

Table 23: Intersection Summary – Channing Street NW & First Street NW

Ch	anning Street NW & Fi	rst Street NW	
	AM Peak Hour	PM Peak Hour	Saturday Peak Hour
Location/Scenarios with LOS F EX = Existing (2013) BG = Future Background (2025) TF = Total Future (2025)		Overall intersection: TF Southbound First Street NW: TF	
Percent of future traffic attributable to development:	27.3%	30.0%	29.8%

Summary of capacity analysis results:

The delays at this intersection are due to the addition of the site-generated trips along First Street NW.

Potential Improvements

	Fotential improvements.	
Existing Conditions (2013)	Future Background Conditions (2025)	Total Future Conditions (2025)
		In conjunction with Phase 1 of development, it is recommended that the intersection be converted from all-way to two-way stop controlled. Converting the north- and southbound movements to free-flowing allows the intersection to operate under acceptable conditions during all time periods.

Capacity Analysis Results:

			Exis	ting Condit	ions (20	13)			Future Ba	ckground	Conditio	ns (2025)			Total I	uture Con	ditions (2025)	
Intersection	Approach	AM Pe	ak	PM Pe	ak	Saturday	Peak	AM Pe	ak	PM Pe	ak	Saturday	Peak	AM Pe	ak	PM Pe	ak	Saturday	y Peak
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Channing Street & First Street NW	Overall	12.0	В	17.2	С	8.6	Α	13.3	В	31.6	D	8.9	Α	33.1	D	147.1	F	11.5	В
	Westbound	11.1	В	9.7	Α	8.0	Α	12.0	В	10.5	В	8.2	A	16.1	c	11.1	В	9.4	A
	Northbound	11.5	В	10.5	В	9.4	Α	13.1	В	11.7	В	9.7	Α	43.6	E	17.9	C	13.1	В
	Southbound	13.4	В	22.5	С	8.7	Α	15.0	В	45.6	E	9.0	A	36.4	Е	233.6	F	11.1	В
Improvements:	Westbound			***					-		***	-		19.2	C	19.8	C	12.7	В



		NE/NW																
		Cha	nning St	reet NE & N	lorth	Capit	ol Str	eet										
700 Day .	1000 100 200 200 200		AN	M Peak Hour			PN	M Peal	k Hour				Saturday	/ Peak	Hour			
Location/Scenario EX = Existing BG = Future Backg TF = Total Futu	g (2013) ground (2025)		Southbound No	orth Capitol Street:	BG, TF	Sout			section: TF apitol Stree		F							
Percent of future traffic attrib	outable to development:			14.7%	-			14.5	5%				15	7.6%				
Summary of capacity analysis results:	The delays at this intersidevelopments. The addi		- Commence of the comment of the com	And the second s	Congression of the Contract				A STORY OF THE STORY	_				A STATE OF THE STA	2000	d		
				Potential Impro	vements													
Existing Condition	ons (2013)	(2013) Future Background Conditions (2025)										Total Future Conditions (2025)						
		Satur but s peak This r	day peak perio till operate und hour. report recomm de the scope o	ods. The southbound der unacceptable co nends that DDOT cor f this TIA, following	nd conditions, retiming the otable conditions during the The southbound movemen unacceptable conditions, do ds that DDOT consider these is TIA, following the construents.			d, N on n s	In conjunction with Phase 1 of developm the on-street parking along the north- ar North Capitol Street adjacent to the site morning and afternoon peak periods. In street parking is permitted on the northk morning peak period and on the southboafternoon peak period. Restricting this planes north- and southbound, which leac operating under acceptable conditions d					pe restricted during the existing condition ound approach during approach during allows for threst to the intersection				
		Dack	ground develop				the	3.0				OF STREET CONTRACTOR		all time	periods.			
				Capacity Analysi	s Results	•		c	operating u			ondition	ns during a					
ersection		Exi: 1 Peak	iting Conditions	Capacity Analysi (2013) Saturday Peak	s Results	: Future Ba	ckground (PM Pe	Conditio	operating u ons (2025) Saturday	nder ac	AM Pe	ondition Total F	os during a	ditions (;	2025) Saturday			
	Overall 38.0 Westbound 50.2 Northbound 7.7	Exit	ting Conditions of PM Peak Delay LO 18.9 B 53.8 D 7.7 A	Capacity Analysi (2013) Saturday Peak (S Delay LOS Delay LOS 49.4 D 5.7 A	AM P Delay 60.1 50.2 7.4	Future Baeak LOS E D A	ckground 0 PM Pe Delay 58.0 54.8 8.1	Conditional Condit	ons (2025) Saturday Delay 12.0 49.4 5.8	Peak LOS B D A	AM Pe Delay 79.9 50.2 8.9	Total F ak LOS E D A	suture Con PM Pe Delay 122.3 57.2 8.6	ditions (2025) Soturday Delay 11.6 49.4 5.9	L		
ntersection hanning Street & North Capitol Street haprovements:	Overall 38.0 Westbound 50.2	Exit	ting Conditions PM Peak Delay LO 18.9 B 53.8 D	Capacity Analysi (2013) Saturday Peak (S Delay LOS Delay LOS 49.4 D 5.7 A	S Results AM P Delay 60.1 50.2	Future Ba	ockground (PM Pe Del ay 58.0 54.8	Conditio	ons (2025) Saturday Delay 12.0 49.4	Peak LOS B D	AM Pe Delay 79.9 50.2	Total F ak LOS E D	Suture Con PMPe Delay 122.3 57.2	ditions (i ak LOS F	2025) Saturday Delay 11.6 49.4	Peal LC		



Table 25: Intersection Summary – Channing Street NE/NW & North Capitol Street (2 of 2)

Channing Street NE & North Capitol Street





Table 26: Intersection Summary – Bryant Street NW & First Street NW

ryant Street NW & Firs	t Street NW	
AM Peak Hour	PM Peak Hour	Saturday Peak Hour
	Overall intersection: TF Southbound First Street NW: TF	
30.0%	27.9%	35.3%
	AM Peak Hour	Overall intersection: TF Southbound First Street NW: TF

Summary of capacity analysis results:

The delays at this intersection are due to the addition of the site-generated trips along First Street NW.

	Potential Improvements:	
Existing Conditions (2013)	Future Background Conditions (2025)	Total Future Conditions (2025)
		In conjunction with Phase 1 of development, it is recommended that this intersection be retimed during the afternoon peak period. In the existing conditions, the signal operates on a half-cycle length of 50 seconds. Retiming the signal with a cycle length of 100 seconds during the afternoon peak period allows the intersection to operate under acceptable conditions.

Capacity Analysis Results:

	-		Exis	ting Condi	ions (20	13)			uture Ba	eckground	Conditio	ns (2025)			Total F	uture Con	ditions ((2025)	
Intersection	Approach	AM Pe	ak	PM Pe	eak	Saturday	Peak	AMPE	ak	PM Pe	ak	Saturday	Peak	AM Pe	ak	PM Pe	ak	Saturday	Peak
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Bryant Street & First Street NW	Overall	15.2	В	20.7	C	11.8	В	17.0	В	35.2	D	12.4	В	29.7	С	116.6	F	15.5	В
	Eastbound	18.7	В	23.4	C	14.9	В	19.5	В	24.3	C	15.2	В	26.7	С	33.1	C	17.8	В
	Northbound	10.2	В	7.5	Α	11.8	В	12.6	В	9.7	A	12.4	В	21.0	С	14.9	В	15.7	В
	Southbound	17.2	В	26.6	C	11.5	В	18.9	В	53.2	D	11.9	В	38.1	D	200.9	F	14.4	В
Improvements:	Overall	-	-	-	-		-	-		-						35.2	D	-	-
	Eastbound	-	-		-		-	-								62.6	E	-	-
	Northbound	_	-	-			-			-						7.7	A	-	-
	Southbound	-		-		-	-	-								38.2	D		_



Southbound

			-		В.	1 804	0 0		-										
			Lolu	mbia	коа	a NW	& G	eorgi	a Ave	enue l	1W								
5000 page 100 page	100 day 100 day 100 day				AM P	eak Hou	r			PN	/I Pea	k Hour				Saturday	/ Peak	Hour	
Location/Scenarion EX = Existing BG = Future Backg TF = Total Future	g (2013) ground (2025)			Southbo	und Ge	orgia <mark>Av</mark> er	nue NW:	TF	Wes			section: T ia Road NV		F					
Percent of future traffic attri	butable to developn	nent:				3.6%					5.7	%							
Summary of capacity analysis results:	The unacceptable delay on the generated by the background conditions during the afternot the morning peak period.		d devel	opments.	The ad	dition of t	he site-g	generated	trips ex	acerbates	this d	elay and ca	auses th	e overall ir	tersect	on to ope	rate un	der unac	cepta
					P	otential	Improv	ements:											
Existing Condition	ons (2013)			F	uture l	Backgrou	ınd Con	ditions	(2025)				17	Total Fut	ire Cor	ditions (2025)		
			approx Colum westb Restrij a thro In add be reti project and af This re outsid	Future Background Conditions, it is recomproximately 125 feet of on-street parking of Columbia Road NW be removed to allow for twestbound approach during the morning and Restriping the westbound approach as a shar a through lane, and a right-turn lane is recommend be retimed. Following these improvements, the projected to operate under acceptable conditional afternoon peak periods. This report recommends that DDOT consider outside the scope of this TIA, following the cobackground developments.						ern side of in the eak period eft-turn lai intersection on is he mornin	ds.	No additions conditions conditions the implen coackground	The int during t nentatio	ersection i he mornin n of the in	s projec g and at	ted to ope	erate un eak per	der acce iods follo	ptab owin
			Fyist	ing Condit	ions (20	13)		i i	Future B	ackground (onditi	ons (2025)			Total	uture Con	ditions (2	2025)	
ersection	Approach	AM Ped Delay		PM Pe		Saturday Delav	Peak LOS	AM Pe		PM Pe Delay		Saturda	y Peak LOS	AM Pe		PM Pe Delay		Saturday Delav	y Pea
umbia Road & Georgia Avenue NW	Overall Westbound Northbound	22.0 36.7 7.5	C D A	17.5 36.6 8.7	B D A		-	55.4 47.3 12.0	E D B	57.4 84.5 50.9	E F D			70.4 54.3 14.4	E E B	85.1 141.9 54.9	F F D	- - -	
rovements:	Overall Westbound	19.5 - -	 	10.6	- -			75.1 37.4 33.2	D C	23.6 27.2 35.8	c			98.6 48.0 33.1	D C	24.1 33.7 42.6	c	-	3
	Northbound						- 1	10.9	В	22.8	C			14.8	В	31.9	C		

48.9

19.0

67.9

21.2



Table 28: Intersection Summary – Columbia Road NW & Georgia Avenue NW (2 of 2)

Columbia Road NW & Georgia Avenue NW









Table 29: Intersection Summary - Harvard Street NW & Georgia Avenue NW (1 of 2)

Summary of capacity analysis results:

The unacceptable delay on the southbound approach of Georgia Avenue NW during the morning peak period is due to the addition of the background growth and trips generated by the background developments. The addition of the site-generated trips exacerbates this delay.

	Potential Improvements:	
Existing Conditions (2013)	Future Background Conditions (2025)	Total Future Conditions (2025)
	In the future background conditions, it is recommended that approximately 100 feet of on-street parking on the southbound approach of Georgia Avenue NW be removed to allow for a southbound left-turn lane. In addition to the restriping, it is recommended that the intersection be retimed to include a protected + permitted southbound left-turn phase. Following these improvements, the intersection is projected to operate under acceptable conditions during the morning and afternoon peak periods. This report recommends that DDOT consider these improvements outside the scope of this TIA, following the construction of the background developments.	No additional improvements are recommended in the total future conditions. The intersection is projected to operate under acceptable conditions during the morning and afternoon peak periods following the implementation of the improvements recommended in the future background conditions.

Capacity Analysis Results:

			Exis	ting Condit	ions (20	13)		(1	Future Ba	ckground (Condition	ns (2025)			Total I	future Con	ditions (2025)	
Intersection	Approach	AM Pe	ak	PM Pe	ak	Saturday	Peak	AM Pe	eak	PM Pe	eak	Saturday	Peak	AM Pe	ak	PM Pe	ak	Saturday	y Peak
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Harvard Street & Georgia Avenue NW	Overall	10.3	В	14.3	В	-		89.6	F	21.3	С			135.9	F	25.0	С	-	
	Eastbound	43.0	D	40.5	D	-		39.0	D	35.4	D	-		38.0	D	34.8	C	-	
	Northbound	4.3	A	6.8	A	-		7.4	A	9.6	A	-		8.4	Α	10.1	В	-	
	Southbound	3.6	Α	4.2	Α	-		142.1	F	22.9	С			226.8	F	33.4	С	-	
Improvements:	Overall		-			7		14.0	В	20.5	С			16.3	В	22.1	C		
	Eastbound		-					41.0	D	41.3	D			42.8	D	42.9	D		
	Northbound		-			-		14.0	В	18.8	В			16.2	В	19.5	В		
	Southbound		-				**	3.6	A	5.0	A	**	**	5.1	A	6.8	A		



Table 30: Intersection Summary – Harvard Street NW & Georgia Avenue NW (2 of 2)

Harvard Street NW & Georgia Avenue NW









Eastbound

Westbound

Northbound

Southbound

	y – W Street NW & Georgia Avenue NW (1 of 2) W Street NW & Georgia Avenue NW																			
			W S	treet N	W & Geor	gia Ave	nue N	W												
	100021100 WYY 20092			AM F	eak Hour			PM Pea	k Hour			S	aturday	Peak I	Hour					
Location/Scenario EX = Existing BG = Future Backg TF = Total Futu	g (2013) ground (2025)						Eastbo	und W Str	eet NW: Bo	G, TF										
Percent of future traffic attril	outable to develop	ment:			4.2%			6.3	%					-		_				
Summary of capacity analysis results:	The unacceptable the background of								due to th	e additic	on of the b	ackgrour	nd growth	h and tr	ips gener	ate				
				P	otential Improv	ements:														
Existing Condition	Existing Conditions (2013)				Future Background Conditions (2025) To										tal Future Conditions (2025)					
	Existing Conditions (2013)			approach of lanes. Wider on to operate t recommend	W Street be con- ing the eastboun- under acceptable ds that DDOT con-	recommended that ructed as separate left- and approach allows the No additional improconditions. The integral conditions during the					ovements are recommended in the total future ersection is projected to operate under accept the morning and afternoon peak periods follow n of the improvements recommended in the fu ons.									
				d developme		he constructi	on of the													
				d developme			on of the													
ersection	Approach	AM Peal	Existing (d developme Ca Conditions (20)	apacity Analysis Saturday Peak	s Results: Fut AM Peak	ure Backgrou	1 Peak	Saturday		AM Pec	ak	ture Conc	ak	Saturday					
	Approach Overall		Existing (d developme Ca	ents. apacity Analysis	s Results: Fut AM Peak	ure Backgrou	1 Peak y LOS	The second second	Peak	AM Pec Delay			_		Pec L				
ersection Street & Georgia Avenue NW		AM Peak Del ay	Existing (d developme Ca conditions (20: PM Peak lay LOS	apacity Analysis 3) Saturdoy Peak Delay LOS	Results: Fut AM Peak Delay	ure Backgrou PM .OS Dela	Peak LOS C	Saturday Del ay	LOS	Delay	ok LOS	PM Ped Delay	ak LOS	Saturday					
	Overall	AM Peak Delay 11.3	Existing C LOS De B 1: A 3: D 50	Catonditions (20: CM Peak lay LOS 6.0 B 6.4 C 0.0 D	apacity Analysis Soturday Peak Delay LOS	Fut. AM Peak Delay 14.8 35.7 43.0	ure Backgrou Ph .OS Dela B 24.1 D 85.5 D 29.1	Peak y LOS C F C	Saturday Del ay	LOS	Delay 15.8	LOS B C D	PM Peo Delay 25.4 89.0 31.3	ak LOS	Saturday					
	Overall Eastbound		Existing C LOS De B 19 A 33 D 56 A 5	Catonditions (20: PM Peak LIGN LOS B.4 C	apacity Analysis 13) Saturday Peak Delay LOS	Fut AM Peak Delay 14.8 35.7	ure Backgrou Ph .OS Dela B 24.1 D 85.5	Peak y LOS C F C B	Saturday Delay 	LOS	Delay 15.8 32.9	LOS B C	PM Ped Delay 25.4 89.0	LOS C F	Saturday					

38.4

41.3

4.6

4.8

68.9

36.8

7.3

2.8

A

D

36.1

41.1

5.5

5.9

D

A

74.0

38.3

7.9

3.0

D

Α



Table 32: Intersection Summary – W Street NW & Georgia Avenue NW (2 of 2)

Harvard Street NW & Georgia Avenue NW









Table 33: Intersection Summary – North Service Court NW & North Capitol Street (1 of 2)

	No	rth Service C	ourt NW &	North Ca	pitol Sti	eet					
		AM	Peak Hour		PM F	eak Hour		Sa	aturday Peak	Hour	
Location/Scenarios EX = Existing (; BG = Future Backgro TF = Total Future	2013) ound (2025)	65618	intersection: TF orth Capitol Street:	TF							
Percent of future traffic attribu	table to development:		11.0%		83	13.6%			8.3%		
Summary of capacity analysis results:	The delays at this intersection commuter volumes, the north									southbou	nd
			Potential Improv	ements:							
Existing Condition	s (2013)	Future	Background Cor	nditions (2025)			Total Fut	ure Cond	itions (2025)		
						approximately Street NE, thus intersection to Additionally, it north- and sou the site be rest in the existing northbound ap southbound ap this parking all	reinforcing the a right-in/right is recommend thound approprieted during the conditions, on a proach during proach during the proach during the conditions of the conditions o	e recomm t-out conf led that th paches of the mornir -street par the morn the aftern	nendation to co iguration. ne on-street pa North Capitol S ng and afterno rking is permiting peak perio noon peak perio	rking alon Street adja on peak po ed on the d and on t od. Restri	t g tl acei eric eric
			Capacity Analysis	Results:							
rraction	Angrach	Existing Conditions (2	013)	Future	Background Con		-		ture Conditions		
rsection	Approach AM Pea	Existing Conditions (2	013) Saturday Peak	Future AM Peak	PM Peak	Saturday Pe		eak	PM Peak	Saturday	
	Approach AMPea Delay Overall	Existing Conditions (2	013) Saturday Peak	Future	PM Peak	Saturday Pe OS Del ay I	ak AM Po .OS Delay 104.0				
rsection th Service Court & North Capitol Street	Delay	Existing Conditions (2 ok PM Peak LOS Delay LOS	013) Saturday Peak Delay LOS	Future AM Peak Delay LOS	<i>PM Peak</i> Delay L	Saturday Pe OS Del ay I	OS Delay	eak LOS	<i>PM Peak</i> Delay LOS	Saturday Delay	
	Overall	Existing Conditions (2 ok PM Peak LOS Delay LOS	013) Saturday Peak Delay LOS	Future AM Peak Delay LOS	<i>PM Peak</i> Delay L	Saturday Pe OS Del ay I	.OS Delay 104.0	LOS F	PM Peak Delay LOS 11.8 C	Saturday Delay 3.2	
	Overall Eastbound	Existing Conditions (2 ok PM Peak LOS Delay LOS	013) Saturday Peak Delay LOS	Future AM Peak Delay LOS	PM Peak Delay L 	Saturday Pe OS Del ay I	.OS Delay 104.0 47.2 236.0 1.3	eak LOS F D F A	PM Peak Delay LOS 11.8 C 44.1 D 17.3 C 4.5 A	Saturday Delay 3.2 46.0 2.9 1.9	
	Delay Overall Eastbound Northbound Southbound Overall	Existing Conditions (2 ok PM Peak LOS Delay LOS	013) Saturday Peak Delay LOS	Future AM Peak Delay LOS	PM Peak Delay L 	Saturday Per OS Delay I	OS Delay 104.0 47.2 236.0 1.3 10.1	LOS F D F A	PMPeak Delay LOS 11.8 C 44.1 D 17.3 C 4.5 A 5.9 A	Saturday Delay 3.2 46.0 2.9 1.9 6.6	
th Service Court & North Capitol Street	Delay Overall Eastbound Northbound Southbound	Existing Conditions (2 ik PM Peak LOS Delay LOS	Soturday Peok Delay LOS	Future AM Peak Delay LOS	PM Peak Delay L	Saturday Pe OS Del ay I 	.OS Delay 104.0 47.2 236.0 1.3	eak LOS F D F A	PM Peak Delay LOS 11.8 C 44.1 D 17.3 C 4.5 A	Saturday Delay 3.2 46.0 2.9 1.9	/ Pe



Table 34: Intersection Summary – North Service Court NW & North Capitol Street (2 of 2)

North Service Court NW & North Capitol Street

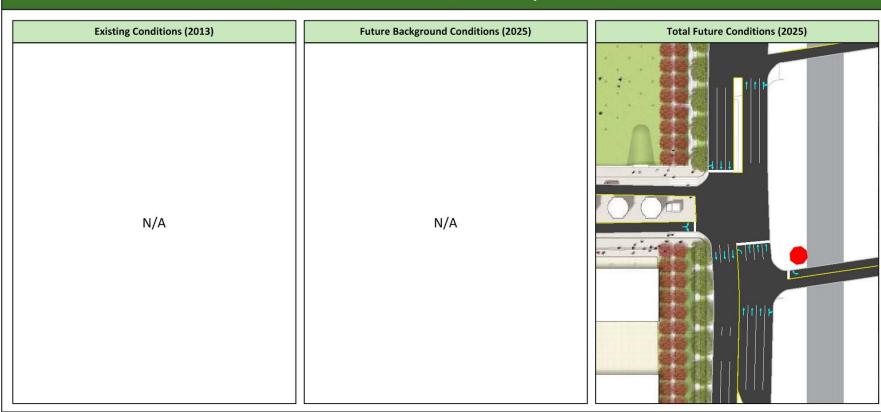




Table 35: Intersection Summary – Evarts Street NW & North Capitol Street (1 of 2)

Eastbound

Northbound Southbound

	ry – Evarts Str																	
			Evar	ts St	reet N	IW & No	orth Ca	apito	l Stre	et								
	1949 <u>-</u> 1176, www.goda				AM Pea	k Hour			PN	/I Peal	Peak Hour Saturday Peak Hour							
Location/Scenarios with LOS F EX = Existing (2013) BG = Future Background (2025) TF = Total Future (2025)				Southbound Nor						North	rth Capitol Street: TF							
Percent of future traffic attrib			17.	4%				18.1	.%				1	.0.7%		_		
Summary of capacity analysis results:			ection during the afternoon peak period are due to the addition of the site-generated trips. The heavy northbound commuter vo entering and exiting the McMillian development leads to unacceptable southbound delays on North Capitol Street during the a															
	÷				Pot	ential Impro	vements:											
Existing Conditio	ns (2013)			Future Background Conditions (2025)							Total Future Conditions (2025)							
										t N n s n	n conjuncti he on-strei Vorth Capit norning an treet parki norning pe afternoon p anes north	et parkin ol Stree d aftern ng is pe ak perio peak per	ng along to t adjacen noon peak rmitted o od and on riod. Restr	to the south the	n- and sou site be res . In the ex rthbound thbound a	thboun tricted tisting of approach	nd approad during the conditions ach during ch during t	e o th
						acity Analysi												
ersection	Approach	AMPed		ng Conditi PM Ped	ons (2013) ak	Saturday Peak	AM Pe		ckground C PM Ped		ns (2025) Saturday	Peak	AM P		Future Con PM Pe		(2025) Saturday	P
		Delay	LOS	Delay		Delay LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	
ts Street & North Capitol Street	Overall	***		-				77		750	-		36.3	D	68.4	E	10.1	
	Eastbound Northbound			_				_			_		44.1 12.3	D B	50.9 16.9	D B	44.2 5.6	
	Southbound			_				_			_		58.6	E	127.6	F	12.2	
rovements:	Overall									***			41.6	D	12.7	В		
ements.	Over un	-		-			1		-				41.0	-	12./	D	-	

44.1

8.3

72.8

46.4

13.4

7.7

D

D



Table 36: Intersection Summary – Evarts Street NW & North Capitol Street (2 of 2)

Evarts Street NW & North Capitol Street

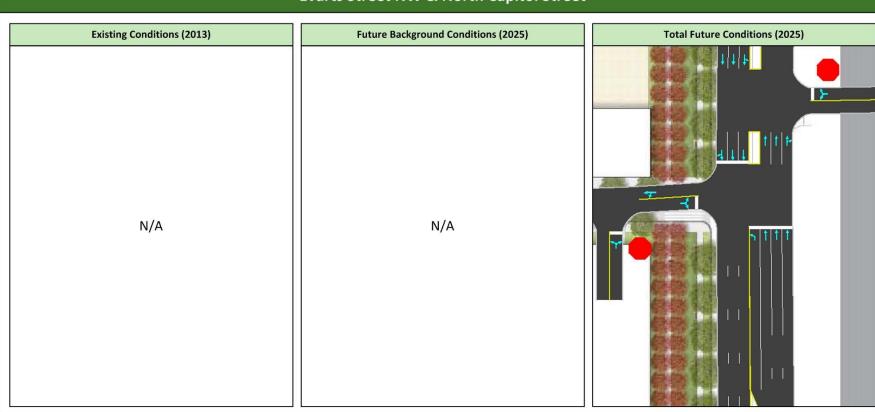




Table 37: Intersection Summary – Evarts Street NW & First Street NW (1 of 2)

Overall

Westbound

Northbound

Southbound

Improvements:

e 37: Intersection Summary	– Evarts Street NVV	/ & FII'SL	street NW (1 01 2)											
		E	varts Stre	et NW &	First S	treet	NW								
			AM I	Peak Hour			PM	Peak Ho	Peak Hour Saturday Peak Hour						
Location/Scenarios with LOS F EX = Existing (2013) BG = Future Background (2025) TF = Total Future (2025)			Westbound E	varts Street NW: 1	TF.	W	estbound	Evarts Stre	eet <mark>NW: T</mark> F						
Percent of future traffic attribu	table to development:		§.	40.4%				41.6%				39	.6%		_
Summary of capacity analysis results:	The delays at this interse	ection are d	ue to the site-ge	nerated trips ente	ering and ex	kiting the	e McMillan	developn	nent.						_
			B	otential Improv	/ements:										
Existing Conditions	s (2013)		Future Background Conditions (2025)						Total Future Conditions (2025)						
								this in along be acl NW. Additi follow vehicl provid under	tersection First Stree nieved by r ionally, it is ring the co- es turning de a signali	be constr t NW. Cor emoving of s recommenstruction in and our zed crossi e condition	existing on- ended that of Parcels t of the Mo ing for ped- ons during a	opment, it i iclude a sou of a 100-foc -street park this interse 2 and 3 (fu Millan deve estrians. Th all time peri	ection be lopmen ection be lopmen e interse	d left-tui irn lane on ig First S e signalize out) to a out and to ection of	tr
				apacity Analysis										TANK BU	
section	Approach AM	A Peak	ting Conditions (20 PM Peak	AM Pe	ak	PM Peak	k Sa	ditions (2025) Saturday Peak			Total Future Conditions (2025) AM Peak PM Peak Saturday F				
ts Street & First Street NW	Westbound Southbound Left	y LOS	Delay LOS	Delay LOS	Delay 	LOS 	Delay 	LOS D	elay LO	219.	8 F	257.2 3.2	F A	16.2 2.0	
- 12 E 1 T 1 C 1 C 1 C 1 C 1 C 1 C 1 C 1 C 1 C										20.0		40.0	10000	40.4	•

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37.1

13.5

10.6

35.7

6.3

6.4

D

10.1

13.8

9.7

8.5

В

В



Table 38: Intersection Summary – Evarts Street NW & First Street NW (2 of 2)

Evarts Street NW & First Street NW Existing Conditions (2013) Future Background Conditions (2025) Total Future Conditions (2025) N/A N/A



Table 39: Intersection Summary – North Service Court NW & First Street NW (1 of 2)

			North	Service	Court NV	/ & Firs	t Str	eet N	w								
				AM	Peak Hour			PIV	l Peak H	Peak Hour Saturday Peak Hour							
Location/Scenarios with LOS F EX = Existing (2013) BG = Future Background (2025) TF = Total Future (2025)			Westbound North Service Court: TF														
Percent of future traffic attributable to development:				47.6% 42.5%								35	5.0%		_		
Summary of capacity analysis results:	The delays at this the employee park						ting the	McMillar	n develop	oment, pr	imarily	the westbo	ound righ	ht turn n	move me	nt gener	at
				Ü	Potential Impro	vements:											
Existing Condition	s (2013)		Future Background Conditions (2025)								To	otal Futur	e Condi	itions (2	2025)		
									turn wou and	lane alor Ild require widening	ng First e remo the ro	Street NW ving the or adway to a	. Constru n-street p nccommo	uction of parking a pdate a f	f a 30-fo along Fir our-lane ection b	ot left-tu st Street e cross-se e signaliz	ur : N ec
									aid v prov unde	vehicles to vide a sign er accept	urning nalized able co	in and out crossing fo nditions do overments.	of the M or pedest	rians. Th	ne inters	ection o	
				***	Capacity Analysi				aid v prov undo reco	vehicles ti vide a sigr er accept ommende	urning nalized able co	in and out crossing fo nditions du	of the M or pedest uring all t	trians. Th	ne inters	section o _l	
section	Approach –	AM Pea		(Conditions (20)				kground Co	aid v prov undo reco	vehicles ti vide a sigr er accept ommende	urning nalized able co d impr	in and out crossing fo nditions du	of the M or pedest uring all t	rians. Th	ne intersions wit	section o _l	ре
		<i>AM Peo</i> Delay	k LOS I	Conditions (20	013) Saturday Peak Delay LOS	Fu AM Pea	LOS	PM Pea Delay	aid v prov und reco	vehicles ti vide a sign er accept ommende (2025) Soturdoy P Delay	urning nalized able cod impro	in and out crossing for nditions du overments. AM Peal Delay	of the Mor pedest uring all t Total Fut k	trians. The time per trime	ne intersions with the intersions with the intersions (20 or in the intersions) and intersions (20 or inters	oction of these	ре
section h Service Court & First Street NW	Westbound		k	Conditions (20	D13) Saturday Peak Delay LOS	Fu AM Pea		PM Pea	aid v prov und reco	vehicles ti vide a sign er accept ommende	urning nalized able co d impr	AM Peal Delay 273.0	of the Mor pedest uring all t	trians. The time per cond PM Peo Delay 23.0	ditions (20)	oction of the section	ре
			k LOS I	Conditions (20 PM Peak Delay LOS	013) Saturday Peak Delay LOS	Fu AM Peal Del ay	LOS	PM Pea Delay	aid v prov und reco	vehicles ti vide a sign er accept ommende (2025) Soturdoy P Delay	eak	in and out crossing for nditions du overments. AM Peal Delay	of the Mor pedest uring all t Total Fut k	trians. The time per trime	ne intersions with the intersions with the intersions (20 or in the intersions) and intersions (20 or inters	oction of these	ре
h Service Court & First Street NW	Westbound Southbound Left		k LOS I	Conditions (20 PM Peak Delay LOS	Saturday Peak Delay LOS	Fu AM Peal Del ay	LOS	PM Pea Delay	aid v prov und reco	vehicles ti vide a sigr er accept ommende	urning nalized able cod impro	AM Peal Delay 273.0 1.1	of the Mor pedest uring all t	ture Cond PM Peo Delay 23.0 0.6	ditions (200)	025) Saturday Delay 12.3 0.8	ре



Table 40: Intersection Summary – North Service Court NW & First Street NW (2 of 2)

North Service Court NW & First Street NW

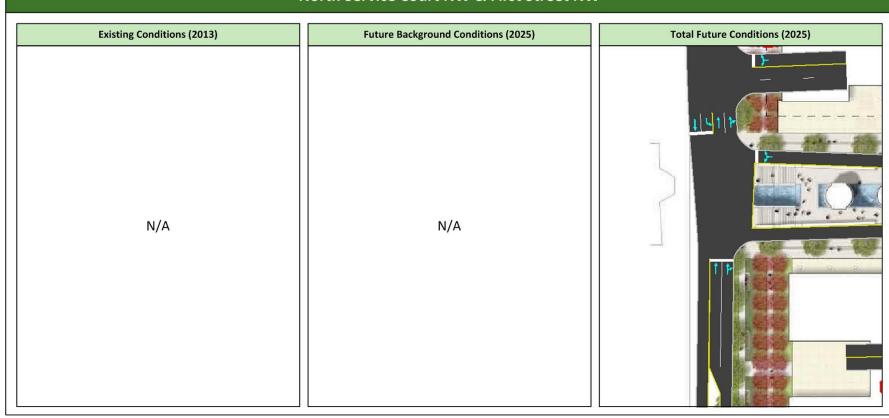




Table 41: Intersection Summary – Medical Office Driveway #1 & First Street NW (1 of 2)

Medical Office Driveway #1 & First Street NW										
1000 ann 1000 ann	OWNER GUILDINGS	AM Peak Hour	PM Peak Hour	Saturday Peak Hour						
Location/Scenarion EX = Existing BG = Future Backg TF = Total Futu	(2013) round (2025)	Westbound Medical Office Driveway #1: TF	Westbound Medical Office Driveway #1: TF							
Percent of future traffic attrib	outable to development:	53.3%	56.0%	42.2%						
	The delays at this intersection	on are due to the site-generated trips entering and	exiting the McMillan development, namely the em	nployee access to the Medical Office Bui						

Summary of capacity analysis results:

parking garage.

Potential Improvements:												
Existing Conditions (2013)	Future Background Conditions (2025)	Total Future Conditions (2025)										
		In conjunction with Phase 1 of development, it is recommended that the drive way function as two lanes inbound and one lane outbound during the morning peak period. During the afternoon peak period, it is recommended that the driveway function as one lane inbound and two lanes outbound. The outbound lanes should be signed as left-turn and right-turn only, respectively, during the afternoon peak period. Additionally, it is recommended that signage and pavement markings be installed along First Street NW in order to prevent vehicles from "blocking the box" at the driveway. Construction of the adjacent signal at the North Service Court is projected to improve the frequency of adequate gaps along First Street NW, improving the outbound vehicular movement.										
	U v s W U V s W v v v V V											

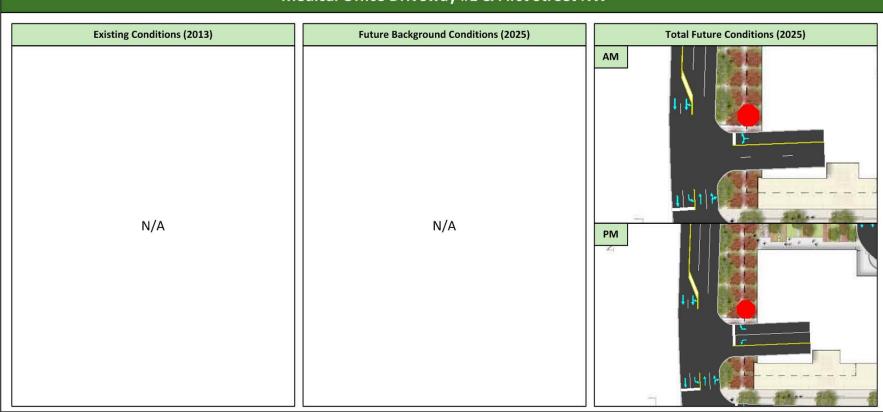
Capacity Analysis Results:

		Existing Conditions (2013)						Future Background Conditions (2025)						Total Future Conditions (2025)					
Intersection	Approach	AM Peak		PM Peak		Saturday Peak		AM Peak		PM Peak		Saturday Peak		AM Peak		PM Pe	ak	Saturday	Peak
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Medical Office Dwy #1 & First Street NW	Westbound		100	75.0								-		570.1	F	791.6	F	15.1	C
	Southbound Left		**											9.4	Α	1.5	Α	0.9	Α
Improvements:	Westbound			227				22						63.9	F	40.3	Ε	11.1	В
	Southbound Left						-							9.3	A	2.4	A	1.9	A



Table 42: Intersection Summary – Medical Office Driveway #1 & First Street NW (2 of 2)

Medical Office Driveway #1 & First Street NW





SUMMARY OF IMPROVEMENTS AND RECOMMENDATIONS

The results of the roadway capacity analysis led to several recommended improvements to mitigate the impact of the site-generated traffic volumes. The following provides a summary of the recommended improvements:

- As outlined in the PUD, new traffic signals at recommended at the following intersections:
 - Michigan Avenue and Half Street NW;
 - North Capitol Street and the North Service Court; and
 - o North Capitol Street and Evarts Street NW.

Preliminary warrant for these traffic signals are included in the Technical Appendices.

A new traffic signal is also recommended at the intersection of First Street NW & the North Service Court. An additional traffic signal at the intersection of First Street NW and Evarts Street should be considered following full build-out of the PUD. A preliminary warrant for this traffic signals is included in the Technical Appendices.

- In conjunction with installing a signal at the intersection of North Capitol Street and the North Service Court, it is recommended that the adjacent intersection of North Capitol Street with Franklin Street NE be converted to right-in/right-out operation.
- It is recommended that parking restrictions along North Capitol Street adjacent to the site be extended to include peak hour restrictions on both sides of the roadway during the weekday morning and afternoon peak hours. In the existing conditions, on-street parking is permitted on the northbound approach during the morning peak period and on the southbound approach during the afternoon peak period. Restricting this parking allows for three travel lanes on the north- and southbound approached adjacent to the site.
- As outlined in the PUD, a northbound left-turn lane is recommended on North Capitol Street at the intersection with Evarts Street NW. An additional northbound left-turn lane is recommended along North Capitol Street at the intersection with the North Service Court.
- Along Michigan Street NW, it is recommended that an eastbound right-turn lane be constructed at the intersection with North Capitol Street. An additional eastbound right-turn lane should be studied at the intersection with First Street NW following full-build-out of the site.

- Along First Street NW, southbound left-turn lanes are recommended at the intersections with the North Service Court and with Evarts Street NW. Additionally, it is recommended that First Street NW adjacent to Parcel 1 be reconstructed and widened to allow for a four-lane cross-section between Michigan Avenue NW and the North Service Court.
- A southbound left-turn lane and signal timing improvements are recommended at the intersection of First Street with Michigan Avenue due to traffic generated by the background developments, not as a mitigation measure for the PUD. Thus, if the PUD constructs this improvement as part of its work on the intersection, the portion of work spent on mitigating the background development trips should be counted as a PUD amenity and not a required PUD mitigation measure.
- Signal timing improvements are recommended at the following intersections:
 - Michigan Avenue NW and First Street NW;
 - Michigan Avenue NE/NW and North Capitol Street;
 and
 - Bryant Street NW and First Street NW.
- It is also recommended that the intersection of Channing Street NW and First Street NW be converted from all-way to one-way stop.

A summary of the recommended improvements is included as Figure 33 and Figure 34.



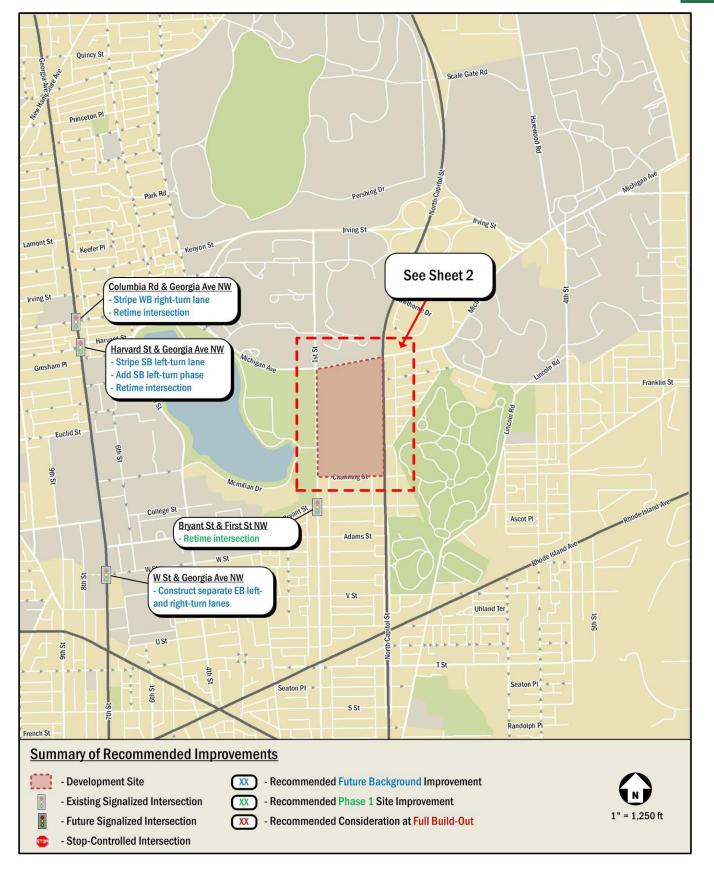


Figure 33: Summary of Recommended Improvements (1 of 2)



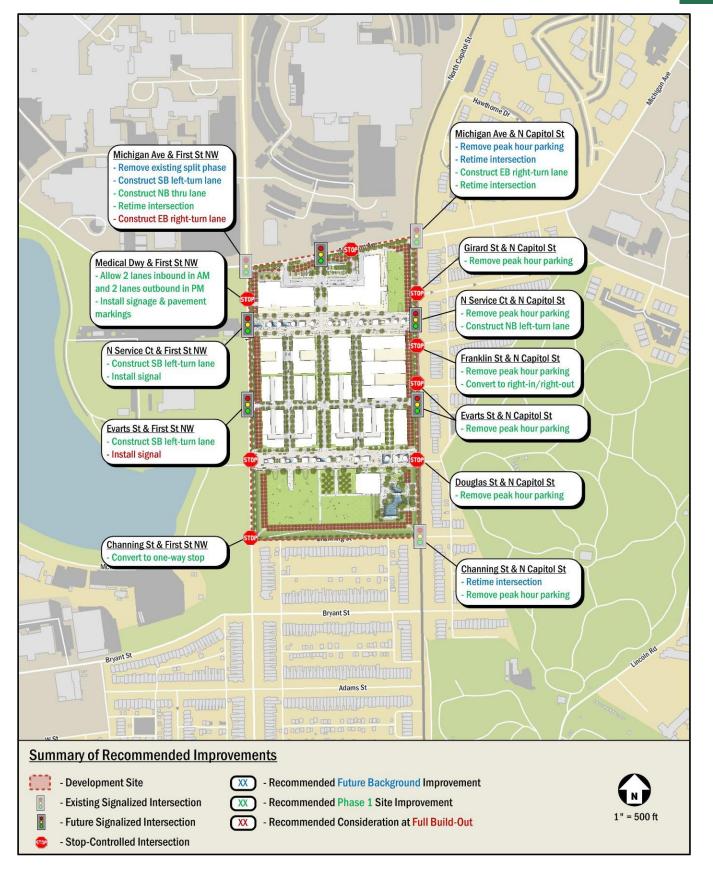


Figure 34: Summary of Recommended Improvements (2 of 2)



TRANSIT

This section discusses the existing and projected future transit facilities in the vicinity of the site and analyzes the overall transit impacts due to the McMillan PUD. The overall purpose of this analysis is to:

- Determine the existing capacity and ridership on the surrounding transit system;
- Determine the overall impact of the McMillan PUD on the surrounding transit network;
- Discuss potential improvements or new transit options to accommodate the additional transit trips; and
- Evaluate on-site transit facilities (i.e. bus stops, bus shelters) in order to determine the most effective layout for the future.

TRANSIT CAPACITY ANALYSIS

This analysis consisted of determining the transit capacity and ridership for the following conditions:

- 2013 Existing Conditions
- 2025 Future Background Conditions (with transit improvements, but without the McMillan PUD)
- 2025 Total Future Conditions (with transit improvements and the McMillan PUD)

For the purpose of this analysis, Metrobus routes within a quarter-mile of the site were considered for evaluation. For rail, typically only Metrorail stations within a half mile of the site are evaluated; however, as shown in Figure 35, 2011 Census Data for the site shows about a 50/50 split between Metrobus and Metrorail ridership. Thus, the Green/Yellow and Red Lines were evaluated despite the fact that the nearest stations for these lines are over a mile away. Figure 36 depicts the existing transit facilities included within this analysis.

Bus Study Area

Metrobus routes within a quarter-mile of the site include the 80 Line, the D8 Line, and the H1-H4 Lines, as described below.

■ 80 – North Capitol Street Line

The 80 Line runs southbound to the Kennedy Center and northbound to Fort Totten. It runs seven days a week with 8 to 15 minute headways during weekday peak hours and 20 to 30 minute headways during the Saturday peak. This route travels through downtown and stops at many

significant locations such as Metrorail Stations at Farragut North/West, McPherson Square, Gallery Place/Chinatown, Union Station, Brookland-CUA, and Fort Totten. Therefore, it is likely that many people who commute via Metrorail will utilize the 80 Line buses for the remainder of their trip to and from the McMillan PUD.

■ <u>D8 – Hospital Center Line</u>

The D8 line runs southbound to Union Station and northbound to Washington Hospital Center. It runs seven days a week with 10 to 20 minute headways during the weekday peak periods and 20 minute headways during the Saturday afternoon peak. The D8 Line is a short route with significant stops located at Union Station, Rhode Island Metro Station, and the Washington Hospital Center.

■ H1 - Brookland-Potomac Park Line

The H1 line runs southbound to Potomac Park and northbound to the Brookland-CUA Metro Station. It runs Monday through Friday with southbound service during the morning peak period and northbound service during the afternoon peak period. It operates at 15 to 20 minute headways at all times. The H1 Line connects with significant locations such as the Columbia Heights Metro Station, Adams Morgan, the Dupont Circle Metro Station, and the Foggy Bottom-GMU Metro Station.

■ H2, H3, H4 – Crosstown Line

The H2-H4 Lines run westbound to the Tenleytown-AU Metro Station and eastbound to the Brookland-CUA Station. The H2 and H4 Lines run seven days a week and the H3 Line runs Monday through Saturday, during AM and PM peak periods only. Between the three lines, this route operates at 7 to 15 minute headways during weekday peak periods and 15 minute headways during the Saturday PM peak period. It provides service to several Metrorail stations at Brookland-CUA, Columbia Heights, Cleveland Park, and Tenleytown-AU. Additionally, the H2 and H3 Lines provide access to the Veterans Affairs Medical Center.

Because multiple transit improvements are made in the future conditions that completely or partially overlap these routes, the Metrobus Lines were categorized into corridors in order to best evaluate the ridership and capacity during each study condition. The corridors are designated as follows:

North Capitol Street Corridor (includes the 80 Line);



- Hospital Center Corridor (includes the D8 Line);
- Brookland-Potomac Park Corridor (includes the H1 Line);
- The Crosstown Corridor (includes the H2, H3, and H4 Lines).

Each corridor was studied during the weekday morning and afternoon peak periods, as well as the Saturday afternoon peak period for both travel directions (eastbound/westbound for the Crosstown Corridor and northbound/southbound for the North Capitol Street Corridor, the Hospital Center Corridor, and the Brookland-Potomac Park Corridor).

Rail Study Area

For the purpose of this analysis, the two nearest Metrorail Lines were included: the Green/Yellow Lines (which run along the same alignment near the site) and the Red Line. The Metrorail system opens at 5:00 AM on weekdays and 7:00 AM on weekends. It closes at midnight Sunday through Thursday and at 3:00 AM on Friday and Saturday.

■ Green/Yellow Line

The Green and Yellow Lines travel from the city of Greenbelt, MD to the north, extending downtown through Chinatown/Gallery Place and L'Enfant Plaza. From there, the Green Line crosses the Anacostia River towards Southeast DC and ends at the Branch Avenue Station in Suitland, MD. The Yellow Line crosses the Potomac River towards Virginia and ends at the Huntington Station just outside the beltway. The arrival of Yellow and Green Line trains typically alternate and run frequently during the weekday morning and afternoon peak periods with headways of approximately six minutes (or three minutes at stations that serve both Lines). During the Saturday afternoon peak period, trains typically operate with headways of approximately 12 minutes (or six minutes at stations that serve both Lines). The nearest Green/Yellow Line station is the U Street-African American Civil War Memorial-Cardozo Station, which is a 1.3-mile walk from the centermost point of the McMillan site.

Red Line

The Red Line travels southbound from the Shady Grove Station in Rockville, MD; travels through downtown DC via Dupont Circle, Chinatown/Gallery Place, and Union Station; and then continues northbound towards the Glenmont Station in Glenmont, MD. Red Line trains typically operate

at three- to five-minute headways during the weekday morning and afternoon peak periods and six-minute headways during the Saturday afternoon peak period. The nearest Red Line station is the Brookland Station which is a 1.1 mile walk from the centermost point of the McMillan site.

Existing Conditions

Existing transit conditions were evaluated for the Metrobus and Metrorail study areas to determine a benchmark for future transit improvements and site-generated transit trips.

Bus System

In order to determine the existing conditions of the Metrobus system, the following steps were taken:

- 1. Determine the existing capacity of each corridor.
- 2. Determine the existing ridership along each corridor.
- 3. Determine the existing ridership/capacity (R/C) ratios.

Existing Capacity

Existing capacity was determined based on the number of buses per hour and the number of seats per bus. According to the 2010 Metrobus Fleet Management Plan¹ standard buses have an average of 41 seats and articulated buses have an average of 63 seats. Currently none of the bus routes near the site utilize articulated buses. Bus route timetables located on the WMATA website were used to determine the number of buses per hour for each study scenario. For the purpose of this analysis, capacity is described as the number of seated passengers per hour. Therefore, the following equation was used to determine existing capacity:

Existing Capacity = $(\#of\ buses/hour) * (\#of\ seats/bus)$

Existing Ridership

In order to effectively compare ridership to capacity, it was necessary to develop an hourly ridership for each route based on the daily ridership provided by WMATA. According to the *Metrobus Fleet Management Plan,* 31.4% of daily ridership occurs during the morning peak and 33.9% of daily ridership occurs during the evening peak. It was assumed that the morning and afternoon peak periods consist of a four-hour period. Additionally, Saturday ridership is approximately 34% of weekday ridership; for the purpose of the study, it was

¹ 2010 Metrobus Fleet Management Plan Final Report, July 2010, Washington Metropolitan Area Transit Authority



assumed that 33.9% of Saturday ridership would occur during the afternoon peak hour.

The existing ridership was based on the 2012 daily ridership values with the amount of morning, afternoon, and Saturday peak ridership determined from the percentages listed above. These ridership values were divided by four to determine the hourly ridership. From there, the directional ridership (EB/WB, NB/SB) was determined based on the ratio of bus service between each direction.

Existing Ridership/Capacity Ratio

The existing Ridership/Capacity (R/C) ratio was determined by dividing the number of passengers by the number of available seats. According to the *Metrobus Regional Bus Services*Performance Assessment Report¹ performed by WMATA in January of 2000, an R/C ratio of 1.2 is acceptable for Radial service, an R/C ratio of 1.1 is acceptable for Crosstown service, and an R/C ratio of 1.0 is acceptable for Express and Off-Peak service. Therefore, an R/C ratio of 1.1 is acceptable for the

Crosstown Corridor and an R/C ratio of 1.2 is acceptable for the remaining three corridors.

Results

Based on the methodology outlined above, the existing capacity, ridership, and R/C ratio was determined for each corridor as shown in Table 43 and depicted in Figure 37. As can be seen, the Hospital Center and Brookland-Potomac Park Corridors operate at acceptable R/C ratios during all study scenarios; however the North Capitol Street Corridor, which provides the most direct southbound service, exceeds the R/C threshold of 1.2 during nearly all study scenarios and the Crosstown Corridor sits at the threshold of 1.1 during the weekday PM scenario. Without the addition of any background transit growth or the site-generated transit trips from the McMillan development, the North Capitol Street Corridor is already over capacity. Therefore, regardless of changes in the area improvements should be made to this corridor in order to increase capacity and reduce the R/C ratio.

Table 43: Existing Metrobus Conditions

Bus Route	Time	Direction	Existing Capacity (passengers/hour)	Existing Ridership (passengers/hour)	Existing R/C Ratio
	Weekday AM	Southbound	246	346	1.4
		Northbound	164	264	1.6
North Capitol Street Corridor	Weekday PM	Southbound	164	292	1.8
	Weekuay Pivi	Northbound	205	366	1.8
	Cotundou DNA	Southbound	82	109	1.3
	Saturday PM	Northbound	82	98	1.2
	\\/\\\	Southbound	164	162	1.0
	Weekday AM	Northbound	164	184	1.1
	Maral day DNA	Southbound	123	139	1.1
Hospital Center Corridor	Weekday PM	Northbound	246	234	1.0
	G : 1 PM	Southbound	246	75	0.3
	Saturday PM	Northbound	123	52	0.4
Described Balance Bala Consider	Weekday AM	Southbound	164	56	0.3
Brookland-Potomac Park Corridor	Weekday PM	Northbound	123	61	0.5
	14/	Westbound	328	312	1.0
	Weekday AM	Eastbound	246	234	1.0
Constant Constant	Maral day DNA	Westbound	246	273	1.1
Crosstown Corridor	Weekday PM	Eastbound	287	318	1.1
	C	Westbound	164	100	0.6
	Saturday PM	Eastbound	164	101	0.6

¹ Metrobus Regional Bus Services Performance Assessment Report, January 2000, Washington Metropolitan Area Transit Authority



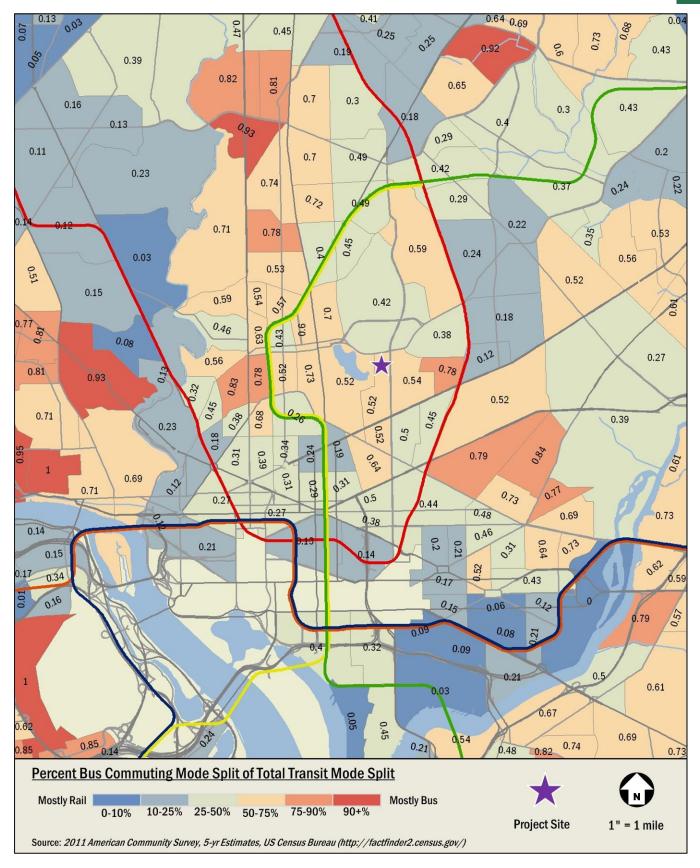


Figure 35: Percent Bus Commuting Mode Split of Total Transit Mode Split



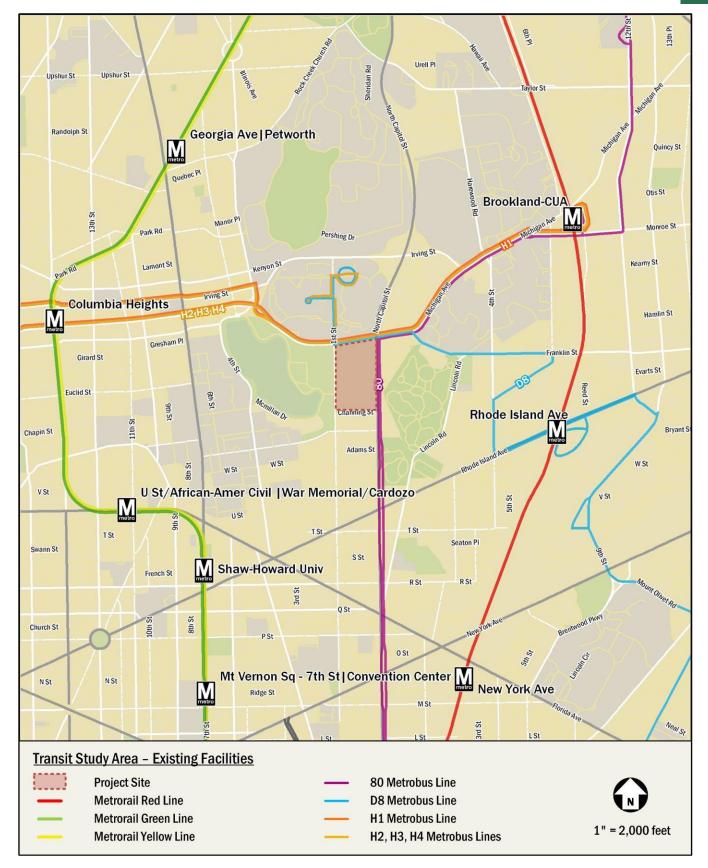


Figure 36: Transit Study Area - Existing Conditions