

APPENDIX

B

TRAFFIC TURNING MOVEMENT COUNT
SUMMARIES - EXISTING TRAFFIC
SITUATION

Board of Traffic Adjustment
District of Columbia
CASE NO. 17309
EXHIBIT NO. 75A2

Counted By: ORGA-NL
Board : D4-1909
City/County: Washington DC.
Weather : Cold/Raining/Wet

O.R George & Associates
10210 Greenbelt Road, Suite 310
Lanham, MD 20706-2218
Tel: (301) 794-7700 Fax: (301) 794-4400

File Name : 07161909
Site Code : 07161909
Start Date : 01/05/2005
Page No : 1

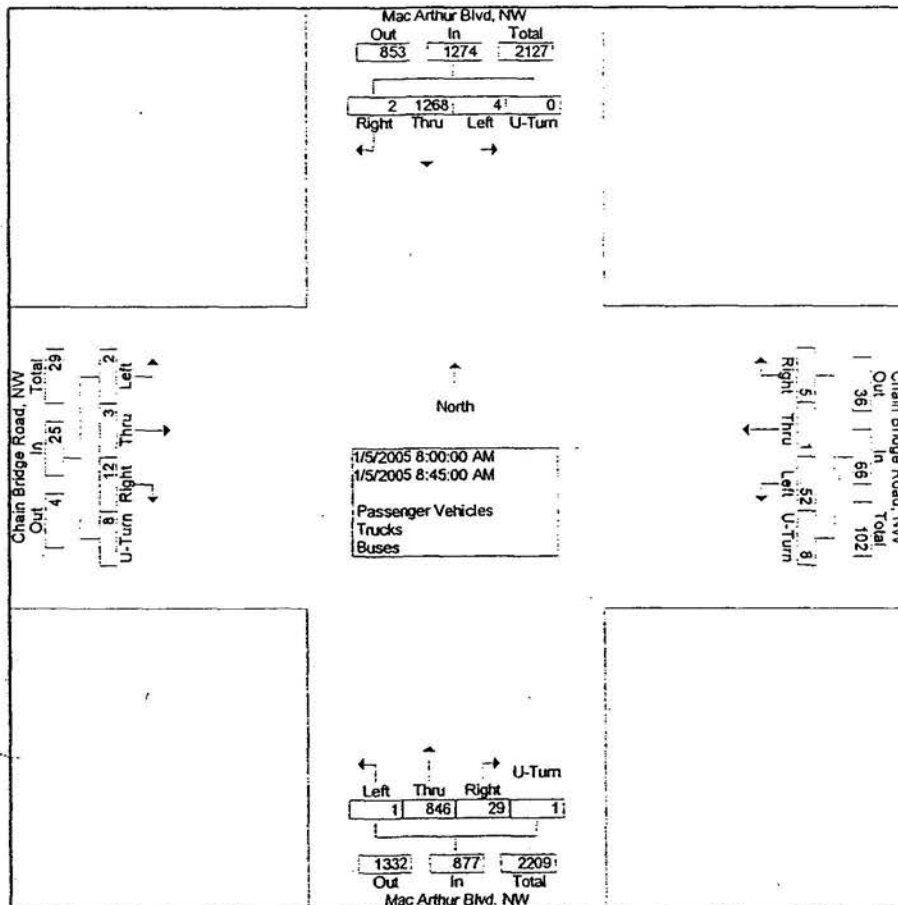
Groups Printed- Passenger Vehicles - Trucks - Buses																					
Mac Arthur Blvd, NW From North						Mac Arthur Blvd, NW From South					Chain Bridge Road, NW From East					Chain Bridge Road, NW From West					
End Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
07:15	0	118	1	0	119	3	109	0	0	112	0	0	2	1	3	0	0	0	0	0	234
07:30	1	161	0	0	162	2	107	1	1	111	2	0	1	2	5	0	2	0	0	2	280
07:45	0	258	4	0	262	6	139	0	0	145	3	0	10	5	18	2	0	0	3	5	430
08:00	1	355	1	0	357	6	190	1	0	197	1	0	28	1	30	4	2	1	0	7	591
Total	2	892	6	0	900	17	545	2	1	565	6	0	41	9	56	6	4	1	3	14	1535
08:15	0	297	0	0	297	12	193	0	1	206	0	0	7	3	10	2	0	1	3	6	519
08:30	1	310	1	0	312	5	221	0	0	226	3	1	14	2	20	5	1	0	5	11	569
08:45	0	306	2	0	308	6	242	0	0	248	1	0	3	2	6	1	0	0	0	1	563
09:00	0	316	1	0	317	0	194	0	0	194	3	0	5	3	11	3	0	2	3	8	530
Total	1	1229	4	0	1234	23	850	0	1	874	7	1	29	10	47	11	1	3	11	26	2181
16:15	1	178	1	0	180	9	130	0	0	139	0	0	4	4	8	0	0	0	2	2	329
16:30	1	145	0	0	146	4	148	2	0	154	4	1	5	0	10	3	0	0	0	3	313
16:45	0	148	0	0	148	3	128	1	0	132	3	0	5	0	8	5	1	0	1	7	295
17:00	2	158	3	0	163	6	152	1	0	159	2	0	2	1	5	6	0	3	0	9	336
Total	4	629	4	0	637	22	558	4	0	584	9	1	16	5	31	14	1	3	3	21	1273
17:15	0	144	3	0	147	8	156	3	0	167	3	0	3	4	10	3	1	1	0	5	329
17:30	1	143	0	0	144	3	170	3	0	176	5	1	3	3	12	3	0	0	2	5	337
17:45	0	148	1	0	149	4	180	4	0	188	5	0	3	4	12	3	0	1	0	4	353
18:00	0	145	1	0	146	3	163	1	0	167	3	1	2	0	6	6	1	0	2	9	328
Total	1	580	5	0	586	18	669	11	0	698	16	2	11	11	40	15	2	2	4	23	1347
Grand Total	8	3330	19	0	3357	80	2622	17	2	2721	38	4	97	35	174	46	8	9	21	84	6336
Approch %	0.2	99.2	0.6	0.0		2.9	96.4	0.6	0.1		21.8	2.3	55.7	20.1		54.8	9.5	10.7	25.0		
Total %	0.1	52.6	0.3	0.0	53.0	1.3	41.4	0.3	0.0	42.9	0.6	0.1	1.5	0.6	2.7	0.7	0.1	0.1	0.3	1.3	

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Counted By: ORGA-NL
 Board : D4-1909
 City/County: Washington DC.
 Weather : Cold/Raining/Wet

File Name : 07161909
 Site Code : 07161909
 Start Date : 01/05/2005
 Page No : 2

Mac Arthur Blvd, NW From North						Mac Arthur Blvd, NW From South					Chain Bridge Road, NW From East					Chain Bridge Road, NW From West					Int. Total	
End Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total		
Peak Hour From 07:15 to 12:45 - Peak 1 of 1																						
Intersection 08:00																						
Volume	2	1268	4	0	1274	29	846	1	1	877	5	1	52	8	66	12	3	2	8	25	2242	
Percent	0.2	99.5	0.3	0.0		3.3	96.5	0.1	0.1		7.6	1.5	78.8	12.1		48.0	12.0	8.0	32.0			
Volume	2	1268	4	0	1274	29	846	1	1	877	5	1	52	8	66	12	3	2	8	25	2242	
Volume	1	355	1	0	357	6	190	1	0	197	1	0	28	1	30	4	2	1	0	7	591	
Peak Factor																					0.948	
High Int.	08:00					08:45					08:00					08:30						
Volume	1	355	1	0	357	6	242	0	0	248	1	0	28	1	30	5	1	0	5	11		
Peak Factor	0.892					0.884					0.550					0.568						

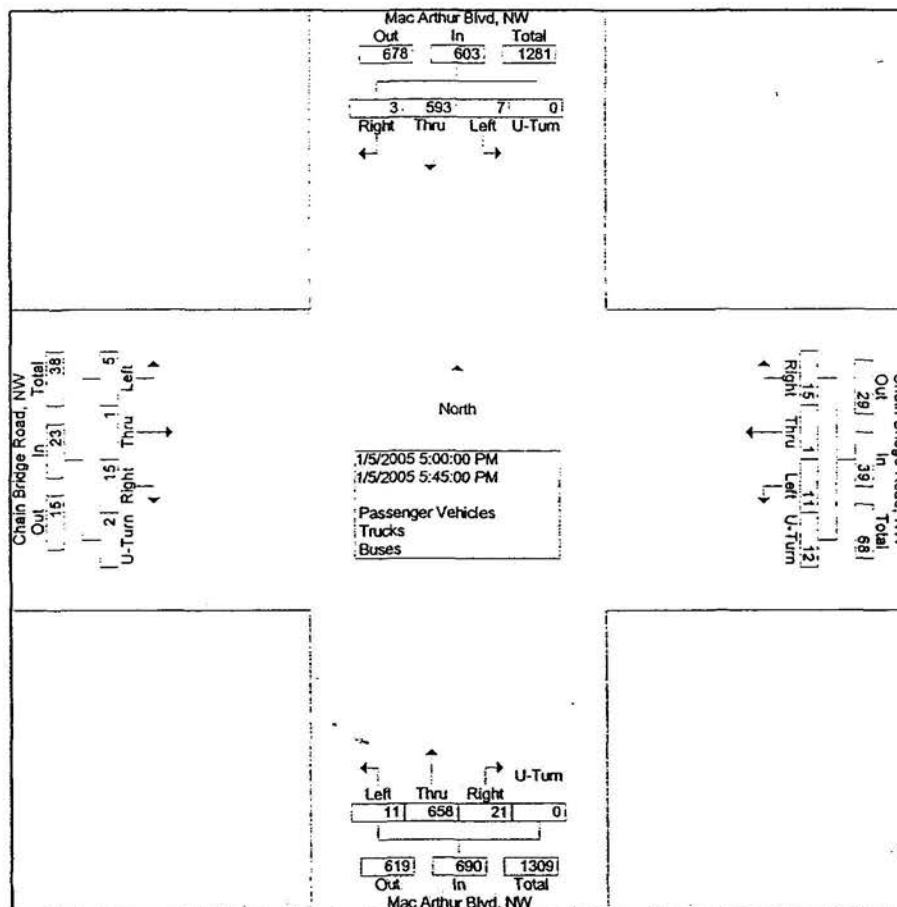


Counted By: ORGA-NL
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File Name : 07161909
 Site Code : 07161909
 Start Date : 01/05/2006
 Page No : 3

	Mac Arthur Blvd, NW From North					Mac Arthur Blvd, NW From South					Chain Bridge Road, NW From East					Chain Bridge Road, NW From West					
End Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour From 13:00 to 18:00 - Peak 1 of 1																					
Intersection	17:00																				
Volume	3	593	7	0	603	21	658	11	0	690	15	1	11	12	39	15	1	5	2	23	1355
Percent	0.5	98.3	1.2	0.0		3.0	95.4	1.6	0.0		38.5	2.6	28.2	30.8		65.2	4.3	21.7	8.7		
Volume	3	593	7	0	603	21	658	11	0	690	15	1	11	12	39	15	1	5	2	23	1355
Volume	0	148	1	0	149	4	180	4	0	188	5	0	3	4	12	3	0	1	0	4	353
Peak Factor	0.960																				
High Int.	17:00					17:45					17:30					17:00					
Volume	2	158	3	0	163	4	180	4	0	188	5	1	3	3	12	6	0	3	0	9	
Peak Factor	0.925					0.918					0.813					0.639					



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Counted By: ORGA-MO
Board : D4-2239
City/County: Washington/DC
Weather : Warm/Cloudy/Dry

File Name : ChB@Lot
Site Code : 03242239
Start Date : 01/04/200
Page No : 1

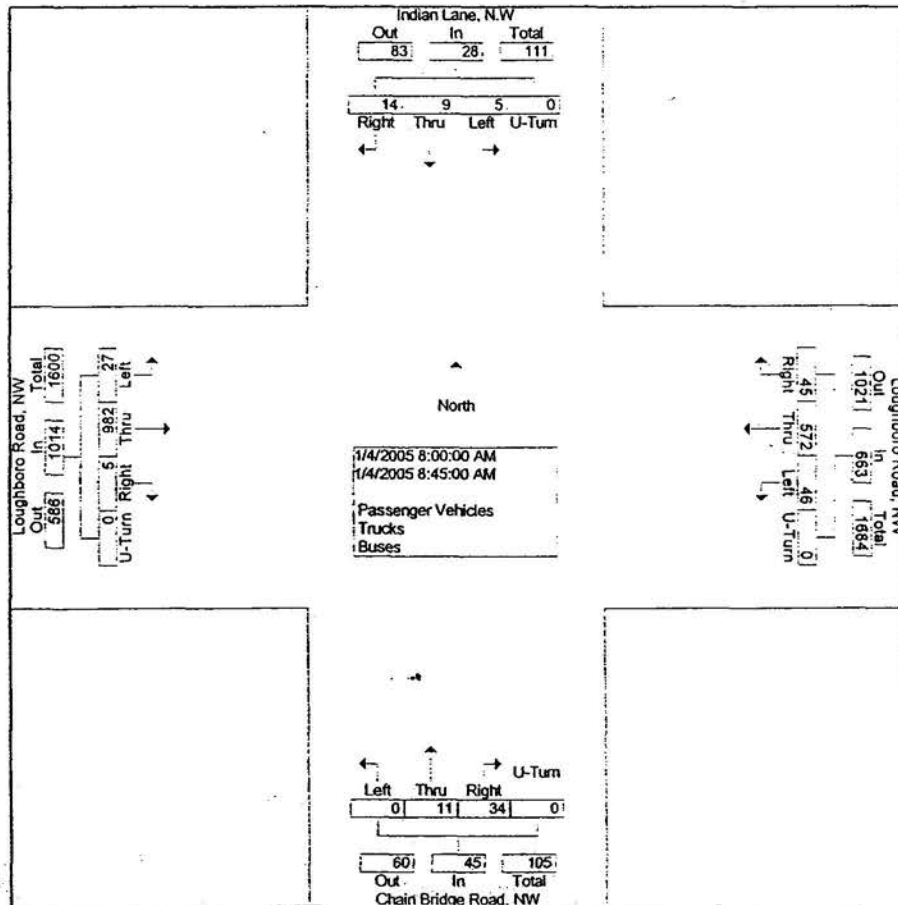
Groups Printed- Passenger Vehicles - Trucks - Buses																					
	Indian Lane, N.W From North					Chain Bridge Road, NW From South					Loughboro Road, NW From East					Loughboro Road, NW From West					
End Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
07:15	2	0	2	0	4	4	0	0	0	4	4	105	3	0	112	4	149	3	0	156	276
07:30	4	0	1	0	5	5	0	0	0	5	7	116	6	0	129	1	219	4	0	224	363
07:45	4	1	2	0	7	3	1	1	0	5	3	139	8	0	150	1	244	4	0	249	411
08:00	2	3	1	0	6	7	1	0	0	8	12	139	19	0	170	0	250	7	0	257	441
Total	12	4	6	0	22	19	2	1	0	22	26	499	36	0	561	6	862	18	0	886	1491
08:15	4	1	0	0	5	9	3	0	0	12	11	150	10	0	171	1	221	3	0	225	413
08:30	4	5	0	0	9	7	4	0	0	11	11	155	10	0	176	2	252	13	0	267	463
08:45	4	0	4	0	8	11	3	0	0	14	11	128	7	0	146	2	259	4	0	265	433
09:00	2	0	2	0	4	4	0	0	0	4	7	123	4	0	134	2	217	10	0	229	371
Total	14	6	6	0	26	31	10	0	0	41	40	556	31	0	627	7	949	30	0	986	1680
16:15	7	0	1	0	8	5	2	0	0	7	11	231	10	0	252	3	118	5	0	126	393
16:30	4	1	2	0	7	6	1	0	0	7	6	208	8	0	222	3	117	5	0	125	361
16:45	3	3	1	0	7	6	1	0	0	7	6	208	2	0	216	7	138	5	0	150	380
17:00	3	1	4	0	8	4	2	0	0	6	10	231	6	0	247	0	132	5	0	137	398
Total	17	5	8	0	30	21	6	0	0	27	33	878	26	0	937	13	505	20	0	538	1532
17:15	4	0	2	0	6	5	2	2	0	9	5	247	5	0	257	4	123	4	0	131	403
17:30	2	0	1	0	3	3	0	1	0	4	18	274	12	0	304	1	139	6	0	146	457
17:45	5	0	5	0	10	6	4	0	0	10	8	224	4	0	236	1	148	2	0	151	407
18:00	7	0	1	0	8	4	3	0	0	7	13	217	5	0	235	0	143	3	0	146	396
Total	18	0	9	0	27	18	9	3	0	30	44	962	26	0	1032	6	553	15	0	574	1663
Grand Total	61	15	29	0	105	89	27	4	0	120	143	2895	119	0	3157	32	2869	83	0	2984	6366
Approch %	58.1	14.3	27.6	0.0		74.2	22.5	3.3	0.0		4.5	91.7	3.8	0.0		1.1	96.1	2.8	0.0		
Total %	1.0	0.2	0.5	0.0	1.6	1.4	0.4	0.1	0.0	1.9	2.2	45.5	1.9	0.0	49.6	0.5	45.1	1.3	0.0	46.9	

Counted By: ORGA-MO
 Board : D4-2239
 City/County: Washington/DC
 Weather : Warm/Cloudy/Dry

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File Name : ChB@Lou
 Site Code : 03242239
 Start Date : 01/04/200
 Page No : 2

Indian Lane, N.W From North						Chain Bridge Road, NW From South					Loughboro Road, NW From East					Loughboro Road, NW From West					Int. Total
End Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour From 07:15 to 12:45 - Peak 1 of 1																					
Intersection 08:00																					
Volume	14	9	5	0	28	34	11	0	0	45	45	572	46	0	663	5	982	27	0	1014	1750
Percent	50.0	32.1	17.9	0.0		75.6	24.4	0.0	0.0		6.8	86.3	6.9	0.0		0.5	96.8	2.7	0.0		
Volume	14	9	5	0	28	34	11	0	0	45	45	572	46	0	663	5	982	27	0	1014	1750
Volume	4	5	0	0	9	7	4	0	0	11	11	155	10	0	176	2	252	13	0	267	463
Peak Factor																					0.945
High Int.	08:30					08:45					08:30					08:30					
Volume	4	5	0	0	9	11	3	0	0	14	11	155	10	0	176	2	252	13	0	267	
Peak Factor	0.778										0.804					0.942					0.949



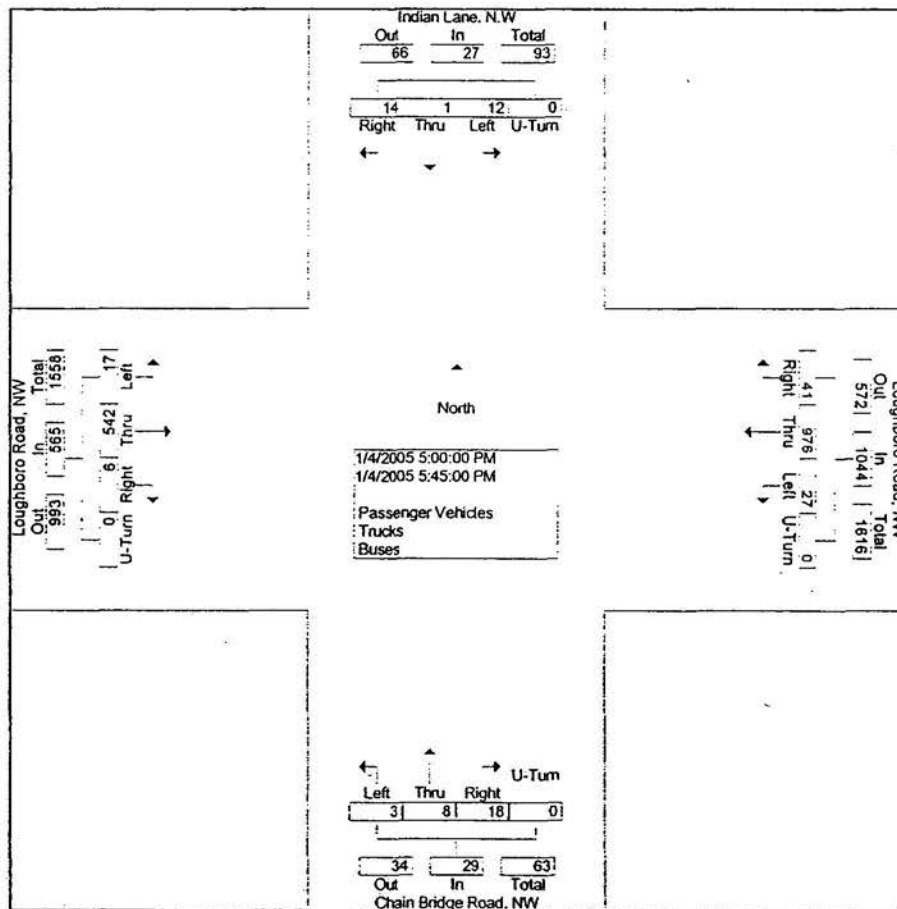
B-E

Counted By: ORGA-MO
 Board : D4-2239
 City/County: Washington/DC
 Weather : Warm/Cloudy/Dry

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File Name : ChB@Lot
 Site Code : 03242239
 Start Date : 01/04/200
 Page No : 3

	Indian Lane, N.W From North					Chain Bridge Road, NW From South					Loughboro Road, NW From East					Loughboro Road, NW From West					
End Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour From 13:00 to 18:00 - Peak 1 of 1																					
Intersection	17:00																				
Volume	14	1	12	0	27	18	8	3	0	29	41	976	27	0	1044	6	542	17	0	565	1665
Percent	51.9	3.7	44.4	0.0		62.1	27.6	10.3	0.0		3.9	93.5	2.6	0.0		1.1	95.9	3.0	0.0		
Volume	14	1	12	0	27	18	8	3	0	29	41	976	27	0	1044	6	542	17	0	565	1665
Volume	2	0	1	0	3	3	0	1	0	4	18	274	12	0	304	1	139	6	0	146	457
Peak Factor																					0.911
High Int.	17:45					17:45					17:30					17:45					
Volume	5	0	5	0	10	6	4	0	0	10	18	274	12	0	304	1	148	2	0	151	
Peak Factor	0.675										0.725					0.859					0.935



City :Washington, D.C.
 County :Washington, D.C.
 Location:Chain Bridge Rd, S of Park Entr

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Site Code : 000000000004
 Start Date: 01/04/2005
 File I.D. : 4C
 Page : 1

Begin Time	Total	Northbound													Page
		Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	
12:00 01/04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0	
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:00	1	0	0	1	0	0	0	0	0	0	0	0	0	0	
05:00	2	0	2	0	0	0	0	0	0	0	0	0	0	0	
06:00	8	0	6	2	0	0	0	0	0	0	0	0	0	0	
07:00	17	0	13	4	0	0	0	0	0	0	0	0	0	0	
08:00	34	0	28	5	0	1	0	0	0	0	0	0	0	0	
09:00	26	0	21	4	0	0	0	0	1	0	0	0	0	0	
10:00	13	0	10	3	0	0	0	0	0	0	0	0	0	0	
11:00	17	0	14	3	0	0	0	0	0	0	0	0	0	0	
12:00 pm	29	0	24	4	0	0	0	0	1	0	0	0	0	0	
01:00	15	0	9	3	0	3	0	0	0	0	0	0	0	0	
02:00	23	0	19	3	0	1	0	0	0	0	0	0	0	0	
03:00	44	0	39	5	0	0	0	0	0	0	0	0	0	0	
04:00	21	0	20	0	0	1	0	0	0	0	0	0	0	0	
05:00	17	0	15	1	0	1	0	0	0	0	0	0	0	0	
06:00	17	0	16	1	0	0	0	0	0	0	0	0	0	0	
07:00	16	0	16	0	0	0	0	0	0	0	0	0	0	0	
08:00	6	0	5	1	0	0	0	0	0	0	0	0	0	0	
09:00	10	1	9	0	0	0	0	0	0	0	0	0	0	0	
10:00	9	0	9	0	0	0	0	0	0	0	0	0	0	0	
11:00	2	0	2	0	0	0	0	0	0	0	0	0	0	0	
Day Totals	328	1	278	40	*	7	*	*	2	*	*	*	*	*	
12:00 01/05	1	0	1	0	0	0	0	0	0	0	0	0	0	0	
01:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0	
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0	
04:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0	
05:00	2	0	1	1	0	0	0	0	0	0	0	0	0	0	
06:00	5	0	4	1	0	0	0	0	0	0	0	0	0	0	
07:00	23	0	18	4	0	1	0	0	0	0	0	0	0	0	
08:00	28	0	25	2	1	0	0	0	0	0	0	0	0	0	
09:00	22	0	17	4	0	1	0	0	0	0	0	0	0	0	
10:00	19	0	14	5	0	0	0	0	0	0	0	0	0	0	
11:00	14	0	13	1	0	0	0	0	0	0	0	0	0	0	
12:00 pm	21	0	19	2	0	0	0	0	0	0	0	0	0	0	
01:00	13	0	8	4	0	1	0	0	0	0	0	0	0	0	
02:00	32	0	29	1	0	2	0	0	0	0	0	0	0	0	
03:00	24	0	19	4	0	1	0	0	0	0	0	0	0	0	
04:00	28	0	25	2	0	1	0	0	0	0	0	0	0	0	
05:00	18	0	18	0	0	0	0	0	0	0	0	0	0	0	
06:00	13	0	12	1	0	0	0	0	0	0	0	0	0	0	
07:00	8	0	8	0	0	0	0	0	0	0	0	0	0	0	
08:00	4	0	4	0	0	0	0	0	0	0	0	0	0	0	
09:00	7	0	6	1	0	0	0	0	0	0	0	0	0	0	
10:00	5	0	4	1	0	0	0	0	0	0	0	0	0	0	
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Day Totals	290	*	248	34	1	7	*	*	*	*	*	*	*	*	

City :Washington, D.C.
 County :Washington, D.C.
 Location:Chain Bridge Rd, S of Park Entr

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Site Code : 000000000004
 Start Date: 01/04/2005
 File I.D. : 4C
 Page : 2

		Northbound													Page
Begin Time	Total	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	
12:00 01/06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0	
05:00	2	0	1	1	0	0	0	0	0	0	0	0	0	0	
06:00	5	0	5	0	0	0	0	0	0	0	0	0	0	0	
07:00	17	0	12	4	0	0	0	0	1	0	0	0	0	0	
08:00	41	0	40	1	0	0	0	0	0	0	0	0	0	0	
09:00	25	0	18	5	2	0	0	0	0	0	0	0	0	0	
10:00	23	0	19	4	0	0	0	0	0	0	0	0	0	0	
11:00	22	0	21	1	0	0	0	0	0	0	0	0	0	0	
12:00 pm	16	0	14	2	0	0	0	0	0	0	0	0	0	0	
01:00	19	0	16	3	0	0	0	0	0	0	0	0	0	0	
02:00	23	0	18	1	1	2	0	0	1	0	0	0	0	0	
03:00	30	0	27	2	0	1	0	0	0	0	0	0	0	0	
04:00	29	0	25	3	0	1	0	0	0	0	0	0	0	0	
05:00	26	0	21	3	0	2	0	0	0	0	0	0	0	0	
06:00	19	0	17	2	0	0	0	0	0	0	0	0	0	0	
07:00	12	0	12	0	0	0	0	0	0	0	0	0	0	0	
08:00	6	0	6	0	0	0	0	0	0	0	0	0	0	0	
09:00	7	0	6	1	0	0	0	0	0	0	0	0	0	0	
10:00	8	0	7	1	0	0	0	0	0	0	0	0	0	0	
11:00	2	0	2	0	0	0	0	0	0	0	0	0	0	0	
Day Totals	333	*	288	34	3	6	*	*	2	*	*	*	*	*	
12:00 01/07	5	0	5	0	0	0	0	0	0	0	0	0	0	0	
01:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0	
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:00	3	0	2	1	0	0	0	0	0	0	0	0	0	0	
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
05:00	3	0	2	1	0	0	0	0	0	0	0	0	0	0	
06:00	8	0	8	0	0	0	0	0	0	0	0	0	0	0	
07:00	18	0	14	4	0	0	0	0	0	0	0	0	0	0	
08:00	39	0	35	3	0	0	0	0	1	0	0	0	0	0	
09:00	22	0	21	0	0	1	0	0	0	0	0	0	0	0	
10:00	12	0	9	3	0	0	0	0	0	0	0	0	0	0	
11:00	15	0	13	2	0	0	0	0	0	0	0	0	0	0	
12:00 pm	32	0	31	1	0	0	0	0	0	0	0	0	0	0	
01:00	31	0	31	0	0	0	0	0	0	0	0	0	0	0	
02:00	23	1	16	5	0	1	0	0	0	0	0	0	0	0	
03:00	35	0	33	1	0	1	0	0	0	0	0	0	0	0	
04:00	25	0	21	3	0	1	0	0	0	0	0	0	0	0	
05:00	14	0	13	1	0	0	0	0	0	0	0	0	0	0	
06:00	16	0	16	0	0	0	0	0	0	0	0	0	0	0	
07:00	16	0	16	0	0	0	0	0	0	0	0	0	0	0	
08:00	10	0	10	0	0	0	0	0	0	0	0	0	0	0	
09:00	6	0	6	0	0	0	0	0	0	0	0	0	0	0	
10:00	9	0	9	0	0	0	0	0	0	0	0	0	0	0	
11:00	2	0	2	0	0	0	0	0	0	0	0	0	0	0	
Day Totals	345	1	314	25	*	4	*	*	1	*	*	*	*	*	

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Northbound														
Begin Time	Total	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13
12:00 01/08	4	0	4	0	0	0	0	0	0	0	0	0	0	0
01:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	2	0	2	0	0	0	0	0	0	0	0	0	0	0
05:00	3	0	1	2	0	0	0	0	0	0	0	0	0	0
06:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0
07:00	5	0	3	1	0	0	0	0	1	0	0	0	0	0
08:00	5	0	5	0	0	0	0	0	0	0	0	0	0	0
09:00	18	0	15	3	0	0	0	0	0	0	0	0	0	0
10:00	20	0	20	0	0	0	0	0	0	0	0	0	0	0
11:00	31	0	27	3	0	1	0	0	0	0	0	0	0	0
12:00 pm	23	0	21	0	0	1	0	0	1	0	0	0	0	0
01:00	27	0	24	3	0	0	0	0	0	0	0	0	0	0
02:00	16	0	16	0	0	0	0	0	0	0	0	0	0	0
03:00	25	0	24	1	0	0	0	0	0	0	0	0	0	0
04:00	28	0	27	1	0	0	0	0	0	0	0	0	0	0
05:00	25	0	25	0	0	0	0	0	0	0	0	0	0	0
06:00	16	0	14	2	0	0	0	0	0	0	0	0	0	0
07:00	10	0	9	1	0	0	0	0	0	0	0	0	0	0
08:00	4	0	4	0	0	0	0	0	0	0	0	0	0	0
09:00	5	0	4	1	0	0	0	0	0	0	0	0	0	0
10:00	9	0	9	0	0	0	0	0	0	0	0	0	0	0
11:00	11	0	11	0	0	0	0	0	0	0	0	0	0	0
Day Totals	289	*	267	18	*	2	*	*	2	*	*	*	*	*
12:00 01/09	3	0	3	0	0	0	0	0	0	0	0	0	0	0
01:00	2	0	1	1	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0
04:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0
05:00	2	0	1	1	0	0	0	0	0	0	0	0	0	0
06:00	3	0	3	0	0	0	0	0	0	0	0	0	0	0
07:00	6	0	6	0	0	0	0	0	0	0	0	0	0	0
08:00	7	0	7	0	0	0	0	0	0	0	0	0	0	0
09:00	10	0	10	0	0	0	0	0	0	0	0	0	0	0
10:00	14	0	14	0	0	0	0	0	0	0	0	0	0	0
11:00	14	0	14	0	0	0	0	0	0	0	0	0	0	0
12:00 pm	22	0	21	1	0	0	0	0	0	0	0	0	0	0
01:00	21	0	19	2	0	0	0	0	0	0	0	0	0	0
02:00	20	0	18	2	0	0	0	0	0	0	0	0	0	0
03:00	19	0	19	0	0	0	0	0	0	0	0	0	0	0
04:00	20	0	18	2	0	0	0	0	0	0	0	0	0	0
05:00	19	0	18	1	0	0	0	0	0	0	0	0	0	0
06:00	10	0	10	0	0	0	0	0	0	0	0	0	0	0
07:00	11	0	11	0	0	0	0	0	0	0	0	0	0	0
08:00	9	0	9	0	0	0	0	0	0	0	0	0	0	0
09:00	8	0	8	0	0	0	0	0	0	0	0	0	0	0
10:00	6	0	6	0	0	0	0	0	0	0	0	0	0	0
11:00	3	0	3	0	0	0	0	0	0	0	0	0	0	0
Day Totals	231	*	221	10	*	*	*	*	*	*	*	*	*	*

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Begin Time	Total	Northbound											
		Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12
12:00 01/10	1	0	1	0	0	0	0	0	0	0	0	0	0
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	2	0	1	1	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	8	0	5	3	0	0	0	0	0	0	0	0	0
07:00	20	0	16	3	0	1	0	0	0	0	0	0	0
08:00	45	0	40	2	1	2	0	0	0	0	0	0	0
09:00	27	0	25	2	0	0	0	0	0	0	0	0	0
10:00	13	0	10	3	0	0	0	0	0	0	0	0	0
11:00	17	0	15	2	0	0	0	0	0	0	0	0	0
12:00 pm	27	0	24	3	0	0	0	0	0	0	0	0	0
01:00	18	0	13	4	0	1	0	0	0	0	0	0	0
02:00	21	0	20	1	0	0	0	0	0	0	0	0	0
03:00	37	0	32	3	0	2	0	0	0	0	0	0	0
04:00	36	0	31	4	0	1	0	0	0	0	0	0	0
05:00	14	0	13	0	0	1	0	0	0	0	0	0	0
06:00	21	0	20	1	0	0	0	0	0	0	0	0	0
07:00	21	0	21	0	0	0	0	0	0	0	0	0	0
08:00	9	0	9	0	0	0	0	0	0	0	0	0	0
09:00	2	0	2	0	0	0	0	0	0	0	0	0	0
10:00	4	0	4	0	0	0	0	0	0	0	0	0	0
11:00	3	0	3	0	0	0	0	0	0	0	0	0	0
Day Totals	346	*	305	32	1	8	*	*	*	*	*	*	*
Totals	2162	2	1921	193	.5	34	0	0	7	0	0	0	0
Percent		.0%	88.8%	8.9%	.2%	1.5%	.0%	.0%	.3%	.0%	.0%	.0%	.0%

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Begin Time	Southbound												
	Total	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12
12:00 01/04	1	0	1	0	0	0	0	0	0	0	0	0	0
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	2	0	2	0	0	0	0	0	0	0	0	0	0
03:00	2	0	2	0	0	0	0	0	0	0	0	0	0
04:00	1	0	0	1	0	0	0	0	0	0	0	0	0
05:00	2	0	2	0	0	0	0	0	0	0	0	0	0
06:00	10	0	9	1	0	0	0	0	0	0	0	0	0
07:00	38	0	33	5	0	0	0	0	0	0	0	0	0
08:00	26	0	21	4	0	1	0	0	0	0	0	0	0
09:00	19	0	14	4	0	1	0	0	0	0	0	0	0
10:00	17	0	14	3	0	0	0	0	0	0	0	0	0
11:00	11	0	9	2	0	1	0	0	0	0	0	0	0
12:00 pm	23	0	14	7	1	0	0	0	1	0	0	0	0
01:00	28	0	19	1	0	7	0	0	1	0	0	0	0
02:00	23	0	18	5	0	0	0	0	0	0	0	0	0
03:00	36	0	30	5	0	1	0	0	0	0	0	0	0
04:00	32	0	28	2	0	2	0	0	0	0	0	0	0
05:00	31	0	27	3	0	1	0	0	0	0	0	0	0
06:00	21	0	19	2	0	0	0	0	0	0	0	0	0
07:00	12	0	11	1	0	0	0	0	0	0	0	0	0
08:00	9	0	5	4	0	0	0	0	0	0	0	0	0
09:00	7	0	7	0	0	0	0	0	0	0	0	0	0
10:00	2	0	2	0	0	0	0	0	0	0	0	0	0
11:00	2	0	2	0	0	0	0	0	0	0	0	0	0
Day Totals	355	*	288	50	1	14	*	*	2	*	*	*	*
12:00 01/05	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	1	0	1	0	0	0	0	0	0	0	0	0	0
05:00	1	0	0	1	0	0	0	0	0	0	0	0	0
06:00	5	0	2	2	0	0	0	0	1	0	0	0	0
07:00	46	0	42	4	0	0	0	0	0	0	0	0	0
08:00	29	0	25	3	1	0	0	0	0	0	0	0	0
09:00	16	0	15	1	0	0	0	0	0	0	0	0	0
10:00	17	0	14	2	0	1	0	0	0	0	0	0	0
11:00	21	0	15	4	0	2	0	0	0	0	0	0	0
12:00 pm	25	0	20	4	0	1	0	0	0	0	0	0	0
01:00	23	0	20	3	0	0	0	0	0	0	0	0	0
02:00	29	0	25	2	1	1	0	0	0	0	0	0	0
03:00	31	0	26	5	0	0	0	0	0	0	0	0	0
04:00	28	0	26	1	0	0	0	0	1	0	0	0	0
05:00	29	0	23	4	0	1	0	0	0	0	0	0	0
06:00	17	0	17	0	0	0	0	0	0	0	0	0	0
07:00	10	0	9	1	0	0	0	0	0	0	0	0	0
08:00	8	0	6	2	0	0	0	0	0	0	0	0	0
09:00	8	0	8	0	0	0	0	0	0	0	0	0	0
10:00	6	0	6	0	0	0	0	0	0	0	0	0	0
11:00	2	0	1	1	0	0	0	0	0	0	0	0	0
Day Totals	351	*	301	40	2	6	*	*	2	*	*	*	*

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		Southbound													F11 Pa
Begin Time	Total	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	
12:00 01/10	1	0	1	0	0	0	0	0	0	0	0	0	0	0	
01:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0	
02:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0	
03:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0	
04:00	2	0	1	1	0	0	0	0	0	0	0	0	0	0	
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:00	6	0	6	0	0	0	0	0	0	0	0	0	0	0	
07:00	35	0	32	3	0	0	0	0	0	0	0	0	0	0	
08:00	37	0	33	4	0	0	0	0	0	0	0	0	0	0	
09:00	23	0	19	2	0	1	1	0	0	0	0	0	0	0	
10:00	18	0	13	3	0	2	0	0	0	0	0	0	0	0	
11:00	24	0	20	3	0	0	0	0	1	0	0	0	0	0	
12:00 pm	25	0	22	2	0	1	0	0	0	0	0	0	0	0	
01:00	29	0	23	6	0	0	0	0	0	0	0	0	0	0	
02:00	21	0	16	2	0	3	0	0	0	0	0	0	0	0	
03:00	31	0	25	5	0	0	0	0	1	0	0	0	0	0	
04:00	38	0	29	9	0	0	0	0	0	0	0	0	0	0	
05:00	32	0	31	0	0	1	0	0	0	0	0	0	0	0	
06:00	22	0	20	1	0	1	0	0	0	0	0	0	0	0	
07:00	14	0	13	1	0	0	0	0	0	0	0	0	0	0	
08:00	11	0	11	0	0	0	0	0	0	0	0	0	0	0	
09:00	4	0	3	1	0	0	0	0	0	0	0	0	0	0	
10:00	7	0	7	0	0	0	0	0	0	0	0	0	0	0	
11:00	2	0	2	0	0	0	0	0	0	0	0	0	0	0	
Day Totals	385	*	330	43	*	9	1	*	2	*	*	*	*	*	
Totals	2477	0	2172	243	6	44	1	0	11	0	0	0	0	0	
Percent		.0%	87.6%	9.8%	.2%	1.7%	.0%	.0%	.4%	.0%	.0%	.0%	.0%	.0%	

B-14

APPENDIX

C

CAPACITY ANALYSIS WORKSHEETS -
EXISTING TRAFFIC SITUATION

TWO-WAY STOP CONTROL SUMMARY

General Information				Site Information			
Analyst	ORGA-IJB			Intersection	Loughboro@ Chain Bridge		
Agency/Co.	O.R.GEORGE & ASSOC			Jurisdiction	Washington D.C		
Date Performed	1/11/2005			Analysis Year	2005		
Analysis Time Period	AM PEAK 7:45-8:45						
Project Description Bender-Chain Bridge Road							
East/West Street: Loughboro Road				North/South Street: Chain Bridge Road			
Intersection Orientation: East-West				Study Period (hrs): 0.25			
Vehicle Volumes and Adjustments							
Major Street	Eastbound			Westbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume (veh/h)	27	982	5	46	572	45	
Peak-hour factor, PHF	0.95	0.95	0.95	0.94	0.94	0.94	
Hourly Flow Rate (veh/h)	28	1033	5	48	608	47	
Proportion of heavy vehicles, P_{HV}	0	--	--	0	--	--	
Median type	Undivided						
RT Channelized?			0			0	
Lanes	0	2	0	0	2	0	
Configuration	LT		TR	LT		TR	
Upstream Signal		0			1		
Minor Street	Northbound			Southbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume (veh/h)	0	11	34	5	9	14	
Peak-hour factor, PHF	0.80	0.80	0.80	0.78	0.78	0.78	
Hourly Flow Rate (veh/h)	0	13	42	6	11	17	
Proportion of heavy vehicles, P_{HV}	0	0	0	0	0	0	
Percent grade (%)	0			0			
Flared approach		Y			Y		
Storage		1			1		
RT Channelized?			0			0	
Lanes	0	1	0	0	1	0	
Configuration		LTR			LTR		
Control Delay, Queue Length, Level of Service							
Approach	EB	WB	Northbound			Southbound	
Movement	1	4	7	8	9	10	11 12
Lane Configuration	LT	LT	LTR			LTR	
Volume, v (vph)	28	48	55			34	
Capacity, c_m (vph)	987	678	296			158	
v/c ratio	0.03	0.07	0.19			0.22	
Queue length (95%)	0.09	0.23	0.67			0.78	
Control Delay (s/veh)	8.8	10.7	25.8			36.2	
LOS	A	B	D			E	
Approach delay (s/veh)	--	--	25.8			36.2	
Approach LOS	--	--	D			E	

TWO-WAY STOP CONTROL SUMMARY

General Information				Site Information		
Analyst	ORGA-IJB			Intersection	Loughboro Rd @ Chain Bridge Rd	
Agency/Co.	O.R. GEORGE & ASSOCIATES			Jurisdiction	Washington D.C	
Date Performed	1/11/2005			Analysis Year	2005	
Analysis Time Period	PM PEAK 4:45-5:45					
Project Description Bender-Chain Bridge Road						
East/West Street: Loughboro Road				North/South Street: Chain Bridge Road		
Intersection Orientation: East-West				Study Period (hrs): 0.25		
Vehicle Volumes and Adjustments						
Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	17	542	6	27	976	41
Peak-hour factor, PHF	0.94	0.94	0.94	0.86	0.86	0.86
Hourly Flow Rate (veh/h)	18	576	6	31	1134	47
Proportion of heavy vehicles, P_{HV}	0	--	--	0	--	--
Median type	Undivided					
RT Channelized?			0			0
Lanes	0	2	0	0	2	0
Configuration	LT		TR	LT		TR
Upstream Signal		0			1	
Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	3	8	18	12	1	14
Peak-hour factor, PHF	0.73	0.73	0.73	0.68	0.68	0.68
Hourly Flow Rate (veh/h)	4	10	24	17	1	20
Proportion of heavy vehicles, P_{HV}	0	0	0	0	0	0
Percent grade (%)	0			0		
Flared approach		Y			Y	
Storage		1			1	
RT Channelized?			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	
Control Delay, Queue Length, Level of Service						
Approach	EB	WB	Northbound		Southbound	
Movement	1	4	7	8	9	10 11 12
Lane Configuration	LT	LT	LTR			LTR
Volume, v (vph)	18	31	38			38
Capacity, c_m (vph)	674	1002	258			186
v/c ratio	0.03	0.03	0.15			0.20
Queue length (95%)	0.08	0.10	0.51			0.74
Control Delay (s/veh)	10.5	8.7	24.6			31.9
LOS	B	A	C			D
Approach delay (s/veh)	--	--	24.6			31.9
Approach LOS	--	--	C			D

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	ORGA-IJB			Intersection	MacArthur Blv@Chain Bridge Rd			
Agency/Co.	O.R.GEORGE & ASSOCIATES			Jurisdiction	Washington D.C			
Date Performed	1/11/2005			Analysis Year	2005			
Analysis Time Period	AM PEAK 7:45-8:45							
Project Description Bender-Chain Bridge Road								
East/West Street: Chain Bridge Road				North/South Street: MacArthur Blvd				
Intersection Orientation: North-South				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Northbound			Southbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume	1	846	29	4	1268	14		
Peak-Hour Factor, PHF	0.88	0.88	0.88	0.89	0.89	0.89		
Hourly Flow Rate, HFR	1	961	32	4	1424	15		
Percent Heavy Vehicles	0	--	--	0	--	--		
Median Type	Raised curb							
RT Channelized			0			0		
Lanes	0	2	0	0	2	1		
Configuration	LT		TR	LT	T	R		
Upstream Signal		0			1			
Minor Street	Westbound			Eastbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume	52	1	5	2	3	5		
Peak-Hour Factor, PHF	0.55	0.55	0.55	0.57	0.57	0.57		
Hourly Flow Rate, HFR	94	1	9	3	5	8		
Percent Heavy Vehicles	0	0	0	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration		LTR			LTR			
Delay, Queue Length, and Level of Service								
Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT	LT	LTR			LTR		
v (vph)	1	4	104			16		
C (m) (vph)	526	704	251			278		
v/c	0.00	0.01	0.41			0.06		
95% queue length	0.01	0.02	1.92			0.18		
Control Delay	11.9	10.1	29.1			18.7		
LOS	B	B	D			C		
Approach Delay	--	--	29.1			18.7		
Approach LOS	--	--	D			C		

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Version

C-3

TWO-WAY STOP CONTROL SUMMARY

General Information				Site Information				
Analyst	ORGA-IJB			Intersection	MacArthur Blv@Chain Bridge Rd			
Agency/Co.	O.R. GEORGE & ASSOCIATES			Jurisdiction	Washington D.C			
Date Performed	1/11/2005			Analysis Year	2005			
Analysis Time Period	PM PEAK 4:45-5:45							
Project Description Bender-Chain Bridge Road								
East/West Street: Chain Bridge Road				North/South Street: MacArthur Blvd				
Intersection Orientation: North-South				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Northbound			Southbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume	11	658	21	7	593	3		
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.93	0.93	0.93		
Hourly Flow Rate, HFR	11	715	22	7	637	3		
Percent Heavy Vehicles	0	-	-	0	-	-		
Median Type	Raised curb							
RT Channelized			0			0		
Lanes	0	2	0	0	2	1		
Configuration	LT		TR	LT	T	R		
Upstream Signal		0			1			
Minor Street	Westbound			Eastbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume	11	1	15	5	1	5		
Peak-Hour Factor, PHF	0.81	0.81	0.81	0.64	0.64	0.64		
Hourly Flow Rate, HFR	13	1	18	7	1	7		
Percent Heavy Vehicles	0	0	0	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration		LTR			LTR			
Delay, Queue Length, and Level of Service								
Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT	LT		LTR			LTR	
v (vph)	11	7		32			15	
C (m) (vph)	954	878		451			457	
v/c	0.01	0.01		0.07			0.03	
95% queue length	0.03	0.02		0.23			0.10	
Control Delay	8.8	9.1		13.6			13.1	
LOS	A	A		B			B	
Approach Delay	-	-	13.6			13.1		
Approach LOS	-	-	B			B		

C-4

APPENDIX

D1

TRAFFIC FLOW GAP STUDY

Gap Survey 03/29/05 07:45 - 08:45
Chain Bridge Road at Site Entrance

No. of Vehicles	Gap
1	0:00:48
2	0:02:52
3	0:00:43
4	0:00:54
5	0:00:34
6	0:00:37
7	0:05:26
8	0:00:39
9	0:02:47
10	0:00:01
11	0:01:32
12	0:03:54
13	0:00:33
14	0:00:03
15	0:03:07
16	0:00:02
17	0:00:13
18	0:00:40
19	0:00:30
20	0:00:16
21	0:00:34
22	0:00:30
23	0:02:11
24	0:03:14
25	0:01:47
26	0:01:30
27	0:00:39
28	0:02:14
29	0:01:23
30	0:00:56
31	0:01:09
32	0:01:36
33	0:02:56
34	0:00:45
35	0:00:50
38	0:01:17
37	0:01:58
38	0:00:45
Average	0:01:23

APPENDIX

D2

ACCIDENT RECORDS

DCDPW: Accident Summary Report (R-4)

Date:

Prepared By:

P. EVANS

Location:

Quadrant:

CHAIN BRIDGE RD

And

LOUGHBORO RD

NW

Summary for the time period of: 1/1/2002 To: 12/31/2002

Total Number of Accident 1

Total Number of Injuries 0

Contributing Factors:

Driver:

Vehicle:

Roadway:

Unknown:

0 0.00%

0 0.00%

0 0.00%

1 100.00%

Collision Types:

Right Angle: Left Turn:

Right Turn:

Rear End:

Side
Swiped:

Head On:

Parked

1

0

0

0

0

0

0

Fixed Object Ran Off
Road:

Pedestrian:

Backing

Non
Collision:

Other:

0

0

0

0

0

0

Accident Times:

Time

Number

Percent

07:30-09:30

0

0.00%

09:30-11:30

0

0.00%

11:30-13:30

0

0.00%

13:30-16:00

0

0.00%

16:00-18:30

1

100.00%

18:30-07:30

0

0.00%

Weekday:

1

100.00%

Weekend:

0

0.00%

D-2-2

DDOT: Accident Summary Report (R-4)

Date:

Prepared By:

Location:

Quadrant

LOUGHBORO RD

And

CHAIN BRIDGE RD

NW

Summary for the time period of: 1/1/2000 To: 12/31/2002

Total Number of Accident 1

Total Number of Injuries 0

Contributing Factors:

Driver:	Vehicle	Roadway	Unknown:
0 0.00%	0 0.00%	0 0.00%	1 100.00%

Collision Types:

Right Angle	Left Turn:	Right Turn:	Rear End:	Side Swiped:	Head On:	Parked
1	0	0	0	0	0	0
Fixed Object	Ran Off Road:	Pedestrian	Backing	Non Collision:	Other:	
0	0	0	0	0	0	

Accident Times:

Time	Number	Percent
07:30-09:30	0	0.00%
09:30-11:30	0	0.00%
11:30-13:30	0	0.00%
13:30-16:00	0	0.00%
16:00-18:30	1	100.00%
18:30-07:30	0	0.00%
Weekday	1	100.00%
Weekend	0	0.00%

D-2-3

D-2-4

DCDPW: Accident Summary Report (R-4)

Date:

Prepared By:

P. EVANS

Location:

Quadrant:

CHAIN BRIDGE RD

And

MACARTHUR BLVD

NW

Summary for the time period of: 1/1/2002 To: 12/31/2002

Total Number of Accident 1

Total Number of Injuries 1

Contributing Factors:

Driver:

Vehicle:

Roadway:

Unknown:

1 100.00%

0 0.00%

0 0.00%

0 0.00%

Collision Types:

Right Angle: Left Turn:

Right Turn:

Rear End:

Side
Swiped:

Head On:

Parked

0

0

0

0

0

0

0

Fixed Object: Ran Off
Road:

Pedestrian:

Backing

Non
Collision:

Other:

0

1

0

0

0

0

Accident Times:

Time

Number

Percent

07:30-09:30

0

0.00%

09:30-11:30

0

0.00%

11:30-13:30

0

0.00%

13:30-16:00

0

0.00%

16:00-18:30

0

0.00%

18:30-07:30

1

100.00%

Weekday:

0

0.00%

Weekend:

1

100.00%

D-2-5

DCDPW: Accident Summary Report (R-4)

Date:

Prepared By:

P. EVANS

Location:

Quadrant:

CHAIN BRIDGE RD

And

MACARTHUR BLVD

NW

Summary for the time period of: 1/1/2000 To: 12/31/2000

Total Number of Accident 2

Total Number of Injuries 1

Contributing Factors:

Driver:

Vehicle:

Roadway:

Unknown:

1 50.00%

0 0.00%

0 0.00%

1 50.00%

Collision Types:

Right Angle: Left Turn:

Right Turn:

Rear End:

Side
Swiped:

Head On:

Parked

0

0

0

0

0

1

0

Fixed Object Ran Off
Road:

Pedestrian:

Backing

Non
Collision:

Other:

0

1

0

0

0

0

Accident Times:

Time

Number

Percent

07:30-09:30

0

0.00%

09:30-11:30

0

0.00%

11:30-13:30

1

50.00%

13:30-16:00

0

0.00%

16:00-18:30

0

0.00%

18:30-07:30

1

50.00%

Weekday:

2

100.00%

Weekend:

0

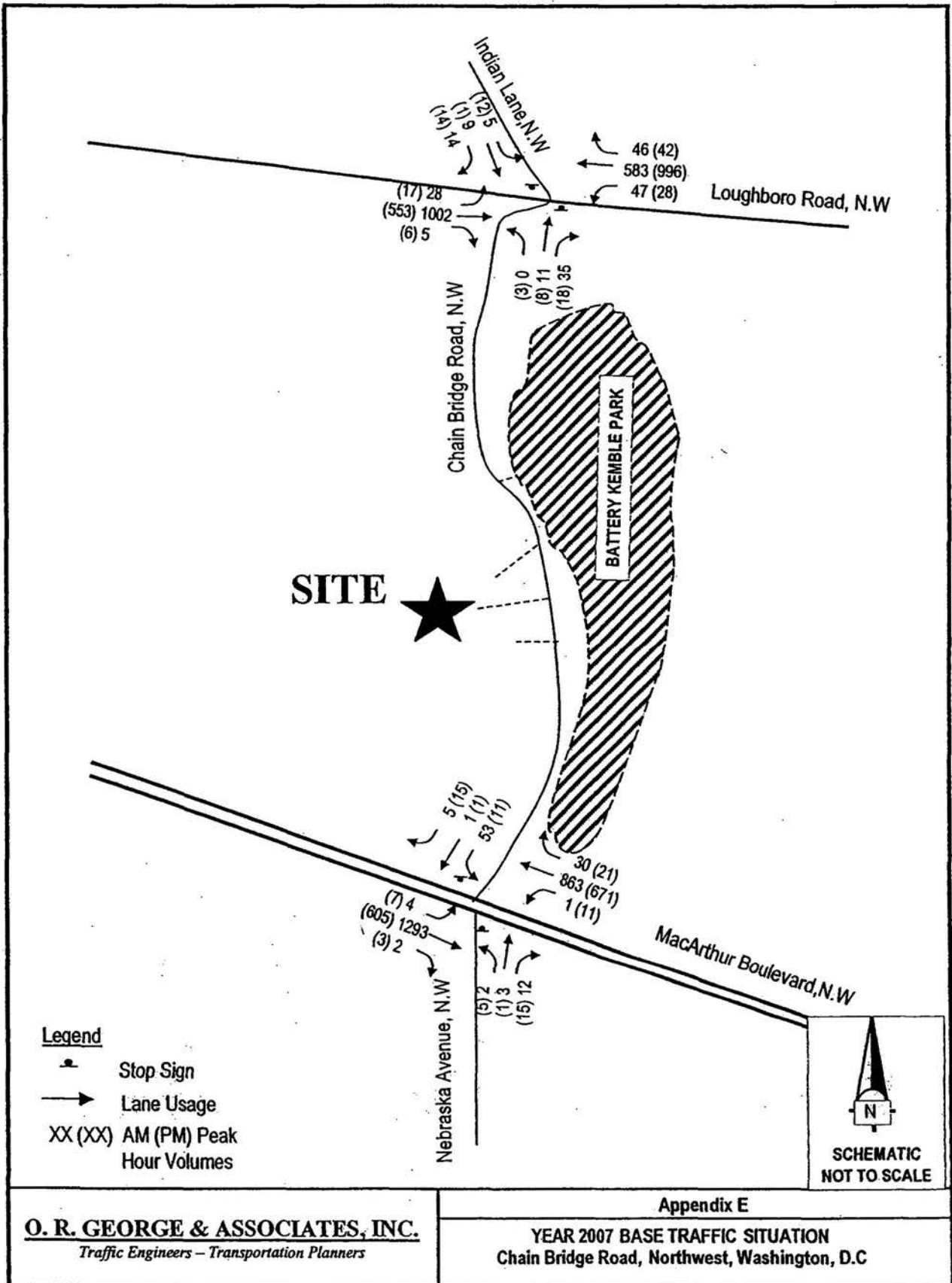
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D-2-7

APPENDIX

E

2007 'BASE' TRAFFIC SITUATION



O. R. GEORGE & ASSOCIATES, INC.
Traffic Engineers – Transportation Planners

Appendix E
YEAR 2007 BASE TRAFFIC SITUATION
Chain Bridge Road, Northwest, Washington, D.C

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	ORGA-IJB			Intersection	Loughboro@ Chain Bridge			
Agency/Co.	O.R. GEORGE & ASSOC			Jurisdiction	Washington D.C			
Date Performed	03/16/2005			Analysis Year	2007			
Analysis Time Period	AM PEAK 7:45-8:45							
Project Description Bender-Chain Bridge Road - Total 2007								
East/West Street: Loughboro Road				North/South Street: Chain Bridge Road				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	28	1002	5	49	583	46		
Peak-hour factor, PHF	0.95	0.95	0.95	0.94	0.94	0.94		
Hourly Flow Rate (veh/h)	29	1054	5	52	620	48		
Proportion of heavy vehicles, P_{HV}	0	-	-	0	-	-		
Median type	Undivided							
RT Channelized?			0			0		
Lanes	0	2	0	0	2	0		
Configuration	LT		TR	LT		TR		
Upstream Signal		0			1			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	1	12	39	5	10	14		
Peak-hour factor, PHF	0.80	0.80	0.80	0.78	0.78	0.78		
Hourly Flow Rate (veh/h)	1	14	48	6	12	17		
Proportion of heavy vehicles, P_{HV}	0	0	0	0	0	0		
Percent grade (%)	0			0				
Flared approach		Y			Y			
Storage		1			1			
RT Channelized?			0			0		
Lanes	0	1	0	0	1	0		
Configuration		LTR			LTR			
Control Delay, Queue Length, Level of Service								
Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT	LT		LTR			LTR	
Volume, v (vph)	29	52		63			35	
Capacity, c_m (vph)	971	665		273			142	
v/c ratio	0.03	0.08		0.23			0.25	
Queue length (95%)	0.09	0.25		0.87			0.92	
Control Delay (s/veh)	8.8	10.9		28.0			40.7	
LOS	A	B		D			E	
Approach delay (s/veh)	-	-		28.0			40.7	
Approach LOS	-	-		D			E	

TWO-WAY STOP CONTROL SUMMARY							
General Information				Site Information			
Analyst	ORGA-IJB			Intersection	MacArthur Blv@Chain Bridge Rd		
Agency/Co.	O.R.GEORGE & ASSOCIATES			Jurisdiction	Washington D.C		
Date Performed	03/16/2005			Analysis Year	2007		
Analysis Time Period	PM PEAK 4:45-5:45						
Project Description Bender-Chain Bridge Road - Total 2007							
East/West Street: Chain Bridge Road				North/South Street: MacArthur Blvd			
Intersection Orientation: North-South				Study Period (hrs): 0.25			
Vehicle Volumes and Adjustments							
Major Street	Northbound			Southbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume	11	671	30	9	605	3	
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.93	0.93	0.93	
Hourly Flow Rate, HFR	11	729	32	9	650	3	
Percent Heavy Vehicles	0	-	-	0	-	-	
Median Type	Raised curb						
RT Channelized			0			0	
Lanes	0	2	0	0	2	1	
Configuration	LT		TR	LT	T	R	
Upstream Signal		0			1		
Minor Street	Westbound			Eastbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume	18	1	15	5	1	15	
Peak-Hour Factor, PHF	0.81	0.81	0.81	0.64	0.64	0.64	
Hourly Flow Rate, HFR	22	1	18	7	1	23	
Percent Heavy Vehicles	0	0	0	0	0	0	
Percent Grade (%)	0			0			
Flared Approach		N			N		
Storage		0			0		
RT Channelized			0			0	
Lanes	0	1	0	0	1	0	
Configuration		LTR			LTR		
Delay, Queue Length, and Level of Service							
Approach	NB	SB	Westbound			Eastbound	
Movement	1	4	7	8	9	10	11
Lane Configuration	LT	LT		LTR			LTR
v (vph)	11	9		41			31
C (m) (vph)	943	860		406			543
v/c	0.01	0.01		0.10			0.06
95% queue length	0.04	0.03		0.33			0.18
Control Delay	8.9	9.2		14.9			12.0
LOS	A	A		B			B
Approach Delay	-	-	14.9			12.0	
Approach LOS	-	-	B			B	

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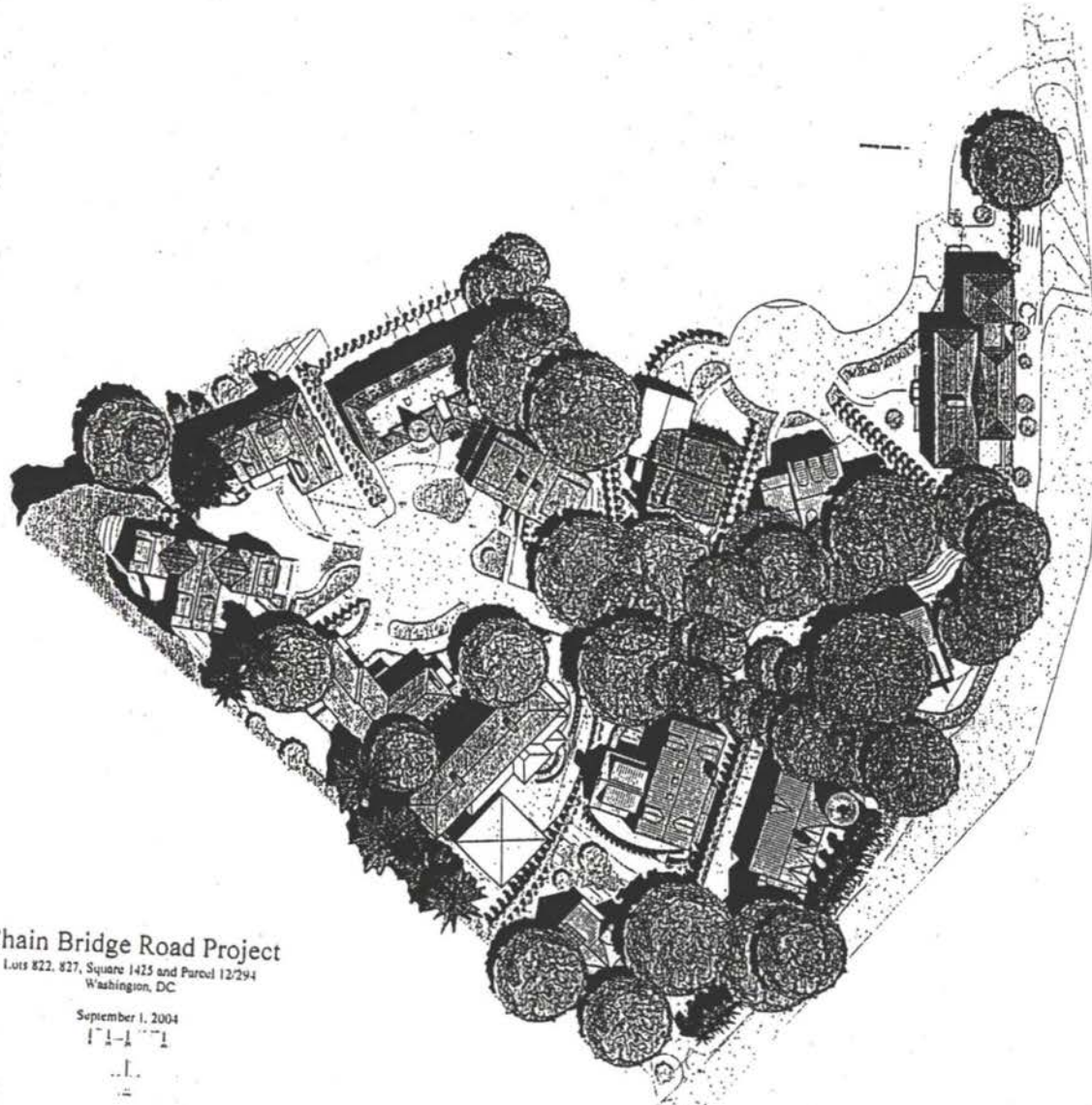
3/18/2005

F-4

APPENDIX

G

PROPOSED SITE LAYOUT



Chain Bridge Road Project
Lots 822, 827, Square 1425 and Parcel 12/294
Washington, DC

September 1, 2004

1" = 1'-0"

...I...

...

APPENDIX

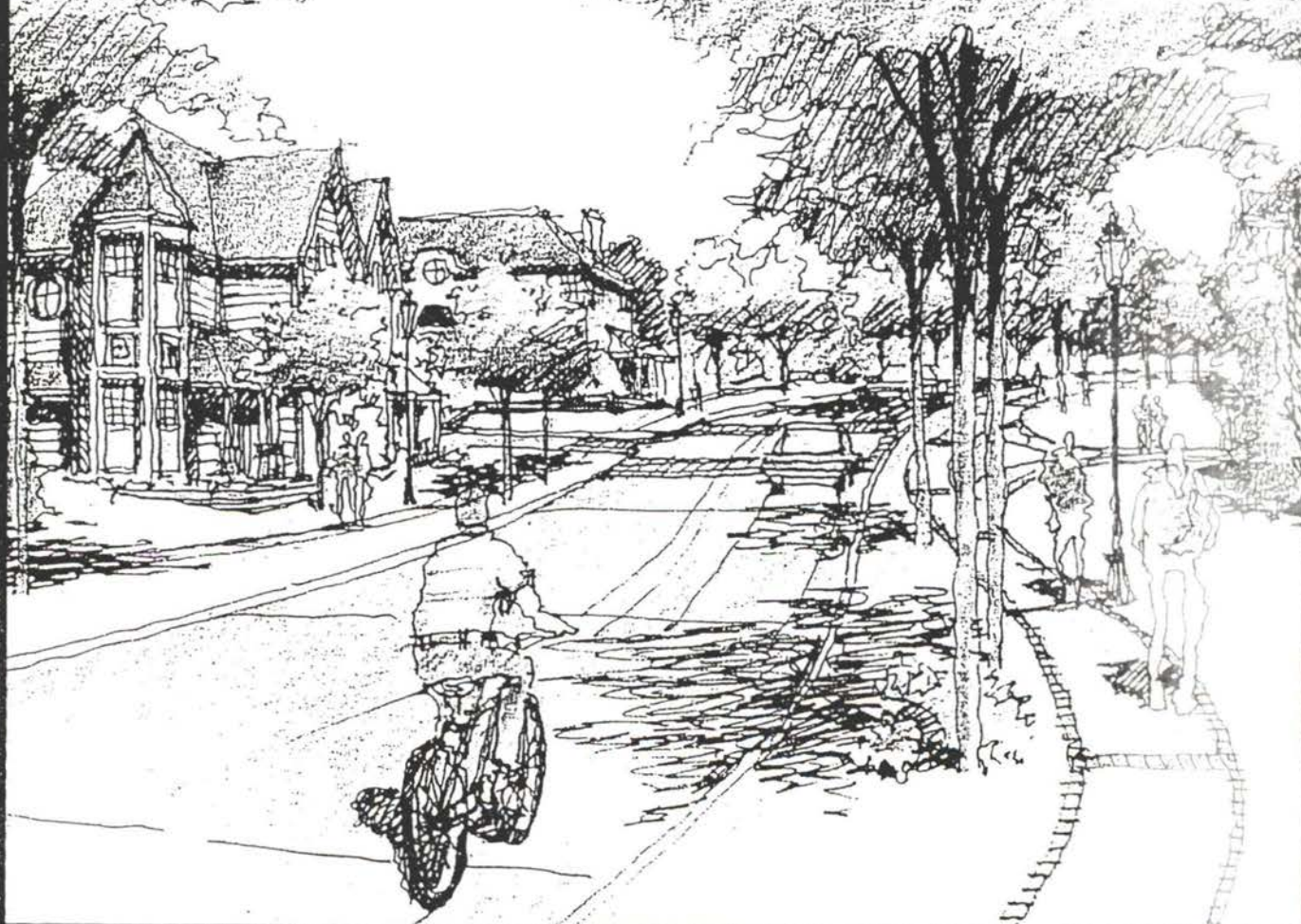
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EXTRACT FROM
"RESIDENTIAL STREETS - URBAN LAND INSTITUTE"

Residential STREETS

Second Edition

American Society of Civil Engineers
National Association of Home Builders
ULI—the Urban Land Institute



ASCE



Philosophy of Residential Street Design

In the past, residential streets have been mistakenly viewed as fulfilling only two functions: providing access and conveying traffic. As a consequence of this philosophy, requirements and design guidelines placed undue stress on the efficient movement of traffic—in other words, moving traffic either in greater volumes or at increased speed—and ignored residential streets' many other functions. As stated in *Performance Streets* (Bucks County, 1980):

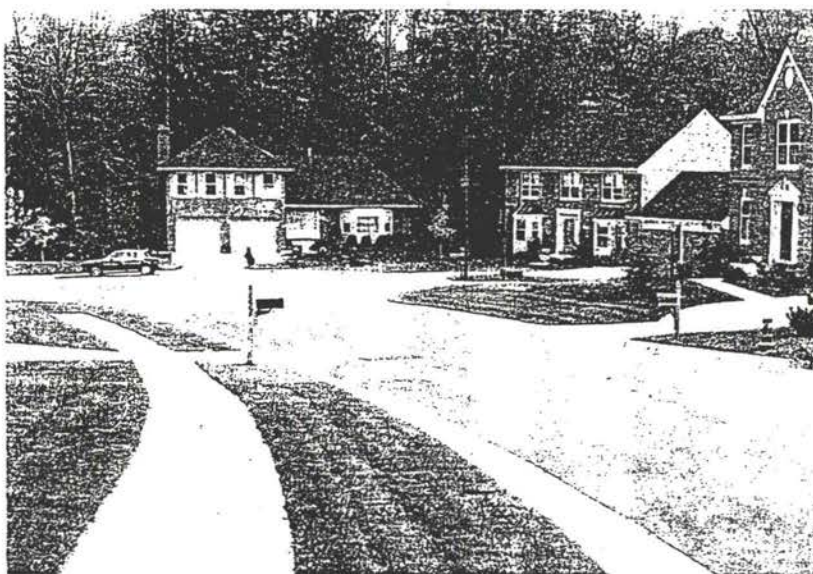
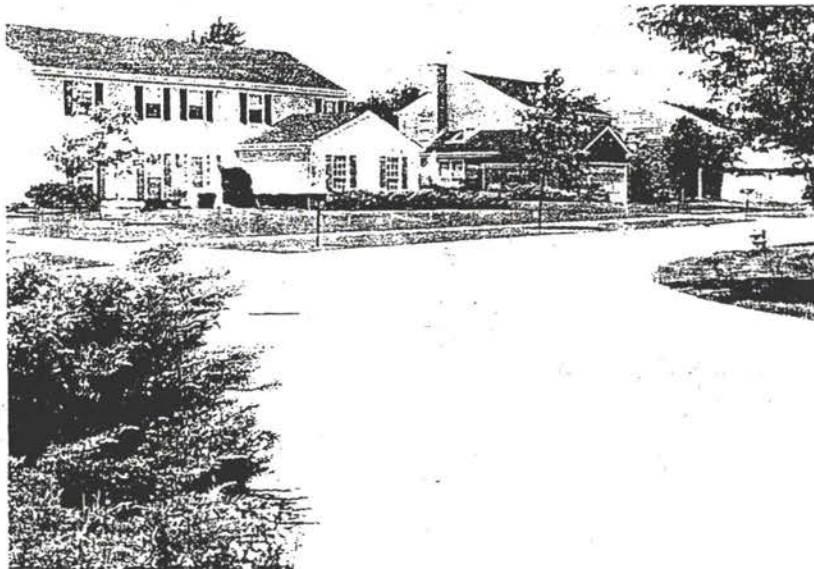
It was often forgotten that residential streets become part of the neighborhood and are eventually used for a variety of purposes for which they were not designed. Residential streets provide direct auto access for the occupant to his home; they carry traffic past his home; they provide a visual setting, an entryway for each house; a pedestrian circulation system; a meeting place for the residents; a play area (whether one likes it or not) for the children, etc. To design and engineer residential streets solely for the convenience of easy automobile movement overlooks the many overlapping uses of a residential street.

Residential Streets, Second Edition is based on the premise that the design of a residential street should be appropriate to its functions. A residential street's functions include not only its place in the transportation system but its role as part of a residential community's living environment.

The idea of a residential street system as much more than a transportation facility is reflected in the following principles that form the basis for the guidelines presented in this book:

- Street planning should relate to overall community planning.
- Traffic in residential areas should be kept to a minimum to reduce noise, congestion, and hazards to pedestrians.
- The street is an important component of overall residential community design. Properly scaled and designed streets can create more attractive communities and can contribute to a clearly defined sense of place.
- Street design standards should permit flexibility in community design. They should allow street alignments to follow natural contours and preserve natural features or to respond to other design objectives such as the creation of more intimate urban- or village-scaled streetscapes.
- Wherever possible, street layouts should be planned to avoid excessive stormwater runoff and the need for storm sewers.
- The amount of paved area should be kept to a minimum to reduce construction and maintenance costs, stormwater runoff, and heat buildup.
- Streets can serve social functions such as meeting places and centers of community activity. For example, children often use low-traffic streets as play areas.

H-2



- In the interest of keeping housing affordable, street costs should be minimized.
- Overdesign of streets should be avoided. Excessive widths or an undue concern with geometry more appropriate for highways encourages greater vehicle speeds.
- Different streets have different functions and need to be designed accordingly. Blanket standards are inappropriate.

These principles suggest that a street system should be designed as a hierarchy of street uses. Routes carrying through traffic should be separated from routes that provide access to residential

H-3

should be the factors that determine cul-de-sac length. A street with houses on 100-foot-wide lots can function well for a greater length than a street with 50-foot lots. For 100-foot-wide house lots, a street of 20 houses would result in a 1,000-foot-long street. For 50-foot-wide house lots, a cul-de-sac should be restricted to a length of approximately 500 feet. Assuming that a cul-de-sac should handle no more than 200 vehicle-trips per day and that each single-family home generates up to eight or 10 vehicle-trips per day, a cul-de-sac should accommodate a maximum of 20 to 25 houses. In some circumstances, including large lots or difficult terrain, lengths longer than 1,000 feet might be appropriate.

Shared Driveways

One alternative method of serving a few homes is through a shared driveway—paved access that is not built to street standards but is simply a normal residential driveway that extends and branches off to several homes. Privately owned and maintained, a shared driveway does not require a turnaround area at the end of the driveway; instead, it simply ends at the last house. The shared driveway can connect to an access street or subcollector at a right angle or, as an extension of a cul-de-sac, connect to the cul-de-sac turnaround (Figure 2-30). An economical and attractive method of serving up to five or six homes, the shared driveway should be just wide enough for two cars to pass, i.e., approximately 16 feet.

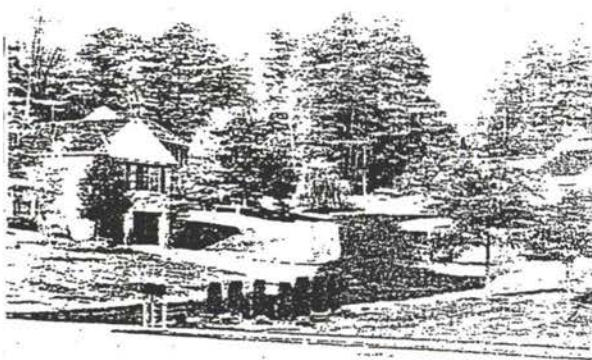


Figure 2-30: Shared driveways.

Low Cost Traffic Engineering Improvements: A Primer



U.S. Department of Transportation
Federal Highway Administration
Office of Transportation Management

April 2003

H-5

Introduction and Purpose

This report presents the results of an investigation into low cost traffic engineering improvements, including types of actions, costs, and benefits.

In an effort to reduce crashes and ease traffic congestion on our nation's highways, traffic engineers and planners have traditionally pursued a wide range of actions. In some cases, the most cost-effective solution requires a significant investment in public funds. In other cases, the most cost-effective solution can be achieved through implementation of lower cost solutions. The purpose of this report is to share approaches that have been implemented to provide low cost solutions for improving safety and traffic flow. The report is designed to serve as a primer, or basic introduction, to the subject of low cost traffic engineering improvements. The goal is to provide practicing traffic engineers and planners with information describing the types of low cost actions that have been implemented, along with their cost and benefits.

"Low cost" is a relative term. Agencies implementing large projects with large budgets may perceive a "low cost" project differently than an agency with a limited budget. For purposes of this discussion, "low cost" is defined as a project or strategy that generally requires an investment in the range of \$10,000 to \$50,000. Many of the strategies discussed range from several hundred dollars to several thousand dollars in magnitude. The research conducted for this study, however, indicates that "low cost" does not mean "low benefit."

The research results presented in this report are based on a review of the literature as well as interviews with transportation agency staff throughout the nation. The results identify a series of successful and effective low cost strategies that agencies have implemented to improve safety and reduce traffic congestion. Hopefully, many of the practices presented are transferable to other communities dealing with similar problems.

This report is divided into five parts. Following this introductory section, the second part describes several low cost traffic engineering improvements that have been implemented in a variety of locations. The third part of this report discusses why low cost traffic engineering improvements are important. Among the most significant reasons cited for pursuing low cost improvements is that limited funding is available to local jurisdictions for managing growing safety and capacity problems. The fourth part of this report examines the benefits that have been derived from the implementation of low cost improvements based on several examples that have been implemented in different parts of the nation. The fifth part of this report describes several experimental or innovative low cost approaches to increasing safety and mitigating congestion.

What Are Low Cost Traffic Engineering Improvements?

Research has confirmed that low cost, shorter-term strategies that utilize shoulders, narrow lanes, regulatory devices, and technology to manage travel and control traffic can increase capacity and improve operations and safety at a particular bottleneck along a congested metropolitan corridor.

Low cost traffic engineering improvement techniques are typically spot applications or are limited to shorter sections of roadway that do not cover an entire length of an arterial corridor. Some of these strategies include pavement markings, static and dynamic signing, roadway lighting, raised medians, curb cuts, roadway geometric changes, or lane controls. These strategies provide the guidance, warning, and control needed for drivers to ensure safe and informed operation through traffic bottlenecks or congested areas.

An understanding of the types of low cost actions that have been implemented is best gained through the examination of several successful programs, including the Automobile Club of Michigan (AAA Michigan); the Traffic Engineering Department of the City of Winston Salem, North Carolina; and the Traffic Engineering Department of the City of Knoxville, Tennessee.

AAA Michigan initiated a program to identify and treat locations in the cities of Detroit and Grand Rapids with frequent crashes. Over the past six years, AAA Michigan examined 253 intersections in Detroit and Grand Rapids and implemented low cost safety improvements at 112 sites. Actions implemented at the intersections included the following:

- implementation of all-red intervals;
- replacement of 8-inch signal heads with 12-inch signal heads;
- relocation of signal heads to improve visibility by realigning two signal heads facing each other, realigning the signal heads over each lane of travel, or mounting the signal heads using box span installations;
- installation of secondary post-mounted signal heads to improve visibility at some locations;
- installation of back plates on traffic signals to improve visibility at some locations;
- installation of left turn lanes through re-striping of approach lanes and exclusive left turn phases, where needed; and
- removal of on-street parking.

Post-implementation crash studies conducted for improvements in Detroit showed a greater than 50% reduction in total crashes and a greater than 60% reduction in total injuries at the treated intersections. A benefit-cost study conducted as part of the project found a 15:1 return for the Detroit intersection improvements and a 16:1 return for the Grand Rapid intersections.

In 1986, the Traffic Engineering Division of the City of Winston Salem, North Carolina began an annual program to locate and treat crash locations and evaluate the results of such treatments. Over time, the program has completed before-and-after studies at 364 locations, adding 40 to 50 new locations each year. As a result, the program has reduced targeted crashes by 49% and total crashes by 13%.

Low cost treatments implemented at high crash locations included the following:

- creating a left turn lane within the confines of an existing roadway,
- adding left turn phases to existing signals,
- replacing "Yield" signs with "Stop" signs at intersections,
- replacing two-way stops with multi-way stops,
- installing traffic signals,
- using bigger and/or better signs,
- installing short segments of center line and stop bars at "Stop" locations,
- installing double-indicating "Stop" signs (adding a left-side sign),
- painting the message "Stop Ahead" and "Stop" on pavement,
- removing signals from late night/early morning programmed flashing operation,
- adding back plates to existing signal installations,
- adding a signal head to an existing display,
- replacing 8-inch signal heads with 12-inch signal heads,
- adding "Signal Ahead" signs,
- installing red "T" displays (two red signal heads mounted horizontally over an amber and green),
- installing an all-red interval, and
- replacing protected/permissive left turn phases with full protected left turn phases.

* The City of Knoxville, Tennessee, Traffic Engineering Department has successfully implemented a number of low cost traffic engineering improvements over the years. Examples include the following:

- installing sight distance mirrors where more expensive earthwork to remove the sight distance obstacle is not feasible,
- installing strobe lights in signals to make the public more aware of signals that are present in areas where background lighting is present,
- providing longer all-red intervals in the signal timing where such things as bridge decks interfere with signals,
- placing signal heads to provide a better view of red signals in limited sight-distance-to-signal faces,
- providing narrower lane widths to provide additional lanes,
- providing narrower lane widths to allow for a pedestrian island, and
- providing detector actuated flashers for sight distance problems that would require very expensive earthwork to correct sight distance problem.

G

**OUTLINE OF TESTIMONY
APPLICANT
DORCHESTER ASSOCIATES, LLC**

- I. INTRODUCTION**
- II. EXISTING USE OF SITE**
- III. PROPOSED DEVELOPMENT**
- IV. EXISTING CONDITIONS AND LIMITATIONS**
- V. REQUIREMENTS FOR GRANTING THE SPECIAL EXCEPTION RELIEF
HAVE BEEN MET**
- VI. CONCLUSION**

H

**OUTLINE OF TESTIMONY
ARCHITECT
STAN ANDRULIS**

- I. INTRODUCTION AND PROFESSIONAL QUALIFICATIONS**
- II. SITE AND LOCATION DESCRIPTION**
 - A. OVERVIEW OF SITE, VICINITY AND LAND USE/ZONING**
 - B. SITE PLANNING – SIZE, LOT CONFIGURATION, TOPOGRAPHY**
- III. PROJECT AND BUILDING DESIGN CONSIDERATIONS**
- IV. ZONING RELIEF IS NEEDED AND THE APPLICANT MEETS ITS BURDEN OF PROOF**
- V. CONCLUSION**

I

**OUTLINE OF TESTIMONY
TRAFFIC CONSULTANT
OSBORNE GEORGE**

- I. INTRODUCTION AND PROFESSIONAL QUALIFICATIONS**
- II. SITE AND LOCATION DESCRIPTION**
 - A. OVERVIEW OF SITE, VICINITY AND LOCAL ROADWAYS**
 - B. EXISTING TRAFFIC CONDITION**
- III. TRAFFIC CONSIDERATIONS**
- V. CONCLUSION**

J

**OUTLINE OF TESTIMONY
ENGINEER
JAMES APFEL**

- I. INTRODUCTION AND PROFESSIONAL QUALIFICATIONS**
- II. SITE AND LOCATION DESCRIPTION**
 - A. OVERVIEW OF SITE, TOPOGRAPHY AND VICINITY**
 - B. SITE PLANNING**
- III. STORMWATER MANAGEMENT PLAN**
- IV. MITIGATION EFFORTS**
- V. CONCLUSION**

K

**OUTLINE OF TESTIMONY
BONIFANT'S TREE SERVICE
ARBORIST**

- I. INTRODUCTION AND PROFESSIONAL QUALIFICATIONS**
- II. SITE AND LOCATION DESCRIPTION**
 - A. OVERVIEW OF SITE AND CBUT OVERLAY ZONE**
 - B. SITE PLANNING – SIZE, LOT CONFIGURATION, TOPOGRAPHY**
- III. TREE PRESERVATION CONSIDERATIONS**
- IV. MITIGATION EFFORTS**
- V. CONCLUSION**

L

**Outline of Testimony
before the Board of Zoning Adjustment**

**BZA Application No. 17309
2800 Chain Bridge Road, N.W.**

**Steven E. Sher
Director of Zoning and Land Use Services
Holland & Knight LLP**

January 10, 2006

I. Site location and description

A. Location

1. West side of Chain Bridge Road, approximately half way between MacArthur Boulevard and Loughboro Road, N.W.
2. Project site consists of lot 827 in Square 1425 and Parcels 12/63, 12/293 and 12/294
3. Site located in the Palisades area of Northwest Washington

B. Size

1. Total site area is approximately 143,190 square feet
2. Roughly "pie" shaped site with frontage of approximately 574 feet on Chain Bridge Road

C. Existing site condition:

1. Unimproved except for a temporary shed
2. Formerly used as a single family dwelling
3. Site slopes up from south to north and from east to west

II. Description of surrounding area

A. Palisades area

B. Area contains predominantly detached single family dwellings

C. Across Chain Bridge Road to the east: Battery Kemble Park

III. Existing zoning: CBUT/R-1-A

A. Uses (§§201 – 221) - One family detached dwelling permitted as a matter-of-right (§201.1(a))

B. Height – maximum of 3 stories, 40 feet (§400.1)

C. Lot area – minimum of 7,500 square feet (§401.3)

D. Lot width – minimum of 75 feet (§401.3)

E. Percentage of lot occupancy – maximum of 40% (§403.2)

F. Rear yard – minimum of 25 feet (§404.1)

G. Side yard – minimum of 8 feet in each side (§405.9)

H. Parking (§2101.1): minimum of 1 space for each dwelling unit

I. Chain Bridge University Terrace (CBUT) Overlay District

1. Lot occupancy limited to 30%, but not less than 3,150 square feet (§1567.1)

2. Maximum impervious surface coverage is 50% (§1567.2)

3. Tree removal provisions

a. No tree with circumference of 75 inches or more may be removed, cut down or fatally damaged (§1568.1(a))

b. No more than 3 trees with circumference of 38 inches or more may be removed, cut down or fatally damaged and none of these trees may be located within 25 feet of a lot line or building restriction line (§1568.1(b))

c. Total circumference inches of trees removed may not be more than 25% of all trees having a circumference of 12 inches or more (§1568.1(c))

d. Tree removal prohibitions do not apply to dead, unhealthy or unsafe trees (§1568.2)

4. Minimum lot area is 9,500 square feet for lots subdivided after July 30, 1999

IV. Proposed development (see computations, attached)

- A. Use: 13 detached one-family dwellings, each on a theoretical building site to be part of a single record lot
- B. Height: maximum of 3 stories, 40 feet at the point of measurement
- C. Lot area:
 1. Smallest lot is 9,522 square feet
 2. Average lot is 9,934 square feet
 3. Both exclusive of areas which are part of the two common driveways
- D. Lot width:
 1. Smallest is 75.8 feet
 2. Average of 89.4 feet
 3. computed on 10 foot interval average
- E. Lot occupancy:
 1. Overall for site is 25.36%
 2. Largest for any individual lot is 31.92%
 3. Smallest for any individual lot is 23.25%
 4. Average for 13 lots is 28.12%
- F. Impervious surface:
 1. Maximum of 44.75% overall
 2. Ranges from 34.31% to 46.13% on the 13 individual house lots
- G. Parking – 2 garage spaces for each unit plus additional space available in front of garages and on private driveways

V. Relief required

- A. Special exception for theoretical building sites on a single subdivided lot (§2516)
- B. Approval for driveway width less than 25 feet (§2516.6(d)) – both common driveways will be 16 feet wide

VI. Standards for the theoretical site special exception (§2516)

- A. Plan submission requirements
- B. For lots having no street frontage
 - 1. Front is side containing the principal entrance
 - 2. Required front yard equivalent to minimum rear yard
 - 3. Rear yard is required
 - 4. Location of rear yard
- C. Net density
 - 1. Covenanted means of ingress or egress not to be included in area of any lot or any yard
 - 2. Vehicular access to be minimum of 25 feet
 - 3. For single entry driveways, turning area with diameter of 60 feet required
 - 4. Board may modify if lesser dimension does not have adverse effect on present character and future development of the area
 - 5. Specific consideration to spacing of buildings and availability of resident, guest and service parking
- D. Height measured from finished grade at middle of front of building
- E. Proposed development shall comply with substantive provisions and not likely have an adverse effect on present character and future development of the neighborhood

- F. Referral required to Office of Planning for review of:
 - 1. Overall planning considerations;
 - 2. Site planning;
 - 3. Traffic and parking; and
 - 4. Impact on neighboring properties
 - G. Board may impose conditions regarding size and location of driveways; net density; height, design, screening and location of structures; and any other matter required to protect overall purpose and intent of Regulations
- VII. Compliance with the special exception standards for theoretical building sites
- A. Required plans submitted, including specific plans for each of the 13 houses
 - B. 4 of the houses have street frontage and would be buildable as a matter-of-right
 - C. Remaining 9 houses have no street frontage
 - 1. Front has been designated as side containing the principal entrance
 - 2. All those theoretical building sites have a 25 foot front yard, equivalent to the minimum required rear yard
 - 3. All theoretical sites have a minimum 25 foot rear yard
 - 4. For the theoretical sites which abut the rear lot line of the single subdivided lot, the rear yard is along the boundary of the subdivided lot
 - D. Net density
 - 1. Covenanted means of ingress or egress (the 2 common driveways) are not included in area of any lot or any yard
 - 2. Vehicular access varies from 12.5 to 20 feet on the main roadway and is minimum of 20 feet on the driveway at the north end

3. Both driveways have circles at the end with diameter of 60 feet
 4. Providing 12.5 to 20 foot driveways does not have adverse effect on present character and future development of the area because:
 - a. It is consistent with width of present driveway; and
 - b. Allows retention of rows of trees adjacent to the driveways
 5. Driveways to individual houses all meet minimum requirements of the Regulations
 6. Houses facing each other across the main driveway are 60 to 100 feet apart
 7. Each house has a two car garage and all have room to park at least two more cars in front of the garages as needed, providing a sufficient number of spaces for resident, guest and service parking
- E. Height measured from finished grade at middle of front of building
- F. Proposed development complies with substantive provisions of CBUT and R-1-A
- G. Project will meet all other requirements of District codes and regulations
- H. Project will not likely have an adverse effect on present character and future development of the neighborhood
1. Surrounding development is all detached one family dwellings
 2. All yard requirements observed adjacent to side and rear lot lines
 3. Lots immediately to the south are smaller than the proposed lots and some don't have street frontage

- I. Referral has been made to the Office of Planning
 - 1. Generalized Land Use Map designates site for low density residential, which is what is proposed
 - 2. Homeowners association will manage stormwater management facilities and solid waste collection
 - 3. Education, recreation and other public services can accommodate expected impacts from only 13 houses
 - a. 4 of houses are permitted as a matter-of-right
 - b. 9 houses could be built as a matter-of-right given size and shape of lot
 - c. Increment is only 4 houses
 - d. Impact is minimal
 - 4. Each house has been individually designed to fit the building site on which it is located and landscaping and screening has been designed appropriately and individually for each house
 - 5. There will be minimal changes in grade, mostly to accommodate driveways
 - 6. Development will fit in with character of development along Chain Bridge Road to the north and south
 - 7. Site sections show that, because of grades setbacks and screening, visual impacts are limited
- J. Board can impose conditions limiting:
 - 1. Building footprints, overall lot occupancy and impervious area
 - 2. Tree protection measures
 - 3. Construction management
 - 4. Phasing
 - 5. Any other matters which arise during the process and need attention

6. Applicant will propose specific conditions in its proposed order

VIII. Conclusions

- A. Proposed special exception is good example of kind of development envisioned under §2516, on a site having proportionally greater area to its depth
- B. Relatively small development with relatively small increase over what could strictly be built as a matter-of-right
- C. Site plan has been designed to fit into the topography
- D. Technical standards of the Regulations have been met
- E. The application should be granted

Chain Bridge Road Development Computations

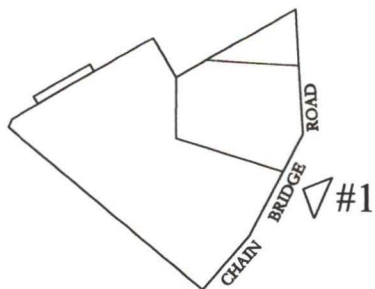
Lot	Lot area	Lot width	Building Area	Lot occupancy	Impervious area	Impervious %
1	9,563	113.2	2,895	30.27%	4,170	43.61%
2	9,588	91.8	2,524	26.32%	3,312	34.54%
3	9,693	107.2	2,787	28.75%	4,186	43.19%
4	9,589	75.8	2,229	23.25%	3,541	36.93%
A	9,522	77.0	2,499	26.24%	3,439	36.12%
B	9,803	112.1	2,440	24.89%	4,686	47.80%
C	9,777	78.6	3,121	31.92%	4,498	46.01%
D	11,939	75.8	3,575	29.94%	5,366	44.95%
E	9,529	90.9	2,933	30.78%	3,629	38.08%
F	9,569	80.2	2,781	29.06%	4,414	46.13%
G	10,619	93.8	2,874	27.06%	3,731	35.14%
H	10,429	76.5	3,070	29.44%	4,098	39.29%
I	9,517	88.9	2,589	27.20%	3,265	34.31%
Shared driveways	14,053			0.00%	11,736	83.51%
Average	9,934	89.4				
Total	143,190		36,317	28.12%	52,245	40.46%
Total plus shared driveways				25.36%	63,981	44.68%

M

Site Photos

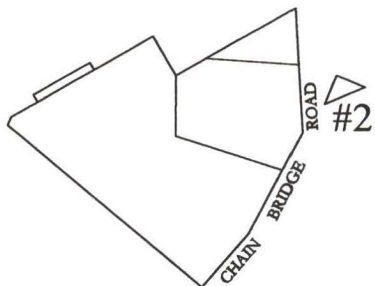
Chain Bridge Road Project

Square 1425 Lot 827 Parcels 12/63, 12/293 and 12/294
December 1, 2005



Site Photograph #1 Chain Bridge Road Project

Square 1425 Lot 827 Parcels 12/63, 12/293 and 12/294
December 1, 2005

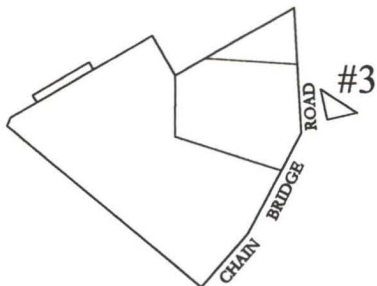


Site Photograph #2
Chain Bridge Road Project
Square 1425 Lot 827 Parcels 12/63, 12/293 and 12/294
December 1, 2005

Project Drawings

Chain Bridge Road Project

Square 1425 Lot 827 Parcels 12/63, 12/293 and 12/294
December 1, 2005



Site Photograph #3
Chain Bridge Road Project
Square 1425 Lot 827 Parcels 12/63, 12/293 and 12/294
December 1, 2005

Index of Drawings

December 1, 2005

Boundary Survey
Plat of Proposed Improvements
All Trees
Hazardous Trees
Subdivision of Lots
Existing Grading
Proposed Grading
Storm Water Management
Impervious Area
Road Alignment

Site Sections

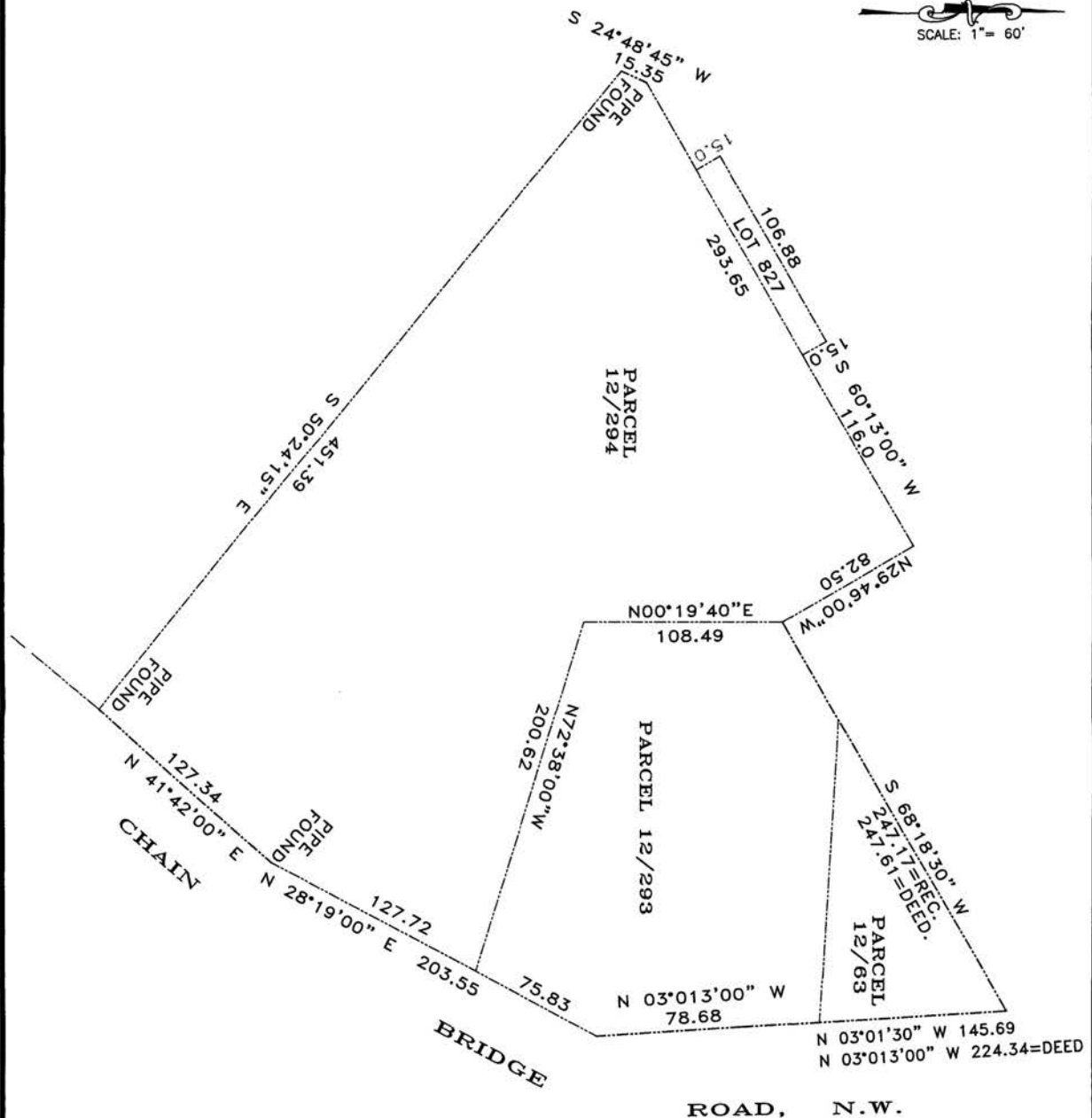
Lots A, B, 3, 4
Lots A, E, F, G, H

Landscape Plans

Lot 1 thru Lot 4
Lot A thru Lot I

Lot 1
Lot 2
Lot 3
Lot 4
Lot A
Lot B
Lot C
Lot D
Lot E
Lot F
Lot G
Lot H
Lot I

BOUNDARY SURVEY
 PARCEL 12/63, 12/293 &
 12/294 & LOT 827 SQUARE 1425
 CHAIN BRIDGE ROAD
 WASHINGTON, D.C.

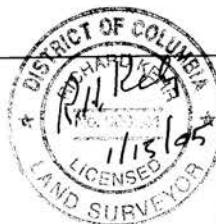


THIS PROPERTY IS SUBJECT TO RESTRICTIONS OF RECORD.
 THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT

CERTIFICATE

I HEREBY CERTIFY THAT THE POSITION OF
 THE EXISTING IMPROVEMENTS ON THE ABOVE
 DESCRIBED PROPERTY HAS BEEN CAREFULLY
 ESTABLISHED BY A TRANSIT-TAPE SURVEY.

Richard H. Kehring
 RICHARD H. KEHRING
 PROFESSIONAL LAND SURVEYOR No. 60241



REFERENCES

PLAT BK.
 PLAT No.
 LIBER
 FOLIO
 FIELD BOOK
 PAGE No.

WEST CONSULTING GROUP, INC.

4424 MONTGOMERY AVENUE,
 BETHESDA, MARYLAND 20814
 (301) 654-7907 654-7908 (FAX)

DATE OF SURVEY

WALL CHECK
 HOUSE LOC.
 BOUNDARY: 01-13-05

SCALE: 1" = 60'

DRAWN BY: RAJ

JOB No. 03-010

I hereby certify that all existing improvements shown hereon, are completely dimensioned, and are correctly platted; that all proposed buildings or construction, or parts thereof, including covered porches, are correctly dimensioned and platted and agree with plans accompanying the application; that the foundation plans as shown hereon is drawn, and dimensioned accurately to the same scale as the property lines shown on this plat; and that by reason of the proposed improvements to be erected as shown hereon the size of any adjoining lot or premises is not decreased to an area less than is required by Zoning Regulations for light and ventilation; and it is further certified and agreed that accessible parking area where required by the Zoning Regulations will be reserved in accordance with the Zoning Regulations, and that this area has been correctly drawn and dimensioned hereon. It is further agreed that the elevation of the accessible parking area with respect to the Highway Department approved curb and alley grade will not result in a rate of grade along centerline of driveway at any point on private property in excess of 20 % for single-family dwellings of flats, or in excess of 12 % at any point for other buildings. (The policy of the Highway Department permits a maximum driveway grade of 12 % across public parking and the private restricted property.)

Date: 12-22-05

[Signature]
(Signature of owner or his authorized agent)

Plat-of Proposed Improvements Chain Bridge Road Project

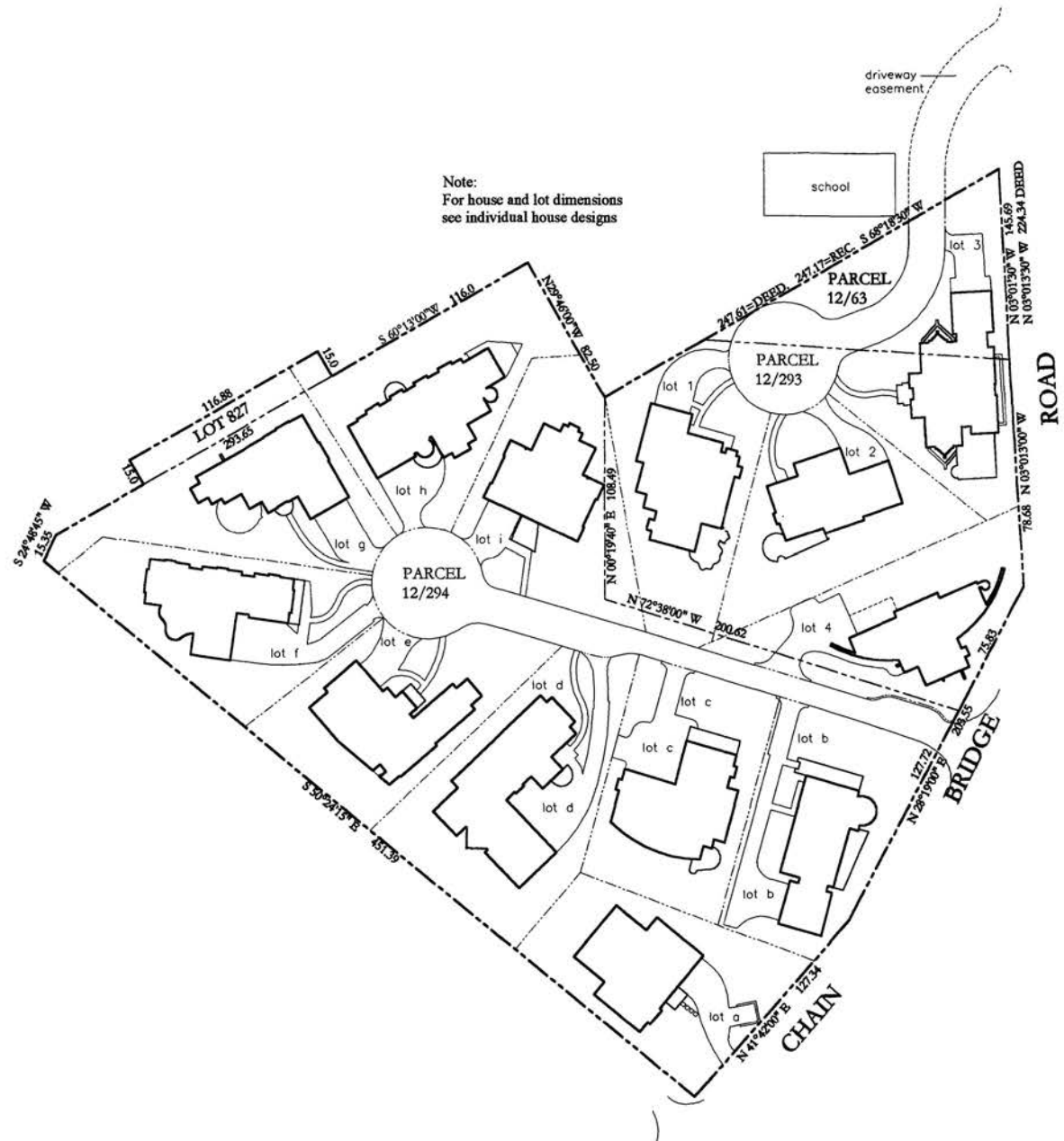
Square 1425 Lot 827, Parcels 12/63, 12/293 and 12/294
Washington, DC

December 1, 2005

0 10 20 30 60



Note:
For house and lot dimensions
see individual house designs



12"-38" Trees Saved				
tree #	circum	species	notes	
1A	31"	oak		
1B	31"	oak		
1A	31"	dogwood		
2B	31"	dogwood		
3C	31"	dogwood		
1D	31"	oak		
2B	34"	oak		
4A	17"	palms		
4B	17"	oak		
4C	16"	elm		
4D	37"	oak		
4E	14"	poplar		
4F	14"	poplar		
4B	15"	poplar		
4I	17"	poplar		
A1	14"	dogwood		
A1	16"	dogwood		
A6	14"	dogwood		
A7	17"	holly		
A8	31"	magnoxia		
A10	20"	holly		
A11	20"	holly		
A12	19"	holly		
A14	14"	holly		
A18	22"	poplar		
A19	17"	holly		
A20	21"	hem lock		
A21	14"	hem lock		
A22	14"	hem lock		
A23	20"	hem lock		
B1	17"	hem lock		
B2	18"	hem lock		
B3	20"	hem lock		
B4	20"	hem lock		
B5	21"	hem lock		
B6	35"	hem lock		
B7	22"	hem lock		
B8	24"	hem lock		
B9	24"	hem lock		
B10	24"	hem lock		
B11	17"	dead		
B12	14"	hem lock		
B13	14"	hem lock		
C1	27"	dogwood		
C2	31"	poplar		
C3	30"	oak		
C4	30"	oak		
C5	30"	oak		
C6	30"	oak		
C7	30"	oak		
C8	30"	oak		
C9	30"	oak		
C10	30"	oak		
C11	30"	oak		
C12	30"	oak		
C13	30"	oak		
C14	30"	oak		
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C91	30"	oak		
C92	30"	oak		
C93	30"	oak		
C94	30"	oak		
C95	30"	oak		
C96	30"	oak		
C97	30"	oak		
C98	30"	oak		
C99	30"	oak		
C100	30"	oak		

Removed for Const.				
tree #	circum	species	notes	
A8	33"	oak		
A7	16"	oak		
A5	14"	holly		
A4	18"	dogwood		
A3	13"	holly		
A2	20"	holly		
A13	19"	holly		
A15	21"	holly		
A16	17"	holly		
A17	27"	holly		
B1	23"	dogwood		
P1	30"	oak		
P2	30"	oak		
P3	25"	oak		
I1	31"	elm		
I2	14"	dogwood		
I4	24"	holly		
I6	15"	holly		
I7	17"	holly		

16.6% of total circumference inches removed

Legend

- 12"-38" trees removed for construction
- 12"-38" trees saved
- larger than 38" trees removed for construction
- larger than 38" trees saved
- hazardous trees & trees dead since initial survey



38" & Larger Trees Saved				
tree #	circum	species	health	note
1	91"	pin oak	45%	school property
2	60"	white pine	60%	
4	94"	american elm	70%	
6	114"	pin oak	80%	
7	87"	red oak	50%	
8	31"	red oak	80%	
9	77"	white oak	70%	
10	87"	red oak	70%	
11	117"	red oak	65%	
13	41"	hazelnut	75%	
15	56"	hazelnut	60%	
16	48"	hazelnut	65%	
17	61"	hazelnut	45%	
19	54"	hazelnut	65%	
21	49"	black cherry	45%	school property
22	64"	box elder	45%	school property
23	74"	poplar	75%	
24	79"	poplar	75%	
25	70"	poplar	70%	
26	74"	poplar	75%	
27	37"	red oak	75%	
29	127"	red maple	50%	
31	55"	flowering cherry	45%	
32	105"	hazelnut	40%	
33	48"	hazelnut	45%	
34	49"	oak	45%	
35	81"	white pine	45%	
37	56"	hazelnut	45%	
40	121"	poplar	75%	
43	42"	white oak	65%	
44	44"	white oak	50%	
44	87"	hazelnut	75%	
45	33"	hazelnut	40%	
46	84"	hazelnut	50%	
47	62"	hazelnut	60%	
48	78"	hazelnut	50%	
49	77"	hazelnut	50%	
50	64"	hazelnut	60%	
51	62"	hazelnut	60%	
52	32"	hazelnut	60%	
53	102"	hazelnut	40%	
59	48"	hazelnut	40%	
62	62"	white oak	75%	school property
63	64"	red oak	50%	school property
64	44"	red oak	50%	
65	42"	white pine	45%	
66	54"	poplar	65%	
67	42"	oak	65%	

Hazardous				
tree #	circum	species	health	note
3	113"	pin oak	40%	
12	134"	poplar	70%	
20	136"	black cherry	50%	
30	114"	red maple	45%	
38	89"	oak	40%	
39	50"	poplar	20%	
41	102"	poplar	40%	
38	92"	hazelnut	40%	
60	83"	american holly	50%	

Dead (died since survey)				
tree #	circum	species	health	note
54	43"	hazelnut	fallen	
61	40"	white pine	dead	

Removed for Construction				
tree #	circum	species	health	note
3	48"	flowering cherry	50%	school property
14	41"	hazelnut	45%	road cut line
18	37"	red maple	60%	road cut line
28	67"	american holly	80%	road cut line
35	48"	magnoxia	65%	road cut line
51	50"	white pine	40%	school property
54	54"	white pine	40%	road cut line
57	42"	white pine	40%	road cut line

All Trees
(12" and greater circumference)
Chain Bridge Road Project
Square 1425 Lot 827, Parcels 12/63, 12/293 and 12/294
Washington, DC

December 1, 2005

