)	(0.	-	-	(0.8		
4th Ave @ 9th St	Е	D	С	D	Е	D	С		3	_			ľ
(Signalized)	(0.62)	(0.44)	(0.10)	(0.32)	(0.84)	(0.39)	(0.22)	(0.	81)	-	(0.6		
3rd Ave @ Butler St		_			C			В	_	_	(2)		ľ
(Signalized) 3rd Ave @ Douglass St	(С		(0.29)		(0.	43)	<u> </u> 3	,	(0.6	53)	Ł
(Signalized)					-		-	(0.	-		59)	-	
3rd Ave @ Degraw St	(0.	(0.13) (0.05) - C (0.26) D (0.81)			D			<u>т (о.</u> В	10)	· ·		`	1
(Signalized)		-			(0.60)			32)	-	-	(0.5		
3rd Ave @ Sackett St					_				3				
(Signalized)							_	(0.			58)		
3rd Ave @ Union St				C (0.45)		2	_		3		50)	_	B
(Signalized) 3rd Ave @ 3rd St			F	(0.45)	E (U.	10)	F	(0.	60) 3	(U.	52)		ł
(Signalized)	-	(0.26) D (0.81) E (0.89) - C (0.32)			(0.88)		(1.10)		74)	(0.16)	(0.9		E
3rd Ave @ 6th St					D			В	, 1,	(0.10)	(5.7		p
(Signalized)		-			(0.77)			60)	-	-	(0.6		
3rd Ave @ 9th St	D			С	D	С	С		3	С			1
(Signalized)	(0.31)		.32)	(0.17)	(0.83)	(0.12)	(0.56)	(0.	60)	(0.26)	(0.7	71)	-
Nevins St @ Baltic St		B (0.37)			-			-			B (0.37)		1020
(Unsignalized) Nevins St @ Degraw St		(0.37) A			A						(0.37)		-
(Unsignalized)		(0.00)			(0.15)			-			-		0
Nevins St @ Union St			B		(0110)				В	[В		1
(Signalized)	-	(0.	.66)		-			-	(0.18)	(0.	09)	-	100
2nd Ave @ 9th St	В	l	В	В	[В			В		80.0
(Signalized)	(0.24)		.34)	(0.12)	(0.	97)		(0.38)			(0.29)		4
Bond St @ Union St (Signalized)	(0.1	78)	-		-		-	B (0.72)	B (0.40)		-		
Bond St @ 3rd St	•	70) 3			В	D		C (0.72)	(0.40)				┨
(Signalized)	_	61)	-	-	(0.74)	(0.95)		(0.80)			-		m
Hoyt St @ Union St	,		C							[В		1
(Signalized)	-	(0.	.78)		-			-		(0.	60)	_	÷
Smith St @ 3rd St		_] .	_	D	_	D	В		_		
(Signalized)						(0.96)		(0.97)	(0.35)				1
Smith St @ Luquer St (Unsignalized)		E (0.62)			-			-			-		
Smith St @ 9th St		(0.02)			С	F	(С				\dagger
(Signalized)		-		-	(0.77)	(1.08)		83)	(0.67)		-		
*		I' IV	/ -	·					,,	•			1

^{*}Lane Group Level of Service (Signalized) / Total Lane Level of Service (Unsignalized)
** Lane Group v/c Ratio (Signalized) / Degree of Utilization (Unsignalized)



Nevins Closure (Mixed Scenario) – PM LOS

			7									
	Eastbound Left Through Right		d	v	Vestboun	d	N	Iorthboun	d	S	outhbound	t
Intersection	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
4th Ave @ Douglass St					_		_		3	В	Α	-
(Signalized)	(0.6		(0.27)					(0.		(0.30)	(0.60)	
4th Ave @ Union St		D (0.00)			B (0.00)		_)	E (0.77)	D	
(Signalized) 4th Ave @ 3rd St		(0.89)			(0.20)		D		98) 3	(0.67)	(0.9	,
4in Ave @ 3rd 3f (Signalized)		E (0.94)			-		(0.70)		69)	-	(1.0	
4th Ave @ 9th St	D	D	D	Е	D	D	C		C		(1.0	
(Signalized)	(0.58)	(0.61)	(0.32)	(0.71)	(0.68)	(0.38)	(0.20)		77)	-	(0.8	
3rd Ave @ Butler St	, ,	_	, ,		D	, ,	, í	3		_	, A	,
(Signalized)					(0.69)		(0.	64)	-	-	(0.6	57)
3rd Ave @ Douglass St		D (0.62) (0.21) - C (0.12) C (0.78)			_		_		3	F		_
(Signalized)	(0.62) (0.21) - C (0.12) C (0.78)						(0.	60)	(0.			
3rd Ave @ Degraw St	- C (0.12) C (0.78)			D (0.47)			3 58)	-	-	A (0.6		
(Signalized) 3rd Ave @ Sackett St					(0.47)		(0.		<u> </u>	,	\ \	00)
(Signalized)					-		-	(0.		(0.		-
3rd Ave @ Union St				В		3))	
(Signalized)		C (0.78)		(0.25)	l .	06)	- (0.91)		91)	(0.8	88)	-
3rd Ave @ 3rd St	_				D		F	_)	С	Ē	
(Signalized)		(0.78) E			(0.68)		(1.08)	,	92)	(0.24)	(1.0	
3rd Ave @ 6th St		E			D (0.40)			В	-	-	C	
(Signalized)				_	(0.69)		, , , ,	46)			(0.9	,
3rd Ave @ 9th St (Signalized)	(0.39)		5 65)	D (0.31)	E (0.80)	C (0.08)	B (0.27)		3 46)	C (0.41)	B (0.6	
Nevins St @ Baltic St	(0.57)	<u> В</u>	00)	(0.51)	(0.00)	(0.00)	(0.27)	[[0.	40)	(0.41)	C (0.0	50)
(Unsignalized)		(0.55)			-			-			(0.70)	
Nevins St @ Degraw St		Α ,			Α						, ,	
(Unsignalized)		(0.01)			(0.09)							
Nevins St @ Union St	_		2		_			_	В	E		_
(Signalized)			94)						(0.10)	(0.0		
2nd Ave @ 9th St	B (0.12)		3 43)	B (0.07)		3 69)		B (0.33)			B (0.38)	
(Signalized) Bond St @ Union St		(0.	4 3)	(0.07)	[0.	07]		(0.33) C	В		(0.30)	
(Signalized)	(0.		-		-		-	(0.86)	(0.44)		-	
Bond St @ 3rd St		, , , =			В	D		D	1 (0.1.1)			
(Signalized)	(0.		-	-	(0.64)	(0.90)		(0.96)			-	
Hoyt St @ Union St												_
(Signalized)	_	(0.	95)		-			-		(0.8	80)	_
Smith St @ 3rd St		-			_	D (0.01)	_	C	B (0.01)		_	
(Signalized)						(0.91)		(0.76)	(0.21)			
Smith St @ Luquer St (Unsignalized)		D (0.41)			-			-			-	
Smith St @ 9th St		(0.41)			В	В	(С			
(Signalized)		-		-	(0.67)	(0.49)		84)	(0.74)		-	
* Lane Group Level of S	ervice (Sid	analized)	/ Total La	ne Level d		(Unsignal	ized)		. , ,			

^{*} Lane Group Level of Service (Signalized) / Total Lane Level of Service (Unsignalized)
** Lane Group v/c Ratio (Signalized) / Degree of Utilization (Unsignalized)

