



Mount Auburn Street
Corridor Study
Appendix C: VISSIM Outputs

Fresh Pond Parkway Corridor Results <u>AM PEAK</u>					
	Segment	Existing Travel Time (s)	Existing Speed (mph)	Build Travel Time (s)	Build Speed (mph)
Northbound Direction	Memorial Dr to Mt Auburn St	32	22.6	37	19.4
	Mt Auburn St to Brattle St	47	12.2	32	18.0
	Brattle St to Huron Ave	70	18.7	69	19.0
	TOTAL	149	17.2	138	18.6
Southbound Direction	Larch Road to Huron Ave	50	12.1	76	8.0
	Huron Ave to Brattle St	138	9.2	205	6.2
	Brattle St to Mt Auburn Ave	37	16.8	75	8.3
	TOTAL	225	10.9	355	6.9

Mt Auburn Street Corridor Results <u>AM PEAK</u>					
		Existing Travel Time (s)	Existing Speed (mph)	Build Travel Time (s)	Build Speed (mph)
Eastbound Direction	Cottage St to Belmont St (eastbound through on Mt Auburn Street)	25	14.1	61	5.8
	Norman St to Mt Auburn St (southbound left turn from Belmont to Mt Auburn St)	42	6.4	98	2.8
	Belmont St to Homer Ave	47	8.5	36	11.0
	Homer Ave to Aberdeen Ave	45	10.1	56	8.0
	Aberdeen Ave to Brattle St	34	9.9	51	6.5
	Brattle St to Coolidge St	274	2.8	165	4.6
	Coolidge St to Fresh Pond Parkway	45	8.2	31	12.1
	TOTAL *	470	5.6	400	6.6
Westbound Direction	Trail St to Fresh Pond Parkway	52	6.6	60	5.8
	Fresh Pond Parkway to Coolidge St	15	13.4	8	27.4
	Coolidge St to Brattle St	27	28.1	33	22.7
	Brattle St to Aberdeen Ave	33	13.3	39	11.1
	Aberdeen Ave to Homer Ave	28	12.9	27	13.5
	Homer Ave to Holworthy St (westbound right turn from Mt Auburn st to Belmont St)	23	16.8	24	16.2
	Homer Ave to Belmont St	26	16.6	25	17.3
	TOTAL *	181	13.8	192	13.0

* total travel time results are based on the through travel time along the Mt Auburn St corridor, therefore excludes the turns to/from Belmont Street

Fresh Pond Parkway Corridor Results <u>PM PEAK</u>					
	Segment	Existing Travel Time (s)	Existing Speed (mph)	Build Travel Time (s)	Build Speed (mph)
Northbound Direction	Memorial Dr to Mt Auburn St	36	19.8	45	16.1
	Mt Auburn St to Brattle St	38	14.9	38	15.3
	Brattle St to Huron Ave	74	17.7	74	17.8
	TOTAL	149	17.2	156	16.4
Southbound Direction	Larch Road to Huron Ave	86	7.0	99	6.1
	Huron Ave to Brattle St	77	16.4	193	6.6
	Brattle St to Mt Auburn Ave	45	13.8	75	8.2
	TOTAL	208	11.8	367	6.7

Mt Auburn Street Corridor Results <u>PM PEAK</u>					
		Existing Travel Time (s)	Existing Speed (mph)	Build Travel Time (s)	Build Speed (mph)
Eastbound Direction	Cottage St to Belmont St (eastbound through on Mt Auburn Street)	37	9.6	59	6.1
	Norman St to Mt Auburn St (southbound left turn from Belmont to Mt Auburn St)	46	5.9	96	2.8
	Belmont St to Homer Ave	41	9.6	35	11.3
	Homer Ave to Aberdeen Ave	30	14.7	27	16.6
	Aberdeen Ave to Brattle St	16	19.4	27	11.2
	Brattle St to Coolidge St	91	8.8	108	7.4
	Coolidge St to Fresh Pond Parkway	71	5.2	55	6.8
	TOTAL *	286	9.2	311	8.5
Westbound Direction	Trall St to Fresh Pond Parkway	52	6.9	49	7.2
	Fresh Pond Parkway to Coolidge St	9	24.0	15	14.4
	Coolidge St to Brattle St	59	12.3	116	6.2
	Brattle St to Aberdeen Ave	42	10.5	47	9.2
	Aberdeen Ave to Homer Ave	32	12.1	35	11.0
	Homer Ave to Holworthy St (westbound right turn from Mt Auburn st to Belmont St)	36	11.0	26	15.3
	Homer Ave to Belmont St	35	12.1	26	15.9
	TOTAL *	227	11.0	290	8.6

* total travel time results are based on the through travel time along the Mt Auburn St corridor, therefore excludes the turns to/from Belmont Street

	Eastbound Direction AM Peak Bus Run Time (Excluding Dwell Time at Stops)			
Segment	Existing Bus Travel Time (s)	Existing Bus Speed (mph)	Build Bus Travel Time (s)	Build Bus Speed (mph)
Belmont St (Cushing St) to Homer Ave	90	7.2	57	11.2
Homer Ave to Aberdeen Ave	36	11.2	58	7.0
Aberdeen Ave to Brattle St	37	7.5	52	5.7
Brattle St to Coolidge Ave	183	2.8	22	23.6
Coolidge Ave to Traill St	72	8.0	57	10.0
TOTAL Average Travel Time	440	5.8	247	9.9

	Westbound Direction AM Peak Bus Run Time (Excluding Dwell Time at Stops)			
Segment	Existing Bus Travel Time (s)	Existing Bus Speed (mph)	Build Bus Travel Time (s)	Build Bus Speed (mph)
Traill St to Coolidge Ave	61	9.1	77	7.2
Coolidge Ave to Brattle St	17	26.9	17	26.7
Brattle St to Aberdeen Ave	22	14.4	26	14.4
Aberdeen Ave to Homer Ave	52	10.2	77	6.3
Homer Ave to Belmont St	29	17.5	28	18.3
TOTAL Average Travel Time	182	13.1	224	10.6

	Eastbound Direction PM Peak Bus Run Time (Excluding Dwell Time at Stops)			
Segment	Existing Bus Travel Time (s)	Existing Bus Speed (mph)	Build Bus Travel Time (s)	Build Bus Speed (mph)
Belmont St (Cushing St) to Homer Ave	92	7.1	49	13.3
Homer Ave to Aberdeen Ave	30	13.4	29	15.0
Aberdeen Ave to Brattle St	14	20.4	31	9.8
Brattle St to Coolidge Ave	45	11.7	22	24.0
Coolidge Ave to Traill St	95	6.0	38	15.2
TOTAL Average Travel Time	276	8.8	168	14.8

	Westbound Direction PM Peak Bus Run Time (Excluding Dwell Time at Stops)			
Segment	Existing Bus Travel Time (s)	Existing Bus Speed (mph)	Build Bus Travel Time (s)	Build Bus Speed (mph)
Traill St to Coolidge Ave	63	9.1	62	9.3
Coolidge Ave to Brattle St	33	16.7	47	11.7
Brattle St to Aberdeen Ave	75	6.2	41	11.2
Aberdeen Ave to Homer Ave	58	5.8	85	4.4
Homer Ave to Belmont St	46	11.6	43	11.1
TOTAL Average Travel Time	274	8.7	279	8.5

EXISTING CONDITIONS												BUILD CONDITIONS												
Intersection Information				AM Peak Hour				PM Peak Hour				Intersection Information				AM Peak Hour				PM Peak Hour				
Intersection	Traffic Control	Approach	Movement	LOS	Avg Queue (feet)	Max Queue (feet)	Delay (sec)	LOS	Avg Queue (feet)	Max Queue (feet)	Delay (sec)	Traffic Control	Approach	Movement	LOS	Avg Queue (feet)	Max Queue (feet)	Delay (sec)	LOS	Avg Queue (feet)	Max Queue (feet)	Delay (sec)		
Belmont / Mt Auburn	Signalized	EB	EBL	B	17	205	11.9	-	-	-	-	Signalized	EB	EBL	D	116	649	40.8	-	-	-	-		
			EBT	B	17	205	16.0	C	51	298	28.3			EBT	D	116	649	43.1	E	274	1057	70.2		
		EB Approach			B			16.0	C				28.3	EB Approach			D			43.1	E			70.2
		WB	WBT	B	27	371	11.5	C	81	556	20.4		WB	WBT	B	32	416	11.0	B	41	484	12.5		
			WBR	A	16	376	7.0	B	75	567	18.7			WBR	A	20	414	8.1	A	28	462	9.1		
		WB Approach			A			9.5	B				19.5	WB Approach			A			9.7	B			10.6
		SB	SBL	D	81	419	35.9	D	63	298	36.9		SB	SBL	F	506	1470	91.6	F	307	1025	89.9		
			SBR	C	81	419	32.7	C	61	301	31.9			SBR	C	506	1470	32.7	C	307	1025	31.1		
		SB Approach			D			35.9	D				36.7	SB Approach			F			90.9	F			87.6
		Overall			B			19.7	C				25.4	Overall			D			43.2	D			42.7
Homer / Mt Auburn	Signalized	EB	EBL	C	144	574	33.0	D	108	482	40.3	Signalized	EB	EBL	B	80	515	14.4	C	20	168	30.2		
			EBT	C	144	574	30.9	C	108	482	27.1			EBT	B	138	543	16.2	D	22	166	47.2		
		EB Approach			C			30.9	C				27.3	EB Approach			B			16.1	D			41.5
		WB	WBT	B	48	305	15.8	B	98	668	19.4		WB	WBT	D	9	120	48.5	C	258	618	21.8		
			WBR	B	48	305	19.3	C	98	668	20.4			WBR	C	7	122	21.7	C	258	618	22.3		
		WB Approach			B			16.0	B				19.5	WB Approach			D			35.9	C			21.8
		SB	SBL	D	7	100	38.3	D	23	179	42.5		SB	SBL	B	80	515	14.2	D	160	588	40.1		
			SBR	B	5	103	14.7	C	21	181	25.5			SBR	A	80	515	6.1	B	160	588	20.0		
		SB Approach			C			27.2	D				36.7	SB Approach			B			14.0	C			20.3
		Overall			C			24.2	C				23.6	Overall			B			15.8	C			22.0
Aberdeen / Mt Auburn	Signalized	EB	EBL	E	196	587	59.1	F	183	528	87.1	Signalized	EB	EBL	C	130	532	20.1	E	141	486	67.7		
			EBT	C	196	587	34.0	C	183	528	21.2			EBT	D	151	676	49.3	B	141	486	15.2		
		EB Approach			D			39.0	D				35.9	EB Approach			C			26.2	C			27.1
		WB	WBT	B	56	285	12.5	D	269	407	44.5		WB	WBT	F	166	676	82.5	C	301	547	32.7		
			WBR	B	56	285	13.0	F	269	407	80.8			WBR	F	166	676	86.2	D	301	547	51.5		
		WB Approach			B			12.6	E				55.8	WB Approach			F			82.5	D			38.6
		SB	SBL	F	240	984	99.3	F	360	946	157.3		SB	SBL	B	119	492	16.3	F	593	1177	214.6		
			SBR	E	221	1007	56.1	F	360	946	101.1			SBR	D	130	532	44.3	F	593	1177	225.6		
		SB Approach			E			77.8	F				129.2	SB Approach			C			21.9	F			220.0
		Overall			D			36.8	E				57.1	Overall			C			29.8	E			55.3
Brattle / Mt Auburn	Unsignalized	EB	EBL	F	185	534	76.7	F	111	401	59.0	Signalized	EB	EBL	C	208	586	29.7	F	321	759	132.5		
			EBT	D	45	235	28.4	A	108	396	2.8			EBT	D	208	586	48.2	E	578	1122	73.6		
		EB Approach			E			44.7	D				30.1	EB Approach			D			41.7	F			123.4
		WB	WBT	A	0	43	7.8	E	174	836	37.5		WB	WBT	A	16	273	7.6	B	114	525	14.7		
			WBR	D	0	43	28.4	F	174	836	65.3			WBR	B	16	273	14.4	B	114	525	19.6		
		WB Approach			A			8.3	E				47.5	WB Approach			B			14.2	B			15.9
		SW	SWR	B	17	252	13.7	F	149	586	73.7		SW	SWR	E	104	469	73.6	F	578	1122	92.7		
			SW Approach	B			13.7	F			73.7			SW Approach	E			73.6	F			92.7		
Critical Movement			F			76.7	F			73.7	Overall			D			37.0	E			67.2			
Coolidge / Mt Auburn	Signalized	EB	EBT	F	763	1270	246.1	E	185	616	67.8	Signalized	EB	EBT	F	791	1130	129.8	E	487	1106	79.9		
			EBR	F	769	1276	200.8	D	190	623	52.8			EBR	F	796	1135	114.0	F	494	1114	88.2		
		EB Approach			F			245.2	E				67.3	EB Approach			F			129.5	F			80.2
		WB	WBT	A	136	501	5.7	A	4	90	1.0		WB	WBT	A	35	498	0.3	A	26	265	5.1		
			WBL	B	280	289	16.1	A	5	130	6.7			WBL	B	337	289	11.1	B	12	178	14.4		
		WB Approach			A			9.5	A				1.6	WB Approach			A			4.3	A			6.1
		NB	NBL	D	11	98	42.8	F	15	198	157.2		NB	NBL	E	14	105	69.1	E	15	122	62.2		
			NBR	E	59	274	56.5	F	269	653	217.0			NBR	F	126	416	109.5	E	70	320	69.6		
		NB Approach			D			53.5	F				201.6	NB Approach			F			100.5	E			67.7
		Overall			F			103.4	D				40.6	Overall			E			65.0	D			35.9

EXISTING CONDITIONS												BUILD CONDITIONS											
Intersection Information				AM Peak Hour				PM Peak Hour				Intersection Information				AM Peak Hour				PM Peak Hour			
Intersection	Traffic Control	Approach	Movement	LOS	Avg Queue (feet)	Max Queue (feet)	Delay (sec)	LOS	Avg Queue (feet)	Max Queue (feet)	Delay (sec)	Traffic Control	Approach	Movement	LOS	Avg Queue (feet)	Max Queue (feet)	Delay (sec)	LOS	Avg Queue (feet)	Max Queue (feet)	Delay (sec)	
Fresh Pond / Mt Auburn	Signalized	EB	EBT	C	289	295	28.8	D	124	277	53.1	Signalized	EB	EBT	B	83	389	19.2	D	105	380	40.5	
			EBR	C	288	442	21.6	B	123	278	16.9			EBR	B	83	389	18.2	B	105	380	18.8	
		EB Approach		C			24.4	C			30.8		EB Approach		B			18.9	C			27.1	
		WB	WBT	D	58	243	44.6	D	50	225	41.0		WB	WBT	E	179	460	65.9	D	105	456	44.9	
			WBL	D	58	243	41.7	D	50	225	39.2			WBL	E	179	460	58.2	D	105	456	54.6	
			WBR	-	-	-	-	D	50	225	44.0			WBR	E	179	460	56.9	D	105	456	47.2	
		WB Approach		D			44.3	D			41.3		WB Approach		E			64.8	D			45.1	
		NW	NWL	F	148	401	92.7	F	407	1096	86.0		NW	NWL	E	132	396	79.6	F	434	1115	91.0	
			NWT	B	45	429	11.1	B	35	397	13.3			NWT	B	85	526	15.2	C	120	810	21.3	
			NWR	B	36	256	19.5	C	92	486	34.3			NWR	C	80	492	28.3	D	117	779	36.1	
		NW Approach		C			31.9	D			44.3		NW Approach		C			32.3	D			50.3	
		SE	SET	B	115	689	16.3	C	125	702	24.5		SE	SET	D	354	705	49.1	D	337	713	52.5	
			SER	B	115	689	17.2	-	-	-	-			SER	D	354	705	45.7	-	-	-	-	
		SE Approach		B			16.3	C			24.5		SE Approach		D			49.1	D			52.5	
		Overall		C			25.9	D			36.3		Overall		D			38.7	D			46.9	
Fresh Pond / Huron	Signalized	EB	EBL	D	32	193	36.7	D	36	270	48.7	Signalized	EB	EBL	D	33	210	37.3	D	55	334	51.7	
			EBT	C	75	551	25.5	C	55	394	27.4			EBT	C	79	618	25.5	C	56	355	28.9	
			EBR	C	37	313	27.2	C	7	94	25.8			EBR	C	47	468	34.4	C	7	83	27.8	
		EB Approach		C			28.2	C			32.4		EB Approach		C			30.3	C			34.3	
		WB	WBL	F	6	88	85.3	E	4	48	79.4		WB	WBL	F	5	61	83.6	E	4	48	78.1	
			WBT	D	104	443	45.2	E	149	566	58.9			WBT	D	95	419	43.1	E	169	578	65.7	
			WBR	D	105	448	39.2	D	152	572	42.1			WBR	C	97	425	32.3	D	172	583	48.6	
		WB Approach		D			46.8	E			59.5		WB Approach		D			44.4	E			65.9	
		NB	NBT	C	93	634	23.3	C	93	582	27.3		NB	NBT	C	84	534	21.4	C	93	549	26.9	
			NBR	C	93	634	23.3	E	93	582	56.1			NBR	B	84	534	19.7	E	93	549	66.0	
		NB Approach		C			23.3	C			27.2		NB Approach		C			21.4	C			26.8	
		SB	SBL	D	161	684	46.2	F	584	1263	86.2		SB	SBL	D	426	995	48.4	F	730	1282	102.5	
			SBT	C	161	684	30.4	E	584	1263	79.9			SBT	E	426	995	77.2	F	730	1282	102.5	
			SBR	C	161	684	29.3	F	584	1263	85.6			SBR	E	426	995	77.7	F	730	1282	108.1	
		SB Approach		C			30.4	F			80.5		SB Approach		E			77.2	F			103.1	
Overall		C			29.4	D			54.9	Overall		D			45.2	E			64.8				
Fresh Pond / Brattle	Signalized	EB	EBL	F	532	902	211.6	F	537	892	219.4	Signalized	EB	EBL	E	136	644	65.1	F	243	735	112.9	
			EBT	F	532	902	184.3	F	537	892	224.4			EBT	E	136	644	60.0	F	243	735	110.4	
			EBR	F	50	277	128.5	F	0	24	146.2			EBR	D	8	182	38.9	E	0	24	73.8	
		EB Approach		F			184.7	F			222.1		EB Approach		E			60.1	F			109.4	
		WB	WBL	F	998	1702	139.7	E	120	895	67.2		WB	WBL	F	900	1627	127.9	F	210	959	88.7	
			WBT	F	732	1623	112.0	E	189	975	56.2			WBT	F	539	1338	89.4	E	249	957	71.5	
			WBR	F	736	1628	113.0	D	193	980	48.5			WBR	F	543	1344	92.2	E	253	962	66.6	
		WB Approach		F			128.1	E			60.4		WB Approach		F			111.7	E			78.0	
		NB	NBT	C	142	757	26.3	B	84	629	18.4		NB	NBT	B	71	522	15.2	B	82	634	17.3	
			NBR	C	153	773	25.4	B	93	645	18.0			NBR	B	79	539	14.4	B	92	651	16.3	
		NB Approach		C			26.2	B			18.3		NB Approach		B			15.0	B			17.1	
		SB	SBT	F	700	1524	84.8	C	173	991	32.4		SB	SBT	F	1235	1831	132.7	F	923	1763	127.0	
			SBR	F	703	1527	84.0	C	175	994	26.8			SBR	F	1244	1841	134.5	F	926	1766	143.8	
		SB Approach		F			84.8	C			32.4		SB Approach		F			132.7	F			127.0	
		Overall		F			80.3	D			47.0		Overall		E			78.8	E			75.7	

EXISTING CONDITIONS												BUILD CONDITIONS												
Intersection Information				AM Peak Hour				PM Peak Hour				Intersection Information				AM Peak Hour				PM Peak Hour				
Intersection	Traffic Control	Approach	Movement	LOS	Avg Queue (feet)	Max Queue (feet)	Delay (sec)	LOS	Avg Queue (feet)	Max Queue (feet)	Delay (sec)	Traffic Control	Approach	Movement	LOS	Avg Queue (feet)	Max Queue (feet)	Delay (sec)	LOS	Avg Queue (feet)	Max Queue (feet)	Delay (sec)		
Aberdeen / Huron	Signalized	EB	EBT	E	360	1160	56.6	C	37	402	27.1	Signalized	EB	EBT	D	331	1107	53.1	C	56	435	32.8		
			EBR	D	4	168	36.8	C	29	291	24.1			EBR	C	6	181	33.8	D	50	317	37.8		
		EB Approach			D			52.0	C				25.8	EB Approach			D			48.6	C			34.9
		WB	WBL	D	62	391	35.2	D	77	475	46.8		WB	WBL	C	56	370	32.5	E	139	557	68.9		
			WBT	A	6	149	9.2	B	13	248	14.1			WBT	A	7	142	9.1	C	28	345	25.1		
		WB Approach			C			25.0	C				27.0	WB Approach			C			23.3	D			42.5
		NB	NBL	C	21	254	24.2	F	736	1431	106.2		NB	NBL	C	22	268	25.4	D	304	1198	51.2		
			NBR	A	11	206	8.3	F	0	12	87.8			NBR	A	12	273	8.9	D	16	300	37.7		
		NB Approach			B			13.8	F				99.1	NB Approach			B			14.6	D			46.0
		Overall			D			35.1	E				57.3	Overall			C			33.3	D			42.0



HOWARD STEIN HUDSON

11 Beacon Street, Suite 1010
Boston, Massachusetts 02108
617.482.7080

www.hshassoc.com