

Exhibit C.2C Existing Conditions Analysis for Un-signalized Intersections

Data #	Serial #	Synchro ID	Street 1 Name	Street 2 Name	Existing Weekday AM					Existing Weekday PM				
					Movement	V/C	Delay	LOS	Comments	Movement	V/C	Delay	LOS	Comments
Unsignalized Intersections														
6	41	25	Columbia	Marsland	Overall	0.66	13	B	Introduction of Traffic Signal with 80 Cycle Length	Overall	0.65	12	B	Introduction of Traffic Signal with 80 Cycle Length
	42	35	Conservation	Westmount	Overall	0.22	8	A	Control: All way stop	Overall	0.11	9	A	N/A
4247	43	10	Conservation	Erbsville	Overall	0.06	11	B	Control: 2-way stop (EB/WB)	Overall	0.03	11	B	N/A
5	44	28	Conservation	Beavercreek	Overall	0.09	0	A	Control: 1-way stop (NB/SB)	Overall	0.04	0	A	N/A
8	45	27	Laurelwood	Beavercreek	Overall	0.01	0	A	Control: 2-way stop (NB/SB) - Now a Roundabout	Overall	0.01	9	A	N/A
1	46	83	Woolwich	University	Overall	0.08	11	B	Control: 2-way stop (EB/WB)	Overall	0.10	18	C	N/A
Roundabout														
Data #	Serial #		Street 1 Name	Street 2 Name	Movement	Low V/C	High V/C	limited analysis		Movement	Low V/C	High V/C	limited analysis	
9	48	9	Erb	Erbsville	Overall	0.57	0.71			Overall	0.86	1.10		

Notes: 1. Critical movement is defined hereby with LOD>D and/or V/C ratio greater than 0.85.

2. Increase of specific movement green time was taken from cross street green time while maintaining the same cycle length.

Notes: 1. Reduced walk time @ Northfield and Westmount, N-S to 17 seconds total (7 w alk, 10 FDW)

2. Keatsway @ Erbsville, Reduced FDW to 16 seconds (max split is 26 seconds while Walk + FDW = 28)

3. Excluded Amber + All Red time from pedestrian call for, University and Phillip, and Columbia and Hagey

Exhibit C.3A Analysis of 2016 Horizon for Signalized Intersections

Data #	Serial #	Synchro ID	Street 1 Name	Street 2 Name	2016 AM					2016 PM				
					Movement	V/C	Delay	LOS	Comments	Movement	V/C	Delay	LOS	Comments
Signalized Intersections														
21	1	145	Albert	Phillip	Overall	0.39	13.8	B		Overall	0.53	18.2	B	
543	2	144	Albert	University	Overall	0.6	23	C		Overall	0.74	26.5	C	
341	3	48	Bridge	Lexington	Overall	0.53	23	C		Overall	0.89	34.7	C	
343	4	51	Bridge	University	Overall	1.0	42.8	D		Overall	1.05	46	D	EBL double left
					EBL	0.93	53.2	D						
24	5	109	Columbia	Albert	Overall	0.67	31.1	C		Overall	0.67	31	C	NB and SB approaches potential widening
										NBT	0.67	42	D	
20	6	95	Columbia	Phillip	Overall	0.59	25	C		Overall	0.77	34	C	
23	7	32	Columbia	Hagey Blvd	Overall	0.54	19	B		Overall	0.52	22	C	
26	8	147	Columbia	Weber	Overall	0.78	30	C		Overall	0.93	42	D	
					WBT	0.90	30	C	WBL	0.68	36	D	EBR right turn bay	
262	9	136	Columbia	Westmount	Overall	0.97	35	C		Overall	1.06	65	E	Right turn bays and potential WBL double
					EBT	0.99	31	C	WBT	1.11	89	F		
46	10	16	Erb	Fisher-Hallman	Overall	0.76	29	C		Overall	0.74	26	C	
44	11	21	Erb	University	Overall	0.72	22	C		Overall	0.67	27	C	
972	12	6	Erbsville	Columbia	Overall	1.01	53	D	EBT and SBL at LOS F, suggest widening	Overall	0.84	31	C	
					EBT	1.12	127	F		WBL	0.69	27	C	
984	13	1	Erbsville	Keatsway	Overall	1.18	77	E	NBT and SBT suggest widening	Overall	0.84	17	B	
324	14	2	Erbsville	Laurelwood	Overall	0.36	21	C		Overall	0.45	23	C	
320	15	8	Fisher Hallman	Columbia	Overall	1.05	53	D	SBL and NBT approaching capacity, potential widening	Overall	0.91	39	D	NBT and SBT suggest widening
					EBT	1.04	58	E			D			
					WBL	0.10	20	B		WBT	0.82	50		
321	16	24	Fisher Hallman	Keatsway	Overall	0.72	18	B		Overall	1.13	75	E	Growth on Keats
323	17	26	Fisher Hallman	Laurelwood	Overall	0.86	24	C		Overall	0.99	29	C	Widening NBT/SBT suggested
					EBL	0.90	57	E						
211	18	20	Fisher Hallman	University	Overall	0.78	28	C		Overall	0.96	40	D	NBL, WBL and right turn bays suggested
502	19	42	King	Northfield	Overall	0.76	32	C		Overall	1.00	47	D	Suggest EBR bay, potential WBL double
										EBT	1.02	73	E	
										WBL	1.04	50	D	
17	20	41	King	Weber	Overall	0.91	43	D		Overall	1.26	105	F	Congestion suggests EBR bay, WBL double left, WBR bay, NBR turn bay
										EBT	1.27	162	F	
										WBL	1.40	232	F	

Exhibit C.3B Analysis of 2016 Horizon for Signalized Intersections

Data #	Serial #	Synchro ID	Street 1 Name	Street 2 Name	2016 AM					2016 PM				
					Movement	V/C	Delay	LOS	Comments	Movement	V/C	Delay	LOS	Comments
85	21	58	King	Union	Overall	0.57	25	C		Overall	0.58	25	C	
84	22	61	King	William	Overall	0.46	17	B		Overall	0.44	19	B	
926	23	45	Lexington	Davenport	Overall	0.72	31	C		Overall	0.85	42	D	
					WBT	0.82	30	C						
500	24	149	Northfield	Davenport	Overall	0.89	36	D		Overall	1.42	90	F	Potential NBL double
260	25	37	Northfield	Westmount	Overall	0.67	23	C		Overall	0.64	16	B	
										EBL	0.68	17	B	
213	26	67	University	Keatsway	Overall	0.51	15	B		Overall	0.50	14	B	
545	27	63	University	King	Overall	0.63	28	C		Overall	1.08	67	E	EBR turn bay, WBR turn bay
					EBT	0.52	6	A		EBT	1.17	119	F	
969	28	50	University	Lexington	Overall	0.48	9	A		Overall	0.72	10	B	
547	29	72	University	Lincoln	Overall	0.61	29	C		Overall	0.83	32	C	WBL double
										EBT	0.96	37	D	
										WBL	0.95	66	E	
42	30	77	University	Westmount	Overall	0.91	38	D		Overall	0.91	36	D	
					SBL	0.96	78	E		SBL	0.42	26	C	
542	31	68	University	Phillip	Overall	0.56	15	B		Overall	0.84	25	C	
					EBL	0.82	23	C						
16	32	108	Weber	Albert	Overall	0.61	12	B		Overall	0.78	22	C	
15	33	90	Weber	Parkside	Overall	0.58	21	C		Overall	0.82	25	C	
55	34	54	Weber	Bridgeport	Overall	0.76	34	C		Overall	0.73	30	C	
82	35	57	Weber	Union	Overall	0.42	20	B		Overall	0.52	23	C	
540	36	52	Weber	University	Overall	0.7	25.1	C		Overall	0.83	33	C	
										EBT	0.89	21	C	
14	37	39	Weber	Northfield	Overall	0.74	36	D		Overall	0.92	43	D	
263	38	138	Westmount	Bearinger	Overall	0.57	29	C		Overall	0.91	48.80	D	
					EBL	0.70	20	C						
264	39	34	Bearinger	Parkside/Wes Graham Way	Overall	0.52	30	C		Overall	0.48	23.20	C	
43	40	62	Westmount	William	Overall	0.51	16	B		Overall	0.47	16.10	B	

Exhibit C.3C Analysis of 2016 Horizon for Un-signalized Intersections

Data #	Serial #	Synchro ID	Street 1 Name	Street 2 Name	2016 AM					2016 PM					
					Movement	V/C	Delay	LOS	Comments	Movement	V/C	Delay	LOS	Comments	
Unsignalized Intersections															
6	41	25	Columbia	Marsland	Overall	0.65	13	C	Introduction of Traffic Signal with 80 Cycle Length	Overall	0.58	12	B	Introduction of Traffic Signal with 80 Cycle Length	
	42	35	Conservation	Westmount	Overall		23	C	N/A	Overall		61	F	N/A	
4247	43	10	Conservation	Erbsville	Overall		4	A	N/A	Overall		6	A	N/A	
5	44	28	Conservation	Beavercreek	Overall		3	A	N/A	Overall		4	A	N/A	
8	45	27	Laurelwood	Beavercreek	Overall			B	N/A	Overall			B	N/A	
1	46	83	Woolwich	University	Overall		8	B	N/A	Overall		1405	F	Results suggest introduction of Traffic Signal	
Roundabout															
Data #	Serial #		Street 1 Name	Street 2 Name	Movement	Low V/C	High V/C				Movement	Low V/C	High V/C		
9	48	9	Erb	Erbsville	Overall	0.86	1.10	limited analysis			Overall	0.69	1.49	limited analysis	

Notes: 1. Critical movement is defined hereby with LOD>D and/or V/C ratio greater than 0.85.

2. Increase of specific movement green time was taken from cross street green time while maintaining the same cycle length.

Notes: 1. Reduced walk time @ Northfield and Westmount, N-S to 17 seconds total (7 w alk, 10 FDW)

2. Keatsway @ Erbsville, Reduced FDW to 16 seconds (max split is 26 seconds while Walk + FDW = 28)

3. Excluded Amber + All Red time from pedestrian call for, University and Phillip, and Columbia and Hagey

Exhibit C.4A Analysis of 2031 Horizon for Signalized Intersections

Data #	Serial #	Synchro ID	Street 1 Name	Street 2 Name	2031 AM					2031 PM				
					Movement	V/C	Delay	LOS	Comments	Movement	V/C	Delay	LOS	Comments
Signalized Intersections														
21	1	145	Albert	Phillip	Overall	0.39	12	B		Overall	0.37	11	B	
543	2	144	Albert	University	Overall	0.59	23	C		Overall	0.64	24	C	
341	3	48	Bridge	Lexington	Overall	0.58	23	C		Overall	0.55	27	C	
343	4	51	Bridge	University	Overall	1.01	52	D	NBL is slightly > 1.0	Overall	1.73	340	F	v/c for EBL, WBT, NBL, SBR is > 1.0
					EBL	0.97	70	E						
24	5	109	Columbia	Albert	Overall	0.75	32	C		Overall	0.83	36	D	
										NBT	0.83	41	D	
20	6	95	Columbia	Phillip	Overall	0.66	31	C		Overall	0.65	30	C	
23	7	32	Columbia	Hagey Blvd	Overall	0.54	20	B		Overall	0.66	16	B	
26	8	147	Columbia	Weber	Overall	0.95	41	D		Overall	0.83	36	D	
					WBT	0.97	57	D		WBL	0.93	21	D	
262	9	136	Columbia	Westmount	Overall	1.26	101	F	v/c for NBT & SBL is > 1.00	Overall	1.07	57	E	v/c for EBT, WBL > 1.0
					EBT	1.21	128	F		WBT	0.33	20	C	
46	10	16	Erb	Fisher-Hallman	Overall	0.83	38	D		Overall	0.76	35	C	
44	11	21	Erb	University	Overall	0.74	17	B		Overall	0.69	22	C	
972	12	6	Erbsville	Columbia	Overall	1.38	128	F	v/c for EBT, NBR, SBL are > 1.0	Overall	0.84	37	D	
					EBT	1.31	208	F		WBL	0.85	46	D	
984	13	1	Erbsville	Keatsway	Overall	1.67	245	F	v/c for NBT & SBL are significantly > 1.0	Overall	1.00	60	E	
324	14	2	Erbsville	Laurelwood	Overall	0.45	21	C		Overall	0.51	23	C	
320	15	8	Fisher Hallman	Columbia	Overall	0.70	195	F	v/c for NBT, NBR, SBL are significantly > 1.0	Overall	1.28	89	F	
					EBT	1.66	328	F		WBT	0.65	28	C	
					WBL	0.15	17	B						
321	16	24	Fisher Hallman	Keatsway	Overall	0.93	29	C		Overall	0.67	26	C	
323	17	26	Fisher Hallman	Laurelwood	Overall	1.25	98	F	v/c for NBT is 1.25 & LOS is F	Overall	0.79	24	C	
					EBL	1.25	177	F						
211	18	20	Fisher Hallman	University	Overall	0.94	49	D	v/c for NBL & SBT is slightly > 1.0	Overall	0.88	31	C	NBL is > 1.0
502	19	42	King	Northfield	Overall	1.12	92	F	v/c for EB and WB approa	Overall	0.89	40	D	v/c for WBL is > 1.0
17	20	41	King	Weber	Overall	0.98	49	D		Overall	1.22	93	F	v/c for SBL is > 1.0
										EBT	1.25	143	F	
										WBL	1.38	266	F	

Exhibit C.3B Analysis of 2031 Horizon for Signalized Intersections

Data #	Serial #	Synchro ID	Street 1 Name	Street 2 Name	2031 AM					2031 PM				
					Movement	V/C	Delay	LOS	Comments	Movement	V/C	Delay	LOS	Comments
Signalized Intersections														
85	21	58	King	Union	Overall	0.51	26	C		Overall	0.45	27	C	
84	22	61	King	William	Overall	0.46	17	B		Overall	0.46	17	B	
926	23	45	Lexington	Davenport	Overall	0.74	30	C		Overall	0.93	46	D	
					WBT	0.86	30	C						
500	24	149	Northfield	Davenport	Overall	1.33	91	F	v/c for EBL and NBL is > 1.0	Overall	1.24	93	F	v/c for EBL & NBL is > 1.0
260	25	37	Northfield	Westmount	Overall	0.88	24	C		Overall	0.63	22	C	
					EBL	0.79	38	D						
213	26	67	University	Keatsway	Overall	0.55	15	B			Overall	0.52	20	
545	27	63	University	King	Overall	0.74	30	C		Overall	0.68	28	C	
					EBT	0.56	8	C		EBT	0.77	12	B	
969	28	50	University	Lexington	Overall	0.78	13	B		Overall	1.47	201	F	v/c for SBT is
547	29	72	University	Lincoln	Overall	0.63	26	C		Overall	0.58	25	C	
										EBT	0.57	43	D	
					WBL	0.69	15	B						
42	30	77	University	Westmount	Overall	1.04	53	D	v/c for NBR, SWL, NET slightly > 1.0	Overall	1.19	73	E	v/c for SBT & SWL is > 1.0
					SBL	0.61	32	C		SBL	0.74	27	C	
542	31	68	University	Phillip	Overall	0.58	15	B		Overall	0.60	17	B	
					EBL	0.82	21	C						
16	32	108	Weber	Albert	Overall	0.88	19	B		Overall	0.82	21	C	
15	33	90	Weber	Parkside	Overall	0.91	31	C		Overall	1.02	34	C	
55	34	54	Weber	Bridgeport	Overall	0.82	36	D		Overall	0.78	34	C	
82	35	57	Weber	Union	Overall	0.45	21	C		Overall	0.61	23	C	
540	36	52	Weber	University	Overall	0.77	26	C		Overall	0.82	25	C	
										EBT	0.34	11	B	
14	37	39	Weber	Northfield	Overall	0.97	63	E		Overall	0.88	49	D	v/c for SBL is slightly >
263	38	138	Westmount	Bearinger	Overall	1.20	86	F	v/c for SBL is slightly > 1.0	Overall	0.83	34.00	C	
					EBL	1.37	189	F						
264	39	34	Bearinger	Parkside/Wes Graham Way	Overall	0.65	22	C		Overall	0.94	29.00	C	
43	40	62	Westmount	William	Overall	0.51	16	B		Overall	0.51	16.00	B	

Exhibit C.4C Analysis of 2031 Horizon for Un-signalized Intersections

Data #	Serial #	Synchro ID	Street 1 Name	Street 2 Name	2031 AM					2031 PM				
					Movement	V/C	Delay	LOS	Comments	Movement	V/C	Delay	LOS	Comments
Unsignalized Intersections														
6	41	25	Columbia	Marsland	Overall		16	C	Introduction of Traffic Signal with 80 Cycle Length	Overall	0.65	12	B	Introduction of Traffic Signal with 80 Cycle Length
	42	35	Conservation	Westmount	Overall	N/A	67	F	Delay for WBT is 123 seconds	Overall	N/A	129	F	N/A
4247	43	10	Conservation	Erbsville	Overall	N/A	6	A	N/A	Overall	N/A	4	A	N/A
5	44	28	Conservation	Beavercreek	Overall	N/A	6	B	N/A	Overall	N/A	6	A	N/A
8	45	27	Laurelwood	Beavercreek	Overall	N/A	N/A	C	N/A	Overall	N/A	N/A	B	N/A
1	46	83	Woolwich	University	Overall	N/A	115	E	Long delays & LOS F at WBL	Overall	N/A	80	D	N/A
Roundabout														
Data #	Serial #		Street 1 Name	Street 2 Name	Movement	Low V/C	High V/C	limited analysis		Movement	Low V/C	High V/C	limited analysis	
9	48	9	Erb	Erbsville	Overall	0.67	2.12			Overall	0.64	1.49		

Notes: 1. Critical movement is defined hereby with LOD>D and/or V/C ratio greater than 0.85.

2. Increase of specific movement green time was taken from cross street green time while maintaining the same cycle length.

Notes: 1. Reduced walk time @ Northfield and Westmount, N-S to 17 seconds total (7 walk, 10 FDW)

2. Keatsway @ Erbsville, Reduced FDW to 16 seconds (max split is 26 seconds while Walk + FDW = 28)

3. Excluded Amber + All Red time from pedestrian call for, University and Phillip, and Columbia and Hagey











