APPENDIX G

Traffic Data

BUENA VISTA TEUTONIA DEVELOPMENT
Draft Environmental Impact Statement (DEIS)

Appendix G Traffic Background Data
Table of Contents

Attachments

ATTACHMENT I

Aerial Photos
Intersection Geometrics and
Pavement Markings

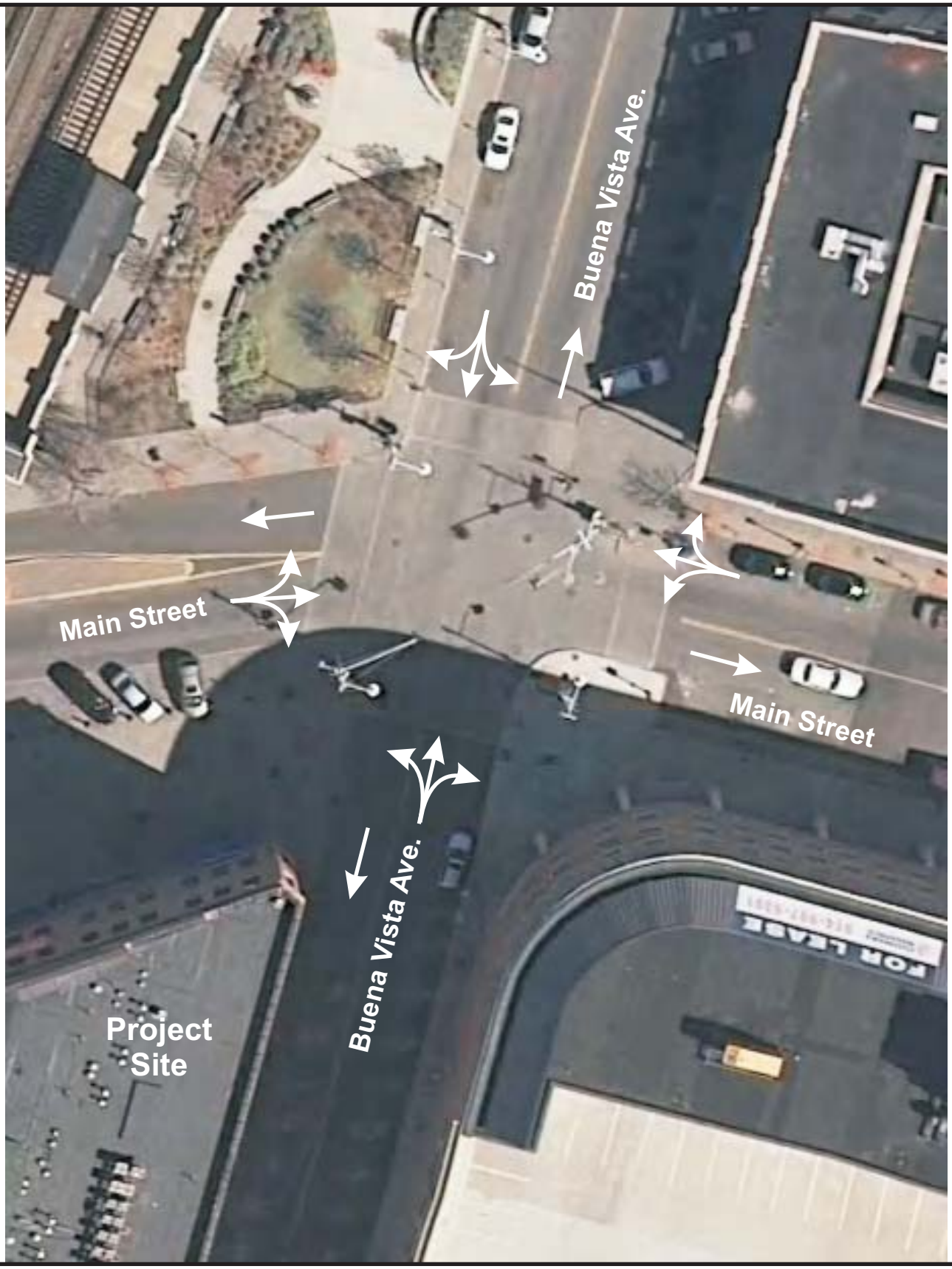

Figure G-1: Intersection of Buena Vista Ave. and Main St.
Buena Vista Teutonia PUR
City of Yonkers, Westchester County, New York
Base: Google Maps
Scale: 1"= 700'

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File 09044 04/08/10
JS:\09044

Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

Figure G-2: Intersection of Buena Vista Ave. and Prospect St.
Buena Vista Teutonia PUR
City of Yonkers, Westchester County, New York
Base: Google Maps
Scale: 1"= 700'

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Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

Figure G-3: Intersection of Riverdale Ave. and Hudson St.
Buena Vista Teutonia PUR
City of Yonkers, Westchester County, New York
Base: Google Maps
Scale: 1"= 700'

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Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

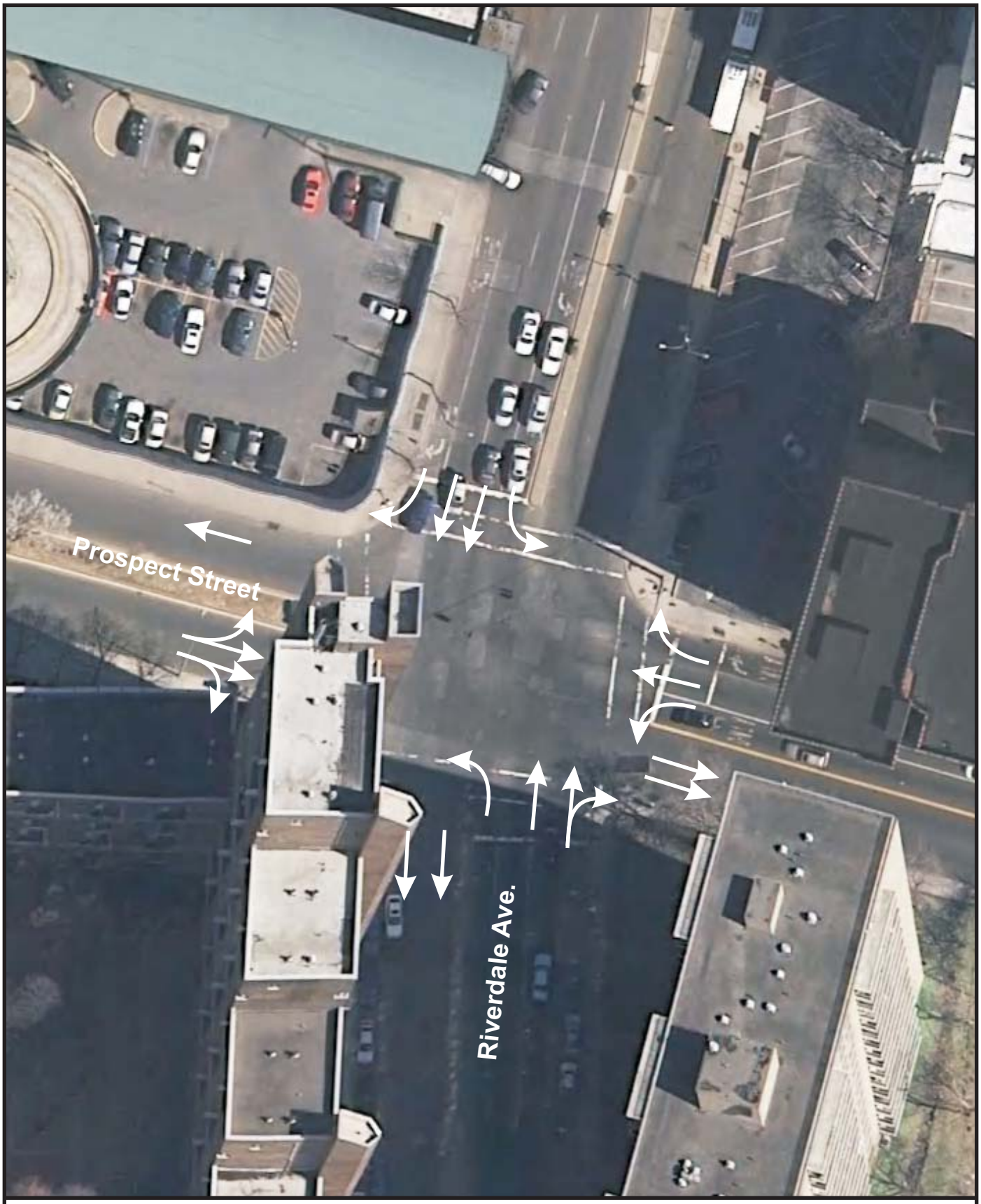

Figure G-4: Intersection of Riverdale Ave. and Prospect St.
Buena Vista Teutonia PUR
City of Yonkers, Westchester County, New York
Base: Google Maps
Scale: 1"= 700'

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Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

Figure G-5: Intersection of Riverdale Ave. and Main St.
Buena Vista Teutonia PUR
City of Yonkers, Westchester County, New York
Base: Google Maps
Scale: 1"= 700'

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Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

Figure G-6: Intersection of Buena Vista Ave. and Hudson St.
Buena Vista Teutonia PUR
City of Yonkers, Westchester County, New York
Base: Google Maps
Scale: 1"= 700'

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Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

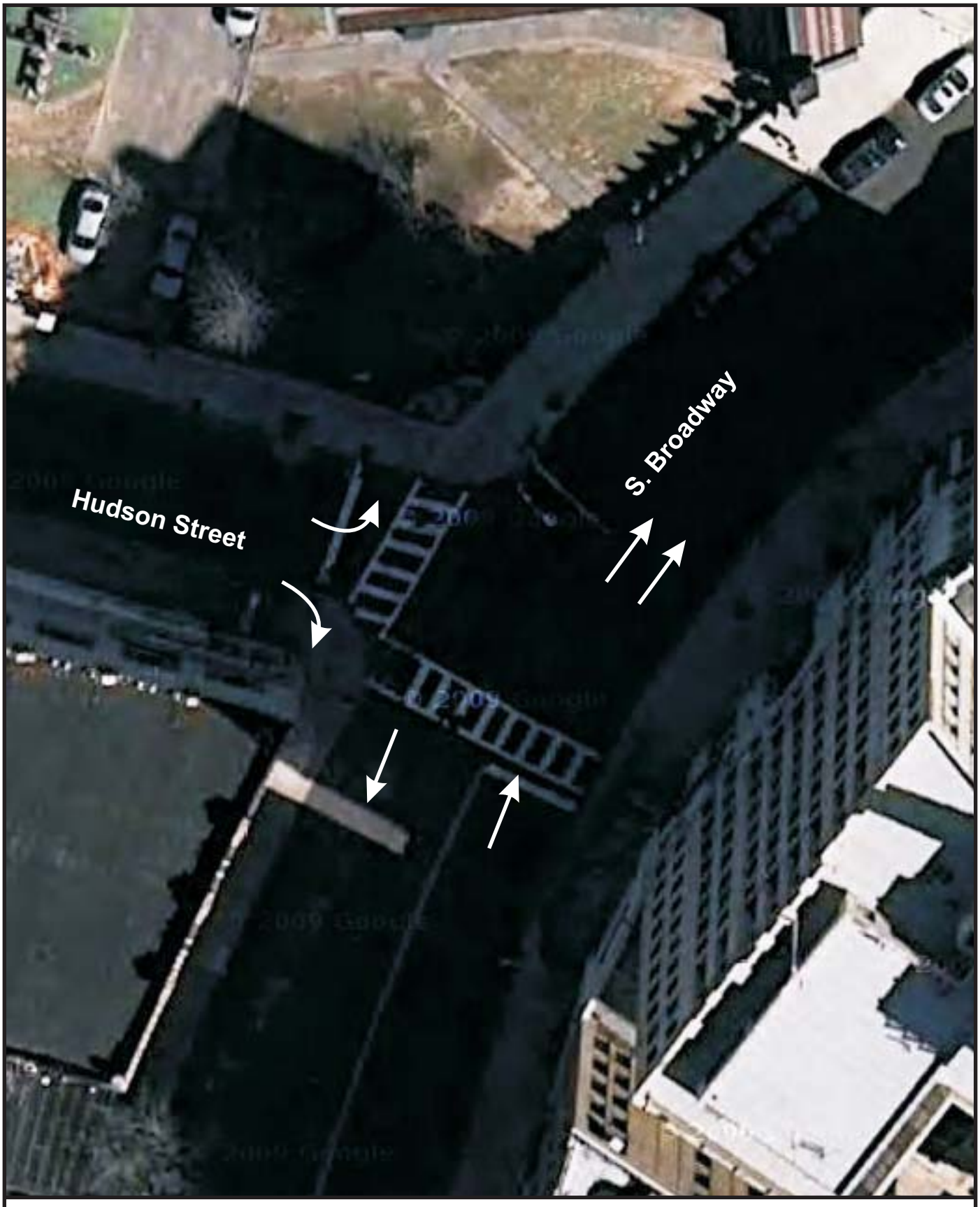

Figure G-7: Intersection of S. Broadway and Hudson St.
Buena Vista Teutonia PUR
City of Yonkers, Westchester County, New York
Base: Google Maps
Scale: 1"= 700'

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Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

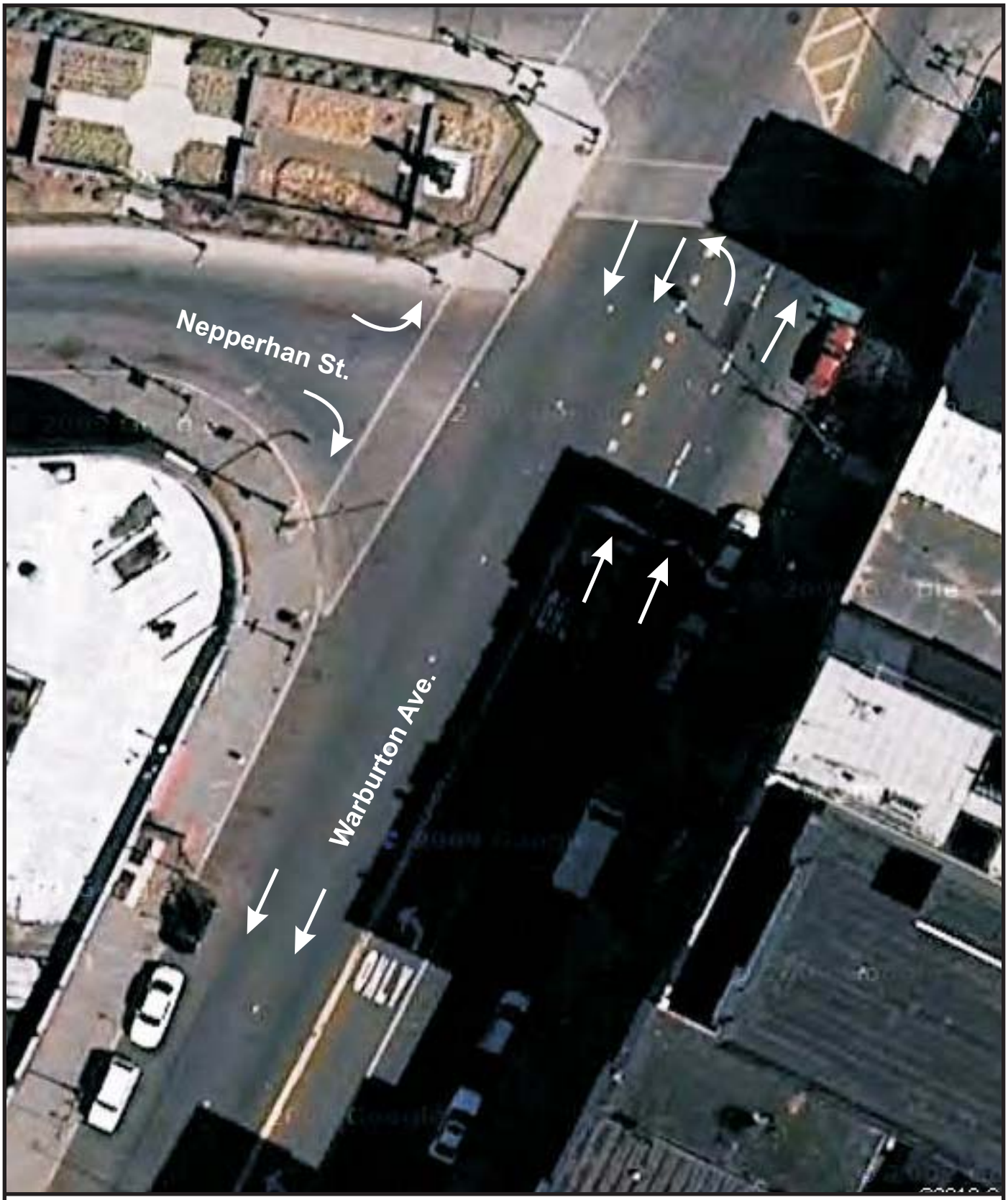

Figure G-8: Intersection of Nepperhan St. and Warburton Ave.
Buena Vista Teutonia PUR
City of Yonkers, Westchester County, New York
Base: Google Maps
Scale: 1"= 700'

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Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

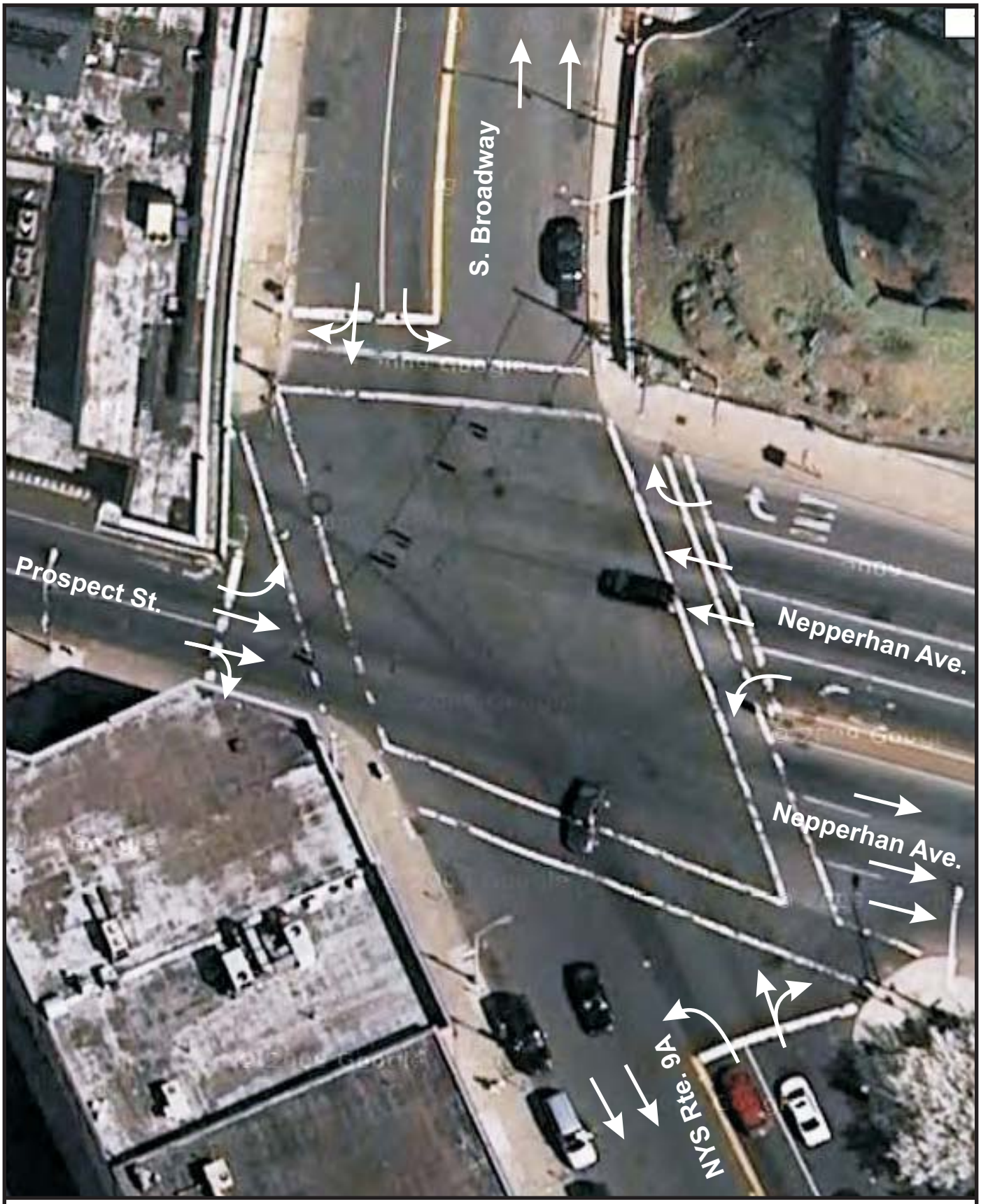

Figure G-9: Intersection of Prospect St., Nepperhan Avenue and S. Broadway (Rte. 9A).
Buena Vista Tuetonia PUR
City of Yonkers, Westchester County, New York
Base Map: Google Maps

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Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

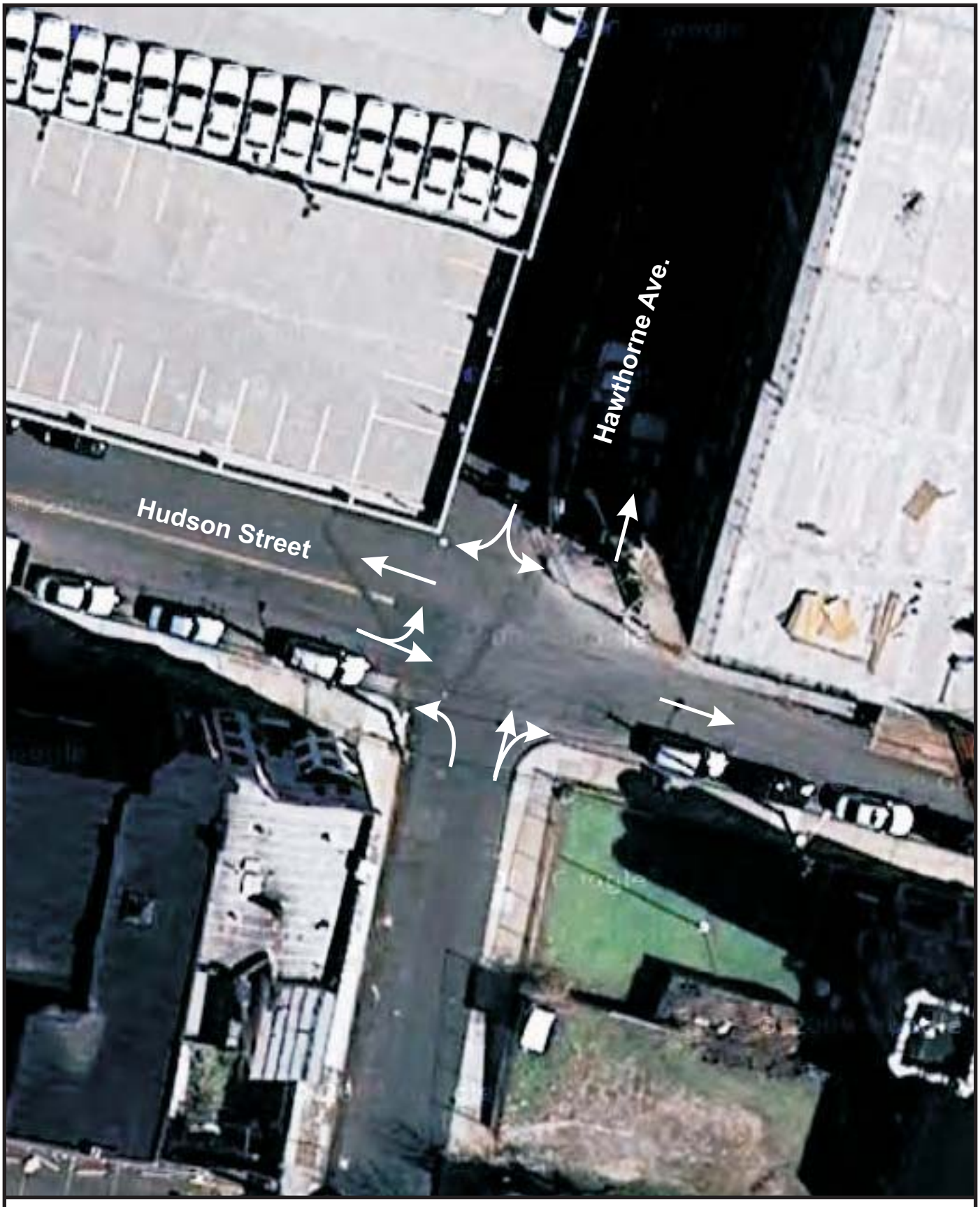

Figure G-10: Intersection of Hawthorne Ave. and Hudson St.
Buena Vista Teutonic PUR
City of Yonkers, Westchester County, New York
Base: Google Maps
Scale: 1"= 700'

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Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

ATTACHMENT II

Manual Peak Hour Counts

WEEKDAY PEAK 15 MINUTE COUNTS

PROJECT	Yonkers Buena Vista	TIM MILLER ASSOCIATES, INC.
LOCATION	01 Buena Vista Avenue and Main Street	
DATE	Tuesday December 1, 2009	
TIME	7:00 AM to 9:30 AM	

15 Minute Traffic

START TIME	END TIME	Buena Vista Avenue SB				Main Street EB				Buena Vista Avenue NB				Main Street WB				GRAND TOTAL
		left 1	thru 2	right 3	Total	left 4	thru 5	right 6	Total	left 7	thru 8	right 9	Total	left 10	thru 11	right 12	Total	
07:00 AM	07:15 AM	5	25	1	31	0	5	21	26	2	32	5	39	3	4	12	19	**115**
07:15 AM	07:30 AM	11	32	2	45	1	6	27	34	3	31	3	37	4	5	14	23	**139**
07:30 AM	07:45 AM	4	34	1	39	3	9	21	33	4	51	7	62	7	5	17	29	**163**
07:45 AM	08:00 AM	2	26	1	29	3	6	19	28	4	48	6	58	13	5	22	40	**155**
08:00 AM	**08:15 AM**	**5**	**36**	**1**	**42**	**2**	**11**	**30**	**43**	**5**	**63**	**7**	**75**	**13**	**5**	**30**	**48**	**208**
08:15 AM	**08:30 AM**	**3**	**37**	**1**	**41**	**1**	**9**	**32**	**42**	**6**	**75**	**7**	**88**	**10**	**5**	**36**	**51**	**222**
08:30 AM	**08:45 AM**	**4**	**28**	**5**	**37**	**4**	**10**	**27**	**41**	**6**	**64**	**14**	**84**	**8**	**5**	**30**	**43**	**205**
08:45 AM	**09:00 AM**	**6**	**34**	**3**	**43**	**3**	**11**	**23**	**37**	**7**	**68**	**11**	**86**	**9**	**8**	**26**	**43**	**209**
09:00 AM	09:15 AM	8	40	3	51	1	9	20	30	10	53	15	78	11	12	23	46	**205**
09:15 AM	09:30 AM	5	33	2	40	1	10	18	29	8	43	9	60	9	9	18	36	**165**
TOTAL		53	325	20	398	19	86	238	343	55	528	84	667	87	63	228	378	1786

WEEKDAY PEAK HOURLY APPROACH VOLUMES

PROJECT	Yonkers Buena Vista
LOCATION	01 Buena Vista Avenue and Main Street
DATE	Tuesday December 1, 2009
TIME	7:00 AM to 9:30 AM

TIM MILLER ASSOCIATES, INC.

HOURLY SUMMARY

START TIME	END TIME	Buena Vista Avenue SB left 1	thru 2	right 3	Total	Main Street EB left 4	thru 5	right 6	Total	Buena Vista Avenue NB left 7	thru 8	right 9	Total	Main Street WB left 10	thru 11	right 12	Total	GRAND TOTAL
07:00 AM	08:00 AM	22	117	5	144	7	26	88	121	13	162	21	196	27	19	65	111	**572**
07:15 AM	08:15 AM	22	128	5	155	9	32	97	138	16	193	23	232	37	20	83	140	**665**
07:30 AM	08:30 AM	14	133	4	151	9	35	102	146	19	237	27	283	43	20	105	168	**748**
07:45 AM	08:45 AM	14	127	8	149	10	36	108	154	21	250	34	305	44	20	118	182	**790**
08:00 AM	**09:00 AM**	**18**	**135**	**10**	**163**	**10**	**41**	**112**	**163**	**24**	**270**	**39**	**333**	**40**	**23**	**122**	**185**	**844**
08:15 AM	09:15 AM	21	139	12	172	9	39	102	150	29	260	47	336	38	30	115	183	**841**
08:30 AM	09:30 AM	23	135	13	171	9	40	88	137	31	228	49	308	37	34	97	168	**784**
08:00 AM	**09:00 AM**	**18**	**135**	**10**	**163**	**10**	**41**	**112**	**173**	**24**	**270**	**39**	**333**	**40**	**23**	**122**	**185**	**854**

WEEKDAY PEAK 15 MINUTE COUNTS

PROJECT	Yonkers Buena Vista	TIM MILLER ASSOCIATES, INC.
LOCATION	02 Buena Vista Avenue and Prospect St	
DATE	Tuesday, December 1, 2009	
TIME	7:00 AM to 9:30 AM	

15 Minute Traffic

START TIME	END TIME	Buena Vista Avenue SB				Buena Vista Avenue NB				Prospect Street WB								GRAND TOTAL
		left 1	thru 2	right	Total	left	thru 3	right 4	Total	left 5	thru	right 6	Total	left	thru	right	Total	
07:00 AM	07:15 AM	36	20		56		26	16	42	4		16	20					**118**
07:15 AM	07:30 AM	38	21		59		21	22	43	8		19	27					**129**
07:30 AM	07:45 AM	35	17		52		32	26	58	4		24	28					**138**
07:45 AM	08:00 AM	36	27		63		38	13	51	4		28	32					**146**
08:00 AM	**08:15 AM**	**36**	**29**		**65**		**49**	**41**	**90**	**5**		**33**	**38**					**193**
08:15 AM	**08:30 AM**	**38**	**55**		**93**		**55**	**40**	**95**	**8**		**32**	**40**					**228**
08:30 AM	**08:45 AM**	**28**	**32**		**60**		**65**	**51**	**116**	**13**		**24**	**37**					**213**
08:45 AM	**09:00 AM**	**39**	**13**		**52**		**55**	**27**	**82**	**7**		**37**	**44**					**178**
09:00 AM	09:15 AM	42	18		60		53	25	78	4		22	26					**164**
09:15 AM	09:30 AM	27	23		50		27	25	52	5		26	31					**133**
TOTAL		355	255		610		421	286	707	62		261	323					1640

WEEKDAY PEAK HOURLY APPROACH VOLUMES

PROJECT	Yonkers Buena Vista	TIM MILLER ASSOCIATES, INC.
LOCATION	02 Buena Vista Avenue and Prospect St	
DATE	Tuesday, December 1, 2009	
TIME	7:00 AM to 9:30 AM	

HOURLY SUMMARY

START TIME	END TIME	Buena Vista Avenue SB left 1	thru 2	right	Total	Buena Vista Avenue NB left	thru 3	right 4	Total	Prospect Street WB left 5	thru	right 6	Total	left	thru	right	Total	GRAND TOTAL
07:00 AM	08:00 AM	145	85		230		117	77	194	20		87	107					**531**
07:15 AM	08:15 AM	145	94		239		140	102	242	21		104	125					**606**
07:30 AM	08:30 AM	145	128		273		174	120	294	21		117	138					**705**
07:45 AM	08:45 AM	138	143		281		207	145	352	30		117	147					**780**
08:00 AM	**09:00 AM**	**141**	**129**		**270**		**224**	**159**	**383**	**33**		**126**	**159**					**812**
08:15 AM	09:15 AM	147	118		265		228	143	371	32		115	147					**783**
08:30 AM	09:30 AM	136	86		222		200	128	328	29		109	138					**688**
08:00 AM	**09:00 AM**	**141**	**129**		**270**		**224**	**159**	**383**	**33**		**126**	**159**					**812**

WEEKEND PEAK 15 MINUTE COUNTS

PROJECT	Yonkers Buena Vista	TIM MILLER ASSOCIATES, INC.
LOCATION	03 Riverdale Avenue and Hudson Street	
DATE	Tuesday, December 1, 2009	
TIME	7:00 AM to 9:30 AM	

15 Minute Traffic

START TIME	END TIME	Riverside Avenue SB left 1	thru 2	right	Total	Hudson Street EB left 3	thru 4	right 5	Total	Riverside Avenue NB left	thru 6	right 7	Total	left	thru	right	Total	GRAND TOTAL
07:00 AM	07:15 AM	36	80		116	6	12	8	26		63	20	83					**225**
07:15 AM	07:30 AM	34	91		125	3	15	13	31		61	23	84					**240**
07:30 AM	07:45 AM	33	115		148	8	21	11	40		63	26	89					**277**
07:45 AM	08:00 AM	49	123		172	6	26	16	48		88	32	120					**340**
08:00 AM	08:15 AM	45	115		160	10	29	12	51		76	20	96					**307**
08:15 AM	**08:30 AM**	**53**	**136**		**189**	**8**	**30**	**15**	**53**		**98**	**31**	**129**					**371**
08:30 AM	**08:45 AM**	**48**	**126**		**174**	**10**	**43**	**8**	**61**		**86**	**24**	**110**					**345**
08:45 AM	**09:00 AM**	**42**	**119**		**161**	**8**	**39**	**6**	**53**		**89**	**21**	**110**					**324**
09:00 AM	**09:15 AM**	**38**	**136**		**174**	**5**	**31**	**8**	**44**		**92**	**23**	**115**					**333**
09:15 AM	09:30 AM	42	101		143	6	26	5	37		74	18	92					**272**
TOTAL		420	1142		1562	70	272	102	444		790	238	1028					3034

WEEKDAY PEAK HOURLY APPROACH VOLUMES

PROJECT	Yonkers Buena Vista	TIM MILLER ASSOCIATES, INC.
LOCATION	03 Riverdale Avenue and Hudson Street	
DATE	Tuesday, December 1, 2009	
TIME	7:00 AM to 9:30 AM	

HOURLY SUMMARY

START TIME	END TIME	Riverside Avenue SB left 1	thru 2	right	Total	Hudson Street EB left 3	thru 4	right 5	Total	Riverside Avenue NB left	thru 6	right 7	Total	left	thru	right	Total	GRAND TOTAL
07:00 AM	08:00 AM	152	409		561	23	74	48	145		275	101	376					**1082**
07:15 AM	08:15 AM	161	444		605	27	91	52	170		288	101	389					**1164**
07:30 AM	08:30 AM	180	489		669	32	106	54	192		325	109	434					**1295**
07:45 AM	08:45 AM	195	500		695	34	128	51	213		348	107	455					**1363**
08:00 AM	09:00 AM	188	496		684	36	141	41	218		349	96	445					**1347**
08:15 AM	**09:15 AM**	**181**	**517**		**698**	**31**	**143**	**37**	**211**		**365**	**99**	**464**					1373
08:30 AM	09:30 AM	170	482		652	29	139	27	195		341	86	427					**1274**
08:15 AM	**09:15 AM**	**181**	**517**		**698**	**31**	**143**	**37**	**211**		**365**	**99**	**464**					1373

WEEKDAY PEAK 15 MINUTE COUNTS

PROJECT	Yonkers Buena Vista	TIM MILLER ASSOCIATES, INC.
LOCATION	04 Prospect Street and Riverdale Avenue	
DATE	Tuesday, March 23, 2010	
TIME	7:00 AM to 9:00 AM	

15 Minute Traffic

START TIME	END TIME	Riverside Avenue SB				Prospect Street EB				Riverside Avenue NB				Prospect Street WB				GRAND TOTAL
		left 1	thru 2	right 3	Total	left 4	thru 5	right 6	Total	left 7	thru 8	right 9	Total	left 10	thru 11	right 12	Total	
07:00 AM	07:15 AM	32	57	2	91	1	33	4	38	13	67	94	174	75	54	12	141	**444**
07:15 AM	07:30 AM	37	65	3	105	2	31	4	37	10	62	100	172	71	70	19	160	**474**
07:30 AM	07:45 AM	37	76	7	120	1	42	8	51	9	83	90	182	82	56	19	157	**510**
07:45 AM	08:00 AM	43	95	9	147	3	29	8	40	25	64	67	156	67	55	21	143	**486**
08:00 AM	**08:15 AM**	**42**	**83**	**6**	**131**	**8**	**40**	**9**	**57**	**19**	**55**	**51**	**125**	**87**	**63**	**25**	**175**	**488**
08:15 AM	**08:30 AM**	**54**	**110**	**19**	**183**	**3**	**51**	**6**	**60**	**24**	**87**	**60**	**171**	**87**	**90**	**45**	**222**	**636**
08:30 AM	**08:45 AM**	**52**	**103**	**20**	**175**	**4**	**29**	**7**	**40**	**20**	**69**	**85**	**174**	**83**	**78**	**32**	**193**	**582**
08:45 AM	**09:00 AM**	**56**	**88**	**13**	**157**	**4**	**33**	**11**	**48**	**17**	**81**	**68**	**166**	**86**	**69**	**40**	**195**	**566**
TOTAL		353	677	79	1109	26	288	57	371	137	568	615	1320	638	535	213	1386	4186

WEEKDAY PEAK HOURLY APPROACH VOLUMES

PROJECT	Yonkers Buena Vista	TIM MILLER ASSOCIATES, INC.
LOCATION	04 Prospect Street and Riverdale Avenue	
DATE	Tuesday, March 23, 2010	
TIME	7:00 AM to 9:00 AM	

HOURLY SUMMARY

START TIME	END TIME	Riverside Avenue SB left 1	thru 2	right 3	Total	Prospect Street EB left 4	thru 5	right 6	Total	Riverside Avenue NB left 7	thru 8	right 9	Total	Prospect Street WB left 10	thru 11	right 12	Total	GRAND TOTAL
07:00 AM	08:00 AM	149	293	21	463	7	135	24	166	57	276	351	684	295	235	71	601	**1914**
07:15 AM	08:15 AM	159	319	25	503	14	142	29	185	63	264	308	635	307	244	84	635	**1958**
07:30 AM	08:30 AM	176	364	41	581	15	162	31	208	77	289	268	634	323	264	110	697	**2120**
07:45 AM	08:45 AM	191	391	54	636	18	149	30	197	88	275	263	626	324	286	123	733	**2192**
08:00 AM	**09:00 AM**	**204**	**384**	**58**	**646**	**19**	**153**	**33**	**205**	**80**	**292**	**264**	**636**	**343**	**300**	**142**	**785**	2272
08:00 AM	**09:00 AM**	**204**	**384**	**58**	**646**	**19**	**153**	**33**	**205**	**80**	**292**	**264**	**636**	**142**	**300**	**343**	**785**	2272

WEEKDAY PEAK 15 MINUTE COUNTS

PROJECT	Yonkers Buena Vista	TIM MILLER ASSOCIATES, INC.
LOCATION	05 Main Street and Riverdale Avenue	
DATE	Tuesday, March 23, 2010	
TIME	7:00 AM to 9:00 AM	

15 Minute Traffic

START TIME	END TIME	Riverside Avenue SB left	thru 1	right 2	Total	Riverside Avenue NB left 3	thru 4	right	Total	Main Street WB left 5	thru 6	right 7	Total	Main Street EB left 8	thru	right 9	Total	GRAND TOTAL
07:00 AM	07:15 AM		61	7	68	10	43		53	6	11	11	28	3		7	10	**159**
07:15 AM	07:30 AM		98	10	108	4	69		73	4	14	11	29	5		14	19	**229**
07:30 AM	07:45 AM		128	9	137	7	83		90	14	20	16	50	8		17	25	**302**
07:45 AM	08:00 AM		123	19	142	8	84		92	12	35	17	64	18		18	36	**334**
08:00 AM	**08:15 AM**		**119**	**13**	**132**	**7**	**71**		**78**	**17**	**24**	**18**	**59**	**7**		**23**	**30**	**299**
08:15 AM	**08:30 AM**		**165**	**16**	**181**	**13**	**105**		**118**	**17**	**21**	**12**	**50**	**6**		**13**	**19**	**368**
08:30 AM	**08:45 AM**		**131**	**23**	**154**	**11**	**79**		**90**	**15**	**31**	**26**	**72**	**6**		**24**	**30**	**346**
08:45 AM	**09:00 AM**		**138**	**22**	**160**	**13**	**91**		**104**	**25**	**31**	**22**	**78**	**4**		**25**	**29**	**371**
TOTAL			963	119	1082	73	625		698	110	187	133	430	57		141	198	2408

WEEKDAY PEAK HOURLY APPROACH VOLUMES

PROJECT	Yonkers Buena Vista	TIM MILLER ASSOCIATES, INC.
LOCATION	05 Main Street and Riverdale Avenue	
DATE	Tuesday, March 23, 2010	
TIME	7:00 AM to 9:00 AM	

HOURLY SUMMARY

START TIME	END TIME	Riverside Avenue SB left	thru 1	right 2	Total	Riverside Avenue NB left 3	thru 4	right	Total	Main Street WB left 5	thru 6	right 7	Total	Main Street EB left 8	thru	right 9	Total	GRAND TOTAL
07:00 AM	08:00 AM		410	45	455	29	279		308	36	80	55	171	34		56	90	**1024**
07:15 AM	08:15 AM		468	51	519	26	307		333	47	93	62	202	38		72	110	**1164**
07:30 AM	08:30 AM		535	57	592	35	343		378	60	100	63	223	39		71	110	**1303**
07:45 AM	08:45 AM		538	71	609	39	339		378	61	111	73	245	37		78	115	**1347**
08:00 AM	**09:00 AM**		**553**	**74**	**627**	**44**	**346**		**390**	**74**	**107**	**78**	**259**	**23**		**85**	**108**	1384
08:00 AM	**09:00 AM**		**553**	**74**	**627**	**44**	**346**		**390**	**74**	**107**	**78**	**259**	**23**		**85**	**108**	1384

WEEKEND PEAK 15 MINUTE COUNTS

PROJECT	Buena Vista Teutonia Development	TIM MILLER ASSOCIATES, INC.
LOCATION	06 Buena Vista Avenue and Hudson Street	
DATE	Tuesday, March 23, 2010	
TIME	7:00 AM to 9:00 AM	

15 Minute Traffic

START TIME	END TIME	Buena Vista Avenue SB left 1	thru 2	right	Total	Buena Vista Avenue NB left	thru 3	right 4	Total	Hudson Street WB left 5	thru	right 6	Total	left	thru	right	Total	GRAND TOTAL
07:00 AM	07:15 AM	3	40		43		33	4	37	3		0	3				0	**83**
07:15 AM	07:30 AM	11	44		55		28	3	31	4		1	5				0	**91**
07:30 AM	07:45 AM	9	38		47		34	11	45	3		0	3				0	**95**
07:45 AM	08:00 AM	12	52		64		57	5	62	4		1	5				0	**131**
08:00 AM	**08:15 AM**	**14**	**67**		**81**		**42**	**10**	**52**	**2**		**6**	**8**				**0**	**141**
08:15 AM	**08:30 AM**	**12**	**70**		**82**		**49**	**11**	**60**	**2**		**7**	**9**				**0**	**151**
08:30 AM	**08:45 AM**	**10**	**59**		**69**		**72**	**7**	**79**	**3**		**2**	**5**				**0**	**153**
08:45 AM	**09:00 AM**	**12**	**49**		**61**		**60**	**9**	**69**	**6**		**0**	**6**				**0**	**136**
TOTAL		83	419		502		375	60	435	27		17	44					981

WEEKEND PEAK HOURLY APPROACH VOLUMES

PROJECT	Buena Vista Teutonia Development	TIM MILLER ASSOCIATES, INC.
LOCATION	06 Buena Vista Avenue and Hudson Street	
DATE	Tuesday, March 23, 2010	
TIME	7:00 AM to 9:00 AM	

HOURLY SUMMARY

START TIME	END TIME	Buena Vista Avenue SB left 1	thru 2	right	Total	Buena Vista Avenue NB left	thru 3	right 4	Total	Hudson Street WB left 5	thru	right 6	Total	left	thru	right	Total	GRAND TOTAL
07:00 AM	08:00 AM	35	174		209		152	23	175	14		2	16					**400**
07:15 AM	08:15 AM	46	201		247		161	29	190	13		8	21					**458**
07:30 AM	08:30 AM	47	227		274		182	37	219	11		14	25					**518**
07:45 AM	08:45 AM	48	248		296		220	33	253	11		16	27					**576**
08:00 AM	**09:00 AM**	**48**	**245**		**293**		**223**	**37**	**260**	**13**		**15**	**28**					**581**
08:00 AM	**09:00 AM**	**48**	**245**		**293**		**223**	**37**	**260**	**13**		**15**	**28**					**581**

WEEKEND PEAK 15 MINUTE COUNTS

PROJECT	Buena Vista Teutonia Development	TIM MILLER ASSOCIATES, INC.
LOCATION	07 South Broadway and Hudson Street	
DATE	Tuesday, March 23, 2010	
TIME	7:00 AM to 9:00 AM	

15 Minute Traffic

START TIME	END TIME					Hudson Street EB				South Broadway NB								GRAND TOTAL
		left	thru	right	Total	left	thru	right	Total	left	thru	right	Total	left	thru	right	Total	
						2		3			4							
07:00 AM	07:15 AM					25		18	43		42		42					**85**
07:15 AM	07:30 AM					24		21	45		39		39					**84**
07:30 AM	07:45 AM					34		25	59		58		58					**117**
07:45 AM	08:00 AM					33		28	61		43		43					**104**
08:00 AM	**08:15 AM**					**34**		**48**	**82**		**54**		**54**					**136**
08:15 AM	**08:30 AM**					**43**		**45**	**88**		**76**		**76**					**164**
08:30 AM	**08:45 AM**					**37**		**30**	**67**		**79**		**79**					**146**
08:45 AM	**09:00 AM**					**37**		**41**	**78**		**87**		**87**					**165**
TOTAL						267		256	523		478							1001

WEEKEND PEAK HOURLY APPROACH VOLUMES

PROJECT	Buena Vista Teutonia Development	TIM MILLER ASSOCIATES, INC.
LOCATION	07 South Broadway and Hudson Street	
DATE	Tuesday, March 23, 2010	
TIME	7:00 AM to 9:00 AM	

HOURLY SUMMARY

START TIME	END TIME					Hudson Street EB				South Broadway NB								GRAND TOTAL
		left	thru	right	Total	left	thru	right	Total	left	thru	right	Total	left	thru	right	Total	
						2		3			4							
07:00 AM	08:00 AM					116		92	208		182		182					**390**
07:15 AM	08:15 AM					125		122	247		194		194					**441**
07:30 AM	08:30 AM					144		146	290		231		231					**521**
07:45 AM	08:45 AM					147		151	298		252		252					**550**
08:00 AM	**09:00 AM**					**151**		**164**	**315**		**296**		**296**					**611**
08:00 AM	**09:00 AM**					**151**		**164**	**315**		**296**		**296**					**611**

WEEKEND PEAK 15 MINUTE COUNTS

PROJECT	Buena Vista Teutonia Development	TIM MILLER ASSOCIATES, INC.
LOCATION	08 Nepperhan Street and Warburton Avenue	
DATE	Tuesday, March 23, 2010	
TIME	7:00 AM to 9:00 AM	

15 Minute Traffic

START TIME	END TIME	Warburton Avenue SB left	thru	right	Total	Nepperhan Street EB left	thru	right	Total	Warburton Avenue NB left	thru	right	Total	left	thru	right	Total	GRAND TOTAL
			1			2		3			4							
07:00 AM	07:15 AM		60		60	18		8	26		59		59					**145**
07:15 AM	07:30 AM		97		97	19		8	27		83		83					**207**
07:30 AM	07:45 AM		132		132	16		10	26		102		102					**260**
07:45 AM	08:00 AM		133		133	19		7	26		116		116					**275**
08:00 AM	**08:15 AM**		**131**		**131**	**17**		**7**	**24**		**105**		**105**					**260**
08:15 AM	**08:30 AM**		**154**		**154**	**15**		**10**	**25**		**117**		**117**					**296**
08:30 AM	**08:45 AM**		**138**		**138**	**20**		**19**	**39**		**112**		**112**					**289**
08:45 AM	**09:00 AM**		**146**		**146**	**20**		**24**	**44**		**124**		**124**					**314**
TOTAL			991		991	144		93	237		818		818					2046

WEEKEND PEAK HOURLY APPROACH VOLUMES

PROJECT	Buena Vista Teutonia Development	TIM MILLER ASSOCIATES, INC.
LOCATION	08 Nepperhan Street and Warburton Avenue	
DATE	Tuesday, March 23, 2010	
TIME	7:00 AM to 9:00 AM	

HOURLY SUMMARY

START TIME	END TIME	Warburton Avenue SB left	thru	right	Total	Nepperhan Street EB left	thru	right	Total	Warburton Avenue NB left	thru	right	Total	left	thru	right	Total	GRAND TOTAL
			1			2		3			4							
07:00 AM	08:00 AM		422		422	72		33	105		360		360					**887**
07:15 AM	08:15 AM		493		493	71		32	103		406		406					**1002**
07:30 AM	08:30 AM		550		550	67		34	101		440		440					**1091**
07:45 AM	08:45 AM		556		556	71		43	114		450		450					**1120**
08:00 AM	**09:00 AM**		**569**		**569**	**72**		**60**	**132**		**458**		**458**					**1159**
08:00 AM	**09:00 AM**		**569**		**569**	**72**		**60**	**132**		**458**		**458**					**1159**
Peak 15 Minutes					**154**				**44**				**124**					**314**
Peak Hour Factor					**0.92**				**0.75**				**0.92**					**PHF** 0.92

WEEKDAY PEAK 15 MINUTE COUNTS

PROJECT	Yonkers Buena Vista	TIM MILLER ASSOCIATES, INC.
LOCATION	09 Prospect Street, Nepperhan Avenue, and South Broadway	
DATE	Tuesday, March 23, 2010	
TIME	7:00 AM to 9:00 AM	

15 Minute Traffic

		South Broadway SB				Prospect Street EB				Riverside Avenue NB				Prospect Street WB				
START TIME	END TIME	left 1	thru 2	right 3	Total	left 4	thru 5	right 6	Total	left 7	thru 8	right 9	Total	left 10	thru 11	right 12	Total	GRAND TOTAL
07:00 AM	07:15 AM	5	12	4	21	1	149	17	167	13	27	14	54	55	128	16	199	**441**
07:15 AM	07:30 AM	3	11	5	19	1	156	15	172	14	27	11	52	57	130	16	203	**446**
07:30 AM	07:45 AM	10	15	6	31	2	135	16	153	13	34	34	81	68	146	22	236	**501**
07:45 AM	08:00 AM	9	15	2	26	1	115	26	142	9	26	25	60	86	127	18	231	**459**
08:00 AM	**08:15 AM**	**23**	**17**	**1**	**41**	**2**	**112**	**11**	**125**	**13**	**26**	**36**	**75**	**120**	**174**	**21**	**315**	**556**
08:15 AM	**08:30 AM**	**21**	**19**	**3**	**43**	**5**	**141**	**19**	**165**	**11**	**38**	**20**	**69**	**86**	**175**	**32**	**293**	**570**
08:30 AM	**08:45 AM**	**16**	**15**	**1**	**32**	**3**	**141**	**23**	**167**	**18**	**40**	**26**	**84**	**89**	**175**	**38**	**302**	**585**
08:45 AM	**09:00 AM**	**22**	**15**	**6**	**43**	**7**	**149**	**13**	**169**	**16**	**46**	**24**	**86**	**104**	**186**	**34**	**324**	**622**
TOTAL		109	119	28	256	22	1098	140	1260	107	264	190	561	665	1241	197	2103	4180

WEEKDAY PEAK HOURLY APPROACH VOLUMES

PROJECT	Yonkers Buena Vista	TIM MILLER ASSOCIATES, INC.
LOCATION	09 Prospect Street, Nepperhan Avenue, and South Broadway	
DATE	Tuesday, March 23, 2010	
TIME	7:00 AM to 9:00 AM	

HOURLY SUMMARY

		South Broadway SB				Prospect Street EB				Riverside Avenue NB				Prospect Street WB				
START TIME	END TIME	left 1	thru 2	right 3	Total	left 4	thru 5	right 6	Total	left 7	thru 8	right 9	Total	left 10	thru 11	right 12	Total	GRAND TOTAL
07:00 AM	08:00 AM	27	53	17	97	5	555	74	634	49	114	84	247	266	531	72	869	**1847**
07:15 AM	08:15 AM	45	58	14	117	6	518	68	592	49	113	106	268	331	577	77	985	**1962**
07:30 AM	08:30 AM	63	66	12	141	10	503	72	585	46	124	115	285	360	622	93	1075	**2086**
07:45 AM	08:45 AM	69	66	7	142	11	509	79	599	51	130	107	288	381	651	109	1141	**2170**
08:00 AM	**09:00 AM**	**82**	**66**	**11**	**159**	**17**	**543**	**66**	**626**	**58**	**150**	**106**	**314**	**399**	**710**	**125**	**1234**	2333
08:00 AM	**09:00 AM**	**82**	**66**	**11**	**159**	**17**	**543**	**66**	**626**	**58**	**150**	**106**	**314**	**399**	**710**	**125**	**1234**	2333

WEEKEND PEAK 15 MINUTE COUNTS

PROJECT	Buena Vista Teutonia Development	TIM MILLER ASSOCIATES, INC.
LOCATION	10 Hudson Street and Hawthorne Avenue	
DATE	Tuesday, March 23, 2010	
TIME	7:00 AM to 9:00 AM	

15 Minute Traffic

START TIME	END TIME	Hawthorne Avenue SB left 1	thru	right 2	Total	Hudson Street EB left 6	thru 3	right	Total	Hawthorne Avenue NB left 4	thru 7	right 5	Total	left	thru	right	Total	GRAND TOTAL
07:00 AM	07:15 AM	7		3	10	1	10		11	9	2	7	18					**39**
07:15 AM	07:30 AM	8		1	9	0	10		10	11	3	6	20					**39**
07:30 AM	07:45 AM	4		2	6	2	20		22	4	2	2	8					**36**
07:45 AM	08:00 AM	6		5	11	1	15		16	8	2	11	21					**48**
08:00 AM	**08:15 AM**	**9**		**2**	**11**	**0**	**16**		**16**	**14**	**4**	**11**	**29**					**56**
08:15 AM	**08:30 AM**	**16**		**5**	**21**	**0**	**18**		**18**	**7**	**3**	**11**	**21**					**60**
08:30 AM	**08:45 AM**	**14**		**4**	**18**	**1**	**13**		**14**	**7**	**1**	**9**	**17**					**49**
08:45 AM	**09:00 AM**	**19**		**3**	**22**	**1**	**21**		**22**	**9**	**0**	**11**	**20**					**64**
TOTAL		83	0		108		123	0	129	69		68	154					391

WEEKEND PEAK HOURLY APPROACH VOLUMES

PROJECT	Buena Vista Teutonia Development	TIM MILLER ASSOCIATES, INC.
LOCATION	10 Hudson Street and Hawthorne Avenue	
DATE	Tuesday, March 23, 2010	
TIME	7:00 AM to 9:00 AM	

HOURLY SUMMARY

START TIME	END TIME	Hawthorne Avenue SB left 1	thru	right 2	Total	Hudson Street EB left 6	thru 3	right	Total	Hawthorne Avenue NB left 4	thru 7	right 5	Total	left	thru	right	Total	GRAND TOTAL
07:00 AM	08:00 AM	25		11	36	4	55		59	32	9	26	67					**162**
07:15 AM	08:15 AM	27		10	37	3	61		64	37	11	30	78					**179**
07:30 AM	08:30 AM	35		14	49	3	69		72	33	11	35	79					**200**
07:45 AM	08:45 AM	45		16	61	2	62		64	36	10	42	88					**213**
08:00 AM	**09:00 AM**	**58**		**14**	**72**	**2**	**68**		**70**	**37**	**8**	**42**	**87**					**229**
08:00 AM	**09:00 AM**	**58**		**14**	**72**	**2**	**68**		**70**	**37**	**8**	**42**	**87**					**229**

WEEKDAY PEAK 15 MINUTE COUNTS

PROJECT	Yonkers Buena Vista	TIM MILLER ASSOCIATES, INC.
LOCATION	01 Buena Vista Avenue and Main Street	
DATE	Tuesday December 1, 2009	
TIME	4:00 PM to 6:30 PM	

15 Minute Traffic

START TIME	END TIME	Buena Vista Avenue SB left 1	thru 2	right 3	Total	Main Street EB left 4	thru 5	right 6	Total	Buena Vista Avenue NB left 7	thru 8	right 9	Total	Main Street WB left 10	thru 11	right 12	Total	GRAND TOTAL
04:00 PM	04:15 PM	7	72	3	82	4	4	12	20	8	44	7	59	8	11	16	35	**196**
04:15 PM	**04:30 PM**	**12**	**58**	**3**	**73**	**5**	**9**	**9**	**23**	**9**	**44**	**9**	**62**	**13**	**13**	**11**	**37**	**195**
04:30 PM	**04:45 PM**	**7**	**54**	**4**	**65**	**5**	**3**	**15**	**23**	**12**	**44**	**10**	**66**	**10**	**7**	**13**	**30**	**184**
04:45 PM	**05:00 PM**	**9**	**42**	**3**	**54**	**5**	**5**	**9**	**19**	**11**	**38**	**7**	**56**	**13**	**11**	**15**	**39**	**168**
05:00 PM	**05:15 PM**	**12**	**69**	**1**	**82**	**4**	**9**	**28**	**41**	**9**	**24**	**8**	**41**	**9**	**25**	**12**	**46**	**210**
05:15 PM	05:30 PM	5	52	0	57	2	9	18	29	5	39	6	50	7	13	16	36	**172**
05:30 PM	05:45 PM	4	44	2	50	1	5	11	17	7	26	5	38	6	16	18	40	**145**
05:45 PM	06:00 PM	3	38	1	42	2	3	8	13	7	31	2	40	6	22	20	48	**143**
06:00 PM	06:15 PM	6	54	1	61	2	4	8	14	6	23	6	35	10	16	20	46	**156**
06:15 PM	06:30 PM	4	42	0	46	1	3	7	11	5	35	4	44	7	17	18	42	**143**
TOTAL		69	525	18	612	31	54	125	210	79	348	64	491	89	151	159	399	1712

WEEKDAY PEAK HOURLY APPROACH VOLUMES

PROJECT	Yonkers Buena Vista	TIM MILLER ASSOCIATES, INC.
LOCATION	01 Buena Vista Avenue and Main Street	
DATE	Tuesday December 1, 2009	
TIME	4:00 PM to 6:30 PM	

HOURLY SUMMARY

START TIME	END TIME	Buena Vista Avenue SB				Main Street EB				Buena Vista Avenue NB				Main Street WB				GRAND TOTAL
		left 1	thru 2	right 3	Total	left 4	thru 5	right 6	Total	left 7	thru 8	right 9	Total	left 10	thru 11	right 12	Total	
04:00 PM	05:00 PM	35	226	13	274	19	21	45	85	40	170	33	243	44	42	55	141	**743**
04:15 PM	**05:15 PM**	**40**	**223**	**11**	**274**	**19**	**26**	**61**	**106**	**41**	**150**	**34**	**225**	**45**	**56**	**51**	**152**	**757**
04:30 PM	05:30 PM	33	217	8	258	16	26	70	112	37	145	31	213	39	56	56	151	**734**
04:45 PM	05:45 PM	30	207	6	243	12	28	66	106	32	127	26	185	35	65	61	161	**695**
05:00 PM	06:00 PM	24	203	4	231	9	26	65	100	28	120	21	169	28	76	66	170	**670**
05:15 PM	06:15 PM	18	188	4	210	7	21	45	73	25	119	19	163	29	67	74	170	**616**
05:30 PM	06:30 PM	17	178	4	199	6	15	34	55	25	115	17	157	29	71	76	176	**587**
04:15 PM	**05:15 PM**	**40**	**223**	**11**	**274**	**19**	**26**	**61**	**106**	**41**	**150**	**34**	**225**	**45**	**56**	**51**	**152**	**757**

WEEKDAY PEAK 15 MINUTE COUNTS

PROJECT	Yonkers Buena Vista	TIM MILLER ASSOCIATES, INC.
LOCATION	02 Buena Vista Avenue and Prospect St	
DATE	Tuesday, December 1, 2009	
TIME	4:00 PM to 6:30 PM	

15 Minute Traffic

START TIME	END TIME	Buena Vista Avenue SB left 1	thru 2	right	Total	Buena Vista Avenue NB left	thru 3	right 4	Total	Prospect Street WB left 5	thru	right 6	Total	left	thru	right	Total	GRAND TOTAL
04:00 PM	**04:15 PM**	**63**	**41**		**104**		**42**	**24**	**66**	**14**		**22**	**36**					**206**
04:15 PM	**04:30 PM**	**48**	**41**		**89**		**42**	**15**	**57**	**12**		**25**	**37**					**183**
04:30 PM	**04:45 PM**	**44**	**35**		**79**		**43**	**19**	**62**	**15**		**25**	**40**					**181**
04:45 PM	**05:00 PM**	**32**	**26**		**58**		**30**	**17**	**47**	**13**		**22**	**35**					**140**
05:00 PM	05:15 PM	61	46		107		37	21	58	8		18	26					**191**
05:15 PM	05:30 PM	49	29		78		29	22	51	5		31	36					**165**
05:30 PM	05:45 PM	39	18		57		18	31	49	10		16	26					**132**
05:45 PM	06:00 PM	28	28		56		25	25	50	10		21	31					**137**
06:00 PM	06:15 PM	52	18		70		14	13	27	7		26	33					**130**
06:15 PM	06:30 PM	37	20		57		16	10	26	9		32	41					**124**
TOTAL		453	302		755		296	197	493	103		238	341					1589

WEEKDAY PEAK HOURLY APPROACH VOLUMES

PROJECT	Yonkers Buena Vista	TIM MILLER ASSOCIATES, INC.
LOCATION	02 Buena Vista Avenue and Prospect St	
DATE	Tuesday, December 1, 2009	
TIME	4:00 PM to 6:30 PM	

HOURLY SUMMARY

START TIME	END TIME	Buena Vista Avenue SB left 1	thru 2	right	Total	Buena Vista Avenue NB left	thru 3	right 4	Total	Prospect Street WB left 5	thru	right 6	Total	left	thru	right	Total	GRAND TOTAL
04:00 PM	**05:00 PM**	**187**	**143**		**330**		**157**	**75**	**232**	**54**		**94**	**148**					**710**
04:15 PM	05:15 PM	185	148		333		152	72	224	48		90	138					**695**
04:30 PM	05:30 PM	186	136		322		139	79	218	41		96	137					**677**
04:45 PM	05:45 PM	181	119		300		114	91	205	36		87	123					**628**
05:00 PM	06:00 PM	177	121		298		109	99	208	33		86	119					**625**
05:15 PM	06:15 PM	168	93		261		86	91	177	32		94	126					**564**
05:30 PM	06:30 PM	156	84		240		73	79	152	36		95	131					**523**
04:00 PM	**05:00 PM**	**187**	**143**		**330**		**157**	**75**	**232**	**54**		**94**	**148**					**710**

WEEKEND PEAK 15 MINUTE COUNTS

PROJECT	Yonkers Buena Vista	TIM MILLER ASSOCIATES, INC.
LOCATION	03 Riverdale Avenue and Hudson Street	
DATE	Tuesday, December 1, 2009	
TIME	4:00 PM to 6:30 PM	

15 Minute Traffic

START TIME	END TIME	Riverside Avenue SB left 1	thru 2	right	Total	Hudson Street EB left 3	thru 4	right 5	Total	Riverside Avenue NB left	thru 6	right 7	Total	left	thru	right	Total	GRAND TOTAL
04:00 PM	**04:15 PM**	**62**	**186**		**248**	**8**	**39**	**10**	**57**		**120**	**28**	**148**					**453**
04:15 PM	**04:30 PM**	**65**	**161**		**226**	**6**	**42**	**14**	**62**		**102**	**32**	**134**					**422**
04:30 PM	**04:45 PM**	**54**	**155**		**209**	**4**	**46**	**12**	**62**		**104**	**27**	**131**					**402**
04:45 PM	**05:00 PM**	**49**	**135**		**184**	**6**	**42**	**10**	**58**		**104**	**22**	**126**					**368**
05:00 PM	05:15 PM	41	152		193	8	46	6	60		120	26	146					**399**
05:15 PM	05:30 PM	53	164		217	5	41	8	54		95	21	116					**387**
05:30 PM	05:45 PM	44	156		200	6	38	7	51		101	23	124					**375**
05:45 PM	06:00 PM	49	160		209	8	43	5	56		99	20	119					**384**
06:00 PM	06:15 PM	51	172		223	5	48	4	57		89	16	105					**385**
06:15 PM	06:30 PM	47	139		186	6	44	6	56		93	18	111					**353**
TOTAL		515	1580	0	2095	62	429	82	573	0	1027	233	1260	0	0	0	0	3928

WEEKDAY PEAK HOURLY APPROACH VOLUMES

PROJECT	Yonkers Buena Vista	TIM MILLER ASSOCIATES, INC.
LOCATION	03 Riverdale Avenue and Hudson Street	
DATE	Tuesday, December 1, 2009	
TIME	4:00 PM to 6:30 PM	

HOURLY SUMMARY

START TIME	END TIME	Riverside Avenue SB left 1	thru 2	right	Total	Hudson Street EB left 3	thru 4	right 5	Total	Riverside Avenue NB left 6	thru 7	right	Total	left	thru	right	Total	GRAND TOTAL
04:00 PM	**05:00 PM**	**230**	**637**		**867**	**24**	**169**	**46**	**239**	**430**	**109**	**539**						**1645**
04:15 PM	05:15 PM	209	603		812	24	176	42	242	430	107	537						**1591**
04:30 PM	05:30 PM	197	606		803	23	175	36	234	423	96	519						**1556**
04:45 PM	05:45 PM	187	607		794	25	167	31	223	420	92	512						**1529**
05:00 PM	06:00 PM	187	632		819	27	168	26	221	415	90	505						**1545**
05:15 PM	06:15 PM	197	652		849	24	170	24	218	384	80	464						**1531**
05:30 PM	06:30 PM	191	627		818	25	173	22	220	382	77	459						**1497**
04:00 PM	**05:00 PM**	**230**	**637**		**867**	**24**	**169**	**46**	**239**	**430**	**109**	**539**						**1645**

WEEKDAY PEAK 15 MINUTE COUNTS

PROJECT	Yonkers Buena Vista	TIM MILLER ASSOCIATES, INC.
LOCATION	04 Prospect Street and Riverdale Avenue	
DATE	Tuesday, March 23, 2010	
TIME	3:00 PM to 6:30 PM	

15 Minute Traffic

START TIME	END TIME	Riverside Avenue SB left 1	thru 2	right 3	Total	Prospect Street EB left 4	thru 5	right 6	Total	Riverside Avenue NB left 7	thru 8	right 9	Total	Prospect Street WB left 10	thru 11	right 12	Total	GRAND TOTAL
03:00 PM	03:15 PM	13	133	17	163	3	31	10	44	20	143	13	176	40	61	24	125	**508**
03:15 PM	03:30 PM	10	144	17	171	3	41	12	56	22	136	19	183	27	85	21	133	**537**
03:30 PM	03:45 PM	15	118	12	145	1	51	12	64	14	143	26	183	15	51	22	88	**480**
03:45 PM	04:00 PM	8	145	21	174	2	26	6	34	21	78	35	134	16	50	14	80	**422**
04:00 PM	04:15 PM	24	139	19	182	1	55	16	72	19	77	27	123	38	58	24	120	**497**
04:15 PM	04:30 PM	55	83	11	149	4	31	6	41	24	97	73	194	47	55	28	130	**514**
04:30 PM	04:45 PM	55	88	17	160	6	49	5	60	15	63	57	135	58	70	31	159	**514**
04:45 PM	05:00 PM	53	97	12	162	3	25	10	38	19	64	54	137	58	66	22	146	**483**
05:00 PM	**05:15 PM**	**84**	**148**	**26**	**258**	**7**	**26**	**4**	**37**	**25**	**64**	**52**	**141**	**60**	**64**	**28**	**152**	**588**
05:15 PM	**05:30 PM**	**77**	**107**	**17**	**201**	**3**	**28**	**9**	**40**	**16**	**68**	**53**	**137**	**64**	**81**	**36**	**181**	**559**
05:30 PM	**05:45 PM**	**72**	**90**	**18**	**180**	**4**	**23**	**11**	**38**	**25**	**56**	**56**	**137**	**59**	**71**	**44**	**174**	**529**
05:45 PM	**06:00 PM**	**63**	**75**	**17**	**155**	**0**	**34**	**8**	**42**	**25**	**74**	**41**	**140**	**72**	**77**	**32**	**181**	**518**
TOTAL		529	1367	204	2100	37	420	109	566	245	1063	506	1820	554	789	326	1669	6149

WEEKDAY PEAK HOURLY APPROACH VOLUMES

PROJECT	Yonkers Buena Vista	TIM MILLER ASSOCIATES, INC.
LOCATION	04 Prospect Street and Riverdale Avenue	
DATE	Tuesday, March 23, 2010	
TIME	3:00 PM to 6:30 PM	

HOURLY SUMMARY

START TIME	END TIME	Riverside Avenue SB left 1	thru 2	right 3	Total	Prospect Street EB left 4	thru 5	right 6	Total	Riverside Avenue NB left 7	thru 8	right 9	Total	Prospect Street WB left 10	thru 11	right 12	Total	GRAND TOTAL
03:00 PM	04:00 PM	46	540	67	653	9	149	40	198	77	500	93	670	98	247	81	426	**1947**
03:15 PM	04:15 PM	57	546	69	672	7	173	46	226	76	434	107	617	96	244	81	421	**1936**
03:30 PM	04:30 PM	102	485	63	650	8	163	40	211	78	395	161	634	116	214	88	418	**1913**
03:45 PM	04:45 PM	142	455	68	665	13	161	33	207	79	315	192	586	159	233	97	489	**1947**
04:00 PM	05:00 PM	187	407	59	653	14	160	37	211	77	301	211	589	201	249	105	555	**2008**
04:15 PM	05:15 PM	247	416	66	729	20	131	25	176	83	288	236	607	223	255	109	587	**2099**
04:30 PM	05:30 PM	269	440	72	781	19	128	28	175	75	259	216	550	240	281	117	638	**2144**
04:45 PM	05:45 PM	286	442	73	801	17	102	34	153	85	252	215	552	241	282	130	653	**2159**
05:00 PM	**06:00 PM**	**296**	**420**	**78**	**794**	**14**	**111**	**32**	**157**	**91**	**262**	**202**	**555**	**255**	**293**	**140**	**688**	**2194**

05:00 PM	**06:00 PM**	**296**	**420**	**78**	**794**	**14**	**111**	**32**	**157**	**91**	**262**	**202**	**555**	**255**	**293**	**140**	**688**	**2194**

WEEKDAY PEAK 15 MINUTE COUNTS

PROJECT	Yonkers Buena Vista	TIM MILLER ASSOCIATES, INC.
LOCATION	05 Main Street and Riverdale Avenue	
DATE	Tuesday, March 23, 2010	
TIME	4:00 PM to 6:00 PM	

15 Minute Traffic

START TIME	END TIME	Riverside Avenue SB left	thru	right	Total	Riverside Avenue NB left	thru	right	Total	Main Street WB left	thru	right	Total	Main Street EB left	thru	right	Total	GRAND TOTAL
			1	2		3	4			5	6	7		8		9		
04:00 PM	**04:15 PM**		**173**	**16**	**189**	**11**	**68**		**79**	**33**	**43**	**20**	**96**	**21**		**27**	**48**	**412**
04:15 PM	**04:30 PM**		**161**	**12**	**173**	**11**	**103**		**114**	**28**	**15**	**19**	**62**	**18**		**29**	**47**	**396**
04:30 PM	**04:45 PM**		**159**	**19**	**178**	**5**	**71**		**76**	**33**	**20**	**23**	**76**	**13**		**27**	**40**	**370**
04:45 PM	**05:00 PM**		**127**	**15**	**142**	**10**	**64**		**74**	**23**	**14**	**15**	**52**	**5**		**20**	**25**	**293**
05:00 PM	05:15 PM		150	17	167	10	77		87	34	20	13	67	15		42	57	**378**
05:15 PM	05:30 PM		150	11	161	17	73		90	23	13	13	49	6		29	35	**335**
05:30 PM	05:45 PM		116	11	127	16	65		81	31	18	20	69	14		18	32	**309**
05:45 PM	06:00 PM		111	10	121	22	73		95	22	16	9	47	10		17	27	**290**
TOTAL			1147	111	1258	102	594		696	227	159	132	518	102		209	311	2783

WEEKDAY PEAK HOURLY APPROACH VOLUMES

PROJECT	Yonkers Buena Vista	TIM MILLER ASSOCIATES, INC.
LOCATION	05 Main Street and Riverdale Avenue	
DATE	Tuesday, March 23, 2010	
TIME	4:00 PM to 6:00 PM	

HOURLY SUMMARY

START TIME	END TIME	Riverside Avenue SB left	thru 1	right 2	Total	Riverside Avenue NB left 3	thru 4	right	Total	Main Street WB left 5	thru 6	right 7	Total	Main Street EB left 8	thru	right 9	Total	GRAND TOTAL
04:00 PM	**05:00 PM**		**620**	**62**	**682**	**37**	**306**		**343**	**117**	**92**	**77**	**286**	**57**		**103**	**160**	**1471**
04:15 PM	05:15 PM		597	63	660	36	315		351	118	69	70	257	51		118	169	**1437**
04:30 PM	05:30 PM		586	62	648	42	285		327	113	67	64	244	39		118	157	**1376**
04:45 PM	05:45 PM		543	54	597	53	279		332	111	65	61	237	40		109	149	**1315**
05:00 PM	06:00 PM		527	49	576	65	288		353	110	67	55	232	45		106	151	**1312**
04:00 PM	**05:00 PM**		**620**	**62**	**682**	**37**	**306**		**343**	**117**	**92**	**77**	**286**	**57**		**103**	**160**	**1471**

WEEKEND PEAK 15 MINUTE COUNTS

PROJECT	Buena Vista Teutonia Development	TIM MILLER ASSOCIATES, INC.
LOCATION	06 Buena Vista Avenue and Hudson Street	
DATE	Tuesday, March 23, 2010	
TIME	4:00 PM to 6:00 PM	

15 Minute Traffic

START TIME	END TIME	Buena Vista Avenue SB left 1	thru 2	right	Total	Buena Vista Avenue NB left	thru 3	right 4	Total	Hudson Street WB left 5	thru	right 6	Total	left	thru	right	Total	GRAND TOTAL
04:00 PM	**04:15 PM**	**16**	**103**		**119**		**42**	**11**	**53**	**16**		**7**	**23**				**0**	**195**
04:15 PM	**04:30 PM**	**12**	**65**		**77**		**44**	**5**	**49**	**9**		**3**	**12**				**0**	**138**
04:30 PM	**04:45 PM**	**16**	**80**		**96**		**42**	**6**	**48**	**15**		**2**	**17**				**0**	**161**
04:45 PM	**05:00 PM**	**10**	**57**		**67**		**46**	**6**	**52**	**4**		**3**	**7**				**0**	**126**
05:00 PM	05:15 PM	65	45		110		22	12	34	0		5	5				0	**149**
05:15 PM	05:30 PM	13	43		56		32	7	39	6		4	10				0	**105**
05:30 PM	05:45 PM	10	52		62		45	9	54	4		3	7				0	**123**
05:45 PM	06:00 PM	12	58		70		42	10	52	4		0	4				0	**126**
TOTAL		154	503		657		315	66	381	58		27	85					1123

WEEKEND PEAK HOURLY APPROACH VOLUMES

PROJECT	Buena Vista Teutonia Development	TIM MILLER ASSOCIATES, INC.
LOCATION	06 Buena Vista Avenue and Hudson Street	
DATE	Tuesday, March 23, 2010	
TIME	4:00 PM to 6:00 PM	

HOURLY SUMMARY

START TIME	END TIME	Buena Vista Avenue SB left 1	thru 2	right	Total	Buena Vista Avenue NB left	thru 3	right 4	Total	Hudson Street WB left 5	thru	right 6	Total	left	thru	right	Total	GRAND TOTAL
04:00 PM	**05:00 PM**	**54**	**305**		**359**		**174**	**28**	**202**	**44**		**15**	**59**					**620**
04:15 PM	05:15 PM	103	247		350		154	29	183	28		13	41					**574**
04:30 PM	05:30 PM	104	225		329		142	31	173	25		14	39					**541**
04:45 PM	05:45 PM	98	197		295		145	34	179	14		15	29					**503**
05:00 PM	06:00 PM	100	198		298		141	38	179	14		12	26					**503**
04:00 PM	**05:00 PM**	**54**	**305**		**359**		**174**	**28**	**202**	**44**		**15**	**59**					**620**

WEEKEND PEAK 15 MINUTE COUNTS

PROJECT	Buena Vista Teutonia Development	TIM MILLER ASSOCIATES, INC.
LOCATION	07 South Broadway and Hudson Street	
DATE	Tuesday, March 23, 2010	
TIME	4:00 PM to 6:00 PM	

15 Minute Traffic

START TIME	END TIME	Hudson Street EB left	thru	right	Total	South Broadway NB left	thru	right	Total	left	thru	right	Total	GRAND TOTAL
		2		3		4								
04:00 PM	**04:15 PM**	**80**		**70**	**150**		**92**		**92**					**242**
04:15 PM	**04:30 PM**	**68**		**36**	**104**		**58**		**58**					**162**
04:30 PM	**04:45 PM**	**71**		**44**	**115**		**87**		**87**					**202**
04:45 PM	**05:00 PM**	**62**		**35**	**97**		**81**		**81**					**178**
05:00 PM	05:15 PM	56		61	117		72		72					**189**
05:15 PM	05:30 PM	56		39	95		77		77					**172**
05:30 PM	05:45 PM	47		36	83		71		71					**154**
05:45 PM	06:00 PM	45		31	76		56		56					**132**
TOTAL		485		352	837		594							1431

WEEKEND PEAK HOURLY APPROACH VOLUMES

PROJECT	Buena Vista Teutonia Development	TIM MILLER ASSOCIATES, INC.
LOCATION	07 South Broadway and Hudson Street	
DATE	Tuesday, March 23, 2010	
TIME	4:00 PM to 6:00 PM	

HOURLY SUMMARY

START TIME	END TIME	Hudson Street EB left	thru	right	Total	South Broadway NB left	thru	right	Total	left	thru	right	Total	GRAND TOTAL
		2		3			4							
04:00 PM	**05:00 PM**	**281**		**185**	**466**		**318**		**318**					**784**
04:15 PM	05:15 PM	257		176	433		298		298					**731**
04:30 PM	05:30 PM	245		179	424		317		317					**741**
04:45 PM	05:45 PM	221		171	392		301		301					**693**
05:00 PM	06:00 PM	204		167	371		276		276					**647**
04:00 PM	**05:00 PM**	**281**		**185**	**466**		**318**		**318**					**784**

WEEKEND PEAK 15 MINUTE COUNTS

PROJECT	Buena Vista Teutonia	TIM MILLER ASSOCIATES, INC.
LOCATION	08 Nepperhan Street and Warburton Avenue	
DATE	Tuesday, March 23, 2010	
TIME	4:00 PM to 6:00 PM	

15 Minute Traffic

START TIME	END TIME	Warburton Avenue SB left	thru	right	Total	Nepperhan Street EB left	thru	right	Total	Warburton Avenue NB left	thru	right	Total	left	thru	right	Total	GRAND TOTAL
			1			2		3			4							
04:00 PM	**04:15 PM**		**159**		**159**	**34**		**25**	**59**		**107**		**107**					**325**
04:15 PM	**04:30 PM**		**135**		**135**	**24**		**34**	**58**		**135**		**135**					**328**
04:30 PM	**04:45 PM**		**154**		**154**	**21**		**26**	**47**		**109**		**109**					**310**
04:45 PM	**05:00 PM**		**128**		**128**	**16**		**24**	**40**		**100**		**100**					**268**
05:00 PM	05:15 PM		135		135	33		21	54		92		92					**281**
05:15 PM	05:30 PM		147		147	18		20	38		85		85					**270**
05:30 PM	05:45 PM		124		124	17		14	31		101		101					**256**
05:45 PM	06:00 PM		87		87	20		21	41		100		100					**228**
TOTAL			1069		1069	183		185	368		829		829					2266

WEEKEND PEAK HOURLY APPROACH VOLUMES

PROJECT	Buena Vista Teutonia	TIM MILLER ASSOCIATES, INC.
LOCATION	08 Nepperhan Street and Warburton Avenue	
DATE	Tuesday, March 23, 2010	
TIME	4:00 PM to 6:00 PM	

HOURLY SUMMARY

START TIME	END TIME	Warburton Avenue SB left	thru	right	Total	Nepperhan Street EB left	thru	right	Total	Warburton Avenue NB left	thru	right	Total	left	thru	right	Total	GRAND TOTAL
		1				2		3		4								
04:00 PM	**05:00 PM**		**576**		**576**	**95**		**109**	**204**		**451**		**451**					**1231**
04:15 PM	05:15 PM		552		552	94		105	199		436		436					**1187**
04:30 PM	05:30 PM		564		564	88		91	179		386		386					**1129**
04:45 PM	05:45 PM		534		534	84		79	163		378		378					**1075**
05:00 PM	06:00 PM		493		493	88		76	164		378		378					**1035**
04:00 PM	**05:00 PM**		**576**		**576**	**95**		**109**	**204**		**451**		**451**					**1231**

WEEKDAY PEAK 15 MINUTE COUNTS

PROJECT	Yonkers Buena Vista	TIM MILLER ASSOCIATES, INC.
LOCATION	09 Prospect Street, Nepperhan Avenue, and South Broadway	
DATE	Tuesday, March 23, 2010	
TIME	3:00 PM to 6:30 PM	

15 Minute Traffic

START TIME	END TIME	South Broadway SB				Prospect Street EB				South Broadway NB				Nepperhan Avenue WB				GRAND TOTAL
		left 1	thru 2	right 3	Total	left 4	thru 5	right 6	Total	left 7	thru 8	right 9	Total	left 10	thru 11	right 12	Total	
03:00 PM	03:15 PM	17	20	9	46	0	42	6	48	13	27	50	90	113	121	39	273	**457**
03:15 PM	03:30 PM	16	26	2	44	3	53	10	66	12	31	90	133	81	117	35	233	**476**
03:30 PM	03:45 PM	12	29	5	46	2	78	4	84	13	27	62	102	81	97	37	215	**447**
03:45 PM	04:00 PM	28	16	0	44	2	74	6	82	16	29	51	96	97	93	55	245	**467**
04:00 PM	04:15 PM	28	26	0	54	3	102	9	114	6	30	56	92	93	112	57	262	**522**
04:15 PM	04:30 PM	20	12	5	37	0	140	13	153	18	39	66	123	66	101	28	195	**508**
04:30 PM	**04:45 PM**	**20**	**24**	**0**	**44**	**0**	**127**	**10**	**137**	**10**	**47**	**56**	**113**	**107**	**121**	**40**	**268**	**562**
04:45 PM	**05:00 PM**	**24**	**26**	**0**	**50**	**0**	**125**	**13**	**138**	**10**	**41**	**53**	**104**	**94**	**111**	**37**	**242**	**534**
05:00 PM	**05:15 PM**	**37**	**23**	**1**	**61**	**3**	**148**	**11**	**162**	**13**	**39**	**75**	**127**	**84**	**147**	**35**	**266**	**616**
05:15 PM	**05:30 PM**	**21**	**15**	**3**	**39**	**3**	**126**	**20**	**149**	**11**	**36**	**38**	**85**	**74**	**155**	**36**	**265**	**538**
05:30 PM	05:45 PM	18	11	3	32	8	132	18	158	15	34	30	79	74	158	30	262	**531**
05:45 PM	06:00 PM	22	11	4	37	7	134	18	159	14	32	29	75	71	153	28	252	**523**
TOTAL		263	239	32	534	31	1281	138	1450	151	412	656	1219	1035	1486	457	2978	6181

WEEKDAY PEAK HOURLY APPROACH VOLUMES

PROJECT	Yonkers Buena Vista	TIM MILLER ASSOCIATES, INC.
LOCATION	09 Prospect Street, Nepperhan Avenue, and South Broadway	
DATE	Tuesday, March 23, 2010	
TIME	3:00 PM to 6:30 PM	

HOURLY SUMMARY

		South Broadway SB				Prospect Street EB				South Broadway NB				Nepperhan Avenue WB				
START TIME	END TIME	left 1	thru 2	right 3	Total	left 4	thru 5	right 6	Total	left 7	thru 8	right 9	Total	left 10	thru 11	right 12	Total	GRAND TOTAL
03:00 PM	04:00 PM	73	91	16	180	7	247	26	280	54	114	253	421	372	428	166	966	**1847**
03:15 PM	04:15 PM	84	97	7	188	10	307	29	346	47	117	259	423	352	419	184	955	**1912**
03:30 PM	04:30 PM	88	83	10	181	7	394	32	433	53	125	235	413	337	403	177	917	**1944**
03:45 PM	04:45 PM	96	78	5	179	5	443	38	486	50	145	229	424	363	427	180	970	**2059**
04:00 PM	05:00 PM	92	88	5	185	3	494	45	542	44	157	231	432	360	445	162	967	**2126**
04:15 PM	05:15 PM	101	85	6	192	3	540	47	590	51	166	250	467	351	480	140	971	**2220**
04:30 PM	**05:30 PM**	**102**	**88**	**4**	**194**	**6**	**526**	**54**	**586**	**44**	**163**	**222**	**429**	**359**	**534**	**148**	**1041**	**2250**
04:45 PM	05:45 PM	100	75	7	182	14	531	62	607	49	150	196	395	326	571	138	1035	**2219**
05:00 PM	06:00 PM	98	60	11	169	21	540	67	628	53	141	172	366	303	613	129	1045	**2208**
04:30 PM	**05:30 PM**	**102**	**88**	**4**	**194**	**6**	**526**	**54**	**586**	**44**	**163**	**222**	**429**	**359**	**534**	**148**	**1041**	**2250**

WEEKEND PEAK 15 MINUTE COUNTS

PROJECT	Buena Vista Teutonia Development	TIM MILLER ASSOCIATES, INC.
LOCATION	10 Hudson Street and Hawthorne Avenue	
DATE	Tuesday, March 23, 2010	
TIME	4:00 PM to 6:00 PM	

15 Minute Traffic

START TIME	END TIME	Hawthorne Avenue SB left 1	thru	right 2	Total	Hudson Street EB left 6	thru 3	right	Total	Hawthorne Avenue NB left 4	thru 7	right 5	Total	left	thru	right	Total	GRAND TOTAL
04:00 PM	04:15 PM	9		7	16	0	24		24	7	12	18	37				0	**77**
04:15 PM	04:30 PM	6		4	10	4	18		22	7	12	21	40				0	**72**
04:30 PM	04:45 PM	6		7	13	1	24		25	10	11	12	33				0	**71**
04:45 PM	05:00 PM	7		1	8	4	13		17	7	10	15	32				0	**57**
05:00 PM	**05:15 PM**	**10**		**3**	**13**	**3**	**84**		**87**	**4**	**20**	**15**	**39**				**0**	**139**
05:15 PM	**05:30 PM**	**10**		**4**	**14**	**0**	**24**		**24**	**6**	**12**	**13**	**31**				**0**	**69**
05:30 PM	**05:45 PM**	**6**		**1**	**7**	**2**	**22**		**24**	**11**	**16**	**14**	**41**				**0**	**72**
05:45 PM	**06:00 PM**	**4**		**2**	**6**	**3**	**35**		**38**	**4**	**9**	**15**	**28**				**0**	**72**
TOTAL		58	0		87		244	0	261	56		123	281					629

WEEKEND PEAK HOURLY APPROACH VOLUMES

PROJECT	Buena Vista Teutonia Development	TIM MILLER ASSOCIATES, INC.
LOCATION	10 Hudson Street and Hawthorne Avenue	
DATE	Tuesday, March 23, 2010	
TIME	4:00 PM to 6:00 PM	

HOURLY SUMMARY

START TIME	END TIME	Hawthorne Avenue SB left 1	thru	right 2	Total	Hudson Street EB left 6	thru 3	right	Total	Hawthorne Avenue NB left 4	thru 7	right 5	Total	left	thru	right	Total	GRAND TOTAL
04:00 PM	05:00 PM	28		19	47	9	79		88	31	45	66	142					**277**
04:15 PM	05:15 PM	29		15	44	12	139		151	28	53	63	144					**339**
04:30 PM	05:30 PM	33		15	48	8	145		153	27	53	55	135					**336**
04:45 PM	05:45 PM	33		9	42	9	143		152	28	58	57	143					**337**
05:00 PM	**06:00 PM**	**30**		**10**	**40**	**8**	**165**		**173**	**25**	**57**	**57**	**139**					**352**
05:00 PM	**06:00 PM**	**30**		**10**	**40**	**8**	**165**		**173**	**25**	**57**	**57**	**139**					**352**

ATTACHMENT III

NYS DOT Machine Counts

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **US 9** ROAD NAME: **NORTH BROADWAY** FROM: **END 9A OLAP** TO: **YONKERS N CITY LN** COUNTY: **Westchester**

DIRECTION: Northbound FACTOR GROUP: 30 REC. SERIAL #: 0411 FUNC. CLASS: 14 CITY: **YONKERS**

STATE DIR CODE: 1 WK OF YR: 11 PLACEMENT: 400' S of Gateway Drive NHS: no BIN:

DATE OF COUNT: 03/11/2008 @ REF MARKER: JURIS: City RR CROSSING:

NOTES LANE 1: Week 11-Nb ADDL DATA: CC Stn: HPMS SAMPLE:

COUNT TYPE: AXLE PAIRS BATCH ID: R08-R08Cww11

COUNT TAKEN BY: ORG CODE: TST INITIALS: JSV PROCESSED BY: ORG CODE: DOT INITIALS: jh

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	S																											
2	S																											
3	M																											
4	T																											
5	W																											
6	T																											
7	F																											
8	S																											
9	S																											
10	M																											
11	T		3	12	11	19	53	168	370	435	342	296	300	305	342	385	372	358	291	253	203	144	115	76	56			
12	W	20	7	15	19	24	57	164	444	536	372	385	335	256	367	404	434	343	317	265	221	148	107	84	59	5383	536	8
13	T	27	10	14	14	16	59	178	481	665	373	339	333	368	338	400	565	419	307	250	184	140	109	82	67	5738	665	8
14	F	26	10	13	17	19	51	185	482	619	399	353	335	458	374	445	495	364	286	274	204	123	103	85	63	5783	619	8
15	S	56	20	18	20	16	33	92	148	258	280	307	375	358	277	279	302	257	240	236	172	141	107	91	87	4170	375	11
16	S	41	21	26	18	18	18	60	95	99	145	167	193	243	275	255	242	188	139	175	150	88	67	67	47	2837	275	13
17	M	21	11	7	9																							
18	T																											
19	W																											
20	T																											
21	F																											
22	S																											
23	S																											
24	M																											
25	T																											
26	W																											
27	T																											
28	F																											
29	S																											
30	S																											
31	M																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	ADT
23	**8**	**14**	**15**	**20**	**54**	**170**	**435**	**552**	**364**	**336**	**319**	**303**	**342**	**388**	**447**	**365**	**299**	**251**	**199**	**141**	**108**	**79**	**60**	**5292**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
7	147	4	83	552	10%	0.979	1.003

ESTIMATED (one way)

AADT

5276

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **US 9** ROAD NAME: **NORTH BROADWAY** FROM: **END 9A OLAP** TO: **YONKERS N CITY LN** COUNTY: **Westchester**

DIRECTION: Southbound FACTOR GROUP: 30 REC. SERIAL #: 0411 FUNC. CLASS: 14 CITY: **YONKERS**

STATE DIR CODE: 2 WK OF YR: 11 PLACEMENT: 400' S of Gateway Drive NHS: no BIN:

DATE OF COUNT: 03/11/2008 @ REF MARKER: JURIS: City RR CROSSING:

NOTES LANE 1: Week 11-Sb ADDL DATA: CC Stn: HPMS SAMPLE:

COUNT TYPE: AXLE PAIRS BATCH ID: R08-R08Cww11

COUNT TAKEN BY: ORG CODE: TST INITIALS: JSV PROCESSED BY: ORG CODE: DOT INITIALS: jh

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	S																											
2	S																											
3	M																											
4	T																											
5	W																											
6	T																											
7	F																											
8	S																											
9	S																											
10	M																											
11	T		15	7	15	17	31	142	528	648	420	430	339	422	394	445	596	455	536	389	295	234	163	119	72			
12	W	59	24	11	17	17	30	115	375	473	319	285	310	474	356	439	511	501	483	373	253	212	172	112	78	5999	511	15
13	T	44	22	4	11	6	27	97	330	387	322	323	337	297	359	408	611	476	518	394	252	237	172	113	103	5850	611	15
14	F	53	31	13	10	9	26	99	296	325	301	297	295	379	340	375	490	458	483	337	285	227	148	117	104	5498	490	15
15	S	80	30	16	18	14	11	30	96	149	210	297	260	312	296	286	268	285	249	212	200	154	156	117	103	3849	312	12
16	S	85	52	24	19	12	16	32	83	88	131	156	192	166	215	185	229	242	174	169	189	166	93	77	52	2847	242	16
17	M	28	15	2	5																							
18	T																											
19	W																											
20	T																											
21	F																											
22	S																											
23	S																											
24	M																											
25	T																											
26	W																											
27	T																											
28	F																											
29	S																											
30	S																											
31	M																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

																									ADT
51	**23**	**9**	**13**	**12**	**27**	**111**	**374**	**448**	**333**	**327**	**313**	**390**	**362**	**422**	**561**	**467**	**501**	**377**	**261**	**223**	**165**	**113**	**82**	**5965**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
7	147	4	83	561	9%	0.979	1.003

ESTIMATED (one way)

AADT

5947

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **NY 9A** ROAD NAME: **SAW MILL RIVER** FROM: **END RT 9 OLAP** TO: **START 983B OLAP OLD NEPPERAN** COUNTY: **Westchester**

DIRECTION: Eastbound FACTOR GROUP: 30 REC. SERIAL #: 0424 FUNC. CLASS: 16 CITY: **YONKERS**

STATE DIR CODE: 1 WK OF YR: 15 PLACEMENT: 50' W of Jones Place NHS: no BIN: 2254850

DATE OF COUNT: 04/12/2006 @ REF MARKER: JURIS: City RR CROSSING:

NOTES LANE 1: Week 15-Eb ADDL DATA: CC Stn: HPMS SAMPLE:

COUNT TYPE: AXLE PAIRS BATCH ID: DOT-VOL

COUNT TAKEN BY: ORG CODE: TST INITIALS: JSV PROCESSED BY: ORG CODE: DOT INITIALS: jph

DATE	DAY	AM 12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	PM 12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	S																											
2	S																											
3	M																											
4	T																											
5	W																											
6	T																											
7	F																											
8	S																											
9	S																											
10	M																											
11	T																											
12	W													336	381	404	432	506	427	370	328	270	233	240	164			
13	T	**107**	**61**	**38**	**26**	**49**	**124**	**226**	**344**	**333**	**338**	**384**	**391**	**398**	**368**	**410**	**414**	**477**	**470**	**380**	**381**	**261**	**277**	**210**	**175**	6642	477	16
14	F	**124**	**91**	**57**	**44**	**45**	**108**	**207**	**266**	**298**	**322**	**344**	**422**	**425**	**374**	**372**	**454**	**429**	**370**	**339**	**322**	**252**	**261**	**222**	**222**	6370	454	15
15	S	**161**	**92**	**84**	**52**	**60**	**76**	**124**	**215**	**234**	**310**	**330**	**386**	**407**	**386**	**394**	**398**	**430**	**399**	**338**	**379**	**296**	**280**	**274**	**308**	6413	430	16
16	S	**223**	**151**	**78**	**74**	**62**	**58**	**92**	**135**	**180**	**235**	**300**	**326**	**320**	**480**	**351**	**372**	**298**	**284**	**298**	**298**	**258**	**243**	**228**	**161**	5505	480	13
17	M	**94**	**50**	**31**	**32**	**40**	**108**	**246**	**326**	**358**	**312**	**329**	**418**	**396**	**381**	**412**	**435**	**492**	**443**	**389**	**339**	**265**	**239**	**177**	**152**	6464	492	16
18	T	**83**	**36**	**33**	**33**	**43**	**117**	**265**	**416**	**392**	**334**	**336**	**390**	**420**	**316**													
19	W																											
20	T																											
21	F																											
22	S																											
23	S																											
24	M																											
25	T																											
26	W																											
27	T																											
28	F																											
29	S																											
30	S																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

																									ADT
103	**62**	**42**	**33**	**45**	**114**	**232**	**332**	**339**	**320**	**342**	**398**	**381**	**355**	**402**	**419**	**483**	**439**	**373**	**343**	**260**	**245**	**205**	**161**	**6428**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
7	146	4	80	483	8%	0.982	1.048

ESTIMATED (one way)

AADT

6134

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **NY 9A** ROAD NAME: **SAW MILL RIVER** FROM: **END RT 9 OLAP** TO: **START 983B OLAP OLD NEPPERAN** COUNTY: **Westchester**

DIRECTION: Westbound FACTOR GROUP: 30 REC. SERIAL #: 0424 FUNC. CLASS: 16 CITY: **YONKERS**

STATE DIR CODE: 2 WK OF YR: 15 PLACEMENT: 50' W of Jones Place NHS: no BIN: 2254850

DATE OF COUNT: 04/12/2006 @ REF MARKER: JURIS: City RR CROSSING:

NOTES LANE 1: Week 15-Wb ADDL DATA: CC Stn: HPMS SAMPLE:

COUNT TYPE: AXLE PAIRS BATCH ID: DOT-VOL

COUNT TAKEN BY: ORG CODE: TST INITIALS: JSV PROCESSED BY: ORG CODE: DOT INITIALS: jph

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	S																											
2	S																											
3	M																											
4	T																											
5	W																											
6	T																											
7	F																											
8	S																											
9	S																											
10	M																											
11	T																											
12	W													**320**	**446**	**389**	**402**	**462**	**509**	**516**	**416**	**361**	**340**	**330**	**230**			
13	T	**153**	**77**	**39**	**30**	**46**	**93**	**190**	**338**	**408**	**401**	**343**	**390**	**394**	**404**	**416**	**442**	**468**	**508**	**467**	**502**	**377**	**366**	**326**	**270**	7448	508	17
14	F	**166**	**97**	**52**	**53**	**55**	**74**	**165**	**305**	**366**	**418**	**312**	**408**	**404**	**372**	**388**	**428**	**452**	**418**	**421**	**414**	**324**	**359**	**335**	**298**	7084	452	16
15	S	**220**	**121**	**86**	**61**	**61**	**66**	**100**	**186**	**222**	**268**	**296**	**322**	**400**	**372**	**419**	**412**	**412**	**398**	**402**	**446**	**434**	**405**	**380**	**350**	6839	446	19
16	S	**278**	**155**	**110**	**80**	**93**	**74**	**95**	**175**	**176**	**244**	**332**	**368**	**302**	**386**	**351**	**364**	**350**	**363**	**355**	**331**	**371**	**322**	**301**	**242**	6218	386	13
17	M	**124**	**62**	**49**	**32**	**33**	**106**	**228**	**350**	**418**	**396**	**344**	**382**	**402**	**398**	**416**	**413**	**476**	**481**	**456**	**426**	**375**	**332**	**256**	**142**	7097	481	17
18	T	**84**	**50**	**38**	**36**	**35**	**98**	**262**	**490**	**513**	**444**	**382**	**366**	**382**	**334**													
19	W																											
20	T																											
21	F																											
22	S																											
23	S																											
24	M																											
25	T																											
26	W																											
27	T																											
28	F																											
29	S																											
30	S																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

																									ADT
132	**74**	**42**	**39**	**44**	**86**	**207**	**364**	**418**	**408**	**339**	**379**	**367**	**389**	**400**	**411**	**461**	**490**	**471**	**440**	**364**	**340**	**299**	**210**	**7174**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
7	146	4	80	490	7%	0.982	1.048

ESTIMATED (one way)

AADT

6845

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **983B** ROAD NAME: **983B** FROM: **SOUTH BROADWAY** TO: **WALSH RD** COUNTY: **Westchester**
DIRECTION: Eastbound FACTOR GROUP: 30 REC. SERIAL #: 0420 FUNC. CLASS: 14 CITY: **YONKERS**
STATE DIR CODE: 1 WK OF YR: 15 PLACEMENT: 983B NHS: no BIN:
DATE OF COUNT: 04/12/2006 @ REF MARKER: 983B87011003 JURIS: State RR CROSSING:
NOTES LANE 1: Week 15-Eb ADDL DATA: CC Stn: HPMS SAMPLE:
COUNT TYPE: AXLE PAIRS BATCH ID: DOT-VOL
COUNT TAKEN BY: ORG CODE: TST INITIALS: JSV PROCESSED BY: ORG CODE: DOT INITIALS: jph

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	S																											
2	S																											
3	M																											
4	T																											
5	W																											
6	T																											
7	F																											
8	S																											
9	S																											
10	M																											
11	T																											
12	W												**854**	**905**	**899**	**872**	**1004**	**1216**	**1074**	**798**	**652**	**584**	**542**	**423**	**290**			
13	T	**172**	**114**	**89**	**77**	**84**	**172**	**480**	**771**	**745**	**651**	**752**	**851**	**936**	**933**	**941**	**1031**	**1191**	**1139**	**882**	**743**	**586**	**557**	**517**	**337**	14751	1191	16
14	F	**260**	**179**	**115**	**96**	**99**	**174**	**400**	**679**	**650**	**647**	**740**	**858**	**899**	**953**	**859**	**950**	**946**	**789**	**645**	**630**	**517**	**499**	**485**	**388**	13457	953	13
15	S	**283**	**157**	**148**	**113**	**127**	**140**	**248**	**416**	**467**	**528**	**589**	**741**	**737**	**792**	**805**	**780**	**728**	**693**	**665**	**655**	**564**	**598**	**579**	**469**	12022	805	14
16	S	**458**	**255**	**215**	**224**	**177**	**125**	**168**	**242**	**312**	**367**	**510**	**559**	**591**	**737**	**786**	**660**	**627**	**557**	**531**	**544**	**500**	**412**	**332**	**268**	10157	786	14
17	M	**154**	**91**	**85**	**76**	**88**	**192**	**509**	**799**	**740**	**595**	**785**	**832**	**900**	**902**	**900**	**1010**	**1243**	**1085**	**826**	**714**	**557**	**452**	**318**	**274**	14127	1243	16
18	T	**178**	**107**	**85**	**62**	**85**	**189**	**575**	**946**	**839**	**721**	**787**	**828**															
19	W																											
20	T																											
21	F																											
22	S																											
23	S																											
24	M																											
25	T																											
26	W																											
27	T																											
28	F																											
29	S																											
30	S																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

																									ADT
199	**130**	**94**	**77**	**87**	**175**	**482**	**784**	**730**	**642**	**751**	**829**	**897**	**894**	**887**	**996**	**1194**	**1078**	**819**	**690**	**565**	**507**	**411**	**294**	**14212**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
7	145	4	79	1194	8%	0.981	1.048

ESTIMATED (one way)

AADT
13561

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **983B** ROAD NAME: **983B**
DIRECTION: Westbound FACTOR GROUP: 30
STATE DIR CODE: 2 WK OF YR: 15
DATE OF COUNT: 04/12/2006
NOTES LANE 1: Week 15-Wb

FROM: **SOUTH BROADWAY**
REC. SERIAL #: 0420
PLACEMENT: 983B
@ REF MARKER: 983B87011003
ADDL DATA:
COUNT TYPE: AXLE PAIRS

TO: **WALSH RD**
FUNC. CLASS: 14
NHS: no
JURIS: State
CC Stn:
BATCH ID: DOT-VOL

COUNTY: **Westchester**
CITY: **YONKERS**
BIN:
RR CROSSING:
HPMS SAMPLE:

COUNT TAKEN BY: ORG CODE: TST INITIALS: JSV
PROCESSED BY: ORG CODE: DOT INITIALS: jph

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	S																											
2	S																											
3	M																											
4	T																											
5	W																											
6	T																											
7	F																											
8	S																											
9	S																											
10	M																											
11	T																											
12	W												**1282**	**1254**	**1326**	**1343**	**1320**	**1400**	**1369**	**1394**	**1178**	**844**	**802**	**624**	**493**			
13	T	**274**	**168**	**125**	**81**	**109**	**228**	**723**	**1126**	**1498**	**1354**	**1217**	**1233**	**1286**	**1363**	**1335**	**1382**	**1464**	**1540**	**1393**	**1231**	**996**	**844**	**716**	**564**	22250	1540	17
14	F	**386**	**246**	**147**	**121**	**124**	**226**	**574**	**960**	**1351**	**1292**	**1234**	**1239**	**1326**	**1283**	**1336**	**1318**	**1310**	**1332**	**1177**	**1067**	**867**	**746**	**744**	**610**	21016	1351	8
15	S	**427**	**298**	**217**	**158**	**181**	**167**	**339**	**536**	**693**	**909**	**1030**	**1074**	**1201**	**1186**	**1232**	**1243**	**1263**	**1286**	**1172**	**1144**	**1089**	**1000**	**917**	**841**	19603	1286	17
16	S	**558**	**367**	**318**	**234**	**227**	**171**	**246**	**418**	**511**	**705**	**899**	**908**	**953**	**1011**	**1059**	**1004**	**961**	**895**	**920**	**840**	**786**	**729**	**569**	**446**	15735	1059	14
17	M	**291**	**177**	**126**	**90**	**113**	**250**	**753**	**1117**	**1600**	**1280**	**1202**	**1148**	**1308**	**1308**	**1339**	**1376**	**1422**	**1410**	**1320**	**1052**	**861**	**738**	**582**	**467**	21330	1600	8
18	T	**289**	**192**	**108**	**82**	**116**	**235**	**820**	**1414**	**1942**	**1493**	**1170**	**1169**															
19	W																											
20	T																											
21	F																											
22	S																											
23	S																											
24	M																											
25	T																											
26	W																											
27	T																											
28	F																											
29	S																											
30	S																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

																									ADT
310	**198**	**125**	**93**	**114**	**226**	**704**	**1132**	**1568**	**1329**	**1183**	**1191**	**1259**	**1307**	**1314**	**1333**	**1402**	**1413**	**1343**	**1132**	**883**	**780**	**629**	**498**	**21466**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
7	145	4	79	1568	7%	0.981	1.048

ESTIMATED (one way)

AADT
20483

ATTACHMENT IV

Other No Build Projects

Table G-1
Buena Vista Teutonia PUR
No-Build Projects Trip Rate Summary

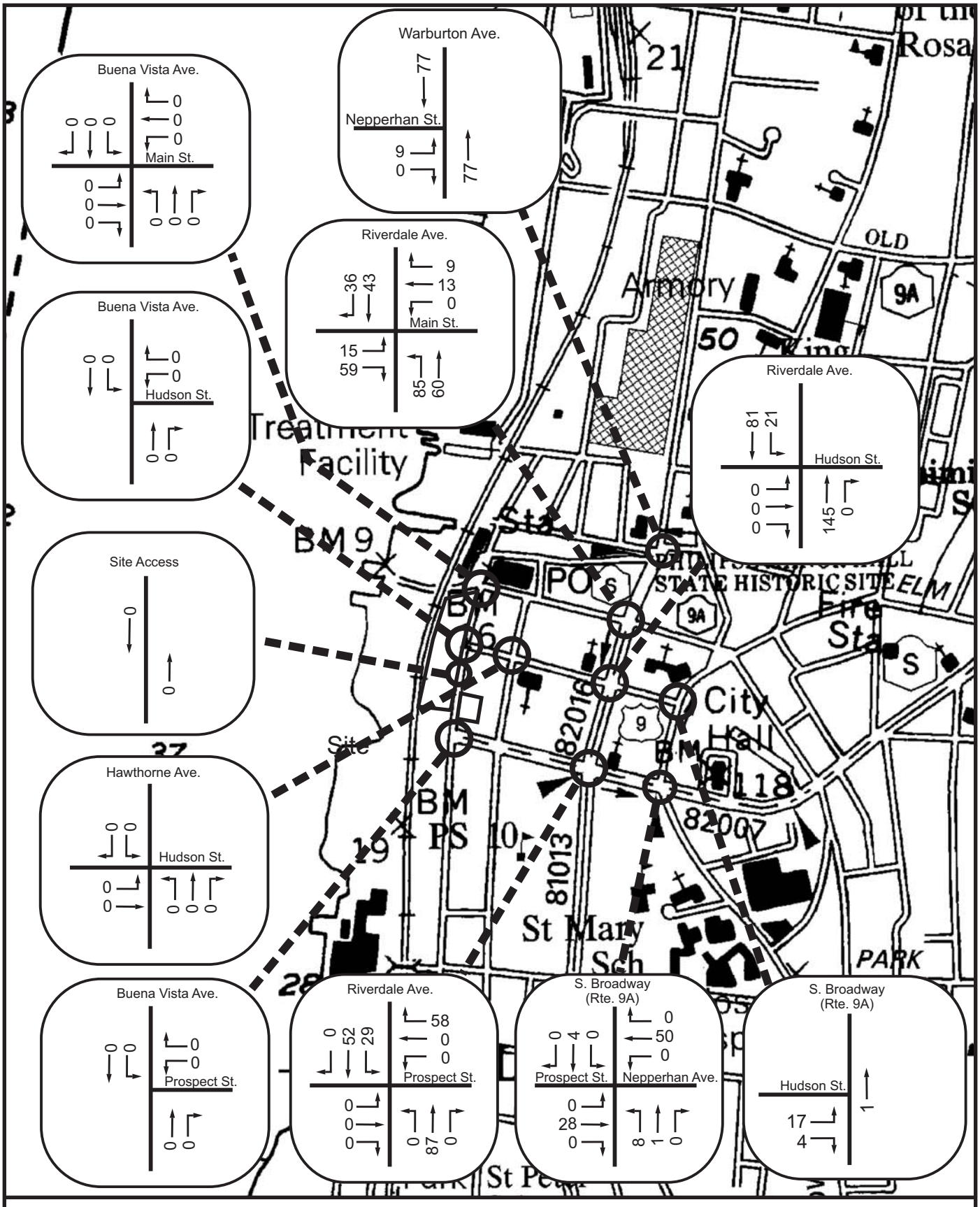
Land Uses {ITE Land Use Code}	Peak Hour Trip Rates			
	Weekday A.M.		Weekday P.M.	
	IN (Trips/ Unit)	OUT (Trips/ Unit)	IN (Trips/ Unit)	OUT (Trips/ Unit)
Residential {220}				
Main Street Lofts 171 Dwelling Units	0.102	0.409	0.425	0.229
Mulford Gardens 220 Dwelling Units	0.101	0.406	0.410	0.221
Office {710}				
I-Park Phase 2 - 100,000 square feet	1.651	0.225	0.324	1.584
Homes for America - 58,000 square feet	1.841	0.251	0.421	2.057
Retail {820}				
Cooks - 4,400 square feet	3.381	2.162	8.738	9.095
I-Park Phase 2 - 30,000 square feet	1.539	0.984	4.638	4.827
Homes for America - 12,000 square feet	2.241	1.433	6.275	6.531

Unit is dwelling units or square footage, as noted.
Trip Generation, Institute of Transportation Engineers, 8th edition, Washington, DC, 2008.

Table G-2
Buena Vista Teutonia PUR
No-Build Projects Trip Generation

Land Uses {ITE Land Use Code}	Peak Hour Trips			
	Weekday A.M.		Weekday P.M.	
	IN (Trips/ Unit)	OUT (Trips/ Unit)	IN (Trips/ Unit)	OUT (Trips/ Unit)
Residential {220}				
Main Street Lofts 171 Dwelling Units	17	70	73	39
Mulford Gardens 220 Dwelling Units	22	89	90	49
Office {710}				
I-Park Phase 2 - 100,000 square feet	165	23	32	158
Homes for America - 58,000 square feet	107	15	24	119
Retail {820}				
Cooks - 4,400 square feet	15	10	38	40
I-Park Phase 2 - 30,000 square feet	46	30	139	145
Homes for America - 12,000 square feet	27	17	75	78

Unit is dwelling units or square footage, as noted.
Trip Generation, Institute of Transportation Engineers, 8th edition, Washington, DC, 2008.



N

W E

S

LEGEND

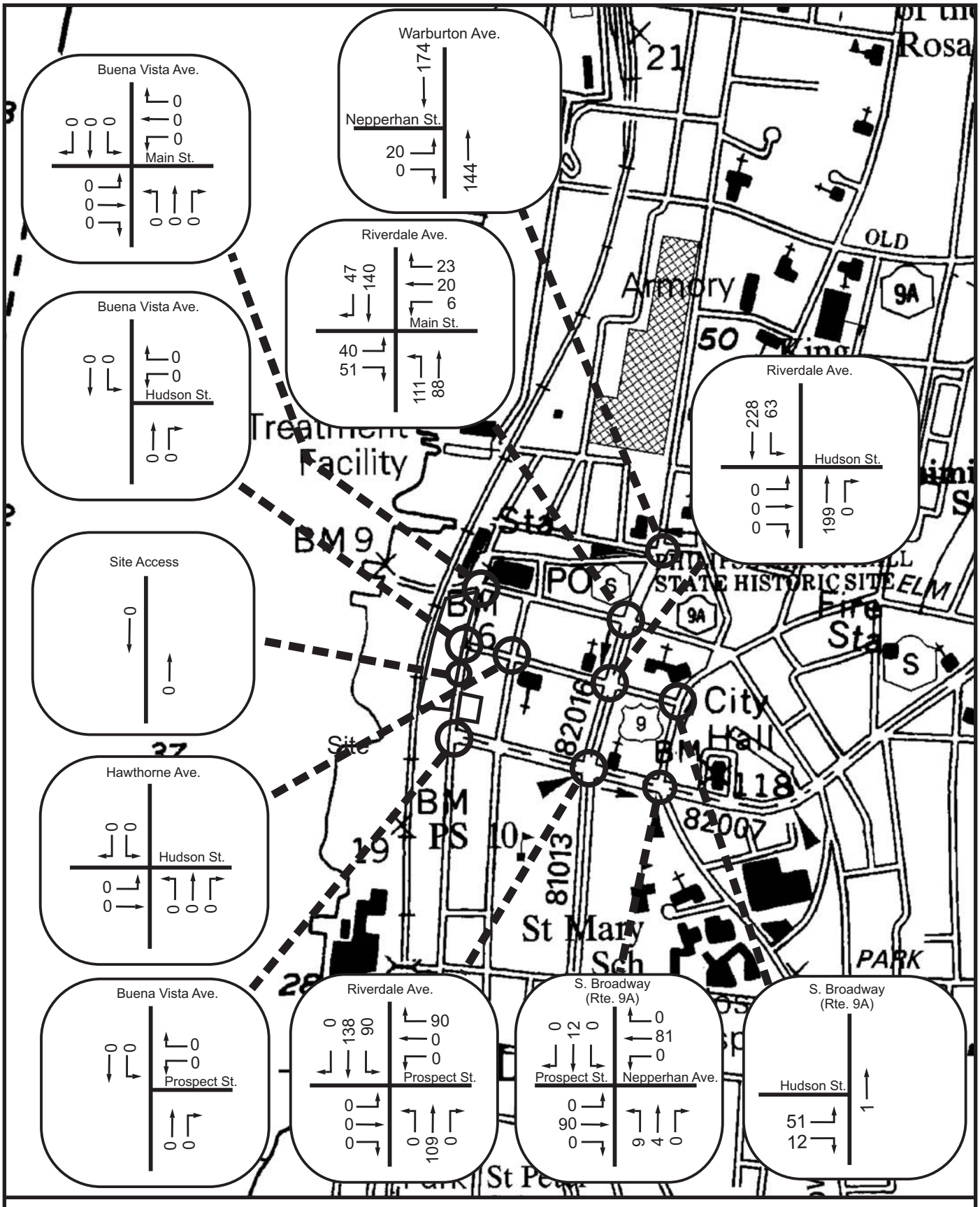
Intersections Studied

Figure G-11: No Build Projects* AM Peak Hour Traffic
Buena Vista Teutonia PUR
City of Yonkers, Westchester County, New York
Base Map: NYS DOT Planimetric Map, Yonkers Quad, 1990
Scale: 1"= 700'

*Excludes SFC

File 09044 5/26/10
JS:\09044

Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418



N

W E

S

LEGEND

Intersections Studied

Figure G-12: No Build Projects* PM Peak Hour Traffic
Buena Vista Teutonia PUR
City of Yonkers, Westchester County, New York
Base Map: NYS DOT Planimetric Map, Yonkers Quad, 1990
Scale: 1"= 700'

*Excludes SFC

File 09044 5/26/10
JS:\09044

Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

ATTACHMENT V

Automated Garage Operation

Automated Garage Parking Operation

A driver enters the building from Buena Vista Avenue, drives up the driveway and around the Auto Court before entering the queuing area of the garage. Overhead Light Emitting Diode (LED) or similar device directs the driver to proceed to the next available Entry/Exit Station ("EES"). Once directed to proceed to one of the four EESs, the overhead door on the front of the EES opens. The driver drives his vehicle into the EES and positions the vehicle by following the directions and prompts shown on screens. The driver turns off the vehicle engine, takes his belongings, exits the vehicle, and exits the EES. Once outside the EES, the driver swipes a smartcard at the Ticketing Machine conveniently located immediately outside the EES.

Once the Ticketing Machine is activated, sensors measure the height, length and width of the vehicle and confirms that no person remains inside the EES. When all of the safety sensors are confirmed, the vehicle is ready to be parked.

The actual parking process is accomplished by a Vertical Lift working in conjunction with the EES and a Horizontal Shuttle. A Vertical Lift is located directly next to each of the four EESs. The rollup door between the Lift and EES opens to allow the vehicle to be moved from the EES to the Lift. The rollup door closes and the EES is ready for the next patron.

While the second patron enters the EES and begins the parking process referred to above, the Lift descends to the computer assigned parking level. One of two Horizontal Shuttles located on that parking level meets the Lift and retrieves the vehicle from the Lift. This allows the Lift to return to the ground floor to retrieve the next vehicle even though the first vehicle has not been fully parked yet. The Shuttle moves laterally down the aisle before positioning itself in front of the computer assigned parking space and parks the vehicle in the parking space.

To retrieve a vehicle, a patron swipes his smartcard at one of the scanners/readers conveniently located near the EES or inside the building lobby to activate the retrieval process. The vehicle is retrieved and the driver is prompted to enter the EES. The driver enters the EEC and his vehicle. The overhead door on the exit side of the EES opens and the driver exits the garage to Buena Vista Avenue.

ATTACHMENT VI

Measures of Effectiveness Criteria

Traffic: Measures of Effectiveness

Introduction

The Highway Capacity Manual[1] and the *Highway Capacity Software*[2] procedures document the methodology used for modeling levels of service and average vehicle delay at both signalized and unsignalized intersections. Level of service is a measure of the operational quality of an intersection; level of service A is the highest, most efficient level, and level of service F is the lowest level. The operational quality of an intersection is based on the average amount of time a vehicle is delayed. Levels of service are examined by 'lane group', the set of lanes allowing common movement(s) on an approach. Approaches to intersections are assigned primary directions for clarity as depicted on the traffic volume figures.

Use of the *Highway Capacity Software* is consistent with the New York State Department of Transportation policy requiring use of capacity analysis software consistent with the most recent version of the Highway Capacity Manual.

The *Highway Capacity Software* modeled results are applied to peak hour periods only. During off peak periods, which is the majority of the time, drivers typically will find operations better than the modeled peak hour results. During peak periods the experience of individual drivers can vary, because the model calculates average delay.

Peak 15 minute traffic flows typically do not all occur in the same 15 minute period in the peak hour. The *Highway Capacity Software* conservatively assumes 15 minute peak approach volumes occur simultaneously.

The Synchro[3] Software is similar to the *Highway Capacity Software* in its function of peak hour intersection analysis. Synchro has added features allowing better analysis of signal coordination, timing, and queue management.

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[1] Highway Capacity Manual, National Academy of Sciences, Transportation Research Board, National Research Council, Washington, DC, 2000.

[2] Highway Capacity Software, Computer software, Version 5.4, Mctrans, Gainsville, Florida, 2008.

[3] Trafficware Ltd., Synchro Studio 7 Synchro Plus SimTraffic 7, version 7, Sugar Land, TX, 2006.

Level of Service Criteria Signalized Intersections

When analyzing activity at signalized intersections, an understanding of the definition of level of service is essential:

> Level of service for signalized intersections is defined in terms of control delay, which is a measure of driver discomfort, frustration, fuel consumption and increased travel time.[4]

These levels of service are:

> *Level of Service* A describes operations with low control delay, up to 10 *seconds per vehicle*. The level of service occurs when progression is extremely favorable and most vehicles arrive during the green phase. Many vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay values.
>
> *Level of Service* B describes operations with control delay greater than 10 and up to 20 *seconds per vehicle*. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with *Level of Service* A, causing higher levels of delay.
>
> *Level of Service* C describes operations with control delay greater than 20 and up to 35 *seconds per vehicle*. These higher delays may result from only fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. Cycle failure occurs when a given green phase does not serve [all its] queued vehicles, and overflows occur. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.
>
> *Level of Service* D describes operations with control delay greater than 35 and up to 55 *seconds per vehicle*. At *level of service* D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, and high *volume to capacity* ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
>
> *Level of Service* E describes operations with control delay greater than 55 and up to 80 *seconds per vehicle*. These high delay values generally indicate poor progression, long cycle lengths, and high *volume to capacity* ratios. Individual cycle failures are frequent.
>
> *Level of Service* F describes operations with control delay in excess of 80 *seconds per vehicle*. This level, considered unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of lane groups. It may also occur at high *volume to capacity* ratios with many individual cycle failures. Poor progression and long cycle lengths may also contribute significantly to high delay levels.[5] (Underlines added for emphasis, italic words unabbreviated for clarity, bracketed words added for clarity)

The table below summaries the levels of service criteria for signalized intersections.

---

[4] Highway Capacity Manual, National Academy of Sciences, Transportation Research Board, National Research Council, Washington, DC, 2000, page 10-15.

[5] Ibid, page 10-16.

Signalized Intersections Level of Service Criteria	
Level of Service	**Average Control Delay (Seconds Per Vehicle)**
A	less than or equal to 10
B	greater than 10 and less than or equal to 20
C	greater than 20 and less than or equal to 35
D	greater than 35 and less than or equal to 55
E	greater than 55 and less than or equal to 80
F	greater than 80
Source: Highway Capacity Manual, National Academy of Sciences, Transportation Research Board, National Research Council, Washington, DC, 2000.	

Level of Service Criteria Unsignalized Intersections

The table below presents the levels of service criteria for unsignalized intersections. Average control delays are different from signalized intersections. Major street lane groups that do not include left turning movements are considered free flowing (effectively operating at a level of service A) and are not analyzed.

Unsignalized Intersections Level of Service Criteria	
Level of Service	**Average Control Delay (Seconds Per Vehicle)**
A	less than or equal to 10
B	greater than 10 and less than or equal to 15
C	greater than 15 and less than or equal to 25
D	greater than 25 and less than or equal to 35
E	greater than 35 and less than or equal to 50
F	greater than 50
Source: Highway Capacity Manual, National Academy of Sciences, Transportation Research Board, National Research Council, Washington, DC, 2000.	

Volume to Capacity Ratio

The volume to capacity ratio is an indication of the unused capacity or the ability a lane group to process more traffic. It is possible to have a movement with a level of service A, B, C, or D and be at capacity for the movement. It is also possible to have a movement with a level of service E or F with additional capacity available on the movement. The ability of an entire intersection to handle more traffic is a complex issue, as traffic can be added to under capacity movements without impacting over capacity movements. Capacity is an estimated value based on standard

vehicle operation. A volume to capacity of one indicates the volume equals the capacity. Volume to capacity ratios greater than one are possible.

Queue Management

Queues are the standing lines of vehicles. Queues first develop as a result of vehicles waiting at red lights or stop signs. As the queues lengthen they can block driveways, other lanes on the same approach or other roads. Where queues block driveways they increase delay at driveways. The blocking of driveways is important to the individuals using the driveways. Blocking drivers entering the networks does not generally effect the transportation network. Blocking drivers from leaving the network can reduce the capacity between intersection or link capacity. Generally the intersection capacity is only effected if the a queue develops behind left turning vehicles attempting to leave the network extends into an intersection. Arterial management encourages access points off the major arterials to avoid this issue.

The *Synchro* analysis identifies when queues extend sufficiently to block access to adjacent lanes. The effect in terms of additional vehicle delay of these blockages (storage blockage) is considered in the *Synchro* analysis but not the *Highway Capacity Software* analysis. These blockages are only critical when the service levels decline to unacceptable levels. where the storage lane is exceeded vehicles can avoid these blockages if there is more than one through lane.

When the queues extend or spill back into the next intersection that intersection's capacity can be effected. This reduction in capacity is network critical when an intersection approach is reduced below the level traffic it is to handle or below the downstream intersection. Of highest importance is avoiding an effect of spillback from intersection to intersection back upon the spillbacks. This can lock that portion of network traffic into a standstill referred to as gridlock that tends to cascade outward.

As a measure of effectiveness the 50th percentile queues or typical maximum back of queue are summarized in Appendix E tables for signalized intersections. The 50th percentile queues for signalized intersections are indicated in the *Synchro* calculations. For unsignalized intersection the *Highway Capacity Software* analysis sheets are used for the 95th percentile queues as queues are not shown in the *Synchro* calculations.

Where queuing becomes an issue typical driver responses include compressing the distance between vehicles and processing through the traffic control faster. This type of response can make actual queues less than modeled queues.

ATTACHMENT VII

Measure of Effectiveness Tables

Table G-5 A
Level of Service and Delay Summary

Intersection	Existing Condition				No Build Condition				Build Condition				No Build Condition w/ SFC				Build Condition with SFC			
	A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
Approach Direction - Movement	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)
Main Street and Buena Vista Avenue (signalized)																				
Eastbound left-through-right	0.17	B 11.6	0.13	B 11.2	0.18	B 11.7	0.13	B 11.3	0.18	B 11.7	0.14	B 11.3	0.28	B 12.8	0.20	B 11.9	0.29	B 12.8	0.20	B 11.9
Westbound left-through-right	0.20	B 11.9	0.22	B 12.1	0.21	B 12.0	0.24	B 12.2	0.24	B 12.3	0.30	B 13.0	0.23	B 12.2	0.28	B 12.7	0.25	B 12.5	0.34	B 13.5
Northbound left-through-right	0.56	B 16.9	0.40	B 14.3	0.59	B 17.5	0.43	B 14.7	0.63	B 18.5	0.44	B 14.9	0.67	C 20.0	0.74	C 24.4	0.71	C 21.5	0.75	C 25.5
Southbound left-through-right	0.28	B 12.7	0.49	B 15.6	0.30	B 12.9	0.51	B 16.1	0.30	B 13.0	0.52	B 16.2	0.30	B 12.9	0.52	B 16.3	0.31	B 13.0	0.53	B 16.4
Overall	0.38	B 14.4	0.35	B 14.1	0.40	B 14.8	0.38	B 14.5	0.43	B 15.3	0.41	B 14.7	0.48	B 16.0	0.51	B 18.1	0.50	B 16.8	0.55	B 18.6
Prospect Street and Buena Vista Avenue (All-way Stop)																				
Wastbound left	0.06	A 9.3	0.09	A 9.3	0.06	A 9.4	0.10	A 9.4	0.07	A 9.6	0.10	A 9.6	0.07	A 9.8	0.10	A 9.7	0.07	A 10.0	0.11	A 9.9
Westbound right	0.20	A 9.4	0.14	A 8.7	0.21	A 9.6	0.15	A 8.8	0.24	B 10.0	0.22	A 9.5	0.27	B 10.6	0.30	B 10.5	0.31	B 11.2	0.38	B 11.6
Northbound through-right	0.54	B 12.9	0.33	B 10.0	0.57	B 13.8	0.35	B 10.3	0.59	B 14.6	0.37	B 10.9	0.61	C 15.6	0.38	B 11.4	0.63	C 16.5	0.41	B 12.1
Southbound left-through	0.42	B 11.7	0.49	B 12.4	0.45	B 12.3	0.52	B 13.1	0.52	B 13.8	0.58	B 14.9	0.62	C 16.8	0.64	C 17.2	0.70	C 20.1	0.72	C 20.9
. Overall		B 11.8		B 10.9		B 12.5		B 11.3		B 13.4		B 12.4		C 15.0		B 13.7		C 16.8		C 15.8
Hudson Street and Riverdale Avenue(signalized)																				
Eastbound left-through-right	0.44	C 30.9	0.50	C 32.2	0.46	C 31.4	0.52	C 32.8	0.49	C 32.0	0.54	C 33.2	0.49	C 33.7	0.70	D 53.1	0.52	C 34.4	0.72	D 54.1
Northbound left-through	0.33	B 19.2	0.39	B 20.0	0.48	C 26.2	0.59	B 14.8	0.48	C 26.2	0.59	B 14.8	0.56	C 25.6	0.72	C 34.3	0.56	C 25.6	0.72	C 34.0
Northbound right	0.08	B 16.9	0.09	B 17.0	0.09	C 27.2	0.12	A 6.8	0.09	C 27.2	0.12	A 6.8	0.15	B 14.6	0.44	C 30.3	0.15	B 14.6	0.44	C 30.2
Southbound left	0.40	B 10.7	0.54	B 14.0	0.46	C 21.9	0.71	C 29.2	0.46	C 21.9	0.71	C 29.0	0.54	B 13.5	0.77	C 25.5	0.54	B 13.4	0.77	C 25.1
Southbound through	0.31	A 1.6	0.38	A 1.8	0.38	A 6.5	0.54	A 7.6	0.38	A 6.5	0.54	A 7.6	0.40	A 1.8	0.50	A 2.9	0.40	A 1.7	0.50	A 2.9
. Overall	0.48	B 12.8	0.53	B 13.5	0.62	B 18.9	0.73	B 15.7	0.63	B 18.9	0.74	B 15.8	0.61	B 15.2	0.81	C 22.2	0.62	B 15.3	0.81	C 22.2

* V/C is Volume to Capacity Ratio except all way stops are degree of utilization.

**LOS is level of service and Delay is in seconds per vehicle.

Reference: Tim Miller Associates, Inc., 2010.

Table G-5 B
Level of Service and Delay Summary

Intersection	Existing Condition				No Build Condition				Build Condition				No Build Condition w/ SFC				Build Condition with SFC			
	A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
Approach Direction - Movement	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)
Prospect Street and Riverdale Avenue (signalized)																				
Eastbound left-through-right	0.26	C 27.3	0.18	C 26.4	0.56	D 45.0	0.16	C 22.8	0.65	D 48.1	0.20	C 23.1	0.85	E 58.2	0.73	E 59.0	0.93	E 70.7	0.78	E 62.6
Westbound left	1.29	F 173.8	0.91	E 64.0	0.92	E 56.1	0.82	D 45.5	0.95	E 63.3	0.85	D 48.3	1.03	F 83.0	1.27	F 180.3	1.05	E 79.3	1.28	F 185.6
Westbound through	0.69	C 28.6	0.67	C 28.9	0.54	C 23.5	0.60	C 29.7	0.56	C 23.9	0.66	C 31.6	0.40	B 16.5	0.58	C 28.6	0.41	B 16.5	0.61	C 28.8
Westbound right	0.09	B 14.8	0.09	B 14.8	0.15	A 6.9	0.16	B 15.0	0.15	A 6.9	0.16	C 21.8	***	***	***	***	***	***	***	***
.Northbound left	0.21	B 18.3	0.24	B 18.9	0.35	C 29.2	0.50	D 39.2	0.37	C 29.7	0.56	D 41.7	0.50	D 45.5	0.38	D 39.5	0.53	D 46.3	0.43	D 41.0
Northbound through-right	0.33	B 18.5	0.29	B 17.9	0.86	D 49.7	0.79	D 43.6	0.86	D 49.7	0.79	D 43.6	1.21	F 148.1	1.30	F 194.2	1.23	F 158.9	1.33	F 208.1
Southbound left	0.64	C 31.0	0.87	D 51.5	0.69	D 38.3	0.89	D 48.8	0.69	D 38.3	0.89	D 48.8	0.73	D 37.6	0.87	D 35.4	0.73	D 37.5	0.87	C 32.1
Southbound through	0.32	B 15.4	0.35	B 15.7	0.49	B 17.9	0.54	B 14.4	0.49	B 17.9	0.54	B 14.4	0.53	C 27.6	0.65	C 33.5	0.53	C 28.1	0.66	C 34.3
Southbound right	0.04	A 2.9	0.06	A 3.0	0.04	B 10.1	0.06	A 6.4	0.04	B 10.1	0.06	A 6.4	0.04	C 21.6	0.07	B 16.7	0.04	C 22.0	0.07	B 17.1
. Overall	0.75	D 48.6	0.72	C 30.9	0.87	D 36.8	0.83	C 33.2	0.89	D 38.3	0.84	C 34.0	0.99	E 68.2	1.23	F 94.6	1.02	E 71.2	1.26	F 97.3
Main Street and Riverdale Avenue (signalized)																				
Eastbound left-through-right	0.12	C 26.1	0.33	C 29.8	0.21	C 23.9	0.89	E 58.5	0.29	C 25.4	0.97	E 76.6	0.35	C 29.7	0.88	E 56.9	0.53	D 35.3	0.95	E 69.5
Westbound left	0.22	C 27.7	0.37	C 30.5	0.21	C 23.9	0.45	C 29.8	0.21	C 23.9	0.46	C 30.1	0.25	C 27.4	0.48	C 29.9	0.27	C 27.8	0.48	C 30.1
Westbound through-right	0.36	C 29.6	0.32	C 28.8	0.37	C 26.1	0.37	C 26.2	0.38	C 26.4	0.40	C 26.7	0.45	C 30.6	0.44	C 27.3	0.47	C 31.0	0.47	C 27.8
Northbound left	0.11	B 12.0	0.09	B 12.7	0.46	C 24.7	0.63	D 39.4	0.46	C 24.9	0.64	D 40.2	0.38	C 22.5	0.68	D 49.8	0.38	C 22.7	0.68	D 49.9
Northbound through	0.21	A 1.4	0.18	A 1.3	0.28	A 1.7	0.27	A 1.6	0.28	A 1.7	0.27	A 1.6	0.27	A 1.5	0.31	B 14.0	0.27	A 1.5	0.31	B 14.0
Southbound through-right	0.52	C 24.1	0.56	C 24.9	0.54	C 21.4	0.66	C 24.0	0.54	C 21.5	0.67	C 24.2	0.70	C 28.7	0.95	D 49.3	0.70	C 28.8	0.96	D 51.0
. Overall	0.35	B 18.5	0.37	C 20.5	0.56	B 17.3	0.88	C 25.7	0.57	B 17.6	0.91	C 28.6	0.62	C 21.7	0.97	D 40.0	0.65	C 22.5	1.00	D 42.5

* V/C is Volume to Capacity Ratio except all way stops are degree of utilization.

**LOS is level of service and Delay is in seconds per vehicle.

*** Included with through movement.

Reference: Tim Miller Associates, Inc., 2010.

Table G-5 C
Level of Service and Delay Summary

Intersection / Approach Direction - Movement	Existing Condition				No Build Condition				Build Condition				No Build Condition w/ SFC				Build Condition with SFC			
	A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)
Hudson Street and Buena Vista Ave. (unsignalized)																				
Southbound left-through	0.04	A 8.1	0.05	A 8.0	0.05	A 8.2	0.05	A 8.0	0.05	A 8.3	0.05	A 8.1	0.05	A 8.3	0.05	A 8.3	0.05	A 8.4	0.05	A 8.4
Westbound left-right	0.06	B 12.5	0.15	B 14.8	0.07	B 12.8	0.16	C 15.4	0.07	B 13.4	0.17	C 16.1	0.07	B 14.1	0.20	C 18.3	0.08	B 14.7	0.21	C 19.3
. Overall		B 12.5		B 14.8		B 12.8		C 15.4		B 13.4		C 16.1		B 14.1		C 18.3		B 14.7		C 19.3
Hudson Street and South Broadway (All-way Stop)* **																				
Eastbound left	0.23	A 9.6	0.44	B 12.3	0.27	B 10.0	0.56	B 14.8	0.29	B 10.2	0.57	C 15.1	0.41	B 12.8	0.97	D 41.2	0.43	B 12.9	0.98	D 44.2
Eastbound right	0.21	A 8.4	0.25	A 8.8	0.23	A 8.6	0.28	A 9.2	0.23	A 8.6	0.28	A 9.2	0.34	B 12.3	0.40	B 18.4	0.34	B 12.3	0.40	B 18.4
Northbound through	0.43	B 11.3	0.50	B 13.1	0.46	B 11.9	0.55	B 14.5	0.46	B 12.0	0.55	B 14.6	0.58	B 17.2	0.73	C 27.7	0.58	B 17.2	0.73	C 27.6
. Overall		B 10.1		B 11.8		B 10.6		B 13.4		B 10.6		B 13.6	0.50	B 14.6	0.85	C 32.6	0.51	B 14.7	0.85	C 34.1
Nepperhan Street and Warburton Avenue (signalized)																				
Eastbound left	0.13	B 11.2	0.16	B 11.5	0.15	B 11.4	0.21	B 11.9	0.16	B 11.5	0.21	B 12.0	0.20	B 16.7	0.29	B 17.7	0.23	B 16.9	0.29	B 17.8
Eastbound right	0.04	B 10.5	0.08	B 10.8	0.05	B 10.6	0.16	B 11.6	0.05	B 10.6	0.16	B 11.6	0.04	B 15.1	0.16	B 16.3	0.04	B 15.1	0.16	B 16.4
Northbound through	0.40	B 13.2	0.39	B 13.1	0.48	B 14.1	0.54	B 14.8	0.50	B 14.3	0.54	B 14.9	0.41	A 9.1	0.50	B 12.4	0.42	A 9.2	0.50	B 12.5
Southbound through	0.49	B 14.2	0.50	B 14.3	0.59	B 15.5	0.68	B 17.1	0.59	B 15.5	0.68	B 17.3	0.51	B 10.2	0.61	B 11.4	0.52	B 10.2	0.61	B 11.5
. Overall	0.31	B 13.5	0.33	B 13.5	0.37	B 14.6	0.44	B 15.5	0.38	B 14.6	0.45	B 15.7	0.40	B 10.2	0.49	B 12.4	0.41	B 10.3	0.50	B 12.4

* V/C is Volume to Capacity Ratio except all way stops are degree of utilization.

**LOS is level of service and Delay is in seconds per vehicle.

*** Signalized in the No Build Condition with SFC and the Build Condition with SFC.

Reference: Tim Miller Associates, Inc., 2010.

Table G-5 D
Level of Service and Delay Summary

Intersection	Existing Condition				No Build Condition				Build Condition				No Build Condition w/ SFC				Build Condition with SFC			
	A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
Approach Direction - Movement	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)	V/C*	LOS** (Delay)
Prospect, Nepperhan, and S. Broadway (signalized)																				
Eastbound left	0.05	B 19.0	0.02	B 18.4	0.07	C 21.6	0.05	C 29.6	0.07	C 21.6	0.05	C 29.7	0.12	C 24.2	0.07	B 17.8	0.12	C 24.0	0.07	B 17.4
Eastbound through-right	0.56	C 28.1	0.53	C 27.3	0.68	C 29.4	1.03	E 70.2	0.71	C 29.9	1.06	E 79.8	0.91	C 34.1	0.87	C 25.5	0.92	C 32.5	0.88	D 36.3
Westbound left	1.34	F 201.9	1.21	F 148.3	1.01	E 71.3	0.80	D 42.0	1.02	E 76.2	0.80	D 41.9	0.97	E 60.3	0.85	D 45.1	0.97	E 61.0	0.86	D 48.1
Westbound through	0.61	C 24.8	0.46	C 22.0	0.51	B 14.7	0.51	C 21.1	0.52	B 14.8	0.54	C 21.5	0.47	A 7.3	0.51	B 11.7	0.47	A 7.2	0.52	B 11.6
Westbound right	0.09	B 17.8	0.10	B 18.0	0.10	B 10.5	0.11	B 16.3	0.10	B 10.5	0.11	B 16.3	0.11	A 5.3	0.13	A 8.5	0.11	A 5.2	0.13	A 8.3
Northbound left	0.21	C 29.2	0.16	C 28.4	0.30	C 34.2	0.17	C 23.4	0.31	C 34.3	0.17	C 23.5	0.39	D 39.0	0.37	D 38.9	0.40	D 39.7	0.38	D 39.8
Northbound through-right***	0.68	D 40.6	1.05	F 95.3	0.84	E 56.6	0.89	D 50.7	0.84	E 56.5	0.89	D 50.7	0.61	D 43.6	0.68	D 47.0	0.62	D 44.6	0.69	D 48.1
Northbound right	***	***	***	***	***	***	***	***	***	***	***	***	0.27	B 12.2	0.52	B 15.8	0.27	B 12.3	0.52	B 16.1
Southbound left	0.49	D 39.4	1.26	F 215.9	0.75	E 67.9	0.80	E 65.0	0.75	E 67.9	0.80	E 65.0	0.61	D 52.1	0.75	E 68.6	0.63	D 53.9	0.78	E 72.7
Southbound through-right	0.18	C 28.1	0.22	C 28.8	0.23	C 32.0	0.21	C 23.7	0.23	C 32.0	0.21	C 23.7	0.26	C 34.7	0.27	D 37.1	0.27	D 35.2	0.27	D 37.6
. Overall	1.21	E 59.4	1.20	E 67.1	0.87	D 35.7	0.89	D 45.1	0.90	D 36.5	0.89	D 47.9	0.82	C 29.0	0.86	C 26.6	0.85	C 28.7	0.88	C 29.9
Hudson and Hawthorne (unsignalized)																				
Eastbound left-through	0.00	A 7.4	0.01	A 7.4	0.00	A 7.4	0.01	A 7.4	0.00	A 7.4	0.01	A 7.4	0.00	A 7.4	0.01	A 7.4	0.00	A 7.4	0.01	A 7.4
Northbound left	0.05	B 10.0	0.04	B 11.0	0.06	B 10.1	0.05	B 11.1	0.06	B 10.2	0.05	B 11.2	0.06	B 10.1	0.05	B 11.1	0.06	B 10.2	0.05	B 11.2
Northbound through-right	0.06	A 9.5	0.18	B 11.4	0.07	A 9.6	0.19	B 11.6	0.07	A 9.6	0.19	B 11.7	0.07	A 9.6	0.19	B 11.6	0.07	A 9.6	0.19	B 11.7
Southbound left-right	0.11	B 10.5	0.07	B 11.9	0.11	B 10.6	0.08	B 12.1	0.12	B 10.7	0.09	B 12.2	0.11	B 10.6	0.08	B 12.1	0.12	B 10.7	0.09	B 12.2
. Overall		B 10.5		B 11.9		B 10.6		B 12.1		B 10.7		B 12.2		B 10.6		B 12.1		B 10.7		B 12.2
Buena Vista and Access (unsignalized)																				
Eastbound left-through	---	---	---	---	---	---	---	---	0.01	A 8.1	0.05	A 8.6	---	---	---	---	0.02	A 8.4	0.05	A 8.8
Northbound left	---	---	---	---	---	---	---	---	0.16	B 13.5	0.11	B 13.7	---	---	---	---	0.19	C 15.5	0.13	C 15.5
Overall	---	---	---	---	---	---	---	---		B 13.5		B 13.7	---	---	---	---		C 15.5		C 15.5

* V/C is Volume to Capacity Ratio except all way stops are degree of utilization.

****Reference: Tim Miller Associates, Inc., 2010.

**LOS is level of service and Delay is in seconds per vehicle.

*** Right turn is separated in the No Build Condition with SFC and Build Condition with SFC.

Table G-6
Queuing Summary

Intersection		Queues (in feet)**									
		Existing Condition		No Build Condition		Build Condition		No Build Condition w/ SFC		Build Condition with SFC	
Approach Direction - Movement	Queue Storage (In Feet)	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour
Main Street and Buena Vista Avenue (signalized)											
Eastbound left-through-right	175	12	11	12	11	12	11	19	14	19	14
Westbound left-through-right	150	15	25	15	27	18	36	17	36	20	44
Northbound left-through-right	225	93	55	99	59	107	61	114	101	123	105
Southbound left-through-right	75	39	75	42	80*	43	82*	42	80*	43	82*
Hudson Street and Riverdale Avenue (signalized)											
Eastbound left-through-right	425	113	132	121	140	129	145	125	187	133	194
Northbound left-through	425	84	100	144	101	144	102	93	314	93	316
Northbound right	100	14	4	9	5	9	5	6	25	6	26
Southbound left	100	20	35	33	102*	34	102*	31	169*	35	168*
Southbound through	225	30	52	47	103	50	105	48	114	53	109
Prospect Street and Riverdale Avenue (signalized)											
Eastbound left-through-right	450	51	34	68	33	82	40	110	90	125	103
Westbound left	150	317*	175*	84	74	91	73	243*	411*	269*	425*
Westbound through	250	52	65	73	84	76	92	107	197	114	220
Westbound right	250	0	0	0	0	0	0	***	***	***	***
.Northbound left	100	32	37	30	54	32	62	50	39	35	45
Northbound through-right	525	65	57	193	179	193	179	303	459	303	459
Southbound left	150	60	120	122	172*	122	172*	189*	346*	188*	343*
Southbound through	425	38	41	50	46	49	46	163	146	164	150
Southbound right	150	0	0	0	0	0	0	9	6	9	0

Queue exceeds storage length.
**See Appendix G *level of service calculations* Signalized 50 Percentile Queue.

*** Included with through movement.

Reference: Tim Miller Associates, Inc., 2010.

Table G-7
Queuing Summary

Intersection		Queues (in feet)**									
		Existing Condition		No Build Condition		Build Condition		No Build Condition w/ SFC		Build Condition with SFC	
Approach Direction - Movement	Queue Storage (In Feet)	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour
Main Street and Riverdale Avenue (signalized)											
Eastbound left-through-right	425	11	40	18	157	28	178	32	222	61	251
Westbound left	75	39	66	39	72	39	72	44	99*	44	99*
Westbound through-right	425	84	70	93	92	97	101	109	144	113	157
Northbound left	75	2	1	22	45	23	47	27	52	28	53
Northbound through	225	10	5	8	5	8	5	11	31	11	31
Southbound through-right	225	167	187	187	251*	188	254*	245*	443*	247*	450*
Hudson Street and South Broadway (signal)**											
Eastbound left	300	***	***	***	***	***	***	1	227	5	231
Eastbound right	300	***	***	***	***	***	***	0	7	0	7
Northbound through	425	***	***	***	***	***	***	0	191	1	192
Nepperhan Street and Warburton Avenue (signalized)											
Eastbound left	450	17	22	20	29	22	30	25	36	28	37
Eastbound right	450	0	0	0	14	0	15	0	11	0	12
Northbound through	275	63	63	81	92	84	94	68	209	70	206
Southbound through	300	83	84	104	126	105	128	92	117	93	120

Queue exceeds storage length.
**See Appendix G *level of service calculations* Signalized 50th Percentile Queue.

** *Signalized under SFC conditions.

Reference: Tim Miller Associates, Inc., 2010.

Table G-8 Queuing Summary											
		Queues (in feet)**									
Intersection		Existing Condition		No Build Condition		Build Condition		No Build Condition w/ SFC		Build Condition with SFC	
Approach Direction - Movement	Queue Storage (In Feet)	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour
Prospect Street, Nepperhan Avenue, and S. Broadway (signalized)											
Eastbound left	75	8	3	7	3	6	3	9	2	9	3
Eastbound through-right	250	178	156	193	288*	205	305*	244	252*	244	266*
Westbound left	175	327*	258*	237*	202*	252*	208*	252*	253*	257*	260*
Westbound through	325	199	138	171	164	174	174	126	179	128	187
Westbound right	325	0	0	0	0	0	0	0	3	0	3
Northbound left	100	31	23	40	26	40	28	49	65	50	67
Northbound through-right	525	160	301	181	269	181	269	122	216	122	216
Northbound right		***	***	***	***	***	***	62	181	62	183
Southbound left	100	48	90	56	67	56	67	56	88	56	88
Southbound through-right	425	37	48	44	51	44	51	47	71	47	72
*Queue exceeds storage length. **See Appendix G level of service calculations Signalized 50th Percentile Queue.											
~~** Five egress points effective total storage outside of garage.~~											
~~*** Access analyzed in Build Conditions only.~~											
*** Exclusive Right turn lane in SFC condition											
Reference: Tim Miller Associates, Inc., 2010.											

ATTACHMENT VIII

Highway Capacity Software Analysis

(on CD)

ATTACHMENT IX

Synchro Analysis

(on CD)

ATTACHMENT X

Traffic Imbalances

Table G-10
Traffic Imbalances

Locations		Existing Volume Imbalances		
Street	**From/ to**	**A.M. Peak Hour**	**P.M. Peak Hour**	**Reasons for imbalances**
Prospect Street	Buena Vista Avenue to Riverdale Avenue	**+95**	**+105**	Same a.m. peak hour different p.m. peak hours*. Different count days **.
	Riverdale Avenue to Buena Vista Avenue	**-279**	**-314**	Intervening Hawthorne Avenue SFC shows 250 turning vehicle reduction in a.m. and 300 turning vehicles reduction in p.m. Same a.m. peak hour different p.m. peak hours*. Different count days**.
	S. Broadway to Riverdale Avenue	**---**	**+106**	132 lot parking lot Cacace. Exit from 81 space Hudson Lot. Same a.m. peak hour different p.m. peak hours*.
Buena Vista Ave.	Prospect St. to Hudson St.	**-90**	**-49**	A parking lot has access to both Buena Vista Avenue and Hawthorne Avenue allowing vehicle parking and through traffic. Different count days**.
	Hudson Street to Main Street	**+95**	**+36**	Same a.m. peak hour different p.m. peak hours*. Different count days**.
	Main Street to Hudson Street	**---**	**+30**	Same a.m. peak hour different p.m. peak hours*. Different count days**.
Riverdale Avenue	Nepperhan Street to Main Street	**-2**	**---**	Parking and vehicles caught between intersections.
	Hudson Street to Prospect Street	**+92**	**+111**	Intervening Parking garage and Shop Rite Different peak hours*. Different count days**.
	Main Street to Nepperhan Street	**---**	**+11**	Parking and vehicle caught between intersections.
	Prospect Street to Hudson Street	**---**	**+123**	Different peak hours*. Different count days**.
	Hudson St. to Main Street	**---**	**-111**	Different count days**.
Hudson Street	Hawthorne Avenue to Riverdale Avenue	**+43**	**-13**	Different peak hours* and different count days. School bus depot/maintenance facility.
	Riverdale Avenue to South Broadway	**-108**	**-42**	Intervening parking lot (approximately 35 spaces) and entrance Hudson Lot 81 spaces parallel to Riverside Avenue Same p.m. peak hour different a.m. peak hours*.
	Buena Vista Avenue to Hawthorne Avenue	**---**	**+91**	Same a.m. peak hour different p.m. peak hours*.
Main Street	Buena Vista Avenue to Riverdale Avenue	**---**	**+60**	Intervening Hawthorne Avenue with access to 8 Buena Vista Avenue 606 parking space garage access and Market Place to Nepperhan Street with access to Larkin Lot 119 spaces Same a.m. peak hour different p.m. peak hours*. Different count days**.
	Riverdale Avenue to Buena Vista Avenue	**---**	**-39**	Intervening Hawthorne Avenue 8 Buena Vista Avenue 606 parking space garage Same a.m. peak hour different p.m. peak hours*. Different count days**.

* See DEIS Table 3.5-1.

**Intersections counted on different days applicable to a.m. and p.m. peak hours.

--- Not reviewed too small.

ATTACHMENT XI

Transit Oriented Development

Email this page

January 2010
Volume 1, Number 1

Welcome to the inaugural issue of the Metro New York Transit-Oriented Development Newsletter, a publication designed to keep municipal officials, planners and advocates up-to-date on the potential for development and redevelopment around the region's transit stations and stops. This is an effort of the Alan M. Voorhees Transportation Center (VTC), Bloustein School of Planning and Public Policy, at Rutgers University, supported with funding from Citi, which aims to enrich the transit-oriented development (TOD) conversation in the New York City metropolitan region. This region includes a large variety of communities—from the city's densest neighborhoods to our area's outlying suburbs—all connected by transit with the potential to use and benefit from that transit. The purpose of this publication is to highlight the best practices, model programs, legislation and local problem-solving experiences of those in the region and the nation. We hope local leaders and the public find these articles of value as all of us strive to create livable, sustainable and thriving communities.

In our inaugural issue, we look at TOD efforts in Yonkers and Patchogue, NY and Stamford, CT

Click here for a PDF file of the entire newsletter (486 KB). Get Adobe Acrobat here.

What Is Transit-Oriented Development … and Why Should You Care about It?

Transit-Oriented Development, or TOD, is an old idea born anew—that the best opportunities to create and sustain vibrant communities can be found in areas well-served by transit and which are conducive to walking and biking. Many attractive and successful communities developed around transit stations before the age of the automobile, especially in the northeastern United States. Now, as road congestion maintains a stranglehold on mobility, concerns about the effects of greenhouse gas emissions increase, and demand grows for more traditional neighborhood environments, TOD offers a vision of how communities can use old concepts to meet current needs.

Intensive, mixed use development located within a half-mile of a transit station or stop exemplifies the aim of TOD. Nearby businesses benefit from increased foot traffic, municipalities realize higher ratables with less space devoted to parking, residents gain from additional shopping and recreational activities near their homes, and transit service can be increased because of the larger concentration of riders. But TOD also refers to a new way of thinking about:

- the relationship of land use and transportation
- where development should occur throughout a neighborhood, city, or region
- how a transit system can anchor strong communities and revive urban transit hubs
- how places can function well for all members of the community—the old and the young, families and singles, the well-off and the financially less fortunate—whether for working, living, or playing

TOD TRAINING
TAPPAN ZEE BRIDGE/I-287 CORRIDOR PROJECT

Two full-day transit-oriented development (TOD) training workshops started in November—one in Westchester County and one in Rockland County. TOD experts from Project for Public Spaces, Reconnecting America and the Regional Plan Association (RPA) conducted these TOD workshops, which will be followed by eight, more advanced, two-day workshops for municipalities in the 30-mile Tappan Zee Bridge/I-287 corridor.

The initiative, sponsored by NYSDOT, NYS Thruway Authority and MTA Metro-North Railroad, is designed to provide municipalities with tools, resources and hands-on exposure to new land-use and planning techniques to meet community goals.

The Metro NY TOD Newsletter is published twice yearly and made possible through funding by Citi. This newsletter is produced by the Alan M. Voorhees Transportation Center (VTC), part of the Edward J. Bloustein School of Planning and Public Policy, Rutgers, The State University of New Jersey.

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Photo / Map Credit

VTC (unless noted)

Why a Newsletter about Transit-Oriented Development (TOD)?

The purpose of this newsletter, simply put, is to get the word out to as many civic leaders as possible about the benefits, successes and obstacles for TOD. There has been growing recognition in recent years among local leaders across America, and particularly in the New York metropolitan area, that transit—and the coordination of development around transit—can play a vital role in creating and maintaining livable and sustainable communities, and to revitalize or reinforce them. State agencies, transit providers, policy makers and the development community across our region have begun to promote TOD as a way to use existing infrastructure to reinvigorate older communities, rather than to acquiesce to developing fringe areas that require new infrastructure while consuming farmland and open space. (more)

Recommended Reading

In this issue we examine the 2009 LI Index Report, an annual project since 2002 that gathers and publishes data to support better policy decisions in New York's Nassau and Suffolk counties. (more)

Tell Us What You Think!

Let us know what you liked or didn't like in this issue. Please take a minute to complete our online readers' survey.

Send your comments, criticisms and ideas for future articles to: vtc@policy.rutgers.edu

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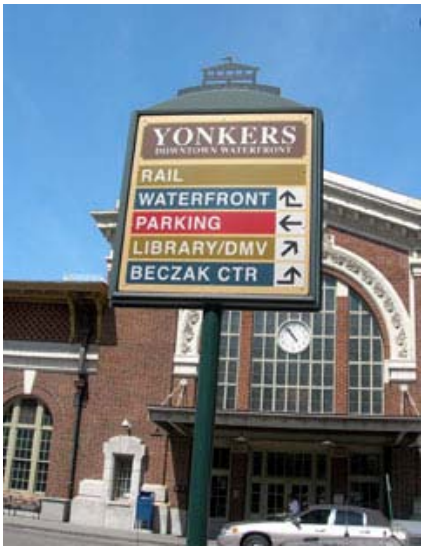
Big Changes Planned for the Yonkers Waterfront

As the New York region and the nation as a whole seek to accommodate economic development while addressing concerns over traffic, sprawl, loss of open space, and environmental protection, transit-oriented development (TOD) has become more important than ever. This is true of suburban locations, such as Beacon and Harrison, New York, where MTA Metro-North Railroad has been leading planning efforts for station-centered, mixed-use TOD, as well as in regional urban centers such as Poughkeepsie and Yonkers.



Renovated Yonkers Station

Courtesy of PCAC

As part of ongoing downtown redevelopment efforts in Yonkers, in August 2008, Yonkers Mayor Philip Amicone unveiled the latest revision of the Alexander Street Master Plan. Located 15 miles north of midtown Manhattan, Yonkers is New York State's fourth largest city and home to four Metro-North rail stations, including Glenwood, which lies within the Plan area, and Yonkers Station, just to the south of the Plan area. Travel between Yonkers Station and Grand Central Terminal in midtown Manhattan can take as little as 25 minutes. The revised plan, which focuses on redeveloping a narrow strip of land between the Hudson River and Metro-North railroad tracks, was approved by the City Council in Spring 2009. City officials hope to capitalize on the significant transit resources.

Recognizing the importance of Yonkers as a transit center and urban core area, Metro-North made $43 million in improvements to Yonkers Station, part of its Capital Program investment. Completed in 2004, the station improvements, which included restoration of the historic station building, creation of a new park and walkways, as well as new station platforms, canopies, shelters, lighting, seating, and ADA improvements, helped serve as a catalyst for the new TOD community, Hudson Park, located on the Hudson River waterfront. In addition, Metro-North made major infrastructure improvements to the four bridges where the rail lines cross city streets, and installed a new pedestrian passageway from the station concourse to the Hudson River. This enhanced access strengthened links to the waterfront for railroad customers and city residents alike and provided the residents of the new development with better connections to the station and downtown Yonkers. Metro-North ridership at the Yonkers Station has grown 50 percent since 2004, while ridership on Amtrak's Empire Service increased by more than 8 percent from FY05 to FY07. An additional benefit to this area is the NY Water Taxi which has been providing service to the World Financial Center and Wall Street since 2007.

Hudson Park reflects the desired development outcome of the Alexander Street Master Plan with three buildings containing 266 luxury rental apartments and about 15,000 square feet of retail space. Two residential towers—12 and 14 stories, each with ground-floor neighborhood retail—were built in a first phase. The residences are 95 percent occupied and the retail space is fully rented in these buildings. The recently opened second phase, a nine-story residential building, is now 40 percent occupied. According to the developer, Collins Enterprises, 70 percent of the residents commute on Metro-North into New York City.

Yonkers Station (foreground)
Hudson Park & Hudson River waterfront (background)

Courtesy of Metro-North

The proposed Alexander Street neighborhood plans call for 12 mixed-use towers to be built along the riverfront, some on land that is currently underwater. After public comment, city officials reduced the number of towers from 19 to 12, reoriented the towers to mitigate the impact upon existing views of the Palisades, and added 4.5 acres of public open space. The height of the proposed towers is intended to draw attention to Yonkers station; the towers will range from 30 stories close to the station to 12 stories in the northern-most section of the redevelopment area. These new buildings will offer spectacular views of Manhattan and the Palisades and will provide as many as 3,750 housing units in the form of one- and two-bedroom condominiums, as well as a small

number of studios. Plans also call for 209,850 square feet of neighborhood-scale, street-level retail space, along with 213,350 square feet of second floor office space. Attention is to be paid to the pedestrian experience, as designs for the new buildings are required to avoid blank walls and to use small, street-level signage. The new development plan also calls for 8.5 acres of new parkland, and Yonkers officials will require developers to extend the current riverfront esplanade by 1.3 miles. The esplanade is a recent addition to the Yonkers waterfront, with the first phase dedicated in September 2003. Until then, there was no public access between the Hudson River and downtown. Residents of adjacent neighborhoods should also gain better access to the river once improvements, such as a new bridge over the railroad tracks at Point Street, are completed.

An earlier version of this article appeared in the December 2008 issue of the *Transit-Friendly Development Newsletter*, a publication produced jointly by the Alan M. Voorhees Transportation Center and NJ TRANSIT.

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Gateway to Fire Island, Patchogue Redevelops through TOD

The Village of Patchogue, located 55 miles outside New York City on Long Island, may not seem a likely candidate for transit-oriented development. An incorporated village within the town of Brookhaven in Suffolk County, this quiet, old, south shore community with about 12,000 residents on 2.2 square miles, is known mostly for its maritime activities and ferry service to the Fire Island National Seashore. However, it has a long history of rail access—the Long Island Rail Road's (LIRR) Montauk Branch has been carrying passengers between Patchogue and New York City since 1869.

Like many other small towns, Patchogue's downtown suffered when regional malls, spurred by the Long Island Expressway, lured shoppers away. And, like so many towns, Patchogue is looking to transit-oriented development as a way to revitalize its main street core and restore derelict areas.

Leading this initiative is Patchogue Mayor Paul Pontieri who has been busy since 2004 implementing smart growth projects throughout the town, especially within walking distance to the train station. "We're 150 years old and we have pockets of blight," Pontieri said in a recent interview. "But, we have some great assets—our railroad station, our sewer capacity, and our waterfront and our compact downtown, both walkable from the station." Interestingly, his town does not have a master plan, but he noted that there is no resistance to increased density for new development projects. This is primarily because all of the new building that the mayor supports has to have a significant workforce housing component. He added, "We have a great Village Board [of Trustees] that endorses these visions, and the Village has a strong community outreach effort so people know what is happening."

Patchogue Theatre

The town was somewhat on the rebound prior to Pontieri becoming mayor. In 1997, the Village acquired the 1923 Patchogue Theatre on East Main Street, a couple of blocks from the rail station. The theatre had started as a home for Broadway productions and vaudeville acts; later it was converted to a movie house. Unfortunately, this venture failed and the theatre stood empty for over a decade. With the help of grant funding, the facility was restored and expanded over the next seven years at a cost of $6 million, and now seats just over 1,200 with full accessibility. This year's events will include touring companies, a large variety of music, children's programming, comedians and variety shows. The mayor noted that performance times were coordinated with the train schedule, so that people from other areas could use the train to attend. Also underway before Pontieri took office was Seacrest Village, a gated luxury rental complex built by a local developer in 2003. The project is located within a block of the train station, on the former site of an automotive store.

Across the street from Seacrest is Copper Beech Village, a project spearheaded by Pontieri that features 80 townhomes on five acres. Copper Beech Village functions as a transition between a neighborhood of single family homes located to the south of the train station and the commercial area of Main Street to the north. In order to bring about this project, Pontieri worked with a nationally known developer, Pulte Homes, and Suffolk County, which provided $3.3 million for land acquisition. The three-story units, completed in 2007, feature two bedrooms, loft/den, two and one-half baths, and a one-car garage. Forty of the units were deemed workforce housing—20 units were reserved for households making up to 120 percent of median area income (MAI) at a sale price of around $240,000; 20 units were set aside for those making up to 80 percent of MAI and offered at approximately $159,000. The market rate units sold from $300,000 to $400,000. The Long Island Housing Partnership (LIHP) qualified the buyers for the affordable units and held a lottery for their disposition. The LIHP will continue to oversee any future transactions of the subsidized units which will remain affordable in perpetuity.

Copper Beech Village

The mayor is now supporting two new projects in the approval process. The larger is a mixed-use residential development by TRITEC Development Group of Long Island, named "New Village." The site, known as the "Four Corners," will feature 240 rental units, 75 of which will be affordable. Other uses will include a six-story, 100-room Hilton Garden Inn, 28,000 square feet of retail space, and the renovation of 12,000 square feet of office space in the existing Wedgwood building. The centerpiece of the project will be a 5,000-square foot town square that will be adjacent to the Main Street commercial area. The estimated cost of the development is $134 million.

Smaller, but equally exciting, is the Artspace project on Terry Street, just a block off Main Street. Artspace, which develops live/work facilities for artists around the country, is planning a five-story building with 45 affordable units on the upper floors and retail space at street level. The $16 million project represents both economic revitalization and the opportunity to strengthen a growing arts community. Many Main Street storefronts are now occupied by artists and creative businesses. In further support of the arts community, Pontieri noted that future plans include converting the Village's 1909 Carnegie library into a cultural art space.

As a result of the theatre renovation and new housing, many new restaurants and shops have sprung up on Main Street. The town's hope is to make Patchogue an arts and recreation destination with a night life that will attract not only seaside vacationers, but business travelers away from the chain hotels on the Long Island Expressway.

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Among the Remains of Industry, a Transit-Oriented City Rises in Connecticut

The daily walk to work includes the familiar sounds of a city—birds chirping, dogs barking, horns honking—and one that's considerably more rare in these days of financial crisis: the sound of construction. Where is this happening? In Stamford, Connecticut, where several of the city's mixed-use projects have broken ground within the last year and are all strongly linked to Stamford's train station, the second busiest on Metro-North Railroad's New Haven line after Grand Central Terminal.

The Stamford Transportation Center, as it is known, offers fast and frequent commuter rail service in Connecticut and the ridership numbers reflect this. For Metro-North express trains to New York City, Stamford is the last stop heading inbound and very often the first station stop after leaving Harlem outbound. The average express trip takes only 47 minutes and is available 18 times each morning peak. In 2008, 3,600 commuters boarded in Stamford each weekday morning heading into Manhattan. Some 2,000 reverse commuters arrive in Stamford each morning, traveling from New York City and stations west of Stamford while more than 2,500 arrive having boarded at stations to the east.

The Stamford Transportation Center serves as the origin/terminus for Metro-North's New Canaan Branch as well as providing access to Amtrak and Peter Pan and Greyhound intercity buses. The station was recently renovated to improve passenger access as well as to accommodate additional and longer trains. Plans are underway to renovate and expand the adjacent parking garage.

In addition, the Stamford Transportation Center serves as a hub connecting to other transit modes, one result of transportation providers and state and local officials working collaboratively to develop and market these intermodal services. Connecticut Transit Stamford (CT Transit Stamford Division) provides 18 bus routes around the city and connections to Norwalk, White Plains and Port Chester, New York. The I-Bus service to White Plains is one of the first jointly sponsored bus services between the two neighboring states. The Stamford CTC (Commuter Train Connection),a dedicated bus distributor service, circulates throughout downtown Stamford carrying railroad commuters to office complexes throughout the city limits. Many private companies and building also provide their own shuttles to the Transportation Center, enhancing the options further for residents and employees looking for an alternative to the automobile.

View from the Stamford Station to the north

Nearly completed Royal Bank of Scotland headquarters (foreground)
Trump Parc under construction (background)

Source: Regional Plan Association

This access to transit allows one to stand on the station's platform today and see several active construction sites with residential and commercial buildings in various stages of completion. These projects represent a transformation of the downtown. The recent surge of development has occurred during the recently completed four-term tenure of Mayor Dan Malloy, a leader on transit-oriented development, sustainability and downtown revitalization. Almost every project currently underway has a significant residential component, and together they represent the downtown's rebirth as a residential neighborhood set within one of the largest employment centers in the state.

Some of these projects are highly visible towers or district-scale redevelopments, while others are smaller scale infill projects that reinforce the pedestrian fabric of the downtown. At the smaller end of the spectrum, a building rehab at 11 Forest Street is presently transforming a former two-story children's furniture store into a three-story mixed use building with ground floor retail and a dozen loft style apartments. Just three blocks away, Trump Parc is now the city's tallest building. Located at the key intersection of Broad and Washington, this 35-story tower is the new visual marker for the city center, visible when approaching from the north, east or west or from miles away on I-95. With a prominent location across from a new riverfront park, these residences signal a new era of built form for the city. Also joining the skyline and adding to the city's employment, a LEED Gold office tower has just been occupied directly across the street from the transportation center, housing the North American headquarters of the Royal Bank of Scotland (RBS).

These three projects and other single building infill are located primarily to the north of the transportation center. In years past, this rail station served as the downtown's southern boundary, separating it from industrial lands that jut into Long Island Sound. Recent real estate trends have recast the station so that it will soon occupy the heart of Stamford's newly expanded downtown,

and will link the downtown to Long Island Sound, significantly increasing the size of the city center and its ability to attract sustainable development.

The South End peninsula is the new frontier of the city's redevelopment. In 2005, a private development company based in Greenwich, Antares, acquired more than 80 acres south of the station, cleared and cleaned the land, and has begun creating a mixed-use community with office, retail, a hotel, and ultimately 4,000 residential units. This project, known as Harbor Point, will capitalize on roughly half of the property within walking distance of the train station—an area which had been dominated by industrial, non-transit-supportive uses. The first two office towers, totaling 400,000 square feet, and the first residential building, with over 300 units, are under construction by Building and Land Technology of Norwalk, the project's present owner. Other smaller projects are contributing to this neighborhood's transformation—Jonathan Rose Companies recently completed the Metro Green Apartments project, creating 50 affordable housing units that are a first phase of a LEED Neighborhood pilot project located between Harbor Point and the transit center.

View from Stamford Station to the south

Phase 1 Metro Green (left)
First residential tower of
Harbor Point under construction (right)

Source: Regional Plan Association

Historical Perspective

The current transformation is only the most recent in a long history of reinvention in Stamford. In the late 1940s the city and town of Stamford were consolidated, ensuring that the ensuing decades of suburbanization did not result in a loss of tax base to the municipality and preventing the freefall that befell so many other Connecticut cities. In the 1950s and 60s, city leaders embraced urban renewal and helped their struggling industrial "Lock City" become a corporate headquarters giant of the 1980s—"The City that Works." Stamford grew significantly during this time, adding over 16 percent to its population between 1980 and 2008, while the state overall grew at a 12 percent rate and its peer cities posted declines. Although many projects built during that era were automobile-oriented, they were located within the downtown which is being retrofitted to be more walkable. Over the last two decades, planning efforts and market trends have gradually improved the pedestrian environment of the station area.

Decades of public policy, beginning with the 1984 Master Plan, set clear priorities for downtown office and retail development and ensured that a market for downtown space would not be cannibalized by competing locations at Stamford's edges. The plan limited commercial development outside of the urban core and redefined the formerly commercial and office-dominated downtown as a mixed-use center by integrating homes, shopping, and entertainment at the city's core. Overall this policy has been very successful. The city also received support through a $100 million station reconstruction project in the late 1980s. These policies and investments led to the city's most recent rebirth in the 1990s and facilitated its rise as a financial services alternative to Midtown and Lower Manhattan, attracting the North American headquarters of UBS, RBS, and others. This increased demand has solidified the station area as the premier office location in the city and southwestern Connecticut.

Future Perspective

City leaders are now looking beyond the rewards of past investments and policy initiatives and have begun work on new public investments to promote sustainable development in the coming decades. Outside of the downtown, two neighborhood centers in the eastern section of the city have become models of sustainable development. Glenbrook and Springdale are both home to commuter rail stations on Metro-North's New Canaan branch line; each has recently rezoned its neighborhood center for walkable and transit-oriented growth.

Two investments in particular will set the stage for the next generation of transit-oriented growth. The first is a transportation investment: a light rail streetcar line that will extend the city's transit-oriented zone deeper into the downtown and to adjacent neighborhoods. Recognizing that transit access and a renewed focus on the Stamford Transportation Center has spurred redevelopment of properties located within walking distance, Stamford's land use and engineering bureaus want to extend its impact. Stamford has been bolstered in this effort by building managers and investors who have utilized shuttles and improved pedestrian links to capitalize on this transit accessibility. With a preliminary route and mode study to be completed this winter, the new light rail streetcar service could serve to extend the energy created by the existing station deeper into the city and establish new walkable nodes of activity beyond the downtown core.

The second major investment by the city is a world-class park now under construction that will balance the intensification of the downtown with open space and recreational amenities. The park will follow the Mill (Rippowam) River, dammed since the 17th Century, along the western edge of downtown. Some of the land for the park will be reclaimed as a result of changes in river management on the part of the U.S. Army Corps of Engineers. Dams and concrete walls along the Mill River are being removed to restore the river to a more natural and narrower course. This process will create acres of new parkland as well as shrink the 100-year floodplain, freeing the western edge of downtown from insurance hurdles that currently constrain redevelopment. Designed by the landscape architect Lori Olin, the park will include a continuous system of paths linking the downtown to Long Island Sound and surrounding neighborhoods and will feature a carousel, a kayak launch and other amenities.

Trump Parc, situated on the
soon to be restored Mill River

Source: Regional Plan Association

While one investment is grey infrastructure and the other is green, both light rail and the park will provide alternatives to the automobile. In focusing its growth strategies around mixed-use, transit-oriented development, Stamford has differentiated itself among communities in metropolitan New York and the Northeast, attracting households and

jobs that will sustain and build on the city's unique attributes—achieving a high quality of life for its residents, workers, and visitors with excellent transportation access.

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