



# Appendix A: Traffic Count Data

**INTERSECTION TRAFFIC FLOW ANALYSIS REPORT**  
**ME2 TRANSPORTATION DATA CORP.**

Location Deh Cho Blvd and Kam Lake Rd

Date Sep 29/08

Observers WD

time ending	FROM THE NORTH on Kam Lake Rd						FROM THE SOUTH on Kam Lake Rd						FROM THE EAST on Deh Cho Blvd						FROM THE WEST on Deh Cho Blvd					
	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE
4:15		37	20	6				27		3									24		2	1		
4:30		41	22	12				25		4									24		2		3	
4:45		21	20	4				43		2									29		3			
5:00		51	20	5			1	32		1									19		1	2		
5:15		40	23	3			2	63		2									47		4	3	1	2
5:30		29	19	2	1	1	1	40		2	1								23		1	1		
5:45		41	28	5				35		2									20		2			
6:00		53	19	3			1	40		1									19		3			
2 hr total	0	313	171	40	1	1	5	305	0	17	1	0	0	0	0	0	0	0	205	0	18	7	4	2
		484		8%				310		5%						#DIV/0!					223		3%	
peak hour	0	161	90				4	170	0				0	0	0				109	0	8			
		251						174						0						117				
2 direct L total	SB	484	49%				NB	310	48%				WB	0	#DIV/0!				EB	223	56%			
	NB	510	51%				SB	331	52%				EB	0	#DIV/0!				WB	176	44%			
		994						641						0						399				

**SYSTEM WIDE PEAK HOUR is 5:00 to 5:45 (time ending) - Or 4:45 to 5:45**

**INTERSECTION TRAFFIC FLOW ANALYSIS REPORT**  
**ME2 TRANSPORTATION DATA CORP.**

Location Old Airport Rd and Borden North Leg

Date Sep 29/08

Observers BL

MJF

time ending	FROM THE NORTH on						FROM THE SOUTH on Borden Dr						FROM THE EAST on Old Airport Rd						FROM THE WEST on Old Airport Rd					
	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE
4:15							19		10	7			14	104		12				81	20	8		
4:30							2		15	1			5	80		12				91	13	6		
4:45							9		2	3			12	67		3				126	12	8		
5:00							14		4	1			6	81		6				142	32	6		
5:15							16		1	1			37	95						154	74	5		
5:30							12		2	2			28	71		3				119	64	3	2	
5:45							19		28	6			19	77		3				92	28	6		
6:00							12		20	2			7	54						75	25	2		
2 hr total	0	0	0	0	0	0	103	0	82	23	0	0	128	629	0	39	0	0	0	880	268	44	2	0
				#DIV/0!				185		12%				757		5%				1148		4%		
peak hour	0	0	0				61	0	35				90	324	0				0	507	198			
								96						414						705				
2 direct L total	SB	0	#DIV/0!				NB	185	32%				WB	757	44%				EB	1148	61%			
	NB	0	#DIV/0!				SB	396	68%				EB	962	56%				WB	732	39%			
		0						581						1719						1880				

**INTERSECTION TRAFFIC FLOW ANALYSIS REPORT**  
**ME2 TRANSPORTATION DATA CORP.**

Location Highway 3 and Old Airport Rd

Date Sep 29/08

Observers RB SP

time ending	FROM THE NORTH on						FROM THE SOUTH on Old Airport Rd						FROM THE EAST on Highway 3						FROM THE WEST on Highway 3					
	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE
4:15							22		85	10			71	24		6				20	14	7		
4:30							9		60	8			62	23		7				18	21	4		
4:45							19		42	4			63	13		10				31	39	8		
5:00							16		79	6			81	15		5				34	45	8		
5:15							10		108	8			120	19		11				34	33	7		
5:30							4		70	2			94	5		7				19	32	4		
5:45							19		57	5			51	14		5				16	22	9		
6:00							15		53	4			56	15		10				13	18	2		
2 hr total	0	0	0	0	0	0	114	0	554	47	0	0	598	128	0	61	0	0	0	185	224	49	0	0
				#DIV/0!				668		7%				726		8%				409		12%		
peak hour	0	0	0				49	0	314				346	53	0				0	103	132			
								363						399						235				
2 direct L	SB	0	#DIV/0!				NB	668	45%				WB	726	50%				EB	409	63%			
total	NB	0	#DIV/0!				SB	822	55%				EB	739	50%				WB	242	37%			
		0						1490						1465						651				

**INTERSECTION TRAFFIC FLOW ANALYSIS REPORT**  
**ME2 TRANSPORTATION DATA CORP.**

Location Gun Club Rd and Highway 3

Date Sept 29/08

Observers VL RL

time ending	FROM THE NORTH on						FROM THE SOUTH on Gun Club Rd						FROM THE EAST on Highway 3 (Yellowknife)						FROM THE WEST on Highway 3 (Rae)					
	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE
4:15									14	9			5	8		6								
4:30									11	6			8	4		5								
4:45									6	4			7	8		8								
5:00									8	4			5	3		3								
5:15									7	3			9	11		8								
5:30									5	4			3	9		1								
5:45									9	5			4	8		2								
6:00									5				1	17		1								
2 hr total	0	0	0	0	0	0	0	0	65	35	0	0	42	68	0	34	0	0	0	68	0	8	0	0
				#DIV/0!					65	54%						31%						12%		
peak hour	0	0	0				0	0	29				21	31	0				0	36	0			
									29							52						36		
2 direct L total	SB	0	#DIV/0!				NB	65	61%				WB	110	45%				EB	68	50%			
	NB	0	#DIV/0!				SB	42	39%				EB	133	55%				WB	68	50%			
		0						107						243						136				

**INTERSECTION TRAFFIC FLOW ANALYSIS REPORT  
ME2 TRANSPORTATION DATA CORP.**

Location Highway 3 - Ingraham Trail

Date Sep 29/08

Observers AS ST

time ending	FROM THE NORTH on Ingraham Trail						FROM THE SOUTH on Ingraham Trail						FROM THE EAST on						FROM THE WEST on Highway 3						
	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	
4:15		15	12	8			68	9		6									16			55	12		
4:30		25	15	23			57	5		3									8			77	12		
4:45		9	5	7			63	10		4									6			58	9		
5:00		10	20	10			68	5		3									10			69	10		
5:15		15	12	4			71	10		4									6			97	10		
5:30		13	14	1			105	11		4									9			114	7		
5:45		6	3	6			86	10		3									11			100	4		
6:00		6	5	3			57	12		3									11			59	1		
2 hr total	0	99	86	62	0	0	575	72	0	30	0	0	0	0	0	0	0	0	77	0	0	629	65	0	0
		185		34%				647		5%						#DIV/0!				706		9%			
peak hour	0	44	49				330	36	0				0	0	0				36	0	0	380			
		93						366					0							416					
2 direct L total	SB	185	55%				NB	647	47%				WB	0	#DIV/0!				EB	706	52%				
	NB	149	45%				SB	728	53%				EB	0	#DIV/0!				WB	661	48%				
		334						1375					0							1367					

**INTERSECTION TRAFFIC FLOW ANALYSIS REPORT**  
**ME2 TRANSPORTATION DATA CORP.**

Location Highway 3 and Niven Gate

Date Sep 29/08

Observers EK MG

time ending	FROM THE NORTH on						FROM THE SOUTH on Niven Gate						FROM THE EAST on Highway 3						FROM THE WEST on Highway 3					
	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE
4:15	6		5	2									75	10	5	2			7	69		7		
4:30	5		6	3									70	10	4	1			11	55		3		
4:45	4		8	1									75	5	1				8	102		6		
5:00	9		10	2									69	6	2	1	1		13	78		2		
5:15	5		9	1									118	13	1				17	125		3		
5:30	8		12	3									86	10	3	2			20	93		1		
5:45	7		4			1							54	12	1		1		10	75		3		
6:00	10		10	3									55	9	6	2			3	71		1		
2 hr total	54	0	64	15	0	1	0	0	0	0	0	0	0	602	75	23	8	2	89	668	0	26	0	0
		118		13%				0		#DIV/0!				677		3%				757		3%		
peak hour	29	0	35				0	0	0				0	327	41				60	371	0			
		64						0						368						431				
2 direct L total	SB	118	42%				NB	0	#DIV/0!				WB	677	48%				EB	757	53%			
	NB	164	58%				SB	0	#DIV/0!				EB	722	52%				WB	666	47%			
		282						0						1399						1423				

**INTERSECTION TRAFFIC FLOW ANALYSIS REPORT**  
**ME2 TRANSPORTATION DATA CORP.**

Location 48 St - 52 Ave

Date Sep 30/08

Observers RB EK

time ending	FROM THE NORTH on 52 Ave						FROM THE SOUTH on 52 Ave						FROM THE EAST on School Driveway						FROM THE WEST on 48 St					
	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE
4:15	1	26	1	2	1		11	23	3	2	1								1	2	16	1		
4:30	1	18	2	1	1		9	18		2	2								3	1	16	2	2	
4:45		23	2	2	1		10	22	1	1	2						2		1		17			
5:00	1	26	6		2		10	21	3								8		5		28		4	
5:15	2	42	12		2		8	27	5		7		1				6	3	4	2	32		1	
5:30	2	32	3		2		11	35	3								13	2	3		26			
5:45	2	26					15	20	3		2						2			2	16		4	
6:00	1	12	2				15	23	6					2			3	1	3	1	10		1	
2 hr total	10	205	28	5	9	0	89	189	24	5	14	0	1	2	0	0	34	6	20	8	161	3	12	0
		243		2%				302		2%				3		0%				189		2%		
peak hour	7	126	21				44	103	14				1	0	0				12	4	102			
		154						161						1						118				
2 direct L total	SB	243	54%				NB	302	45%				WB	3	7%				EB	189	61%			
	NB	209	46%				SB	367	55%				EB	42	93%				WB	119	39%			
		452						669						45						308				

**INTERSECTION TRAFFIC FLOW ANALYSIS REPORT**  
**ME2 TRANSPORTATION DATA CORP.**

Location Franklin Ave and 48 St

Date Sept 30/08

Observers BL MJF

time ending	FROM THE NORTH on Franklin Avenue						FROM THE SOUTH on Franklin Avenue						FROM THE EAST on 48 St						FROM THE WEST on 48 St					
	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE
4:15	9	58	28	4	2	1	40	62	12	5	21		6	30	4	3	30		15	29	15	6	34	
4:30	1	53	7	3			30	29	9	3	9		7	10	3				9	17	10	2	4	
4:45	3	60	8				37	42	9	5			6	17	2		13		9	20	19	2		
5:00	3	69	10	4			39	42	9	3	5		8	29	1		15		10	20	19	2	4	
5:15	10	110	26	4			47	71	21	2			20	37	6		2		8	33	29	5		
5:30	8	62	16	4			41	41	9	5			13	27	2	1	13		13	26	19	1		
5:45	5	68	17				30	50	8	11			6	28	4		7		10	19	22		4	
6:00	4	41	16	2			38	41	5	2			7	15	3				7	15	21	2		
2 hr total	43	521	128	21	2	1	302	378	82	36	35	0	73	193	25	4	80	0	81	179	154	20	46	0
		692		3%				762		5%				291		1%				414		5%		
peak hour	26	309	69				157	204	47				47	121	13				41	98	89			
		404						408						181						228				
2 direct L total	SB	692	59%				NB	762	50%				WB	291	49%				EB	414	40%			
	NB	484	41%				SB	748	50%				EB	304	51%				WB	623	60%			
		1176						1510						595						1037				

**INTERSECTION TRAFFIC FLOW ANALYSIS REPORT  
ME2 TRANSPORTATION DATA CORP.**

Location Franklin Ave and 46 St

Date Sep 30/08

Observers RL VL

time ending	FROM THE NORTH on Franklin Ave						FROM THE SOUTH on Franklin Ave						FROM THE EAST on 46 St						FROM THE WEST on					
	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE
4:15		61		5		1	4	64		6	2	1							3			1		1
4:30		63		3	1		4	59		2									4					6
4:45		84		5			5	80		3									7					6
5:00		82					4	66		2													11	1
5:15		115	1				8	87		3		1											7	
5:30		90	1	1			3	76		1		2							8				4	
5:45		67	1				3	57		1									1				6	
6:00		59	2	2				64		1							7		5		5	1	5	
2 hr total	0	621	5	16	1	1	31	553	0	19	2	4	0	0	0	0	7	0	28	0	6	1	46	1
		626		3%				584		3%				0		#DIV/0!				34		3%		
peak hour	0	354	3				18	286	0				0	0	0				9	0	0			
		357						304						0						9				
2 direct L total	SB	626	52%				NB	584	48%				WB	0	#DIV/0!				EB	34	49%			
	NB	581	48%				SB	627	52%				EB	0	#DIV/0!				WB	36	51%			
		1207						1211						0						70				

**INTERSECTION TRAFFIC FLOW ANALYSIS REPORT**  
**ME2 TRANSPORTATION DATA CORP.**

Location Franklin - 43 St

Date Sep 30/08

Observers AS ST

time ending	FROM THE NORTH on Franklin Avenue						FROM THE SOUTH on Franklin Avenue						FROM THE EAST on 43 St						FROM THE WEST on					
	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE
4:15		40	4	4			13	35		3	3								6		7	1		
4:30		44	2	4	2		15	66		1	5								7		8			
4:45		57	2	2	6		7	66		3	8								8		14	1		
5:00		61	5	1	6		19	61			7								6		12	1		
5:15		67	2	2	3		37	98		2	14								10		17			
5:30		58	2	1	4		28	85		1	9								10		12	1		
5:45		57	5		2		15	62			13								6		14			
6:00		45	6	1	1		20	51		1	2								8		14			
2 hr total	0	429	28	15	24	0	154	524	0	11	61	0	0	0	0	0	0	0	61	0	98	4	0	0
		457		3%				678		2%						#DIV/0!				159		3%		
peak hour	0	243	14				99	306	0				0	0	0				32	0	55			
		257						405						0						87				
2 direct L total	SB	457	44%				NB	678	56%				WB	0	#DIV/0!				EB	159	47%			
	NB	585	56%				SB	527	44%				EB	0	#DIV/0!				WB	182	53%			
		1042						1205						0						341				

**INTERSECTION TRAFFIC FLOW ANALYSIS REPORT**  
**ME2 TRANSPORTATION DATA CORP.**

Location Franklin Ave and School Draw

Date sep 30/08

Observers MG WD

time ending	FROM THE NORTH on Franklin Avenue						FROM THE SOUTH on Franklin Ave						FROM THE EAST on School Draw						FROM THE WEST on					
	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE
4:15	2	53		7				50	3	7		1	4		4		1							
4:30	2	35						60	6			1	6		5	3	3							1
4:45	2	54		1				53	4	2			7		4	1								4
5:00	4	51		1		1		45	4			1	6		3		2							6
5:15	4	47		1		1		80	6	2			9		5	1								8
5:30	5	50		1				70	5	2		5	3		6		4							3
5:45	1	44						49	4	1		4	8		4		3							12
6:00	4	41		1		1		48	2	1		2	4		3		4	1						6
2 hr total	24	375	0	12	0	3	0	455	34	15	0	14	47	0	34	5	17	1	0	0	0	0	40	0
		399		3%				489		3%				81		6%				0		#DIV/0!		
peak hour	14	192	0				0	244	19				26	0	18				0	0	0			
		206						263						44						0				
2 direct L total	SB	399	45%				NB	489	54%				WB	81	58%				EB	0	#DIV/0!			
	NB	489	55%				SB	422	46%				EB	58	42%				WB	0	#DIV/0!			
		888						911						139						0				

**INTERSECTION TRAFFIC FLOW ANALYSIS REPORT**  
**ME2 TRANSPORTATION DATA CORP.**

Location Franklin Ave/McDonald Dr/Weaver Rd

Date Sep 30/08

Observers SP

time ending	FROM THE NORTH on McDonald Ave						FROM THE SOUTH on Franklin Ave						FROM THE EAST on Weaver Rd						FROM THE WEST on Weaver Rd					
	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE
4:15		3					8	30		1	1	1	1			1						38	4	
4:30		1					6	43	1		1											34	2	1
4:45						1	10	44	1	1			1		1				3			44	1	2
5:00		3	1				11	30	1		1		1				4	1	1			33		2
5:15		3	3		1		8	51	1	1	1		1				3	2	2	1		45	1	
5:30		6					13	58			2						3	3	4			37	1	1
5:45		1	5				4	44		1			3				2	3	2	1		37		
6:00		2				1	11	34		1	1		1				2	2				43	1	1
2 hr total	1	23	4	0	1	2	71	334	4	5	7	1	8	0	1	1	14	11	12	2		311	10	6
		28		0%				409		1%				9		11%				325		3%		3
peak hour	1	17	4				36	183	2				5	0	0				9	2		152		
		22						221						5						163				
2 direct L total	SB	28	7%				NB	409	54%				WB	9	56%				EB	325	81%			
	NB	347	93%				SB	342	46%				EB	7	44%				WB	75	19%			
		375						751						16						400				

**INTERSECTION TRAFFIC FLOW ANALYSIS REPORT**  
**ME2 TRANSPORTATION DATA CORP.**

Location 54 St and Franklin Ave

Date Oct.1/08

Observers Marg/Emelda

time ending	FROM THE NORTH on Franklin Ave						FROM THE SOUTH on Franklin Ave						FROM THE EAST on 54 St						FROM THE WEST on					
	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE
4:15	4	147		6	4			140	23	3	40		19		3	1	28	2						
4:30	5	195		9	7			145	11	2	21	1	8		7		22	3						
4:45	4	240		4	7			134	11	5	55	6	12		6	1	26	2						
5:00	6	199		6	24			142	20	4	102	5	11		7		51	2						
5:15	9	305		3	23			167	11	4	79	3	31		6	1	53	3						
5:30	4	210		5	17			116	10		75	12	26		3		38	6						
5:45	11	144		1	7			133	10	1	56	8	19		9		23	6						
6:00	3	110		3	4			143	18	1	81	7	24		8		29	4						
2 hr total	46	1550	0	37	93	0	0	1120	114	20	509	42	150	0	49	3	270	28	0	0	0	0	0	0
		1596		2%				1234		2%				199		2%				0		#DIV/0!		
peak hour	30	858	0				0	558	51				87	0	25				0	0	0			
		888						609						112						0				
2 direct L total	SB	1596	58%				NB	1234	42%				WB	199	55%				EB	0	#DIV/0!			
	NB	1169	42%				SB	1700	58%				EB	160	45%				WB	0	#DIV/0!			
		2765						2934						359						0				

**INTERSECTION TRAFFIC FLOW ANALYSIS REPORT**  
**ME2 TRANSPORTATION DATA CORP.**

Location 52 St and 51 Ave

Date Oct.1 /08

Observers RB

time ending	FROM THE NORTH on 51 Avenue						FROM THE SOUTH on						FROM THE EAST on 52 St						FROM THE WEST on 52 St					
	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE
4:15	14		38		2									10	2	1	4		6	8			6	
4:30	9		40		12								1	15	1	1	2		16	13	1		8	
4:45	3		18		1									10			4		13	15	1	1		
5:00	6		25		10									13	3		10		10	15			10	
5:15	20		41		6									11	5		10		18	28		1	13	
5:30	11	1	22		8									13	2		9		11	17		1	6	
5:45	10		25	6										14	1		4		8	8		1	10	
6:00	3		20		8									11	3		2		7	12			5	
2 hr total	76	1	229	6	47	0	0	0	0	0	0	0	1	97	17	2	45	0	89	116	2	4	58	0
		306		2%						#DIV/0!				115		2%				207		2%		
peak hour	47	1	113				0	0	0				0	51	11				47	68	0			
		161						0						62						115				
2 direct L	SB	306	74%				NB	0	0%				WB	115	37%				EB	207	39%			
total	NB	106	26%				SB	4	100%				EB	192	63%				WB	326	61%			
		412						4						307						533				

**INTERSECTION TRAFFIC FLOW ANALYSIS REPORT**  
**ME2 TRANSPORTATION DATA CORP.**

Location Franklin Ave and Forest Dr

Date Oct.1/08

Observers BL MJF

time ending	FROM THE NORTH on Franklin						FROM THE SOUTH on Franklin						FROM THE EAST on Forest Dr						FROM THE WEST on Forest Dr					
	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE
4:15	7	156	5	10			10	93	20	6	4		30	8	9	2			2	3	1			
4:30	13	150	3	12			11	106	16	4	3		49	4	8				2	5	2			3
4:45	17	175	2	6			4	98	27	4	3		48	1	6				2	3	2			5
5:00	4	218	1	7			14	133	31	9	6		41	6	10				6	2	3			4
5:15	11	316	8	5			8	146	39	4	4		62	2	3				1	2	3			2
5:30	13	143	2	6			12	73	47	4	5		71	7	8				3	3	6			4
5:45	15	197	2	1			6	118	35	2	7		44	2	3				3	2	7			2
6:00	13	174	8	4			17	143	21	3	4		62	7	11				3	4	6			
2 hr total	93	1529	31	51	0	0	82	910	236	36	36	0	407	37	58	2	0	0	20	24	30	0	22	0
peak hour	43	874	13	3%			40	470	152	3%			218	17	24	0%			13	9	19	0%		
		930						662						259						41				
2 direct L total	SB	1653	63%				NB	1228	38%				WB	502	59%				EB	74	33%			
	NB	988	37%				SB	1966	62%				EB	353	41%				WB	150	67%			
		2641						3194						855						224				

**INTERSECTION TRAFFIC FLOW ANALYSIS REPORT**  
**ME2 TRANSPORTATION DATA CORP.**

Location Con Rd and Forest Dr and Negus Pl

Date Oct.1/08

Observers WD

time ending	FROM THE NORTH on Con Rd						FROM THE SOUTH on Con Rd						FROM THE EAST on Negus Pl						FROM THE WEST on Forest Dr					
	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE
4:15	5	4	2	1	3		3	3	1										4		3	2		
4:30	1	8	7	1			6	4		1				1					4		10	2		
4:45		3	1		2		4	1							1		2		3	1	8		2	4
5:00	1	2	2				2	7						1	1		5		1	1	3		1	2
5:15	1	7	3		2	1		2				1		2					8		6	1		
5:30		6	17	2		6	8	3							1			1	4	2	4			1
5:45	1	5			2		3	3			1			1	1		1		5	2	7	1	1	
6:00		2	9				2	3				1					2		7		7		1	
2 hr total	9	37	41	4	9	7	28	26	1	1	2	1	0	5	4	0	10	1	36	6	48	6	5	7
		87		5%				55		2%				9		0%				90		7%		
peak hour	3	20	22				13	15	0				0	4	3				18	5	20			
		45						28						7						43				
2 direct L total	SB	87	57%				NB	55	39%				WB	9	36%				EB	90	55%			
	NB	66	43%				SB	85	61%				EB	16	64%				WB	74	45%			
		153						140						25						164				

**INTERSECTION TRAFFIC FLOW ANALYSIS REPORT**  
**ME2 TRANSPORTATION DATA CORP.**

Location 48 Street and 49 Avenue

Date Oct 1/08

Observers VL RL

time ending	FROM THE NORTH on 49 Ave						FROM THE SOUTH on 49 Ave						FROM THE EAST on 48 St						FROM THE WEST on 48 St					
	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE
4:15	2	7	27		4	1	20	7	5	2	2		15	25	7	1			12	20	17	3		
4:30	4	15	27	1	14	2	25	15	7	3	17	1	7	36	6		3		28	28	25			
4:45	6	7	16		6		20	7	9	1	10	1	14	38	5	2			14	31	30	2	2	
5:00	2	11	28		17		31	14	8	1	22	1	9	39	12				17	31	29	3		
5:15	2	5	20	1	5		35	7	10		17	1	12	40	3	2			16	36	40	4		
5:30	2	6	12		3	1	30	13	12		13		7	52	3			1	20	46	36	1		
5:45	1	6	6		3		8	2	1		10		10	26	8				13	42	21	2		
6:00	7	2	10		5	1	12	8	10	1	9	3	18	37	5		3		17	46	18			1
2 hr total	26	59	146	2	57	5	181	73	62	8	100	7	92	293	49	5	6	1	137	280	216	15	2	1
		231		1%				316		3%				434		1%				633		2%		
peak hour	7	28	66				104	36	31				38	157	26				66	155	126			
		101						171						221						347				
2 direct L total	SB	231	47%				NB	316	46%				WB	434	54%				EB	633	51%			
	NB	259	53%				SB	367	54%				EB	368	46%				WB	620	49%			
		490						683						802						1253				

**INTERSECTION TRAFFIC FLOW ANALYSIS REPORT**  
**ME2 TRANSPORTATION DATA CORP.**

Location 49 St and 51 Avenue

Date Oct.1/08

Observers ST L

time ending	FROM THE NORTH on 51 Avenue						FROM THE SOUTH on 51 Avenue						FROM THE EAST on 49 Street						FROM THE WEST on 49 Street					
	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE
4:15	8	23	3	1			15	36	13	6	23		5	19	9	2	20		3	46	60	3	35	
4:30	9	17	3	1			6	17	5	1	16		7	11	7		13		8	20	12		19	
4:45	15	16	8	1			6	28	6	1	10		4	25	1	1	13	1	9	30	14	2	20	
5:00	7	13	4			1	8	33	6		13		5	21	5		12	2	4	27	12		28	
5:15	7	36	13				19	37	10		22		6	21	14		11		7	38	15		36	
5:30	11	15	13				10	28	2		12	3	6	23	4		22		10	30	14	1	45	
5:45	13	22	6				17	25	4		9	1	7	22	5		15	3	4	20	11		22	
6:00	11	12	6				6	10	1		5	1	5	20	7			1	8	21	15		15	
2 hr total	81	154	56	3	0	1	87	214	47	8	110	5	45	162	52	3	106	7	53	232	153	6	220	0
		291		1%				348		2%				259		1%				438		1%		
peak hour	38	86	36				54	123	22				24	87	28				25	115	52			
		160						199						139						192				
2 direct L total	SB	291	48%				NB	348	50%				WB	259	42%				EB	438	59%			
	NB	319	52%				SB	352	50%				EB	360	58%				WB	305	41%			
		610						700						619						743				

**INTERSECTION TRAFFIC FLOW ANALYSIS REPORT**  
**ME2 TRANSPORTATION DATA CORP.**

Location Old Airport Rd & Borden St (Walmart)

Date Oct 2/08

Observers RB MG

time ending	FROM THE NORTH on Old Airport Rd						FROM THE SOUTH on Old Airport Rd						FROM THE EAST on Borden						FROM THE WEST on Borden					
	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE
4:15	6	73	6	2	4		98	106	2	8			10	10	3				11	4	21	1		
4:30	3	104	25	8	3		69	89	3	9	8		11	11	3				14	4	49	3		
4:45	1	129	37	11	1	2	81	78	3	9	5	1	11	7	1	1			15	2	23	3		
5:00	3	139	30	8	13		79	93	14	12	12		10	12	1				22	4	53			
5:15	11	123	25	3		2	82	90	34	6	10	3	15	31	4				19	8	35			
5:30	7	117	26	4	2		90	116	29	11	2		19	28	8			1	23	3	48	2		
5:45	6	116	38	6	6		79	59	15	8	4		15	19	3				9	4	28			
6:00	5	99	29	2	1		70	65	7	3	4		16	9	2		19	1	9	3	53	1		
2 hr total	42	900	216	44	30	4	648	696	107	66	45	4	107	127	25	1	19	2	122	32	310	10	0	0
		1158		4%				1451		5%				259		0%				464		2%		
peak hour	27	495	119				330	358	92				59	90	16				73	19	164			
		641						780						165						256				
2 direct L total	SB	1158	58%				NB	1451	52%				WB	259	59%				EB	464	32%			
	NB	843	42%				SB	1317	48%				EB	181	41%				WB	991	68%			
		2001						2768						440						1455				

**INTERSECTION TRAFFIC FLOW ANALYSIS REPORT**  
**ME2 TRANSPORTATION DATA CORP.**

Location Franklin, Old Airport Rd, Kam Lake

Date Oct.2/08

Observers LT AS BL ST

time ending	FROM THE NORTH on Franklin						FROM THE SOUTH on Kam Lake						FROM THE EAST on Taylor						FROM THE WEST on Old Airport Rd					
	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE
4:15	1	39	144	8			20	44	3	10			10	20	4	2			98	8	17	2		
4:30	3	57	129	7			18	38	2	6			8	16	2				137	17	25	5		1
4:45	1	63	154	9			34	38	5	7			19	15	5	2			132	19	32	2		1
5:00	3	113	234	4			23	43	8	2			26	9	1	3			123	10	21	2		
5:15	2	120	219	2			23	64	7	4			25	17	2	1			150	12	15	3		1
5:30	1	201	218	1			17	54	5	6			22	26	5	1			148	21	26	4		1
5:45	1	75	145	1			16	44	8	3			6	10	2	3			121	13	20	3		
6:00	4	53	112	5			12	62	3	5			13	10	1	2			150	13	21	6		
2 hr total	16	721	1355	37	0	0	163	387	41	43	0	0	129	123	22	14	0	0	1059	113	177	27	0	4
		2092		2%				591		7%				274		5%				1349		2%		
peak hour	7	509	816				79	205	28				79	62	10				542	56	82			
		1332						312						151						680				
2 direct L total	SB	2092	59%				NB	591	37%				WB	274	62%				EB	1349	45%			
	NB	1468	41%				SB	1027	63%				EB	170	38%				WB	1641	55%			
		3560						1618						444						2990				

**INTERSECTION TRAFFIC FLOW ANALYSIS REPORT**  
**ME2 TRANSPORTATION DATA CORP.**

Location Old Airport Rd and Range Lake Rd

Date Oct 2/08

Observers RL WD

time ending	FROM THE NORTH on Range Lake Rd						FROM THE SOUTH on Range Lake Rd						FROM THE EAST on Old Airport Rd						FROM THE WEST on Old Airport Rd					
	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE
4:15	6	19	9	1	4		46	11	11	1			54	124	4	8			8	91	53	1	6	
4:30	13	13	7		3		49	11	13	4	2		54	101	2	6	4		17	117	59	7	5	
4:45	14	17	10		4	1	71	8	15	4	4		52	124		10	3		14	113	60	14	3	
5:00	9	12	4		4	1	56	11	31	1			61	96		3	13		21	94	73	4	3	
5:15	18	13	8		3		56	9	28	4	1		72	93	3	3	8		20	104	82	3	6	
5:30	15	18	5				62	11	31	1			64	119	2	5	3		16	106	81	5	3	
5:45	7	10					43	18	38	2		3	65	118	1	7	1		37	123	88	6		
6:00	33	25	11		5		55	10	28	2		2	101	170	3	3	23		19	106	80	5	1	
2 hr total	115	127	54	1	23	2	438	89	195	19	7	5	523	945	15	45	55	0	152	854	576	45	27	0
		296		0%				722		3%				1483		3%				1582		3%		
peak hour	49	53	17				217	49	128				262	426	6				94	427	324			
		119						394						694						845				
2 direct L total	SB	296	54%				NB	722	37%				WB	1483	56%				EB	1582	52%			
	NB	256	46%				SB	1226	63%				EB	1164	44%				WB	1437	48%			
		552						1948						2647						3019				

<b>Intersection</b>	<b>Total Intersection Peak Hour Volume</b>		
	<b>Oct 2 (Thurs)</b>	<b>Oct 3 (Fri)</b>	<b>% Difference</b>
Old Airport Road @ Borden W	1842	1979	6.9%
Old Airport Road @ Kam Lake/Franklin	2475	2617	5.4%
Old Airport Road @ Range Lake	2052	2463	16.7%

**INTERSECTION TRAFFIC FLOW ANALYSIS REPORT**  
**ME2 TRANSPORTATION DATA CORP.**

Location old Airport Rd and Borden Rd

Date Oct.3

Observers RB MG

time ending	FROM THE NORTH on Old Airport Rd						FROM THE SOUTH on Old Airport Rd						FROM THE EAST on Borden						FROM THE WEST on Borden					
	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE
4:15	7	120	53	6	17	3	101	148	20	20	13		17	24	4				33	1	35	1		
4:30	8	103	24	5	10	2	72	79	13	5	6		15	12	2				24	3	39	2		
4:45	17	124	30	3	15	2	100	92	10	11	14		11	7	1				23	9	33	1		
5:00	7	93	35	1	7		86	91	14	4	6		16	15	3				25	6	58	1		
5:15	8	138	42	2	11	1	93	72	23	4	8		12	27	1				21	8	46	1	2	
5:30	11	100	50	5	8	3	91	115	41	4	9		18	40					35	7	56		1	
5:45	8	102	49	2	6	1	73	86	35	10	9		22	33	2				1	7	57	1		
6:00	6	103	50	3	11	3	100	75	21	3	9		13	28	2				8	4	63	3		
2 hr total	72	883	333	27	85	15	716	758	177	61	74	0	124	186	15	0	0	0	170	45	387	10	3	0
		1288		2%				1651		4%				325		0%				602		2%		
peak hour	34	433	176				343	364	113				68	115	6				82	28	217			
		643						820						189						327				
2 direct L total	SB	1288	58%				NB	1651	54%				WB	325	53%				EB	602	33%			
	NB	943	42%				SB	1394	46%				EB	294	47%				WB	1235	67%			
		2231						3045						619						1837				

**INTERSECTION TRAFFIC FLOW ANALYSIS REPORT  
ME2 TRANSPORTATION DATA CORP.**

Location Franklin, Old Airport Rd, Kam Lake

Date

Observers

SP

BL

AS

ST

time ending	FROM THE NORTH on Franklin						FROM THE SOUTH on Kam Lake						FROM THE EAST on Taylor						FROM THE WEST on Old Airport Rd					
	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE
4:15		43	122	3			14	28	3				18	27	7	1			159	17	21	7		
4:30		59	145	8			21	47	3	1			15	15	2	1			139	7	34	3		
4:45		74	171	6			25	64	12	5			10	22	3				151	20	24	4		
5:00		87	173	4			27	51	8	2			13	8	4				146	13	24	3		
5:15	1	111	211	4			20	81	2	3			37	17	5	2			129	17	17		1	
5:30		215	229	8			27	43	8	3			21	17	1				146	14	20	1		
5:45		174	211	7			22	38	9	4			4	10					169	15	22	4		
6:00	1	155	147	6			12	46	6	5			6	10	2				142	18	16			
2 hr total	2	918	1409	46	0	0	168	398	51	23	0	0	124	126	24	4	0	0	1181	121	178	22	1	0
		2329		2%				617		4%				274		1%				1480		1%		
peak hour	1	587	824				96	213	27				75	52	10				590	59	83			
		1412						336						137						732				
2 direct L total	SB	2329	59%				NB	617	34%				WB	274	61%				EB	1480	46%			
	NB	1603	41%				SB	1220	66%				EB	174	39%				WB	1703	54%			
		3932						1837						448						3183				

**INTERSECTION TRAFFIC FLOW ANALYSIS REPORT**  
**ME2 TRANSPORTATION DATA CORP.**

Location Range Lake Rd and Old Airport Rd

Date Oct 3/08

Observers WD RL VL

time ending	FROM THE NORTH on Range Lake Rd						FROM THE SOUTH on Range Lake Rd						FROM THE EAST on Old Airport Rd						FROM THE WEST on Old Airport Rd					
	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE
4:15	21	35	27		13	1	60	18	40	3	12	1	85	145	1	4			9	94	80	8		1
4:30	22	30	17		12	3	68	9	30	6	7	1	58	132		4			21	103	75	5		
4:45	13	17	16		4		58	6	41	2	6		55	127		8			23	130	117	8		
5:00	6	11	17		7		52	13	24	3	13		51	140	1	2			19	107	89	2		
5:15	24	20	20		7	1	71	6	28	3	12	1	75	130		3			49	71	107	3		
5:30	17	39	13		11	2	64	15	42	1	6		112	190	2	3			22	119	120	7		
5:45	8	10	9		8		59	15	35	2	5	1	58	163	3	5			12	115	90	3		1
6:00	15	19	19		8	2	53	17	33		10	2	70	120	1	2			41	150	111	4		
2 hr total	126	181	138	0	70	9	485	99	273	20	71	6	564	1147	8	31	0	0	196	889	789	40	0	3
		445		0%				857		2%				1719		2%				1874		2%		
peak hour	55	80	59				246	49	129				296	623	6				102	412	406			
		194						424						925						920				
2 direct L total	SB	445	59%				NB	857	36%				WB	1719	57%				EB	1874	51%			
	NB	303	41%				SB	1534	64%				EB	1288	43%				WB	1770	49%			
		748						2391						3007						3644				

**INTERSECTION TRAFFIC FLOW ANALYSIS REPORT  
ME2 TRANSPORTATION DATA CORP.**

Location Highway 3 and Old Airport Rd

Date Tuesday 24 February 2009

Observers

time ending	FROM THE NORTH on						FROM THE SOUTH on Old Airport Rd						FROM THE EAST on Highway 3						FROM THE WEST on Highway 3					
	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE
4:15							12		69	13			65	20		16				28	28	12		
4:30							10		50	7			53	21		5				32	29	7		
4:45							7		57	10			74	8		6				23	29	6		
5:00							14		64	6			75	11		9				24	22	0		
5:15							7		94	9			74	8		7				15	20	2		
5:30							13		46	7			90	5		6				22	22	5		
5:45							8		41	6			53	8		5				14	19	4		
6:00							8		48	11			36	0		5		1		9	14	7		
2 hr total	0	0	0	0	0	0	79	0	469	69	0	0	520	81	0	59	0	1	0	167	183	43	0	0
									548	13%						10%					350	12%		
peak hour	0	0	0				43	0	240				267	60	0				0	107	108			
									283												215			
2 direct L	SB	0	#DIV/0!				NB	548	44%				WB	601	49%				EB	350	69%			
total	NB	0	#DIV/0!				SB	703	56%				EB	636	51%				WB	160	31%			
		0						1251						1237						510				

4:45 - 5:45	FROM THE NORTH on								FROM THE SOUTH on Old Airport Rd								FROM THE EAST on Highway 3								FROM THE WEST on Highway 3							
	LT	ST	RT	CV	PED	BIKE		LT	ST	RT	CV	PED	BIKE		LT	ST	RT	CV	PED	BIKE		LT	ST	RT	CV	PED	BIKE					
		0	0	0	0	0	0	0	42	0	245	28	0	0	0	292	32	0	27	0	0	0	0	0	75	83	11	0	0			

**INTERSECTION TRAFFIC FLOW ANALYSIS REPORT  
ME2 TRANSPORTATION DATA CORP.**

Location Gun Club Rd and Highway 3

Date Thursday 26 February 2009

Observers

time ending	FROM THE NORTH on						FROM THE SOUTH on Gun Club Rd						FROM THE EAST on Highway 3 (Yellowknife)						FROM THE WEST on Highway 3 (Rae)					
	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE
4:15									9	4			6	10		3					6			
4:30									12	2			4	6		3					6	1	1	
4:45							1		4	1			7	11		6					10		2	
5:00									8	2			4	10		4					1			
5:15									3	2			5	5		5					7			
5:30									3	1			6	10		4					13		1	
5:45									3	1			4	7		4					5			
6:00									2	1			0	5		1					8		1	
2 hr total	0	0	0	0	0	0	1	0	44	14	0	0	36	64	0	30	0	0	0	56	1	5	0	0
				#DIV/0!					45	31%					100	30%					57	9%		
peak hour	0	0	0				1	0	33				21	37	0				0	23	1			
									34						58						24			
2 direct L	SB	0	#DIV/0!				NB	45	55%				WB	100	50%				EB	57	47%			
total	NB	0	#DIV/0!				SB	37	45%				EB	100	50%				WB	65	53%			
		0						82						200						122				

4:45 - 5:45	FROM THE NORTH on						FROM THE SOUTH on Gun Club Rd						FROM THE EAST on Highway 3 (Yellowknife)						FROM THE WEST on Highway 3 (Rae)					
	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE
	0	0	0	0	0	0	0	0	17	6	0	0	19	32	0	17	0	0	0	26	0	1	0	0

**INTERSECTION TRAFFIC FLOW ANALYSIS REPORT  
ME2 TRANSPORTATION DATA CORP.**

Location Highway 3 - Ingraham Trail

Date Tuesday 25 February 2009

Observers

time ending	FROM THE NORTH on Ingraham Trail						FROM THE SOUTH on Ingraham Trail						FROM THE EAST on						FROM THE WEST on Highway 3					
	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE
4:15		6	8	5			63	4		3									13		36	6		
4:30		8	6	3			61	5		1									13		58	4		
4:45		4	7	2			74	9		2									10		54	4		
5:00		4	6	2			51	3		3									5		68	5		
5:15		4	4	1			85	11		2									8		102	5		
5:30		4	5	2			64	5		2									5		55	3		
5:45		3	4	3			46	6		0									8		63	9		
6:00		3	9	8			49	0		0									3		50	1		
2 hr total	0	36	49	26	0	0	493	43	0	13	0	0	0	0	0	0	0	0	65	0	486	37	0	0
		85		31%				536		2%						#DIV/0!				551		7%		
peak hour	0	20	23				271	28	0				0	0	0				36	0	282			
		43						299												318				
2 direct L	SB	85	44%				NB	536	51%				WB	0	#DIV/0!				EB	551	50%			
total	NB	108	56%				SB	522	49%				EB	0	#DIV/0!				WB	542	50%			
		193						1058						0						1093				

4:45 - 5:45	FROM THE NORTH on Ingraham Trail						FROM THE SOUTH on Ingraham Trail						FROM THE EAST on						FROM THE WEST on Highway 3					
	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE
	0	15	19	8	0	0	246	25	0	7	0	0	0	0	0	0	0	0	26	0	288	22	0	0

**INTERSECTION TRAFFIC FLOW ANALYSIS REPORT  
ME2 TRANSPORTATION DATA CORP.**

Location Con Rd and Forest Dr and Negus Pl

Date Thursday 26 February 2009

Observers

time ending	FROM THE NORTH on Con Rd						FROM THE SOUTH on Con Rd						FROM THE EAST on Negus Pl						FROM THE WEST on Forest Dr					
	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE
4:15	1	2							1		2				1		4		5	1	3	1	1	
4:30		1	2		1		5	5											4		6		1	
4:45		3	7	1			5	4											6		7	1		
5:00		4	6				1	5											2		4			
5:15	1	3	7		3		2	6	1	1				1			5		5		5	1		
5:30	1	9	6		1		4	3	3										2	1	4			
5:45		2	5				2	2						1			2		3		3			
6:00		4	4		1		2	2			2			1			1		3	1	1	1	1	
2 hr total	3	28	37	1	6	0	21	27	5	1	6	0	0	3	1	0	12	0	30	3	33	4	3	0
	68		1%				53		2%				4		0%				66		6%			
peak hour	2	19	26				12	18	4				0	1	0				15	1	20			
	47						34						1						36					
2 direct L	SB	68	54%				NB	53	46%				WB	4	27%				EB	66	52%			
total	NB	58	46%				SB	61	54%				EB	11	73%				WB	61	48%			
		126						114						15						127				

4:45 - 5:45	FROM THE NORTH on Con Rd						FROM THE SOUTH on Con Rd						FROM THE EAST on Negus Pl						FROM THE WEST on Forest Dr					
	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE	LT	ST	RT	CV	PED	BIKE
		2	18	24	0	4	0	9	16	4	1	0	0	0	2	0	0	7	0	12	1	16	1	0

## ME2 TRANSPORTATION DATA CORP. Vehicle Counts

### VehicleCount-151 -- English (ENU)

**Datasets:**

**Site:** Franklin Avenue S of 51 Street  
**Filter time:** 18:57 Monday, September 29, 2008 => 12:24 Saturday, October 04, 2008  
**Direction:** North (bound)  
**In profile:** 33493 Vehicles

**\* Monday, September 29, 2008 - Total=1253 (Incomplete) , 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>136</b>	<b>102</b>																							
44	34	15																				124	101	78
25	19	14																				98	77	65
32	27	15																				112	72	57
35	22	12																			20	89	79	63

**\* Tuesday, September 30, 2008 - Total=7916, 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
	56	36	37	15	30	45	103	390	752	400	416	477	576	613	534	560	545	561	468	428	319	271		
<b>168</b>	<b>116</b>																							
15	9	9	4	5	10	26	60	179	102	113	117	141	162	124	138	151	170	125	116	94	75			
48	39	13																						
14	7	9	3	6	14	16	61	230	87	105	107	128	160	136	127	118	139	105	106	90	66			
37	22	15																						
15	11	13	3	13	5	27	94	184	94	89	119	134	137	147	143	140	117	113	108	73	70			
38	32	19																						
12	9	6	5	6	16	34	175	159	117	109	134	173	154	127	152	136	135	125	98	62	60			
45	23	14																						

AM Peak 0745 - 0845 (768), AM PHF=0.83 PM Peak 1245 - 1345 (632), PM PHF=0.91

**\* Wednesday, October 01, 2008 - Total=7942, 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
	61	44	49	25	24	52	84	339	744	414	431	488	565	573	488	553	550	517	528	407	370	339		
<b>195</b>	<b>102</b>																							
13	14	19	8	6	3	14	47	199	110	106	104	162	164	112	117	121	162	149	114	98	106			
61	35	22																						
15	14	10	7	2	7	11	64	219	92	110	128	114	153	125	130	143	103	130	106	78	87			
48	24	17																						
19	10	11	5	9	15	25	79	175	91	108	116	135	119	123	167	142	122	133	89	86	77			
45	27	20																						
14	6	9	5	7	27	34	149	151	121	107	140	154	137	128	139	144	130	116	98	108	69			
41	16	16																						

AM Peak 0800 - 0900 (744), AM PHF=0.85 PM Peak 1230 - 1330 (606), PM PHF=0.92

**\* Thursday, October 02, 2008 - Total=7782, 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
	75	55	48	42	25	42	100	356	779	409	395	460	579	556	505	551	503	531	451	413	309	297		
<b>185</b>	<b>116</b>																							
22	13	17	13	4	1	18	45	185	104	96	116	152	168	130	138	114	151	109	116	89	90			
53	36	17																						
17	11	15	13	4	11	15	64	241	94	101	96	129	138	121	128	127	117	115	100	75	91			
55	27	18																						
20	17	6	9	8	12	24	87	184	101	95	117	123	128	124	142	138	138	111	97	80	60			
39	28	19																						
16	14	10	7	9	18	43	160	169	110	103	131	175	122	130	143	124	125	116	100	65	56			
38	25	17																						

AM Peak 0800 - 0900 (779), AM PHF=0.81 PM Peak 1245 - 1345 (609), PM PHF=0.87

**\* Friday, October 03, 2008 - Total=7647, 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
2300	71	47	59	34	28	54	113	351	794	426	435	502	566	617	548	560	607	587	585	67	1	151	
238	206																						
17	8	17	7	5	3	21	38	209	114	127	119	134	176	140	142	118	156	140	47	1	0		
69	56	42																					
18	11	16	8	5	8	27	53	233	95	97	99	127	160	132	137	151	156	145	15	0	1		
56	58	34																					
19	12	17	6	7	17	30	89	203	97	90	124	123	136	129	162	159	152	149	4	0	74		
52	45	44																					
17	16	9	13	11	26	35	171	149	120	121	160	182	145	147	119	179	123	151	1	0	76		
61	47	28																					

AM Peak 0745 - 0845 (816), AM PHF=0.88 PM Peak 1245 - 1345 (654), PM PHF=0.90

**\* Saturday, October 04, 2008 - Total=933 (Incomplete) , 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
2300	148	112	105	71	41	42	77	146	105	56	14	16	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	31	23	18	11	14	16	29	27	17	8	5	0	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	35	33	20	13	4	17	31	22	12	0	4	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	23	27	19	13	12	23	35	26	13	0	4	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	23	22	14	4	12	21	51	30	14	6	3	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

## ME2 TRANSPORTATION DATA CORP. Vehicle Counts

### VehicleCount-147 -- English (ENU)

**Datasets:**

**Site:** Franklin Avenue S of 51 Street  
**Filter time:** 19:21 Monday, September 29, 2008 => 12:32 Saturday, October 04, 2008  
**Direction:** South (bound)  
**In profile:** 34521 Vehicles

**\* Monday, September 29, 2008 - Total=952 (Incomplete) , 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	372	276	
<b>195</b>	<b>109</b>																									
59	32	17																						114	87	
55	39	20																						53	94	70
44	21	13																						98	90	54
37	17	13																						95	74	65

**\* Tuesday, September 30, 2008 - Total=7816, 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
	63	41	30	16	22	34	96	237	457	371	386	495	555	536	541	603	626	732	574	426	349	323			
<b>193</b>	<b>110</b>																								
56	17	6	6	4	4	7	14	34	98	84	95	93	151	141	152	153	139	256	149	122	96	98			
44	20	8	12	3	7	7	19	44	134	98	97	115	155	140	133	157	133	201	134	98	85	83			
48	13	10	9	6	5	11	32	72	125	90	96	136	115	117	129	142	178	149	145	100	85	69			
45	22	13																							
	13	17	3	3	6	9	31	87	100	99	98	151	134	138	127	151	176	126	146	106	83	73			
	24	10																							

AM Peak 1130 - 1230 (593), AM PHF=0.96 PM Peak 1630 - 1730 (811), PM PHF=0.79

**\* Wednesday, October 01, 2008 - Total=7779, 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
	59	48	55	15	25	20	106	224	465	351	433	513	547	528	524	522	662	706	556	416	347	345			
<b>205</b>	<b>107</b>																								
52	20	9	29	4	4	5	11	37	108	79	102	110	156	152	149	135	122	241	122	115	96	81			
54	16	12	12	3	3	1	24	34	136	85	99	118	116	131	139	132	180	191	140	109	108	94			
51	13	14	8	5	2	5	37	59	117	88	108	130	129	120	101	125	161	144	142	96	71	96			
48	10	13	6	3	16	9	34	94	104	99	124	155	146	125	135	130	199	130	152	96	72	74			
	26	12																							

AM Peak 1115 - 1215 (559), AM PHF=0.90 PM Peak 1630 - 1730 (792), PM PHF=0.82

**\* Thursday, October 02, 2008 - Total=7640, 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
	81	64	52	30	24	39	93	207	429	314	368	474	548	510	545	598	685	736	497	377	344	315			
<b>198</b>	<b>112</b>																								
56	24	11	5	6	6	8	7	24	97	68	88	99	150	138	137	154	158	255	139	99	101	86			
58	25	17	23	9	5	4	20	35	124	73	82	105	132	125	128	147	142	210	136	80	84	68			
42	20	15	10	6	6	10	31	72	114	78	104	128	120	126	155	160	214	146	103	103	85	93			
42	12	23	12																						
	12	21	14	9	7	17	35	76	94	95	94	142	146	121	125	137	171	125	119	95	74	68			
	25	17																							

AM Peak 1130 - 1230 (552), AM PHF=0.92 PM Peak 1630 - 1730 (850), PM PHF=0.83

**\* Friday, October 03, 2008 - Total=8038, 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
	74	59	66	27	21	42	114	236	484	354	411	461	562	496	578	557	533	744	513	478	388	382		
<b>243</b>	<b>215</b>																							
	28	19	21	12	2	7	19	25	100	102	100	103	172	124	143	153	111	238	145	149	88	88		
68	58	37																						
	17	9	18	5	3	7	18	49	147	79	112	94	124	128	155	135	46	203	115	117	104	79		
63	61	44																						
	12	14	14	5	10	11	32	67	126	77	105	105	132	107	119	140	178	161	128	114	107	118		
56	60	32																						
	17	17	13	5	6	17	45	95	111	96	94	159	134	137	161	129	198	142	125	98	89	97		
56	36	30																						

AM Peak 1145 - 1245 (587), AM PHF=0.85 PM Peak 1630 - 1730 (817), PM PHF=0.86

**\* Saturday, October 04, 2008 - Total=2050 (Incomplete) , 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
	143	117	131	69	39	46	64	137	192	267	343	435	-	-	-	-	-	-	-	-	-	-	-	-
-	-																							
	37	28	43	23	9	9	12	34	46	57	64	100	67	-	-	-	-	-	-	-	-	-	-	-
-	-																							
	44	30	33	16	6	11	14	28	38	56	74	119	0	-	-	-	-	-	-	-	-	-	-	-
-	-																							
	32	29	28	17	9	8	19	29	48	65	88	109	-	-	-	-	-	-	-	-	-	-	-	-
-	-																							
	30	30	27	13	15	18	19	46	60	89	117	107	-	-	-	-	-	-	-	-	-	-	-	-
-	-																							

**ME2 TRANSPORTATION DATA CORP.**  
**Vehicle Counts**

**VehicleCount-145 -- English (ENU)**

**Datasets:**

**Site:** Franklin Avenue S of Forest  
**Filter time:** 12:22 Monday, September 29, 2008 => 0:45 Tuesday, October 07, 2008  
**Direction:** North (bound)  
**In profile:** 68714 Vehicles

**\* Monday, September 29, 2008 - Total=11342 (Incomplete) , 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
-	-	-	-	-	-	-	-	-	-	-	-	-	1306	1092	1366	1356	1384	1328	1184	926	698	442	260	
-	-	-	-	-	-	-	-	-	-	-	-	-	410	280	308	318	372	312	322	280	206	134	86	38
-	-	-	-	-	-	-	-	-	-	-	-	0	310	242	314	298	338	324	250	236	184	86	68	30
-	-	-	-	-	-	-	-	-	-	-	-	260	282	248	374	374	316	338	318	196	160	110	58	26
-	-	-	-	-	-	-	-	-	-	-	-	508	304	322	370	366	358	354	294	214	148	112	48	28

**\* Tuesday, September 30, 2008 - Total=19796, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
122	68	66	44	52	98	296	1050	2016	936	890	1074	1500	1352	1148	1374	1416	1376	1328	1246	864	708	446	326	
38	20	16	8	8	22	58	140	540	218	224	252	360	414	304	328	368	370	342	380	266	226	116	118	42
30	18	20	18	10	14	52	174	646	198	228	256	312	352	248	346	338	312	280	294	192	190	108	72	38
26	12	14	4	18	18	86	272	468	240	196	254	322	278	296	362	318	354	348	306	202	152	104	70	40
28	18	16	14	16	44	100	464	362	280	242	312	506	308	300	338	392	340	358	266	204	140	118	66	36

AM Peak 0745 - 0845 (2118), AM PHF=0.82 PM Peak 1230 - 1330 (1594), PM PHF=0.79

**\* Wednesday, October 01, 2008 - Total=15405, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
156	94	84	56	64	124	260	1030	1908	954	834	1148	1432	1292	1102	794	702	747	752	596	502	387	256	131	
42	28	20	10	8	10	36	110	580	256	218	296	356	368	248	252	182	189	167	161	136	105	91	48	33
38	30	26	22	14	18	44	156	570	214	212	256	252	326	278	161	169	194	214	140	112	92	65	25	17
40	18	22	6	18	30	76	292	406	226	224	254	340	274	300	203	182	185	159	149	116	107	51	39	19
36	18	16	18	24	66	104	472	352	258	180	342	484	324	276	178	169	179	212	146	138	83	49	19	22

AM Peak 0745 - 0845 (2028), AM PHF=0.87 PM Peak 1230 - 1330 (1518), PM PHF=0.78

**\* Thursday, October 02, 2008 - Total=9760, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
91	50	47	33	28	52	132	503	987	446	436	552	738	631	583	619	636	736	689	585	442	377	231	136	
33	13	15	13	6	5	23	52	266	118	99	127	178	183	147	158	152	205	172	160	131	117	66	44	20
17	11	12	8	8	12	24	72	305	110	123	126	145	160	145	151	163	176	163	147	102	89	65	23	28
19	13	11	6	9	14	27	137	218	99	114	134	163	144	149	157	150	186	169	137	109	92	62	39	15
22	13	9	6	5	21	58	242	198	119	100	165	252	144	142	153	171	169	185	141	100	79	38	30	14

AM Peak 0745 - 0845 (1031), AM PHF=0.85 PM Peak 1230 - 1330 (758), PM PHF=0.75

**\* Friday, October 03, 2008 - Total=8455, 15 minute drops HOSE UP - CITY YK SWEEPER**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
77	45	52	30	26	63	111	0	0	0	312	583	738	683	602	707	759	727	821	640	510	431	314	224	
20	6	12	3	4	2	29	0	0	0	0	124	159	191	146	183	187	192	197	169	137	129	95	62	40
28	14	9	6	9	7	40	0	0	0	60	122	154	143	156	167	163	163	190	181	139	106	68	56	40
15	13	18	13	4	28	42	0	0	0	119	167	161	184	134	195	199	182	236	136	94	98	69	60	38
14	12	13	8	9	26	0	0	0	0	133	170	264	165	166	162	210	190	198	154	140	98	82	46	37

AM Peak 1130 - 1230 (650), AM PHF=0.96 PM Peak 1800 - 1900 (821), PM PHF=0.87

**\* Saturday, October 04, 2008 - Total=3188, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
155	109	99	71	57	57	102	189	312	445	514	570	508	0	0	0	0	0	0	0	0	0	0	0	0
40	31	22	18	17	13	17	26	58	88	119	137	162	0	0	0	0	0	0	0	0	0	0	0	0
40	28	29	20	15	9	23	38	65	113	127	133	162	0	0	0	0	0	0	0	0	0	0	0	0
38	23	27	19	17	20	23	53	78	119	124	147	145	0	0	0	0	0	0	0	0	0	0	0	0
37	27	21	14	8	15	39	72	111	125	144	153	39	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak 1130 - 1230 (624), AM PHF=0.96 PM Peak 1200 - 1300 (508), PM PHF=0.78

**ME2 TRANSPORTATION DATA CORP.**  
**Vehicle Counts**

**VehicleCount-140 -- English (ENU)**

**Datasets:**

**Site:** Franklin Avenue S of Forest  
**Filter time:** 12:02 Monday, September 29, 2008 => 12:51 Saturday, October 04, 2008  
**Direction:** South (bound)  
**In profile:** 53402 Vehicles

**\* Monday, September 29, 2008 - Total=7140 (Incomplete) , 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
-	-	-	-	-	-	-	-	-	-	-	-	565	628	634	810	925	1035	690	565	508	384	270	126	
-	-	-	-	-	-	-	-	-	-	-	-	54	196	159	186	238	306	199	149	140	121	89	38	29
-	-	-	-	-	-	-	-	-	-	-	-	158	142	162	199	205	322	153	142	151	99	71	35	18
-	-	-	-	-	-	-	-	-	-	-	-	153	130	139	203	264	219	168	149	112	76	58	32	13
-	-	-	-	-	-	-	-	-	-	-	-	200	160	174	222	218	188	170	125	105	88	52	21	15

PM Peak 1630 - 1730 (1110), PM PHF=0.86

**\* Tuesday, September 30, 2008 - Total=10507, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
75	33	36	25	37	56	180	441	605	458	492	574	834	661	631	817	865	1018	716	596	522	437	242	156	
29	6	10	4	8	5	25	63	154	105	114	108	268	183	167	174	193	331	199	174	137	119	90	40	26
18	11	10	6	8	11	27	81	162	110	134	124	201	162	162	201	207	287	173	142	138	102	55	41	22
13	7	9	7	12	14	61	132	158	123	120	151	164	168	147	221	238	219	186	139	130	118	49	39	17
15	9	7	8	9	26	67	165	131	120	124	191	201	148	155	221	227	181	158	141	117	98	48	36	12

AM Peak 1145 - 1245 (824), AM PHF=0.77 PM Peak 1630 - 1730 (1083), PM PHF=0.82

**\* Wednesday, October 01, 2008 - Total=10665, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
77	51	55	25	44	54	196	442	589	468	483	619	787	622	633	725	906	1073	792	624	501	489	265	145	
26	15	15	6	7	8	27	71	151	119	115	124	270	183	162	161	207	340	189	191	156	110	72	40	30
22	13	14	6	8	15	35	86	162	113	117	126	172	153	164	182	233	243	192	143	137	133	64	41	22
17	7	14	6	8	13	63	121	159	105	115	147	161	148	138	186	235	272	217	150	120	132	67	36	23
12	16	12	7	21	18	71	164	117	131	136	222	184	138	169	196	231	218	194	140	88	114	62	28	18

AM Peak 1145 - 1245 (825), AM PHF=0.76 PM Peak 1645 - 1745 (1086), PM PHF=0.80

**\* Thursday, October 02, 2008 - Total=10509, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
93	64	63	31	35	65	177	414	605	415	451	581	834	640	682	812	935	1004	723	579	484	395	273	154	
30	15	14	10	5	10	26	57	144	96	118	111	282	173	167	184	222	330	187	148	127	116	81	45	35
22	14	12	8	9	13	27	68	172	83	105	123	192	167	164	196	196	294	187	141	136	96	83	43	23
23	13	17	4	10	16	56	130	157	107	110	175	173	142	189	212	273	203	175	133	117	100	61	34	16
18	22	20	9	11	26	68	159	132	129	118	172	187	158	162	220	244	177	174	157	104	83	48	32	11

AM Peak 1130 - 1230 (821), AM PHF=0.73 PM Peak 1630 - 1730 (1141), PM PHF=0.86

**\* Friday, October 03, 2008 - Total=11251, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
85	58	66	31	32	67	168	432	629	473	536	598	794	650	660	854	954	1099	712	624	548	508	347	326	
35	20	20	13	5	12	25	63	159	116	126	126	264	206	161	204	234	324	187	189	156	108	102	77	49
23	12	17	4	7	13	31	78	186	126	127	119	186	157	177	199	209	312	170	149	130	110	69	88	46
16	11	17	9	12	17	50	128	161	123	135	142	157	147	148	225	229	252	179	153	130	142	83	96	38
11	15	12	5	8	25	62	163	123	108	148	211	187	140	174	226	282	211	176	133	132	148	93	65	39

AM Peak 1145 - 1245 (818), AM PHF=0.77 PM Peak 1645 - 1745 (1170), PM PHF=0.90

**\* Saturday, October 04, 2008 - Total=3330 (Incomplete) , 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
172	139	116	85	66	63	91	184	296	410	566	623	519	-	-	-	-	-	-	-	-	-	-	-	-
49	41	37	32	8	12	12	45	59	102	160	153	162	-	-	-	-	-	-	-	-	-	-	-	-
46	38	30	22	17	12	14	37	68	98	126	157	173	-	-	-	-	-	-	-	-	-	-	-	-
38	28	24	18	19	14	29	50	70	97	126	171	172	-	-	-	-	-	-	-	-	-	-	-	-
39	32	25	13	22	25	36	52	99	113	154	142	12	-	-	-	-	-	-	-	-	-	-	-	-

AM Peak 1145 - 1245 (649), AM PHF=0.94

## ME2 TRANSPORTATION DATA CORP. Vehicle Counts

### VehicleCount-138 -- English (ENU)

**Datasets:**

**Site:** Highway 3 EAST Highway 4 (ski club)  
**Filter time:** 11:39 Monday, September 29, 2008 => 12:29 Saturday, October 04, 2008  
**Direction:** East (bound)  
**In profile:** 17464 Vehicles

**\* Monday, September 29, 2008 - Total=2635 (Incomplete) , 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
2300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>93</b>	<b>44</b>																						
38	7	7																					
32	20	5																					
14	12	2																					
9	5	3																					

**PM Peak 1630 - 1730 (456), PM PHF=0.83**

**\* Tuesday, September 30, 2008 - Total=4014, 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
2300	17	5	5	14	7	18	48	178	426	220	189	248	347	311	266	290	348	374	203	155	122	110	
<b>83</b>	<b>30</b>																						
23	7	2	3	4	3	3	8	24	107	57	48	50	99	103	58	67	78	147	72	47	32	25	
15	5	1	0	5	0	2	19	26	158	44	48	57	69	79	71	73	73	93	46	34	25	30	
32	2	2	1	3	0	3	12	48	88	54	52	66	74	66	64	70	100	67	48	34	28	25	
13	3	0	1	2	4	10	9	80	73	65	41	75	105	63	73	80	97	67	37	40	37	30	

**AM Peak 0745 - 0845 (433), AM PHF=0.69 PM Peak 1630 - 1730 (437), PM PHF=0.74**

**\* Wednesday, October 01, 2008 - Total=1902, 15 minute drops HOSE UP- HGHWY SWEEPER**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	
2300	7	7	10	5	7	25	0	0	0	0	0	0	0	0	0	0	79	225	325	434	241	201	126	96
<b>85</b>	<b>29</b>																							
40	4	3	3	0	2	7	0	0	0	0	0	0	0	0	0	0	55	63	134	66	58	45	22	
19	2	1	3	2	2	6	0	0	0	0	0	0	0	0	0	0	36	81	107	59	65	38	23	
14	1	1	1	0	1	7	0	0	0	0	0	0	0	0	0	0	19	69	94	112	56	49	17	20
12	0	2	3	3	2	5	0	0	0	0	0	0	0	0	0	0	60	65	87	81	60	29	26	31

**AM Peak 0500 - 0600 (25), AM PHF=0.89 PM Peak 1645 - 1745 (440), PM PHF=0.82**

**\* Thursday, October 02, 2008 - Total=3843, 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
2300	19	11	12	3	6	15	47	155	389	183	190	230	375	294	246	261	297	433	212	152	94	108	
<b>80</b>	<b>31</b>																						
29	6	4	5	0	2	2	6	15	98	60	46	50	98	84	64	68	60	156	59	37	33	33	
18	5	4	0	0	0	3	17	24	144	40	57	44	71	74	60	65	79	128	57	42	20	32	
20	4	1	3	2	2	6	10	45	79	43	37	56	93	76	54	66	92	82	42	40	24	20	
13	4	2	4	1	2	4	14	71	68	40	50	80	113	60	68	62	66	67	54	33	17	23	

**AM Peak 0745 - 0845 (392), AM PHF=0.68 PM Peak 1630 - 1730 (442), PM PHF=0.71**

**\* Friday, October 03, 2008 - Total=4239, 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
	23	5	12	4	4	20	40	159	381	199	191	249	362	276	325	345	420	376	269	172	142	141		
<b>76</b>	<b>48</b>																							
	12	1	5	1	0	3	10	18	<b>104</b>	49	46	69	102	76	104	89	97	<b>119</b>	70	48	41	35		
22	14	15																						
	3	1	3	0	1	3	12	29	<b>132</b>	39	45	43	76	65	81	76	<b>123</b>	96	80	53	29	32		
13	15	19																						
	0	0	3	2	3	5	8	38	<b>93</b>	52	56	58	75	65	89	89	<b>97</b>	84	64	38	26	44		
15	7	9																						
	8	3	1	1	0	9	10	<b>74</b>	52	59	44	79	109	70	51	91	<b>103</b>	77	55	33	46	30		
26	12	12																						

AM Peak 0745 - 0845 (403), AM PHF=0.76 PM Peak 1615 - 1715 (442), PM PHF=0.90

**\* Saturday, October 04, 2008 - Total=773 (Incomplete) , 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
	55	27	15	14	11	16	45	43	77	140	173	157	-	-	-	-	-	-	-	-	-	-	-	-
	-	-																						
	15	8	7	8	1	8	14	7	15	32	38	47	0	-	-	-	-	-	-	-	-	-	-	-
	-	-																						
	19	9	3	1	1	2	10	12	17	23	45	55	-	-	-	-	-	-	-	-	-	-	-	-
	-	-																						
	9	5	4	3	2	0	5	8	22	47	45	52	-	-	-	-	-	-	-	-	-	-	-	-
	-	-																						
	12	5	1	2	7	6	16	16	23	38	45	3	-	-	-	-	-	-	-	-	-	-	-	-
	-	-																						

## ME2 TRANSPORTATION DATA CORP. Vehicle Counts

### VehicleCount-138 -- English (ENU)

**Datasets:**

**Site:** Highway 3 EAST of Highway 4 (ski club)  
**Filter time:** 11:39 Monday, September 29, 2008 => 12:29 Saturday, October 04, 2008  
**Direction:** West (bound)  
**In profile:** 15955 Vehicles

**\* Monday, September 29, 2008 - Total=2467 (Incomplete) , 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
2300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>72</b>	<b>25</b>																						
22	6	3																					
24	9	7																					
10	8	1																					
16	2	2																					

**PM Peak 1630 - 1730 (397), PM PHF=0.77**

**\* Tuesday, September 30, 2008 - Total=3629, 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
2300	13	5	8	4	12	38	64	214	235	193	169	233	298	283	263	324	342	361	153	133	110	83	
<b>63</b>	<b>28</b>																						
17	14	4																					
26	7	0	3	2	3	5	17	22	70	45	47	59	54	64	80	62	66	88	43	26	22	20	
11	1	1	2	2	2	5	12	63	59	40	52	45	52	66	58	93	91	69	33	34	37	18	
9	2	2	0	0	6	19	14	107	47	46	34	76	86	75	52	97	100	58	35	32	22	15	

**AM Peak 0730 - 0830 (299), AM PHF=0.70 PM Peak 1630 - 1730 (425), PM PHF=0.73**

**\* Wednesday, October 01, 2008 - Total=1772, 15 minute drops HOSE UP - HGHWY SWEEPER**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
2300	9	12	6	3	16	19	0	0	0	0	0	0	0	0	0	64	232	369	358	191	160	110	130
<b>73</b>	<b>20</b>																						
28	4	4	2	1	2	5	0	0	0	0	0	0	0	0	0	41	93	119	58	54	28	35	
19	0	2	2	2	2	6	0	0	0	0	0	0	0	0	0	63	93	92	53	41	27	25	
15	3	5	0	0	4	7	0	0	0	0	0	0	0	0	9	61	91	76	40	29	31	35	
11	2	5	2																				
	2	1	2	0	8	1	0	0	0	0	0	0	0	0	55	67	92	71	40	36	24	35	

**AM Peak 0445 - 0545 (26), AM PHF=0.81 PM Peak 1615 - 1715 (395), PM PHF=0.83**

**\* Thursday, October 02, 2008 - Total=3313, 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
2300	21	10	10	5	15	19	51	193	205	193	156	229	321	281	226	227	309	300	152	116	92	99	
<b>62</b>	<b>21</b>																						
22	6	5	3	1	2	1	13	19	62	48	36	45	100	83	69	43	84	89	41	40	25	31	
17	4	7	8																				
	4	2	1	1	1	4	18	24	60	43	37	53	73	72	54	60	61	95	30	41	17	25	
18	2	0	1	0	3	3	5	52	43	40	46	57	57	72	35	69	88	65	37	22	22	24	
5	9	3	5	3	9	11	15	98	40	62	37	74	91	54	68	55	76	51	44	13	28	19	

**AM Peak 1130 - 1230 (304), AM PHF=0.76 PM Peak 1630 - 1730 (348), PM PHF=0.92**

**\* Friday, October 03, 2008 - Total=3949, 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
	12	9	7	6	10	30	70	210	210	150	213	246	317	285	289	356	434	367	204	165	127	125		
60	47																							
	8	4	1	1	0	5	22	26	54	44	55	53	118	78	67	81	117	125	52	52	29	32		
21	7	4																						
	1	2	3	1	2	4	22	30	49	32	49	67	61	64	83	80	102	96	60	37	27	21		
9	12	5																						
	2	0	1	1	1	4	12	56	67	35	49	55	49	69	65	81	108	77	43	42	38	27		
18	16	4																						
	1	3	2	3	7	17	14	98	40	39	60	71	89	74	74	114	107	69	49	34	33	45		
12	12	8																						

AM Peak 1115 - 1215 (311), AM PHF=0.66 PM Peak 1615 - 1715 (442), PM PHF=0.88

**\* Saturday, October 04, 2008 - Total=764 (Incomplete) , 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
	21	22	17	13	17	30	61	42	100	127	164	150	-	-	-	-	-	-	-	-	-	-	-	-
-	-																							
	4	4	4	1	0	8	20	11	26	32	44	51	0	-	-	-	-	-	-	-	-	-	-	-
-	-																							
	5	4	4	2	2	6	10	4	19	30	35	49	-	-	-	-	-	-	-	-	-	-	-	-
-	-																							
	4	10	8	4	6	4	18	10	30	34	47	47	-	-	-	-	-	-	-	-	-	-	-	-
-	-																							
	8	4	1	6	9	12	13	17	25	31	38	3	-	-	-	-	-	-	-	-	-	-	-	-
-	-																							

## ME2 TRANSPORTATION DATA CORP. Vehicle Counts

### VehicleCount-156 -- English (ENU)

**Datasets:**

**Site:** Old Airport E of Borden (Walmart)  
**Filter time:** 13:30 Monday, September 29, 2008 => 11:23 Saturday, October 04, 2008  
**Direction:** East (bound)  
**In profile:** 28940 Vehicles

**\* Monday, September 29, 2008 - Total=3253 (Incomplete) , 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	432	470	594	558	379	325	221	124	
<b>114</b>	<b>36</b>																							
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	109	120	117	167	130	85	59	40	
36	9	11														90	103	148	133	103	73	53	30	
39	16	15														81	127	111	158	142	83	87	57	27
21	8	1														97	106	136	171	116	63	80	52	27
18	3	6																						

**\* Tuesday, September 30, 2008 - Total=5850, 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
	33	9	6	9	9	28	90	149	294	264	334	398	489	418	454	495	589	587	386	333	200	146		
<b>89</b>	<b>41</b>																							
	11	3	0	2	2	5	22	19	78	69	83	82	175	136	116	115	134	197	116	113	64	46		
29	12	13																						
	15	0	4	5	0	7	26	25	67	72	93	87	122	106	105	107	130	105	112	74	52	41		
21	9	6																						
	1	1	1	1	1	9	15	50	78	67	72	90	87	92	123	126	161	150	89	79	44	30		
30	10	6																						
	6	5	1	1	6	7	27	55	71	56	86	139	105	84	110	147	164	135	69	67	40	29		
9	10	1																						

AM Peak 1130 - 1230 (526), AM PHF=0.75 PM Peak 1615 - 1715 (652), PM PHF=0.83

**\* Wednesday, October 01, 2008 - Total=6133, 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
	26	14	11	10	13	27	88	174	286	312	339	392	538	412	422	497	602	662	446	329	224	145		
<b>112</b>	<b>52</b>																							
	13	3	3	2	1	5	21	29	56	84	72	105	190	83	109	104	128	177	165	91	79	43		
42	12	12																						
	6	2	3	4	4	9	20	36	74	74	85	82	108	100	103	127	146	159	121	87	56	37		
34	12	7																						
	6	7	4	3	2	7	15	45	79	74	79	91	107	122	109	145	163	172	81	90	44	29		
20	15	10																						
	1	2	1	1	6	6	32	64	77	80	103	114	133	107	101	121	165	154	79	61	45	36		
16	13	9																						

AM Peak 1145 - 1245 (519), AM PHF=0.68 PM Peak 1645 - 1745 (673), PM PHF=0.95

**\* Thursday, October 02, 2008 - Total=5807, 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
	38	14	15	9	14	30	77	147	225	276	318	396	529	422	429	454	615	526	391	329	262	164		
<b>90</b>	<b>37</b>																							
	12	6	4	1	6	6	22	22	59	54	92	86	183	105	108	96	131	156	142	101	78	42		
29	17	7																						
	7	2	7	0	0	6	18	29	47	74	68	78	123	127	99	100	150	82	88	77	70	49		
26	8	7																						
	10	5	0	5	2	6	18	39	55	69	75	100	122	91	107	119	159	156	82	83	59	31		
22	8	5																						
	9	1	4	3	6	12	19	57	64	79	83	132	101	99	115	139	175	132	79	68	55	42		
13	4	1																						

AM Peak 1145 - 1245 (560), AM PHF=0.77 PM Peak 1615 - 1715 (640), PM PHF=0.91

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**\* Friday, October 03, 2008 - Total=6543, 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
	20	12	4	5	14	28	65	162	258	339	351	487	517	480	493	582	672	672	460	341	276	155		
<b>104</b>	<b>46</b>																							
	7	4	3	0	6	7	17	31	56	77	83	97	<b>199</b>	123	130	139	141	<b>170</b>	127	102	83	45		
39	15	8																						
	7	4	1	2	4	8	17	30	60	86	88	<b>124</b>	110	107	137	130	<b>183</b>	165	146	86	62	34		
26	15	9																						
	5	2	0	1	0	8	14	44	73	78	83	<b>131</b>	95	121	100	158	<b>189</b>	176	96	74	65	37		
25	7	4																						
	1	2	0	2	4	5	17	57	69	98	97	<b>135</b>	113	129	126	155	<b>159</b>	161	91	79	66	39		
14	9	8																						

AM Peak 1115 - 1215 (589), AM PHF=0.74 PM Peak 1615 - 1715 (701), PM PHF=0.93

**\* Saturday, October 04, 2008 - Total=1176 (Incomplete) , 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
	29	23	18	16	7	27	54	73	126	282	376	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-																							
	8	7	8	6	1	12	10	14	21	52	83	104	-	-	-	-	-	-	-	-	-	-	-	-
-	-																							
	9	4	1	4	1	6	13	17	34	78	99	41	-	-	-	-	-	-	-	-	-	-	-	-
-	-																							
	4	8	4	5	1	4	14	15	30	77	98	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-																							
	8	4	5	1	4	5	17	27	41	75	96	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-																							

## ME2 TRANSPORTATION DATA CORP. Vehicle Counts

### VehicleCount-152 -- English (ENU)

**Datasets:**

**Site:** Old Airport Rd W of S.Borden Rd  
**Filter time:** 13:12 Monday, September 29, 2008 => 11:19 Saturday, October 04, 2008  
**Direction:** West (bound)  
**In profile:** 31673 Vehicles

**\* Monday, September 29, 2008 - Total=3311 (Incomplete) , 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
2300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	355	462	527	489	470	280	285	191	129
89	34																						
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	122	125	141	136	65	83	59	28
37	12	6													105	149	117	111	131	65	72	56	29
12	11	2													128	94	140	123	117	74	72	39	37
15	4	4													105	97	145	114	86	76	58	37	35
25	7	3																					

**\* Tuesday, September 30, 2008 - Total=6540, 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
2300	15	10	1	12	39	81	164	486	573	351	375	378	549	498	458	509	511	454	327	289	220	154	
54	32																						
	6	5	0	1	4	8	43	60	181	93	88	92	119	130	122	97	126	95	74	82	62	45	
21	15	4							136	96	108	92	118	121	111	116	116	129	100	93	51	34	
14	2	1	0	2	5	17	19	82	136	96	108	92	118	121	111	116	116	129	100	93	51	34	
14	10	9							144	66	93	95	128	114	111	137	142	132	81	61	54	51	
14	4	1	1	4	15	19	35	122	144	66	93	95	128	114	111	137	142	132	81	61	54	51	
5	3	3	0	5	15	37	67	222	112	96	86	99	184	133	114	159	127	98	72	53	53	24	
5	3	5																					

AM Peak 0745 - 0845 (683), AM PHF=0.77 PM Peak 1230 - 1330 (563), PM PHF=0.76

**\* Wednesday, October 01, 2008 - Total=6751, 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
2300	20	6	14	15	40	94	191	506	558	409	381	404	517	537	424	501	494	527	383	305	170	145	
73	37																						
	4	2	0	5	5	18	43	62	145	115	99	113	101	145	113	115	128	119	90	104	52	40	
33	10	11							147	95	87	95	126	119	123	134	128	147	92	85	46	33	
20	9	0	6	1	7	13	36	91	147	95	87	95	126	119	123	134	128	147	92	85	46	33	
20	18	2							145	78	93	97	117	134	102	120	118	139	92	55	46	37	
12	2	2	3	2	13	24	44	133	145	78	93	97	117	134	102	120	118	139	92	55	46	37	
12	6	8							220	121	121	102	99	173	139	86	132	120	122	109	61	26	35
8	5	2	5	7	15	39	68	220	121	121	102	99	173	139	86	132	120	122	109	61	26	35	
8	3	1																					

AM Peak 0745 - 0845 (657), AM PHF=0.75 PM Peak 1245 - 1345 (571), PM PHF=0.83

**\* Thursday, October 02, 2008 - Total=6474, 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
2300	22	11	11	12	39	102	164	468	477	328	368	364	561	538	466	479	573	476	353	258	175	134	
66	29																						
	11	4	1	2	3	12	36	44	128	81	101	89	119	155	133	100	158	137	89	68	51	42	
24	12	3							114	66	88	83	116	143	116	113	129	163	83	65	43	30	
12	2	3	1	1	10	18	21	83	114	66	88	83	116	143	116	113	129	163	83	65	43	30	
12	6	4							130	123	82	89	84	129	120	117	120	138	92	93	64	42	32
18	8	2	1	2	8	21	35	130	123	82	89	84	129	120	117	120	138	92	93	64	42	32	
18	7	5							211	112	99	90	108	197	120	100	146	148	84	88	61	39	30
12	1	2	8	7	18	51	72	211	112	99	90	108	197	120	100	146	148	84	88	61	39	30	
12	4	5																					

AM Peak 0730 - 0830 (583), AM PHF=0.69 PM Peak 1230 - 1330 (624), PM PHF=0.79

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**\* Friday, October 03, 2008 - Total=6893, 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
	17	6	7	16	38	95	132	482	502	379	376	363	527	535	485	557	580	490	432	321	231	164		
<b>100</b>	<b>58</b>																							
	3	3	1	3	5	15	24	61	151	99	79	95	104	144	137	124	164	108	119	94	66	47		
33	16	17																						
	4	2	4	3	9	20	21	86	126	102	86	100	96	158	120	122	151	135	100	90	57	30		
23	20	11																						
	5	0	1	4	11	18	33	136	106	107	94	84	139	128	117	148	128	138	102	74	62	39		
21	10	10																						
	5	1	1	6	13	42	54	199	119	71	117	84	188	105	111	163	137	109	111	63	46	48		
23	12	11																						

AM Peak 0730 - 0830 (612), AM PHF=0.77 PM Peak 1230 - 1330 (629), PM PHF=0.84

**\* Saturday, October 04, 2008 - Total=1704 (Incomplete) , 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
	49	32	15	12	40	56	91	169	261	379	427	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17	10	2	1	2	17	30	29	43	94	110	139	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11	8	7	7	6	5	17	41	65	94	110	34	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10	12	3	2	10	10	18	38	54	80	106	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11	2	3	2	22	24	26	61	99	111	101	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

## ME2 TRANSPORTATION DATA CORP. Vehicle Counts

### VehicleCount-137 -- English (ENU)

**Datasets:**

**Site:** Old Airport Road E of Dickson  
**Filter time:** 11:25 Monday, September 29, 2008 => 11:35 Saturday, October 04, 2008  
**Direction:** East (bound)  
**In profile:** 25273 Vehicles

**\* Monday, September 29, 2008 - Total=3625 (Incomplete) , 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	
2300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	469	322	338	422	531	614	252	242	177	104
112	42	-	-	-	-	-	-	-	-	-	-	-	-	-	213	86	77	104	98	210	94	59	49	39
40	9	13	-	-	-	-	-	-	-	-	-	-	-	22	82	78	84	90	132	192	52	62	38	22
41	19	11	-	-	-	-	-	-	-	-	-	-	-	72	91	78	89	113	151	111	60	65	55	24
17	11	6	-	-	-	-	-	-	-	-	-	-	-	138	83	80	88	115	150	101	46	56	35	19
14	3	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**PM Peak 1630 - 1730 (703), PM PHF=0.84**

**\* Tuesday, September 30, 2008 - Total=5111, 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	
2300	36	6	6	11	11	26	79	175	284	242	253	345	425	372	371	427	530	597	258	227	152	133		
98	47	13	2	1	7	3	5	22	19	71	68	69	59	187	124	95	87	120	228	79	67	45	34	
26	13	14	11	1	3	2	0	7	26	25	74	70	68	74	88	89	91	101	117	157	65	49	36	30
29	11	6	6	1	1	2	2	7	14	47	77	47	58	81	66	76	97	108	152	117	68	63	33	32
32	17	4	6	2	1	0	6	7	17	84	62	57	58	131	84	83	88	131	141	95	46	48	38	37
11	6	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

**AM Peak 1130 - 1230 (487), AM PHF=0.65 PM Peak 1630 - 1730 (678), PM PHF=0.74**

**\* Wednesday, October 01, 2008 - Total=5202, 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	
2300	28	19	9	16	11	29	77	177	288	245	281	336	470	321	352	414	556	607	286	240	158	124		
110	48	14	4	3	2	1	5	20	23	76	61	59	76	199	82	76	78	112	204	120	66	51	27	
46	11	9	6	6	5	10	3	10	17	45	74	58	51	60	91	90	116	141	121	172	66	62	39	29
24	15	8	4	5	1	3	1	5	19	49	73	55	82	80	71	87	73	104	165	124	57	60	35	25
23	8	10	4	4	0	1	6	9	21	60	65	71	89	120	109	62	87	91	158	107	43	52	33	43
17	14	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

**AM Peak 1130 - 1230 (490), AM PHF=0.62 PM Peak 1630 - 1730 (699), PM PHF=0.86**

**\* Thursday, October 02, 2008 - Total=4860, 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	
2300	33	17	15	14	16	31	68	155	217	230	252	312	462	311	319	334	548	566	287	214	192	137		
98	32	9	4	5	0	7	7	22	18	51	44	80	58	176	96	75	68	117	208	108	66	48	29	
29	13	13	8	3	6	2	1	5	15	35	49	68	55	68	116	81	72	79	116	147	50	59	56	35
31	9	6	10	8	0	5	2	9	17	37	56	50	56	78	77	57	85	101	149	121	61	51	41	34
26	7	8	6	2	4	7	6	10	14	65	61	68	61	108	93	77	87	86	166	90	68	38	47	39
12	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

**AM Peak 1130 - 1230 (478), AM PHF=0.68 PM Peak 1630 - 1730 (670), PM PHF=0.81**

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**\* Friday, October 03, 2008 - Total=5353, 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
	30	10	6	5	17	28	57	151	240	243	277	398	457	398	395	475	584	538	352	234	178	136			
<b>96</b>	<b>48</b>																								
	13	3	3	1	9	5	16	24	50	57	62	78	<b>214</b>	102	110	115	134	<b>169</b>	111	86	49	26			
36	13	4																							
	6	3	1	1	4	9	15	37	53	60	64	77	<b>82</b>	104	98	117	<b>160</b>	142	110	50	37	25			
17	10	8																							
	8	2	1	2	1	6	13	30	79	63	73	<b>113</b>	79	91	86	108	<b>143</b>	126	65	50	42	43			
24	14	6																							
	3	2	1	1	3	8	13	60	58	63	78	<b>130</b>	82	101	101	135	<b>147</b>	101	66	48	50	42			
19	11	9																							

AM Peak 1130 - 1230 (539), AM PHF=0.63 PM Peak 1615 - 1715 (619), PM PHF=0.92

**\* Saturday, October 04, 2008 - Total=890 (Incomplete) , 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
	27	23	18	16	9	22	57	55	101	181	223	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-																							
	4	6	8	8	1	11	13	11	22	39	46	70	-	-	-	-	-	-	-	-	-	-	-	-
-	-																							
	8	4	3	1	1	3	14	16	21	47	58	80	-	-	-	-	-	-	-	-	-	-	-	-
-	-																							
	6	6	3	5	1	3	18	12	29	45	58	8	-	-	-	-	-	-	-	-	-	-	-	-
-	-																							
	9	7	4	2	6	5	12	16	29	50	61	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-																							

## ME2 TRANSPORTATION DATA CORP. Vehicle Counts

### VehicleCount-137 -- English (ENU)

**Datasets:**

**Site:** Old Airport E of Dicksen  
**Filter time:** 11:25 Monday, September 29, 2008 => 11:35 Saturday, October 04, 2008  
**Direction:** West (bound)  
**In profile:** 27120 Vehicles

**\* Monday, September 29, 2008 - Total=3262 (Incomplete) , 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	
2300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	461	455	370	397	385	373	237	223	146	96
78	41	-	-	-	-	-	-	-	-	-	-	-	-	83	149	89	74	111	122	59	60	38	22	
35	17	6	-	-	-	-	-	-	-	-	-	-	14	90	90	96	112	89	86	56	57	33	28	
16	14	5	-	-	-	-	-	-	-	-	-	-	79	123	121	90	100	82	93	53	61	40	20	
14	4	3	-	-	-	-	-	-	-	-	-	-	71	165	95	95	111	103	72	69	45	35	26	
13	6	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

**PM Peak 1215 - 1315 (527), PM PHF=0.80**

**\* Tuesday, September 30, 2008 - Total=5537, 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
2300	17	7	0	13	46	87	153	470	598	299	277	308	492	466	353	391	368	347	254	206	162	135	
64	24	6	3	0	2	6	9	48	65	189	83	66	77	99	149	95	94	94	91	72	66	41	39
27	7	3	0	2	6	23	23	78	192	72	73	78	89	119	88	83	73	98	70	47	32	34	
16	8	7	0	4	14	17	31	113	109	61	68	67	132	102	80	99	98	80	67	55	43	37	
12	8	2	0	5	20	38	51	214	108	83	70	86	172	96	90	115	103	78	45	38	46	25	
9	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**AM Peak 0730 - 0830 (708), AM PHF=0.83 PM Peak 1230 - 1330 (572), PM PHF=0.83**

**\* Wednesday, October 01, 2008 - Total=5715, 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
2300	15	8	11	8	45	101	179	485	591	320	314	352	465	439	345	386	352	395	306	208	141	142	
75	32	3	4	1	7	19	44	69	191	72	78	71	92	138	83	81	90	106	68	59	38	35	
37	8	8	4	1	6	19	35	79	171	85	69	88	86	107	108	109	93	115	81	74	44	37	
16	15	3	0	1	2	13	21	37	118	106	66	89	93	123	89	78	93	94	96	71	34	29	33
12	5	4	0	2	13	21	37	118	106	66	89	93	123	89	78	93	94	96	71	34	29	33	
10	4	2	0	1	2	13	21	37	118	106	66	89	93	123	89	78	93	94	96	71	34	29	33
10	4	2	0	1	2	13	21	37	118	106	66	89	93	123	89	78	93	94	96	71	34	29	33

**AM Peak 0730 - 0830 (699), AM PHF=0.80 PM Peak 1230 - 1330 (532), PM PHF=0.81**

**\* Thursday, October 02, 2008 - Total=5404, 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
2300	17	11	8	9	40	98	163	422	544	260	288	287	506	470	339	371	404	386	252	190	127	118	
68	26	8	2	2	3	15	48	60	163	75	69	72	91	129	84	84	100	127	63	58	30	37	
25	12	4	1	0	7	20	25	68	172	63	86	60	108	121	95	78	110	116	73	44	36	16	
18	4	2	0	1	3	12	19	32	115	110	71	64	72	121	107	78	94	97	76	62	48	36	31
13	7	4	0	1	3	12	19	32	115	110	71	64	72	121	107	78	94	97	76	62	48	36	31
12	3	3	0	1	4	18	44	58	179	99	51	69	83	186	113	82	115	97	67	54	40	25	34

**AM Peak 0730 - 0830 (629), AM PHF=0.88 PM Peak 1230 - 1330 (557), PM PHF=0.75**

Yellowknife Transportation Improvement Study

Appendix A

**\* Friday, October 03, 2008 - Total=5750, 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
	13	4	6	9	36	89	128	445	534	314	283	320	456	465	389	412	420	395	322	237	181	155			
<b>96</b>	<b>41</b>																								
	4	3	1	0	4	16	27	56	<b>166</b>	71	60	77	84	<b>153</b>	100	98	127	108	76	77	52	36			
23	11	11																							
	2	0	4	2	8	21	22	76	<b>150</b>	84	71	72	79	<b>121</b>	106	102	103	101	76	56	32	39			
36	16	17																							
	4	0	1	3	14	18	32	118	<b>127</b>	86	72	70	<b>116</b>	97	89	88	100	100	90	59	44	36			
20	7	8																							
	3	1	0	4	10	34	47	<b>195</b>	91	73	80	101	<b>177</b>	94	94	124	90	86	80	45	53	44			
17	7	8																							

**AM Peak 0745 - 0845 (638), AM PHF=0.82 PM Peak 1230 - 1330 (567), PM PHF=0.80**

**\* Saturday, October 04, 2008 - Total=1288 (Incomplete) , 15 minute drops**

	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
	44	27	15	9	36	62	91	119	190	242	282	-	-	-	-	-	-	-	-	-	-	-	-	-	
	11	9	5	1	1	21	27	26	37	63	64	80	-	-	-	-	-	-	-	-	-	-	-	-	
	17	8	5	2	5	5	17	28	38	59	66	81	-	-	-	-	-	-	-	-	-	-	-	-	
	8	5	2	4	11	11	21	27	56	52	76	10	-	-	-	-	-	-	-	-	-	-	-	-	
	8	5	3	2	19	25	26	38	59	68	76	-	-	-	-	-	-	-	-	-	-	-	-	-	



# Appendix B: Parking Count Data

**ME2 TRANSPORTATION DATA CORP.  
YELLOWKNIFE ONSTREET PARKING OCCUPANCY  
TUESDAY 01 MAY 2007**

time ending	49 Ave btwn 48 st & 49 st		49 Ave btwn 49 st & 50 st		49 Ave btwn 50 st & 51 st constr		47 Street btwn 49 Ave & Franklin		48 Street btwn 49 Ave & Franklin		49 Street btwn Vis Cen & 49 Ave		49 Street btwn 49 Ave & Franklin		50 Street btwn 49 Ave & Franklin		51 Street btwn 49 Ave & Franklin		52 Street btwn 49 Ave & Franklin		53 Street btwn 49 Ave & Franklin	
	Esides	Wside	Esides	Wside	Esides	Wside	Nside	Sside	Nside	Sside	Nside	Sside	Nside	Sside	Nside	Sside	Nside	Sside	Nside	Sside	Nside	Sside
stalls	3	5	13	10	8	4	14	15	15	18	6	4	18	17	14	13	14	12	16	11	11	9
10:00 AM	3	4	12	5	6	4	13	15	11	13	1	0	13	15	11	11	14	12	10	7	11	6
NOON	3	5	12	7	6	4	12	14	10	15	5	3	15	17	14	12	13	8	7	4	10	4
2:00 PM	1	4	12	6	7	3	12	15	10	15	2	1	15	14	10	9	16	11	9	7	10	5

time ending	47 Street btwn Franklin & 51 Ave		48 Street btwn Franklin & 51 Ave		49 Street btwn Franklin & 51 Ave		50 Street btwn Franklin & 51 Ave		51 Street btwn Franklin & 51 Ave		52 Street btwn Franklin & 51 Ave		48 Street btwn 51 Ave & 52 Ave		49 Street btwn 51 Ave & 52 Ave		50 Street btwn 51 Ave & 52 Ave		51 Street btwn 51 Ave & 52 Ave	
	Esides	Wside	Nside	Sside	Nside	Sside	Nside	Sside	Nside	Sside	Nside	Sside								
stalls		15	25	14	22	13	12	26	27	19	24	26		27	24	19	16	21	26	
10:00 AM		5	9	8	17	11	8	12	12	16	11	21		17	3	5	5	3	22	
NOON		6	11	7	14	12	10	19	11	8	7	20		25	6	4	4	6	17	
2:00 PM		6	18	9	18	13	8	14	19	17	9	18		21	8	6	6	3	19	

time ending	Franklin btwn 47 St & 48 St		Franklin btwn 48 St & 49 St		Franklin btwn 49 St & 50 St		Franklin btwn 50 St & 51 St		Franklin btwn 51 St & 52 St		Franklin btwn 52 St & 53 St		51 Ave btwn 47 St & 48 St		51 Ave btwn 48 St & 49 St		51 Ave btwn 49 St & 50 St		51 Ave btwn 50 St & 51 St		51 Ave btwn 51 St & 52 St	
	Esides	Wside	Esides	Wside	Esides	Wside	Esides	Wside	Esides	Wside	Esides	Wside										
stalls	5	5	7	3	5	6	7	3	8	6			6		5	6	5	6	5	6		5
10:00 AM	5	1	3	2	4	6	2	3	5	5			6		1	1	0	3	4	4	2	4
NOON	3	1	5	1	5	6	6	3	6	5			6		0	5	2	5	2	1	3	1
2:00 PM	3	3	5	4	5	5	6	1	5	5			6		1	4	2	3	3	3	3	3

time ending	52 Ave btwn 48 St & 49 St		52 Ave btwn 49 St & 50 St		52 Ave btwn 50 St & 51 St	
	Esides	Wside	Esides	Wside	Esides	Wside
stalls		7		6		7
10:00 AM		5		6		3
NOON		4		3		1
2:00 PM		5		3		3

TOTAL STALL	TOTAL OCC STALL	UNOCC STALL	% OCC
731	457	274	63%
	461	270	63%
	487	244	67%

  demand higher than supply

**ME2 TRANSPORTATION DATA CORP.  
YELLOWKNIFE OFFSTREET PARKING OCCUPANCY  
OCTOBER 2008**

time ending	Block 1 47 street to 48 street btwn 49 Avenue to Franklin Avenue						Block 2 48 Street to 49 Street btwn 49 Avenue to Franklin Avenue			Block 3 49 Street to 50 Street btwn 49 Avenue to Franklin Avenue				Block 4 50 Street to 51 Street btwn 49 Avenue to Franklin Avenue		Block 5 51 Street to 52 Street btwn 49 Avenue to Franklin Avenue		Block 6 52 Street to 53 Street btwn 49 Avenue to Franklin Avenue		
	stalls	64	10	20	24	31	20	26	21	8	28	32	16	17	87	16	46	34	15	24
10:00 AM	42	10	4	9	18	14	19	11	3	16	21	6	12	49	11	37	26	6	14	17
NOON	30	4	11	11	16	13	20	17	8	13	20	13	7	42	10	25	24	6	12	17
2:00 PM	41	6	10	13	22	13	22	15	5	13	20	7	9	52	11	37	29	6	14	17

time ending	Block 7 48 Street to 49 Street btwn Franklin Avenue to 51 Ave		Block 8 50 Street to 51 Street btwn Franklin Avenue to 51 Ave		
	stalls	4	48	15	40
10:00 AM	3	36	4	27	7
NOON	0	9	3	26	6
2:00 PM	3	37	2	28	7

TOTAL STALL	TOTAL OCC STALL	UNOCC STALL	% OCC
689	422	267	61%
	439	250	64%

  demand higher than supply



# Appendix C: Public Consultation Summary

Yellowknife Transportation Improvement Study – Appendix C  
 Summary of Stakeholders Meeting  
 October 03, 2008

Participant Contact Info	Agency	Remarks/Observation/ Comments	Issues/Concerns	Suggestions/ Recommendations	Miscellaneous/ Agency's background
<p style="text-align: center;">Doug Ritchie (867) 873-8897</p>	<p style="text-align: center;">Ecology North</p>	<ul style="list-style-type: none"> <li>▪ Public transportation is of interest. Bike paths are important to us and making bicycling easier in the city of Yellowknife.</li> <li>▪ The agency is encouraged by the City's approach to long term planning for the future.</li> </ul>	<ul style="list-style-type: none"> <li>▪ For the past 50 years all transportation issues and property development have been focused on vehicles burning fossil fuels.</li> <li>▪ Promote and raise awareness of alternatives to the automobile and integrate into traffic planning for the city.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Have to start to build in flexibility into the infrastructure to accommodate alternative forms of transportation.</li> <li>▪ Important to build in as many options as we can.</li> <li>▪ Consider mass transit options such as monorail systems.</li> <li>▪ City should encourage transit oriented development in the future.</li> <li>▪ Would like to see private/public partnerships in transportation such as ride-sharing vans used as taxis.</li> </ul>	<ul style="list-style-type: none"> <li>▪ One area of interest is sustainable living.</li> <li>▪ Also focus on climate change and public awareness.</li> <li>▪ Some members are on the Smart Growth Committee and Transportation Issues Committee.</li> </ul>
<p style="text-align: center;">Shelagh Montgomery (867)669-2092</p>	<p style="text-align: center;">City of Yellowknife Councilor Smart Growth Committee</p>	<ul style="list-style-type: none"> <li>▪ Would like to see city become more pedestrian-friendly</li> <li>▪ More efficient public transit system to encourage users</li> </ul>	<ul style="list-style-type: none"> <li>▪ Unresolved land claims issues that would impact future growth and development depending on how they would be resolved</li> </ul>	<ul style="list-style-type: none"> <li>▪ Explore a combination system utilizing taxis and other vehicles</li> <li>▪ Ride sharing options</li> <li>▪ More handicapped accessibility to park areas and walking paths in the city</li> </ul>	
<p style="text-align: center;">Blair Chapman (867)920-8023</p>	<p style="text-align: center;">GNWT Transport Canada, Dept. of Highways</p>	<ul style="list-style-type: none"> <li>▪ Explained relationship between the City and Territorial governments regarding their respective jurisdiction</li> <li>▪ The sand pits, part of a native land claims agreement, would have a</li> </ul>	<ul style="list-style-type: none"> <li>▪ Issues surrounding the re-alignment of Hwy 4 and the various options</li> <li>▪ Potential of the Mackenzie Valley pipeline and how that development</li> </ul>	<ul style="list-style-type: none"> <li>▪ Long-term planning, including a by-pass highway, to allow industrial traffic to avoid using Old Airport Road</li> <li>▪ In the next 20 years, looking at moving the airport structure to the</li> </ul>	<ul style="list-style-type: none"> <li>▪ Challenges of the GNWT Department of Highways</li> </ul>

Yellowknife Transportation Improvement Study – Appendix C  
 Summary of Stakeholders Meeting  
 October 03, 2008

		huge impact on the city, once it has been settled	would influence Yellowknife	other side of the runway to line it up with access road <ul style="list-style-type: none"> <li>▪ Improve access to biking trails</li> <li>▪ Would like to see incentives to encourage more usage of hybrid, electric and fuel efficient vehicles</li> </ul>	
Hal Lodgson (867)873-5569 <a href="mailto:logsdon@theedge.ca">logsdon@theedge.ca</a> 3901 Bryson Drive	NWT Floatplane Association	<ul style="list-style-type: none"> <li>▪ Lack of planning has contributed to private ownership of all the accessible shoreline in the city, very little shoreline public access which makes it very difficult to put in any facilities that could be used by floatplane owners</li> <li>▪ Not financially feasible under present circumstances for a commercial business to operate a floatbase facility during summer months. The tourism spin-off from this would make it worthwhile</li> </ul>	<ul style="list-style-type: none"> <li>▪ Major concern is lack of facilities for float planes for anyone who would like to fly in to visit the city and also for those living here</li> <li>▪ Even in the airport, there are no facilities for parking/storage of private aircraft for citizens or anyone else</li> <li>▪ Concerns for the downtown area becoming obsolete as business relocates to other areas</li> </ul>	<ul style="list-style-type: none"> <li>▪ Separate bicycle paths should be included in new developments</li> <li>▪ Local roads made narrower</li> <li>▪ Maintain the floatplane docks on public lands and develop new docks on Back Bay for visiting pilots</li> <li>▪ Approve the development of additional moorage space for floatplanes on Kam Lake</li> </ul>	<ul style="list-style-type: none"> <li>▪ NWT Floatplane Association is a non-profit group of aircraft owners, pilots and others interested in aviation. One of the primary objectives is to make Yellowknife a more aviation friendly destination</li> </ul>
Leslie Valpy (867)669-3423	City of Yellowknife			<ul style="list-style-type: none"> <li>▪ Improve parking at the local airport; there should be a separate area for staff parking, a drop-off and pick-up area for passengers, and an area for passenger parking</li> <li>▪ Dedicated Bike path</li> <li>▪ More public access,</li> </ul>	

Yellowknife Transportation Improvement Study – Appendix C  
 Summary of Stakeholders Meeting  
 October 03, 2008

				sidewalks, and parking at Latham Isl4791and <ul style="list-style-type: none"> <li>▪ Improve timing on traffic lights</li> </ul>	
John Carter (867)673-4307	Yellowknives Dene First Nation CEO	<ul style="list-style-type: none"> <li>▪ Encourage City to minimize its footprint</li> </ul>	<ul style="list-style-type: none"> <li>▪ Transit system being underutilized, more buses during peak hours</li> <li>▪ Concerns regarding the growth of the city impacting native land</li> </ul>	<ul style="list-style-type: none"> <li>▪ City encourages more compact development and less urban sprawl. Condensed downtown core would encourage people to leave their cars at home</li> <li>▪ More advanced turn signals</li> <li>▪ Public transit have a direct route from downtown to airport</li> <li>▪ More elevated speedways connecting some of the downtown buildings</li> </ul>	
Pat Thargard (867)445-7205	Yellowknife Chamber of Commerce	<ul style="list-style-type: none"> <li>▪ Vehicles sometimes blocked intersections creating a grid lock situation during peak hours</li> </ul>	<ul style="list-style-type: none"> <li>▪ Downtown parking, hard to find a place during peak hours</li> </ul>	<ul style="list-style-type: none"> <li>▪ More access to biking and walking trails</li> <li>▪ Reliable bus schedule</li> </ul>	
Peter Neugebauer (867)920-5660	City of Yellowknife	<ul style="list-style-type: none"> <li>▪ Big box retails such as Walmart does not create as much as development conflict as the diamond mines</li> <li>▪ Promoting a vibrant downtown with the right people working and living in it</li> </ul>	<ul style="list-style-type: none"> <li>▪ As a pedestrian, walking is hazardous in the downtown core</li> </ul>	<ul style="list-style-type: none"> <li>▪ Dedicated bike trail would improve the situation on bicycle rules</li> <li>▪ Consider using small buses</li> <li>▪ Separation of walk, bike and vehicles</li> </ul>	
David McCann (867)920-4061 <a href="mailto:David.mccann1@gmail.com">David.mccann1@gmail.com</a> 14 Ptarmigan Road		<ul style="list-style-type: none"> <li>▪ Link transportation directly to land use and density of development planning</li> </ul>	<ul style="list-style-type: none"> <li>▪ Too much dependence on automotive vehicles right now; its wasteful,</li> </ul>	<ul style="list-style-type: none"> <li>▪ Develop a more compact but cyclable, walkable city, where trails and sidewalks are given equal emphasis to roads</li> </ul>	

Yellowknife Transportation Improvement Study – Appendix C  
 Summary of Stakeholders Meeting  
 October 03, 2008

			polluting, potentially unhealthy, contributes to our high cost of living, and to substantial Green House Emissions	<ul style="list-style-type: none"> <li>▪ Transit should be encouraged and be made much smarter, accessible, more functional and efficient through the growing use of system sensors and information technology</li> <li>▪ Development of dedicated transit ways as a forerunner to light rail for the longer term</li> </ul>	
Stephan Folkers (867)920-4403 Stephan@ykdenehousing.com	Yellowknives Dene First Nation – Housing Division General Manager	<ul style="list-style-type: none"> <li>▪ Favor a compact growth strategy</li> <li>▪ Favor a local network with alternate modes of transportation</li> <li>▪ Yellowknife growth numbers are somewhat optimistic, future transportation infrastructure has to be integral to a city development plan that focuses on YK citizens leaving the vehicle at home</li> </ul>	<ul style="list-style-type: none"> <li>▪ Danger spots are the right/left changing traffic lights</li> </ul>	<ul style="list-style-type: none"> <li>▪ Fast track the Kam Lake-Airport Connector</li> <li>▪ Incorporate traffic impact study in the development process</li> <li>▪ Provide bike lanes along Franklin Avenue</li> </ul>	

Yellowknife Transportation Improvement Study – Appendix C  
Summary of Stakeholders Meeting  
October 03, 2008

**Additional Notes**

On day 1 of the proceedings, a summary of comments included:

- There are households in the city of Yellowknife with 2 or 3 cars;
- The Smart Growth Committee is interested in road dieting, however, roads are wide to facilitate winter parking and snow plowing;
- Fuel cost escalation is a concern;
- Mr. Doug Ritchie of Ecology North is very interested in environmental protection and sustainable northern living and wishes this component to be part of the Smart Growth plan;
- Public transit and biking are hot topics – there were comments that the City of Yellowknife could consider some of the higher cost options, such as a subway system, a monorail system, or a street car system. Mr. Bosco Tong of iTRANS Consulting Inc. suggested these options are likely too large given Yellowknife's population size. To be considered are Transit Oriented Demand (TOD), an efficient bus system, good sidewalks, and adequate walk-paths.
- There was a previous study on the transit system – Mr. Jeffrey Humble of the City of Yellowknife will help to find the Transit Report;
- Highway 4 and the route to the mining sites were discussed but there are currently no development plans for the Highway available;
- A general comment from the Smart Growth Committee was that the transportation system should be more pedestrian friendly and frequency of buses should be increased;
- An additional downtown parkade is not favoured;
- A mass transit of some kind is encouraged;
- Consideration should be given to convert 50 Avenue and 49 St into a pedestrian walk street;
- The hierarchical transportations system of walk/ped, cycle, bus, car pool, taxi, vehicles is encouraged;
- Parks should be accessible to the handicapped;
- Environmental concern is important – green house gas emission should be reduced; and
- There are concerns that left turn signals are not provided for protection.

On day 2 of the proceedings, a summary of comments included:

- Mr. Doug Ritchie of Ecology North is interested in sustainable living. Public transportation is important. Bike paths are important. In the past focus is on fossil fuel and vehicles; this should change. Alternative mode of transportation is to be promoted. Mass transit options are to be explored. TOD is to be promoted. Public partner partnership is to be encouraged.
- Mr. Blair Chapman of Transport Canada Department of Highways explained some of the issues surrounding the re-alignment of Highway 4. He talked about the future planning of the highway but there are no final plans at this point. He talked about the Mackenzie Valley pipeline and how that development may influence the city of Yellowknife.
- Ms. Shelagh Montgomery of the City of Yellowknife (Chairperson of the Smart Growth Committee) would like to see the city as a pedestrian friendly city; perhaps with a pedestrian mall in the downtown area; more handicapped accessible to park areas; and ride sharing options.
- Mr. Stephan Folkers representing the housing unit of First Nation said that currently they do not see any transportation issues. Bus services are fine and residents seem to be able to live without bus services on Sunday. Bus ridership can be improved. Northwest Territory are

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lacking in knowledge regarding sharing the road with cyclists. Cycling downtown in the city core is perceived as unsafe.

- Mr. Hal Lodgson representing the Float Plane Association indicated it is a small group of 35 members. There is presently no place to park once pilots and passengers leave their plane. There is no parking and in general service provided is poor. Docking and fueling is not convenient. There is no transport means to go into the city. They realize that their group is too small to support an adequate transportation system. Float planes operate at Kam Lake, East Bay and Back Bay. There are tourism potentials that the City should consider. The association is a non-profit organization. May be the City could provide the land for a nominal fee for the Association to plan some facilities. Road dieting and traffic calming has sparked off some interest. Parking downtown is a concern during peak hours. Gasoline prices are a concern. The current parkade at Centre Mall is not considered safe because of the neighbourhood.
- Ms Leslie Valpy of the City of Yellowknife suggested there is not enough parking at the airport at all times. 40 percent of all parking spaces are taken up by airport staff. There should be a separate area for staff parking. There should be dedicated bike tracks. Sidewalks are inadequate. Connectivity in general needs to be considered. The bus route system was discussed. Yellowknife has 1 college, and 11 schools (2 high schools). She suggested that the bus operation should be examined – increasing the frequency during the cold winter months so that people do not have to wait too long. Buses are underutilized now except during the peak hours. Improve traffic signals.
- Mr. John Carter, CEO of Yellowknives Dene First Nation, said that footprint of development areas should be minimized (compact growth) and to reduce suburban sprawl. Increasing the size of the city by annexation is not encouraged. Condensed downtown would encourage people to leave their cars at home. Advanced left turn signals should be considered. The city should consider some kind of +15 connection system for downtown buildings. He has concerns that growth of the city may impact negatively on First Nations land. Prefer more buses during the rush hour and less during other times.
- Ms. Pat Thargard of the Chamber of Commerce commented on the perceived downtown parking issue and indicated that she had trouble finding a place to park during peak hours; as well as having to feed the parking meter every two hours. Center Square Mall has a parkade but it is not well used as it is not considered safe due to the neighbourhood. The usefulness of a new parkade will be dependent on its location. She suggested that there should be a more reliable bus schedule. Vehicles sometimes blocked intersections creating a grid lock situation during peak hours. 4-way stop signs are viewed favourably as a traffic calming device.
- Mr. Peter Neugebauer representing Economic Development for the City commented that he walked a lot and drives only during the weekend. Walking may be hazardous in the downtown core area. Bicycles are a double edge sword as bicycles do not obey rules of the road. Whitehorse is a winter city too and they have bicycles in their city that work. Peter sees that the big box retailers such as Wal-Mart do not create as much a development conflict as the diamond mines (socio-economic impact). The City might consider using smaller buses for public transit. He suggested dial a bus for the handicapped for a service fee. Separation of walk, bike and vehicles is important. He is for promoting a vibrant downtown with a shared working/living component.

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Participant Contact Info	Agency	Remarks/Observation/ Comments	Issues/Concerns	Suggestions/ Recommendations	Miscellaneous/ Agency's background
<p style="text-align: center;">Bruce Jillo                      (867) 873-2047  <a href="mailto:bruceh@sub-arctic.ca">bruceh@sub-arctic.ca</a>                      Box 2441                      Yellowknife, NWT X1A 2P8</p>	<p style="text-align: center;">Great Slave                      Snowmobile                      Association</p>	<ul style="list-style-type: none"> <li>▪ Right now, snowmobiles are allowed on the roads. Visibility on a snowmobile is less than for an automobile and we would like to see a trail system that would keep snowmobiles away from the city.</li> </ul>	<ul style="list-style-type: none"> <li>▪ At a population of 50,000, we would have to ban snowmobiles from the roads in the city limits or establish corridors for snowmobile use.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Reduce conflict between automobiles and snowmobiles.</li> <li>▪ ATVs are also used in the summer time so there is a need to have a continuous system where all people can flow.</li> <li>▪ To see even limited usage on some streets or a dedicated lane for low velocity vehicles. There will be electric vehicles in the future and if snowmobiles and ATVs would be allowed to use low velocity lanes that would be helpful.</li> <li>▪ To have an integrated system where you could go throughout the city.</li> <li>▪ Have a system where bike paths, pedestrian trails and snowmobiles could have shared access.</li> </ul>	
<p style="text-align: center;">Bruce Hewlko                      (867) 766-4353                      4209 – 49A Avenue                      Yellowknife. NT X1A 1B3</p>	<p style="text-align: center;">GSSA – Trail                      Riders                      Secretary</p>	<ul style="list-style-type: none"> <li>▪ Yellowknife is unique among Canadian cities in that snowmobiles are allowed to operate on all city streets, except those in the downtown core.</li> </ul>	<ul style="list-style-type: none"> <li>▪ To discuss the impact of the development with snowmobilers.</li> </ul>	<ul style="list-style-type: none"> <li>▪ To discuss the impact of the development with snowmobilers.</li> <li>▪ Yellowknife will continue to be a compact city with the potential for small satellite developments</li> </ul>	<ul style="list-style-type: none"> <li>▪ Many of the members of the Great Slave Snowmobile Association – Trail Riders have a excellent knowledge of the</li> </ul>

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Participant Contact Info	Agency	Remarks/Observation/ Comments	Issues/Concerns	Suggestions/ Recommendations	Miscellaneous/ Agency's background
				for residential and commercial use	local terrain and would welcome the opportunity to assist the City in developing a long term trail system.
<p style="text-align: center;">Lloyd Thiessen                      (867)873-7239                      itlloyd@hotmail.com</p>	<p style="text-align: center;">TIC                      Transportation Issues Committee</p>	<ul style="list-style-type: none"> <li>▪ There's nothing wrong with the system. You can have any system you want, as long as you go and ask Council for more money. It's a fixed budget so we're trying to have the greatest level of service during the week in order to stay within our system. The majority of our system is geared towards getting the high school students and the majority of commuters into the downtown core during the week. That limits the amount of money and time we can spend on Saturday service. It's a real balancing act.</li> <li>▪ What we're trying to do is we are working towards an ideal.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Issues surrounding the re-alignment of Hwy 4 and the various options</li> <li>▪ Potential of the Mackenzie Valley pipeline and how that development would influence Yellowknife</li> </ul>	<ul style="list-style-type: none"> <li>▪ Maybe part of your study should develop a magic pot of money so that we can build all of these great trails and these great roads and come up with the perfect transit system.</li> </ul>	
<p style="text-align: center;">Heather Clark                      (867)873-8230                      Nwtcpdinfo@yk.com                      Box 1387</p>	<p style="text-align: center;">NWT                      Floatplane Association</p>	<ul style="list-style-type: none"> <li>▪ Transit pass varies, some people use it daily. It's very well utilized. It's pretty</li> </ul>	<ul style="list-style-type: none"> <li>▪ Routes are anywhere in the city. What it states in the policy is</li> </ul>	<ul style="list-style-type: none"> <li>▪ The City was supposed to be subsidized with the taxi so that if you called and they were too</li> </ul>	

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Participant Contact Info	Agency	Remarks/Observation/ Comments	Issues/Concerns	Suggestions/ Recommendations	Miscellaneous/ Agency's background
Yellowknife, NT X1A 2P1		<p>much guaranteed that you could not get a ride first thing in the morning or at the end of the day. It's also used for school kids. It may be time for the School Board to look at getting their own accessible bus. I think that it's well utilized but I don't have the stats as they're maintained by Wendy here at the City. It depends on the time of day. It runs at the same times as the regular transit bus.</p>	<p>within a certain amount of meters of the regular route but, unlike the regular route, it does go into Kam Lake and the airport and it does go into Niven.</p>	<p>busy, but that does not happen. I think you could reduce the use of it if there were improvements to the regular transit system. There's people who live in Niven and they are unable to walk to a bus stop. Or if you live in Kam Lake you can't get to the bus. Looking at the regular buses, if they were accessible buses that would drop down, it would help mitigate the need for the other service.</p>	
<p>Dennis Kefalas                  (867)920-5639  <a href="mailto:dkefalas@yellowknife.ca">dkefalas@yellowknife.ca</a></p>	<p>Public Works                  City of                  Yellowknife</p>	<ul style="list-style-type: none"> <li>▪ Snowmobiles are tolerated on the roads of the city but not encouraged. We have had two snowmobile fatalities on the lake here in recent years. The accidents were both caused by excessive speed and were definitely preventable.</li> <li>▪ People want to take advantage of the great outdoors. In terms of how the city develops, I would see us trying to take advantage of as much of the waterfront as possible.</li> </ul>	<ul style="list-style-type: none"> <li>▪ We do meet a lot in regard to by-pass roads and other changes. They're planning changes of actually putting a highway through Fred Henne Park which we're trying to discourage. Part of our growth will be related to tourism and the more campgrounds we have here, we'll actually increase</li> </ul>	<ul style="list-style-type: none"> <li>▪ Improve parking at the local airport; there should be a separate area for staff parking, a drop-off and pick-up area for passengers, and an area for passenger parking</li> <li>▪ Dedicated Bike path</li> <li>▪ More public access, sidewalks, and parking at Latham Isl4791and</li> <li>▪ Improve timing on traffic lights</li> <li>▪ As for the trails, we would like to see a way to connect all the trails. Niven Lake is a classic example. There's a</li> </ul>	

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Participant Contact Info	Agency	Remarks/Observation/ Comments	Issues/Concerns	Suggestions/ Recommendations	Miscellaneous/ Agency's background
		<p>I'd like to see all-weather roads towards the mines to reduce the traffic when the winter roads open. Does not think it's safe to share the roads with snowmobiles and quads. I would like to see a hub system developed as the population increases.</p>	<p>the amount of people coming to Yellowknife.</p>	<p>really nice trail about two-thirds around the lake and then there's this little corner patch that you can only walk and then there's this really nice little piece of trail and then you have to walk the last bit. All of our trails are like that. It would be nice if they were designed to be pedestrian/bike friendly.</p> <ul style="list-style-type: none"> <li>▪ The City could put a path beside the highway for people to walk on but then it's crossing the highway. A pedestrian crosswalk with lights would probably be a good idea. Niven Lake is still growing and there's still a couple more phases. We've got great little areas but there's no flow and you're taking your life in your hands when you try to cross various roads.</li> </ul>	
<p style="text-align: center;">Grant White                  (867)920-5636                  gwhite@yellowknife.ca</p>	<p style="text-align: center;">Community Services                  City of Yellowknife</p>	<ul style="list-style-type: none"> <li>▪ It's important to keep in mind that no matter what alternative forms of transportation there is, there will always be</li> </ul>		<ul style="list-style-type: none"> <li>▪ We would like to be able to have connectivity between all the trails.</li> </ul>	

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Participant Contact Info	Agency	Remarks/Observation/ Comments	Issues/Concerns	Suggestions/ Recommendations	Miscellaneous/ Agency's background
		<p>automobiles. I don't think the City is in a position to be governing what people will be using. It's important that as we design the parks and trails and facilities.</p>			
<p style="text-align: center;">Jennifer Marchant            (867)766-8392            jmarchant@snclavalinprofac.com</p>	<p style="text-align: center;">Downtown Enhancement</p>	<ul style="list-style-type: none"> <li>▪ I like the concept of using snowmobiles, bicycles, walking, and ATVs for transportation. If we need to keep something unique about Yellowknife, I don't want to see snow machines excluded from areas. Certainly, we need to control their access but I can't see sharing with bicycles and pedestrians. Walking or biking next to a road reduces the pleasures of these activities simply due to the noise. Most people that walk are walking for pleasure.</li> </ul>	<ul style="list-style-type: none"> <li>▪ One of the issues of the DEC is to keep people living and working in the downtown area. From a transportation point of view, I think when you live and work in the downtown area, walking is paramount and it's an absolute must. Electric vehicles, golf vehicles, and quads are all options to be considered. I would like to see a ring/circle system where you can get from point A to point B very simply.</li> <li>▪ Parkades make more sense. If you had a new parkade, it would be used by</li> </ul>	<ul style="list-style-type: none"> <li>▪ It's important to have natural walking trails as opposed to bicycle trails or handicapped trails. There is a great deal of pleasure being able to walk around Frame Lake over the rocks because it's natural and hasn't been blasted away but I do understand the need for a bicycle commuter trail being different. We need both. We need to have the nature trails but we need commuter trails as well.</li> <li>▪ Side by side is okay for bicycles but side by side is not okay with noisy vehicles. If you want to go out for a walk with your family for exercise, you want to enjoy the peaceful nature, you don't want to be struggling waiting</li> </ul>	

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<b>Participant Contact Info</b>	<b>Agency</b>	<b>Remarks/Observation/ Comments</b>	<b>Issues/Concerns</b>	<b>Suggestions/ Recommendations</b>	<b>Miscellaneous/ Agency's background</b>
			<p>the people that come to work downtown.</p>	<p>for a snow machine to go over your toes. The City had come up with a wonderful concept to interconnect Frame Lake and Niven under the roadway system and it was safe.</p> <ul style="list-style-type: none"> <li>▪ A safety issue, because you could not cross one of the busiest highways to go for a walk and go over that trail – you can't get to it.</li> </ul>	

### **Open House #1 Summary – December 4<sup>th</sup>, 2008**

The essence of the open house feedback and public discussion is summarized as follows:

- More mixed use development in the downtown core (e.g. residential / commercial);
- Better integration of cycling and walking paths, better integration of different modes (transit, bicycle, vehicle) on the road system (e.g. share the road, education of citizens on bicycles rights on the road);
- Potential collision locations indentified by a resident:
  - Intersection of Norseman and Old Airport Road – there is a light pole in the median that often gets hit and there is skidding and sliding occurring regularly; and,
  - Intersection of Old Airport Road and Franklin – pedestrian crossing on the east / north leg of Franklin is hazardous, especially for children crossing to the multiplex.
- The signal timing along Franklin Avenue (downtown and especially west/south of downtown) needs improvement. Always get stopped at the same lights;
- Intersection of 48 Street and Franklin Avenue – vehicles travelling on 48 Street have to wait a very long time for the signal to change. There is shortcutting on 47 Street and 46 Street to avoid this intersection as a consequence;
- Dedicated separated bicycle paths and / or on-street bicycle lanes would encourage more cycling;
- Approximately the same travel time by car from downtown to the shopping area (i.e. Wal-Mart/Co-op) on Old Airport Road using Hwy 4 → Hwy 3 → Old Airport Road as taking Franklin → Old Airport Road; and,
- Better terminuses of the bike trails to allow for proper access to and from key activity nodes without having to enter onto busy street network (specifically Frame Lake trail at Old Airport Road and also at Hwy 4).

### **Community Design Charrette – April 2009**

The design charrette was attended by HDR| iTRANS, EIDOS Consulting, and Dillon Engineering as well as several consultants who spoke on specific topic areas of interest. The community design charrette and its summary was the responsibility of EIDOS Consulting and can be found in their report to the City of Yellowknife.

**Smart Growth Committee Meetings (October and November 2009)**

Presentations were provided to the City of Yellowknife staff and the Smart Growth Committee at the meetings on October 1, 2009 and again on November 19, 2009.

**Open House #2 Summary – December 3<sup>th</sup>, 2009**

There were no comments submitted to the consultant in writing at this open house. HDR | iTRANS staff did have conversations with Yellowknife residents, but they were more explanatory in nature than fielding any commentary on changes to the information presented. The overall feeling from the public at the open house was that the Study was moving in the right direction.



# Appendix D: Collision Summary

### Collision Summary Between Segments along Franklin Avenue

Link		Nature and Number of Accidents (2004 - 2006)										Severity		Total	Potential Contributing Factor	Comments / Recommendations
From	To	Rear End	Side Swipe (Same Direction)	Side Swipe (Opposite Direction)	Other Multi-Vehicle (Same Direction)	Right Turn Including Conflict	Hit Moving Object	Hit Parked Vehicle	Head-On	Right Angle	Off Road Right	Fatal	Injury			
Old Airport Road	Forrest Drive	10	4									0	5	14	40% icy road conditons	Review winter maintenance program
Forrest Drive	53rd Street	18	10	5				2	7			0	6	43	49% winter months; 84% icy road conditions	Review winter maintenance program
53rd Street	48th Street	7	4		3	3	4	16		4		0	4	41	44% summer months; 20% potholes; 68% Evening;24% icy road conditions	Review parking restrictions
48th Street	46th Street							2				0	0	2	100% icy road conditions	Review winter maintenance program
46th Street	43rd Street	2						2		12		0	0	16	75% icy road conditions; 100% evening	Review sight lines
43rd Street	School Draw Avenue		5	2								0	0	7	71% May; 71% Wednesday	Review roadway design
<b>Total</b>		<b>37</b>	<b>23</b>	<b>7</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>22</b>	<b>7</b>	<b>16</b>	<b>1</b>	<b>0</b>	<b>15</b>	<b>123</b>	<b>77% Evening and PM 54% icy road conditions 25% month of November</b>	<b>Most accidents occur under icy road surface conditions in the evening hours. Rear-ends are the dominant collision type suggesting speed and driver error as possible contributing factors. Review of on-street parking may reduce collision frequency. Review of winter maintance at approaches to intersection may improve traction. Increased police presense between 3PM and 12AM will promote safe driving.</b>

**Definitions**

Winter months = December through February

Night = 12am - 6am, AM = 6am - 9am, Midday = 10am - 2pm, PM = 3pm - 6pm, Evening = 6pm - 12am

## Collision Summary at Intersections along Franklin Avenue

Intersecting Street	Nature and Number of Accidents (2004 - 2006)								Severity		Total	Potential Contributing Factor	Comments / Recommendations
	Rear End	Side Swipe (Same Direction)	Left Turn	Opposite Direction	Hit Moving Object	Hit Stationary Object	Head-On	Right Angle	Fatal	Injury			
Franklin Avenue / Old Airport Road	23								0	2	23	65% Monday; 91% Evening	Review speed/signal timings
Franklin Avenue / Forrest Drive	21	8	2	2					0	4	33	58% winter months; 55% Thursday; 82% icy road conditions	Review winter maintenance program
Franklin Avenue / 53rd Street	3		2		2			2	4	0	2	31% icy road conditions	Review winter maintenance program
Franklin Avenue / 48th Street		4						2	0	0	6	80% March	Review sight lines
Franklin Avenue / 46th Street						1		2	0	0	3	100% December; 100% icy road conditions	Review winter maintenance program
Franklin Avenue / 43rd Street	7		3					3	0	0	13	85% winter months; 54% Friday; 54% potholes; 100% icy road conditions	Review winter maintenance program
Franklin Avenue / School Draw Avenue	3								0	0	3	100% winter months; 100% Tuesday	Review winter maintenance program
Franklin Avenue / Weaver Drive								2	0	0	2	100% icy road conditions; 100% Monday	Review winter maintenance program
<b>Total</b>	<b>57</b>	<b>12</b>	<b>7</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>13</b>	<b>0</b>	<b>8</b>	<b>96</b>	<b>67% Evening and PM 57% icy road conditions 47% winter months</b>	<b>Most accidents occur with icy road surface condition in evening hours. Rear-ends are the dominant collision type suggesting speed and driver error as possible contributing factors. Suggested review of intergreen times of signal may help to reduce frequency of rear-ends. Improved winter maintenance may improve traction. Increase police presence between 3PM and 12AM will promote safer driving.</b>

**Definitions**

Winter months = December through February

Night = 12am - 6am, AM = 6am - 9am, Middy = 10am - 2pm, PM = 3pm - 6pm, Evening = 6pm - 12am



# Appendix E: Intermediate-term Transportation Analysis

## 8. Future Land Use – Intermediate

Table E8-1 summarizes the total households and jobs in the intermediate-term horizon.

**Table E8-1: Total Households and Jobs in Intermediate-term Horizon**

Type	Existing	Compact / Hybrid / Dispersed
		Intermediate-term
Households	6890	11390
Jobs	10840	18115

The total households in each scenario for the intermediate-term horizon are summarized in **Table E8-2** and jobs are summarized in **Table E8-3**.

**Table E8-2: Intermediate-term Land Use Summary – Households**

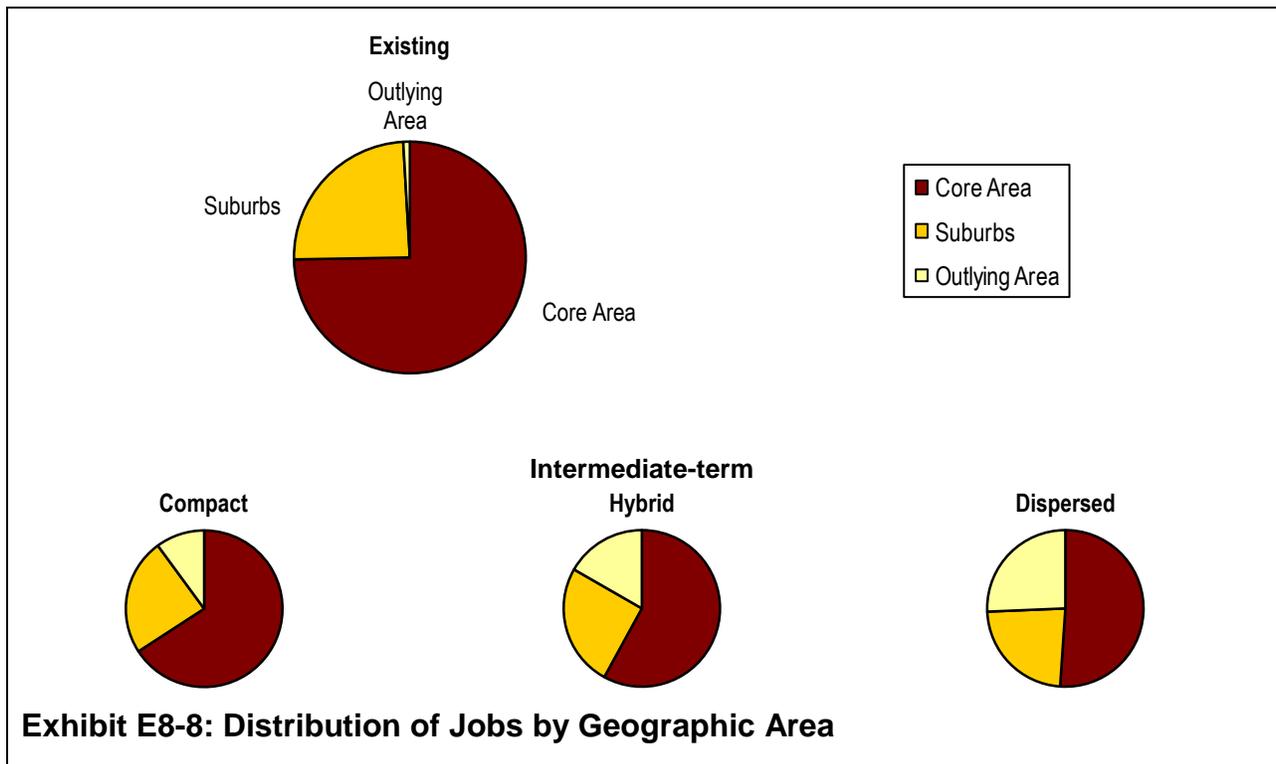
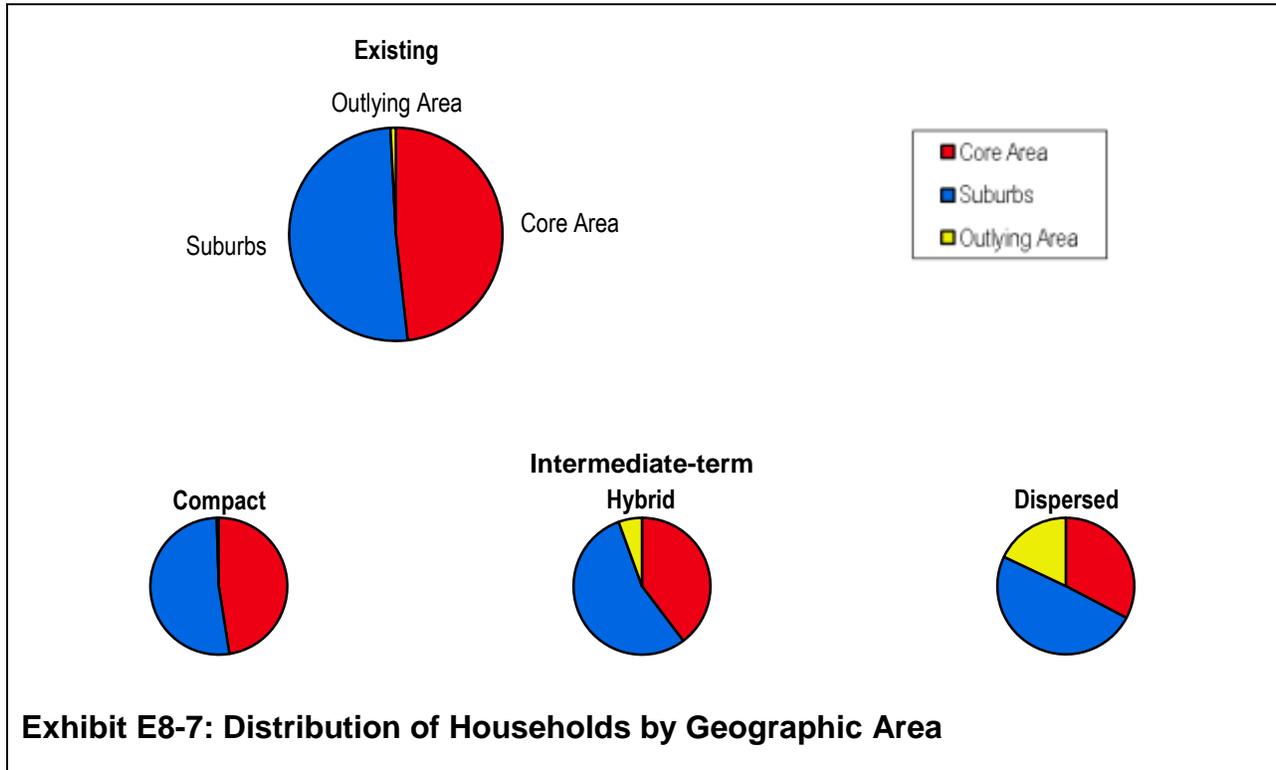
Smart Growth Plan Zone		Total Number of Households			
		Existing	Compact	Hybrid	Dispersed
A	Downtown / City Centre	2634	3774	3334	2784
B	Old Airport Road	309	1109	709	459
C	Old Town	380	530	480	480
D	Niven Lake	204	1404	1304	1054
E	Range Lake North	760	810	810	810
F	Range Lake South	1846	1896	1896	1896
G	Taylor Road	374	849	974	674
H	Tin Can Hill	207	707	1047	1007
I	Kam Lake	120	255	205	180
J	Negus Point	6	6	406	1246
K	Highway 4 North	0	0	0	550
L	Grace Lake.	0	0	175	0
M	Kam Lake East	0	0	0	0
N	East Shore (Dettah)	50	50	50	250
O	City West End	0	0	0	0
<i>Total Households</i>		<i>6890</i>	<i>11390</i>	<i>11390</i>	<i>11390</i>

**Table E8-3: Intermediate-term Land Use Summary – Jobs**

Smart Growth Plan Zone		Total Number of Jobs			
		Existing <sup>1</sup>	Compact	Hybrid	Dispersed
A	Downtown / City Centre	6739	9089	8139	7389
B	Old Town	301	701	601	401
C	Old Airport Road/Capital Area West	1061	2136	1761	1461
D	Kam Lake	475	975	975	775
E	Range Lake North	553	728	728	628
F	Range Lake South	320	495	520	370
G	Niven Lake	16	191	191	66
H	Con Mine / Tin Can Hill / Negus Point	275	675	825	875
I	Airport	1001	1301	1351	1501
K	Engle Business District	15	965	1165	1515
L	Grace Lake / Engle West	54	154	554	954
M	Kam Lake East	6	6	406	406
N	Highway 4 North	6	406	506	1106
O	Giant Mine	2	152	102	152
P	East Shore (Dettah)	0	125	275	500
Q	Long Lake North/West	16	16	16	16
Total Jobs		10840	18115	18115	18115

<sup>1</sup> Approximate, based on disaggregation of Statistics Canada 2006 Census Data

The geographic distribution of households and jobs in the three scenarios for the intermediate-term horizon are illustrated in **Exhibit E8-7** and **Exhibit E8-8**.



## 9. Travel Demand Model – Intermediate

The final PM peak hour trips for each trip distance category in each of the three growth scenarios are shown in **Table E9-3** for the intermediate-term.

**Table E9-3: Forecast PM Peak Hour Trips by Trip Distance Category**

Intermediate-term Compact Trips (Work and Non-Work)									
Trip Distance (km)			V	W	TR	C	TA	O/DNS	Total
0	to	1	1243	647	95	43	0	106	2134
1	to	2	2184	747	139	31	0	0	3101
2	to	5	5845	200	302	168	0	201	6716
5	to	10	3303	0	105	36	121	36	3601
10	to	20	366	0	0	0	0	3	369
20	to	1000	37	0	0	0	0	0	37

Intermediate-term Hybrid Trips (Work and Non-Work)									
Trip Distance (km)			V	W	TR	C	TA	O/DNS	Total
0	to	1	1093	561	84	37	0	93	1868
1	to	2	1907	654	121	27	0	0	2709
2	to	5	5260	178	271	152	0	181	6042
5	to	10	3807	0	119	41	134	41	4142
10	to	20	907	0	0	0	0	5	912
20	to	1000	284	0	0	0	0	1	285

Intermediate-term Dispersed Trips (Work and Non-Work)									
Trip Distance (km)			V	W	TR	C	TA	O/DNS	Total
0	to	1	1181	583	91	40	0	103	1998
1	to	2	1604	549	102	23	0	0	2278
2	to	5	4574	153	236	132	0	158	5253
5	to	10	3886	0	119	42	127	42	4216
10	to	20	1519	0	0	0	0	9	1528
20	to	1000	683	0	0	0	0	2	685

V = Trips by vehicle (driver and passenger), W = Walk, TR = Transit, C = Cycling, TA = Taxi, O = Other, DNS = Did not say

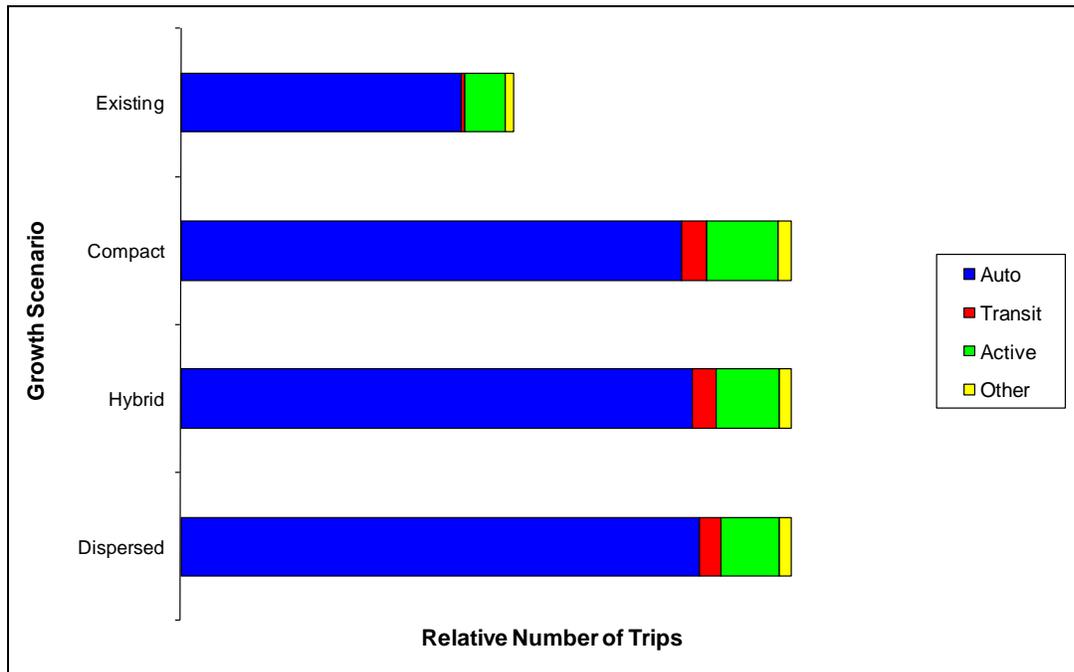
The final PM peak hour trips for each trip distance category in each scenario are shown in **Table E9-4**.

**Table E9-4: Total PM Peak Hour Trips by Mode**

			Trips By Mode						
	Horizon	Land Use	V	W	TR	C	TA	O	Total
Scenario	Existing	--	7,280	1,000	100	60	50	220	<b>8,710</b>
	Intermediate	Compact	12,980	1,590	640	280	120	350	15,960
		Hybrid	13,260	1,390	600	260	130	320	15,960
		Dispersed	13,450	1,280	550	240	130	310	15,960

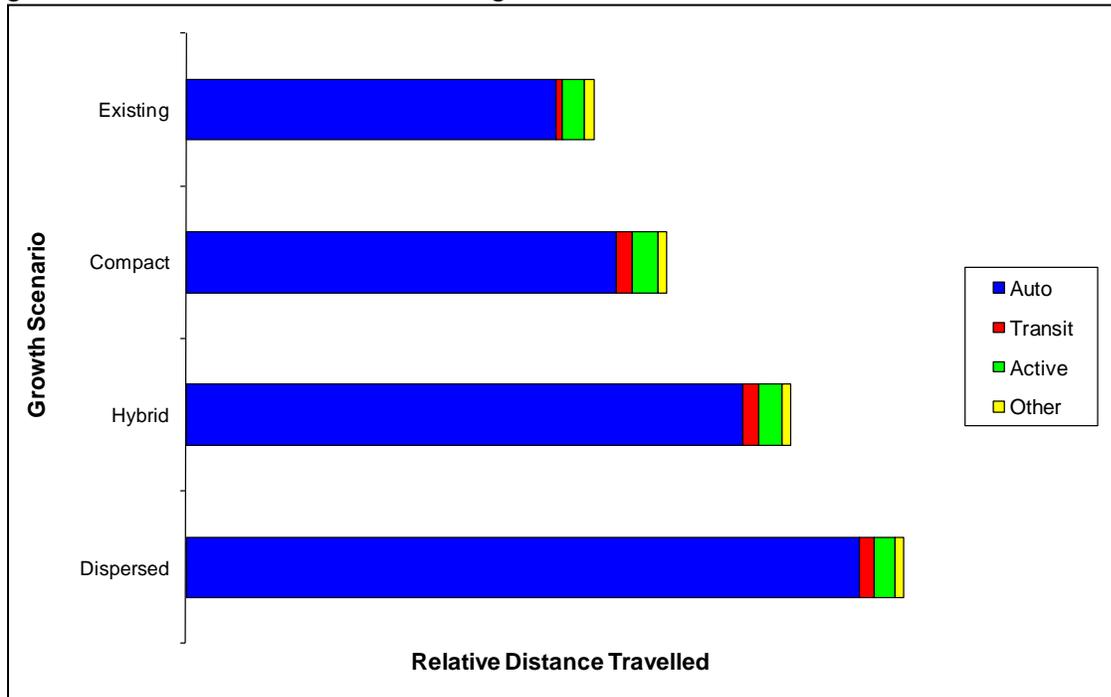
V = Trips by vehicle (driver and passenger), W = Walk, TR = Transit, C = Cycling, TA = Taxi, O = Other

**Exhibit E9-3** shows the relative trips made by mode for each growth scenario and for the existing scenario.



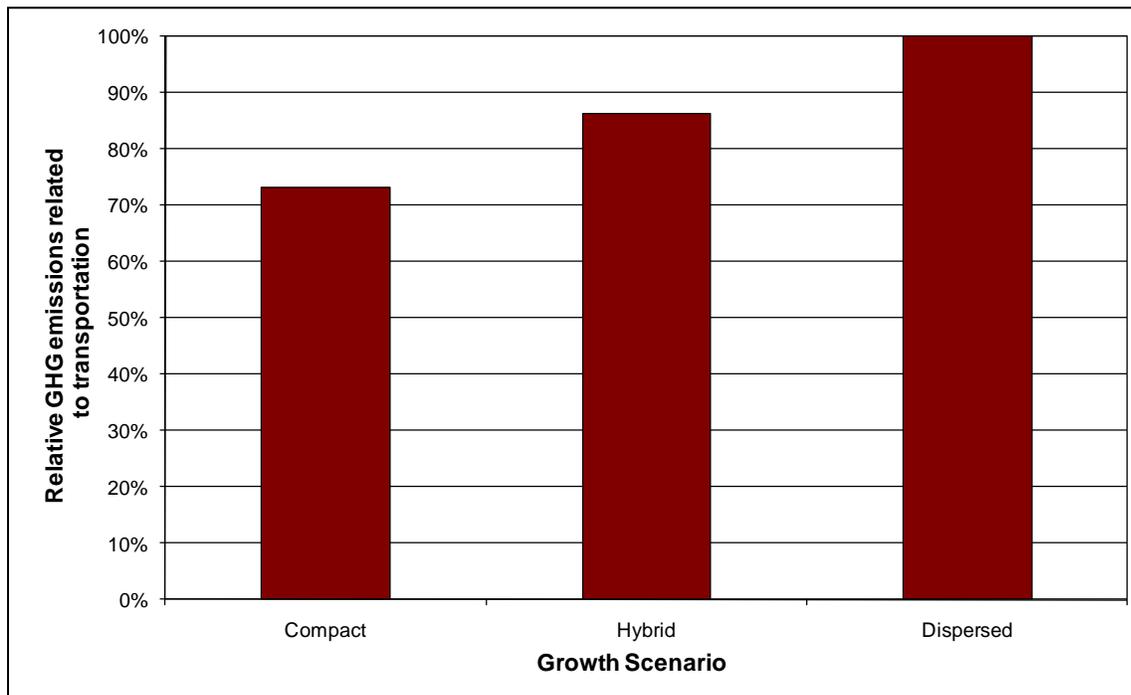
**Exhibit E9-3: Relative Trips Made – Intermediate-term Horizon**

**Exhibit E9-4** shows the relative distance travelled and breakdown by mode for each growth scenario and for the existing scenario.



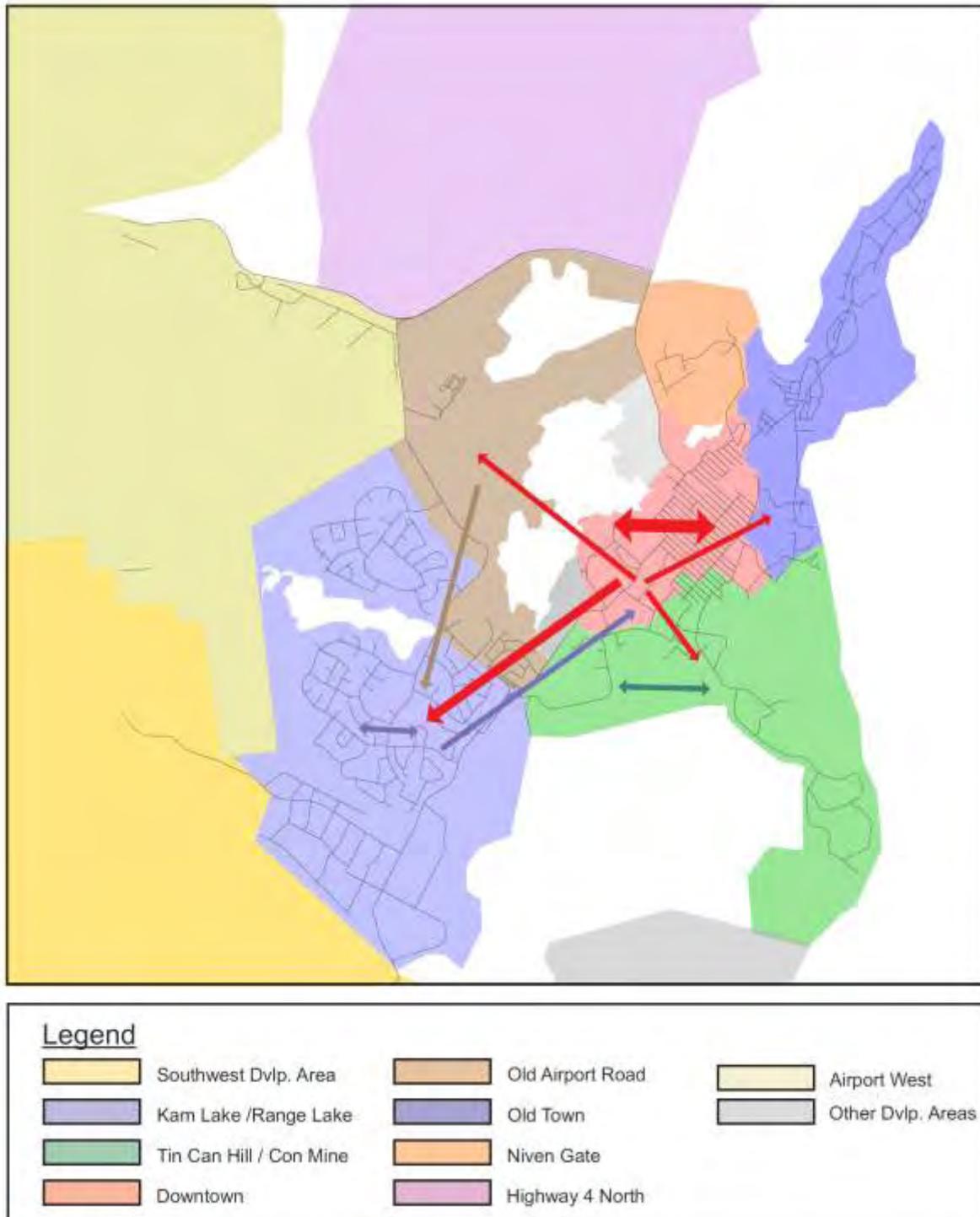
**Exhibit E9-4: Relative Distance Travelled – Intermediate-term Horizon**

The relative GHG emissions between the different scenarios are shown in **Exhibit E9-5**.



**Exhibit E9-5: Relative GHG Emissions – Intermediate-term Horizon**

Exhibit E9-7 illustrates the direction and intensity of travel between different zones in the PM peak period for the intermediate-term, compact scenario.



**Exhibit E9-7: OD Travel Patterns – Intermediate-term, Compact**

Exhibit E9-8 illustrates the direction and intensity of travel between different zones in the PM peak period for the intermediate-term, hybrid scenario.

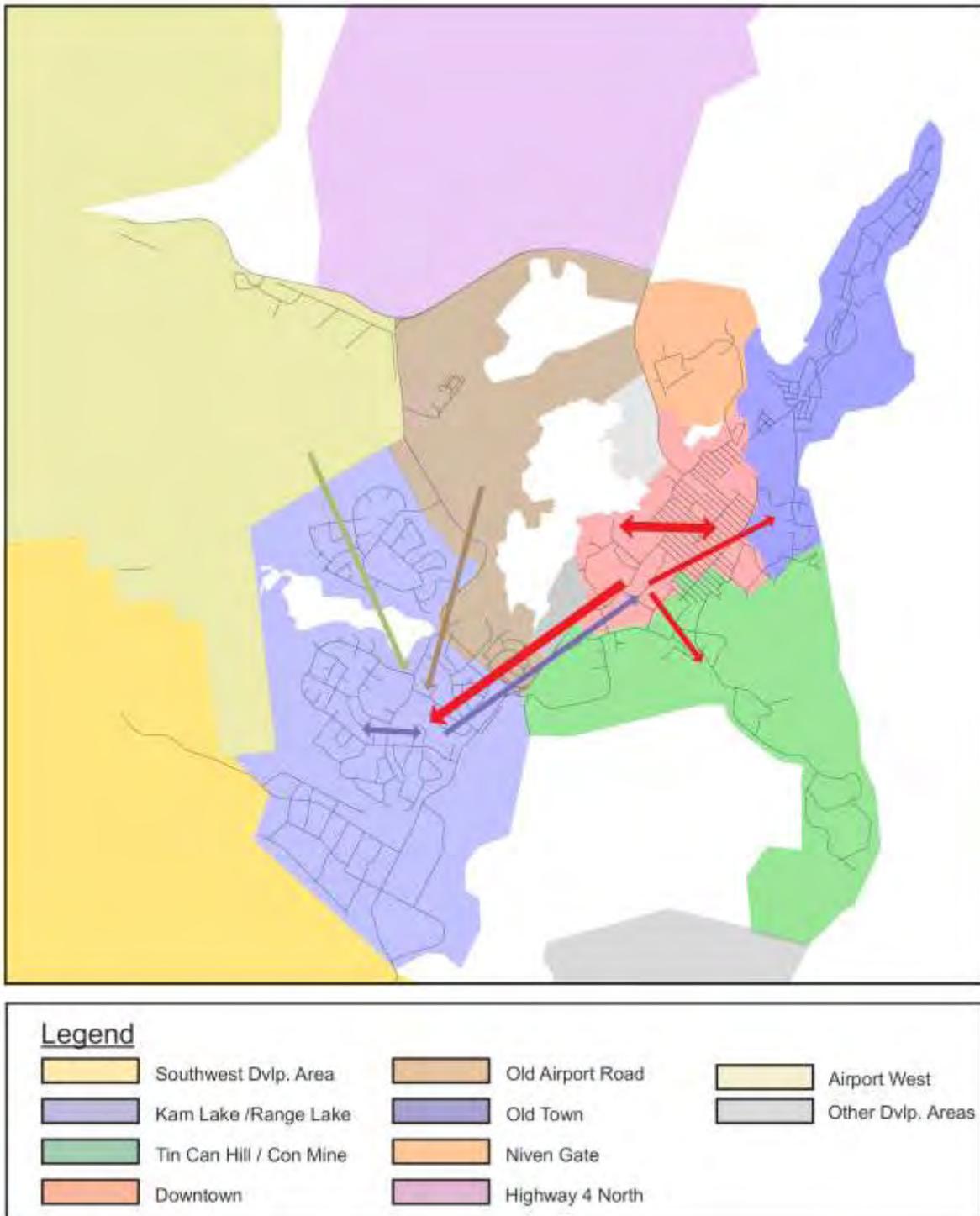
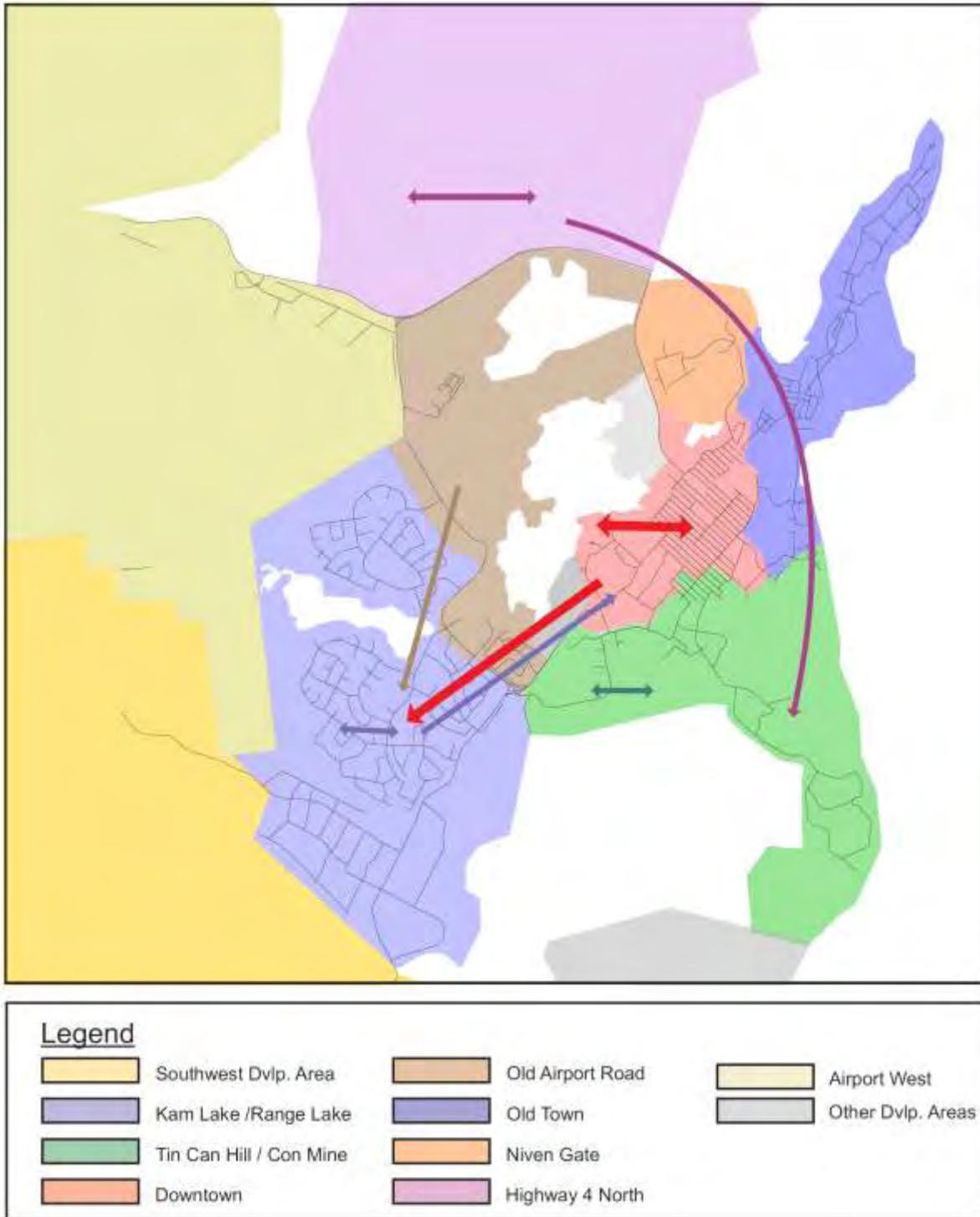


Exhibit E9-8: OD Travel Patterns – Intermediate-term, Hybrid

**Exhibit E9-9** illustrates the direction and intensity of travel between different zones in the PM peak period for the intermediate-term, dispersed scenario.



**Exhibit E9-9: OD Travel Patterns – Intermediate-term, Dispersed**

Exhibit E9-10 illustrates the roadway and intersection traffic volumes for the intermediate-term, compact scenario.



**Legend**  
 ← 450 Approach Volume (PM Peak Hour)

Exhibit E9-10: Intermediate-term, Compact Scenario

Exhibit E9-11 illustrates the roadway and intersection traffic volumes for the intermediate-term, hybrid scenario.



Legend	
← 450	Approach Volume (PM Peak Hour)

Exhibit E9-11: Intermediate-term, Hybrid Scenario

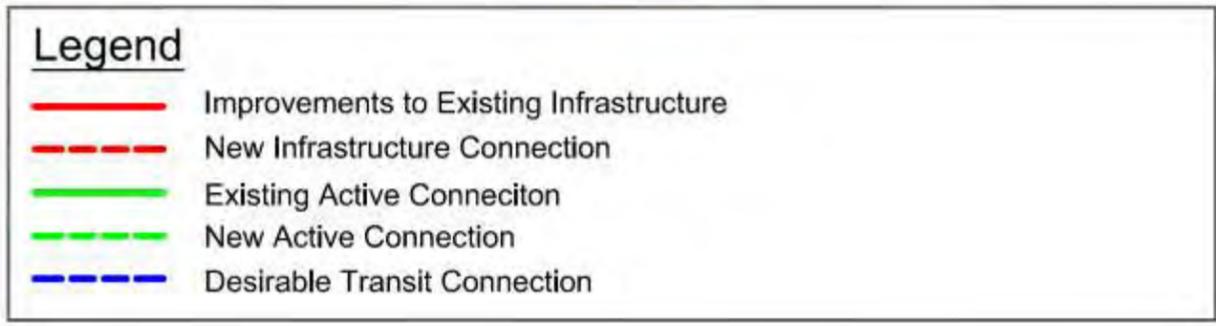
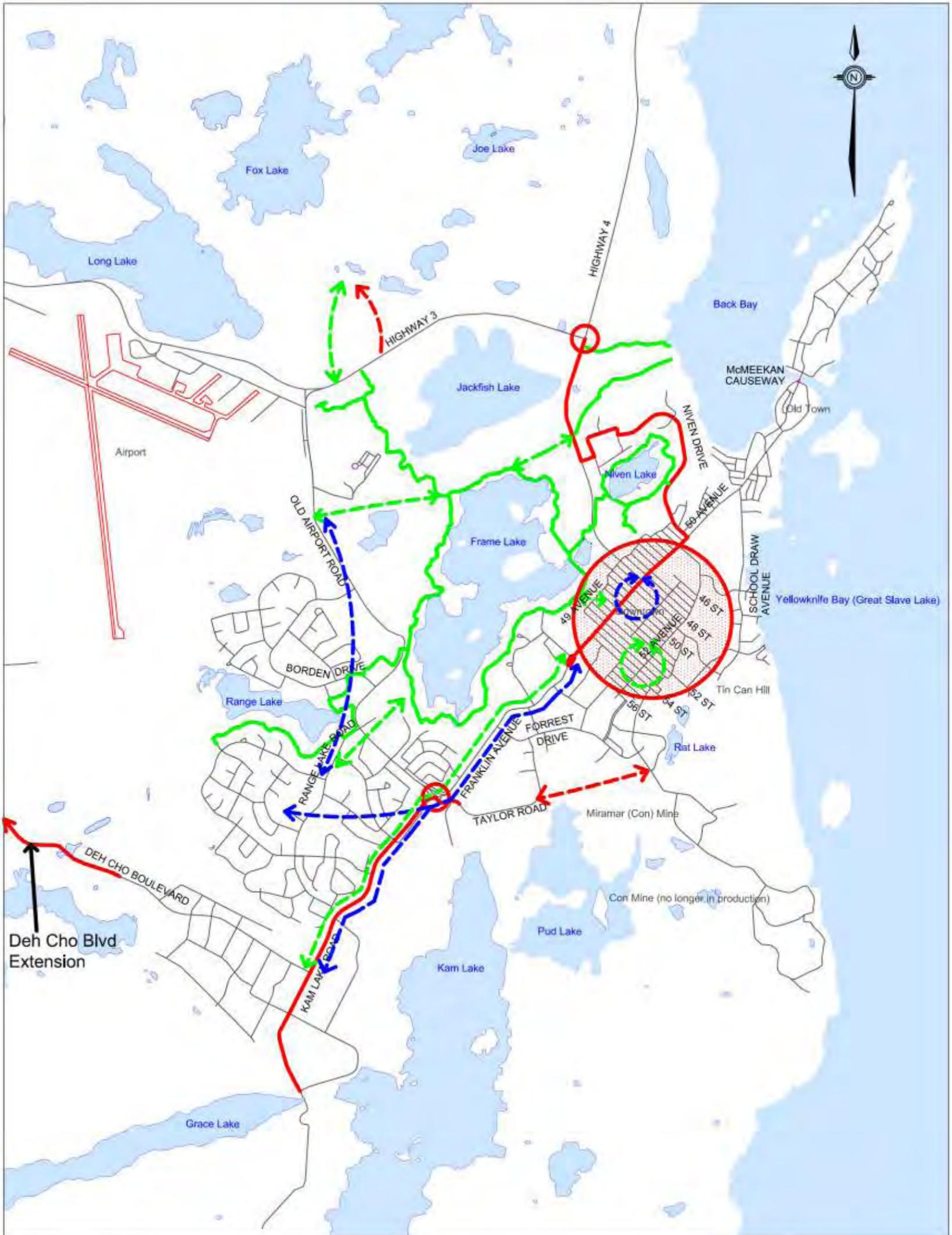
Exhibit E9-12 illustrates the roadway and intersection traffic volumes for the intermediate-term, dispersed scenario.



**Legend**  
 ← 450 Approach Volume (PM Peak Hour)

Exhibit E9-12: Intermediate-term, Dispersed Scenario

**Exhibit E9-13** provides a graphical summary of the proposed transportation improvements in the intermediate-term, compact scenario.



**Exhibit E9-13: Proposed Improvements – Intermediate-term, Compact Scenario**

Exhibit E9-14 provides a graphical summary of the proposed transportation improvements in the intermediate-term, hybrid scenario.

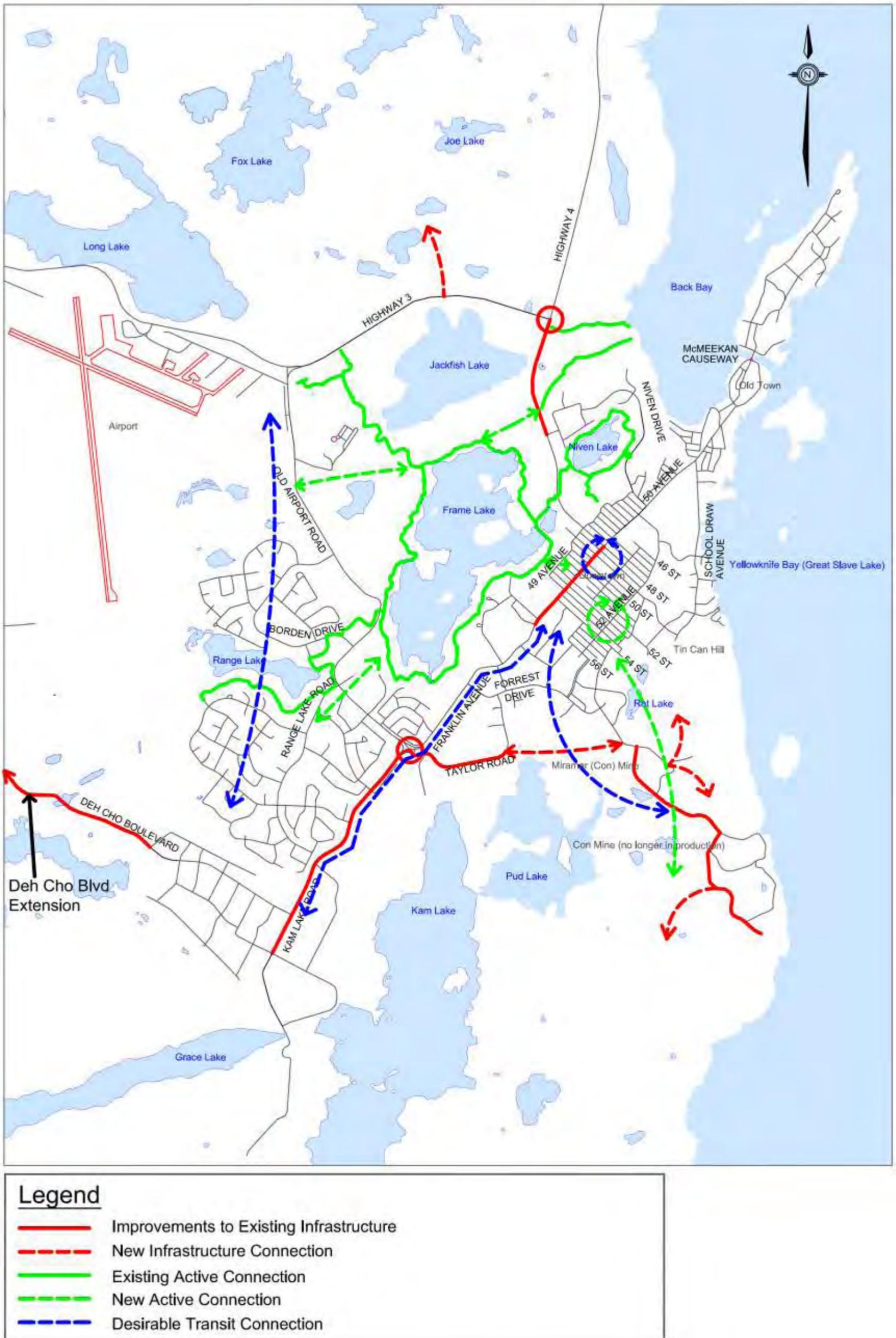


Exhibit E9-14: Proposed Improvements – Intermediate-term, Hybrid Scenario

Exhibit E9-15 provides a graphical summary of the proposed transportation improvements in the intermediate-term, dispersed scenario.

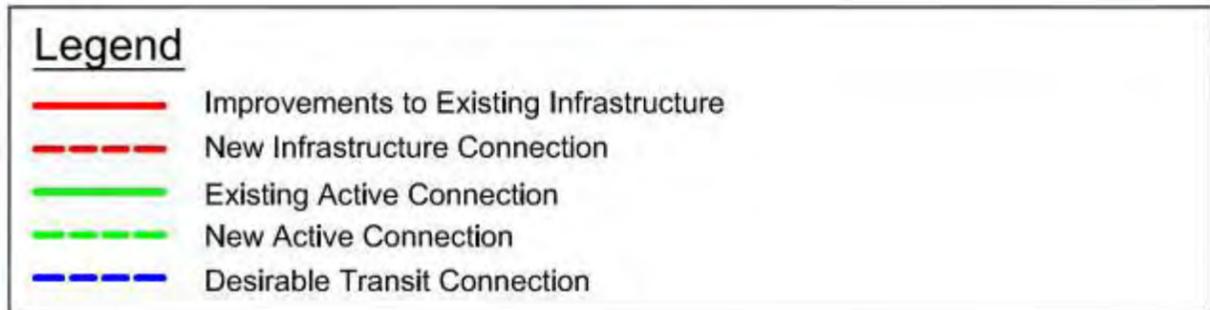


Exhibit E9-15: Proposed Improvements – Intermediate-term, Dispersed Scenario



# Appendix F: Transportation Model Technical Memo



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File: 2.0  
Project # 4868

## Memorandum

To: Jeffrey Humble – City of Yellowknife  
Cc: Donna Howes – HDR|iTRANS  
From: Sasha Naylor, Allison Clavelle, David Kriger – HDR|iTRANS  
Date: October 6, 2009  
Re: Yellowknife Transportation Plan  
Transportation Model Technical Memo

---

This memorandum constitutes the technical documentation for the travel demand forecasting model that HDR|iTRANS built and calibrated for the City of Yellowknife (“City”) as part of its Smart Growth Development Plan transportation strategy. The memorandum is organized as follows: Section 1 gives an overview of the model; Section 2 contains a description of the zone structure and its incorporation into the model; Section 3 explains the existing demand based on origin-destination (“OD”) matrix development; Section 4 describes mode split; Section 5 shows the road network and its construction in the model; Section 6 outlines the calibration of the existing (base) model; and Section 7 outlines the process of population and employment assignment to the zones. The final section, Section 8, details the demand forecasting process.

### 1. OVERVIEW

Forecasting models are used widely around the world to project travel. These projections are used to develop transportation master plans, evaluate proposed improvements to the transportation network or assess a new land use scenario.

Travel is a function of two basic inputs:

1. The transportation network
2. The forecast demographic and socio-economic conditions

In other words, the demand for travel is a derived demand, meaning that people travel in order to participate in some land-based activity (e.g., go to work or go to school). This land-based activity is represented by demographic and socio-economic characteristics (in this case, households and jobs): as these characteristics grow, so the demand for travel grows. The transportation network – the road and transit network – provides the means to access these land-based activities.

Several travel demand modelling packages are available commercially. For this study, HDR|iTRANS purchased a QRS II license on behalf of the City. QRS II (“Quick Response

System”) is ideally suited for Yellowknife because of its user-friendliness, flexibility, and ease of use. It uses default values for some inputs and rates, which are based upon accepted published sources. QRS is paired with the General Network Editor (“GNE”) which provides a graphic platform for creation and editing of the transportation network. A workbook forecasting tool was created to work with QRS for trip generation, distribution and mode split activities.

These default values were complemented by other inputs from several types of data that were collected in Yellowknife specifically for this study in late 2008:

- A household OD survey;
- A classification of all roads and summary of posted speed limits; and,
- Turning movement and 24 hour traffic counts, which were conducted at several strategic link locations and many intersections throughout the City.

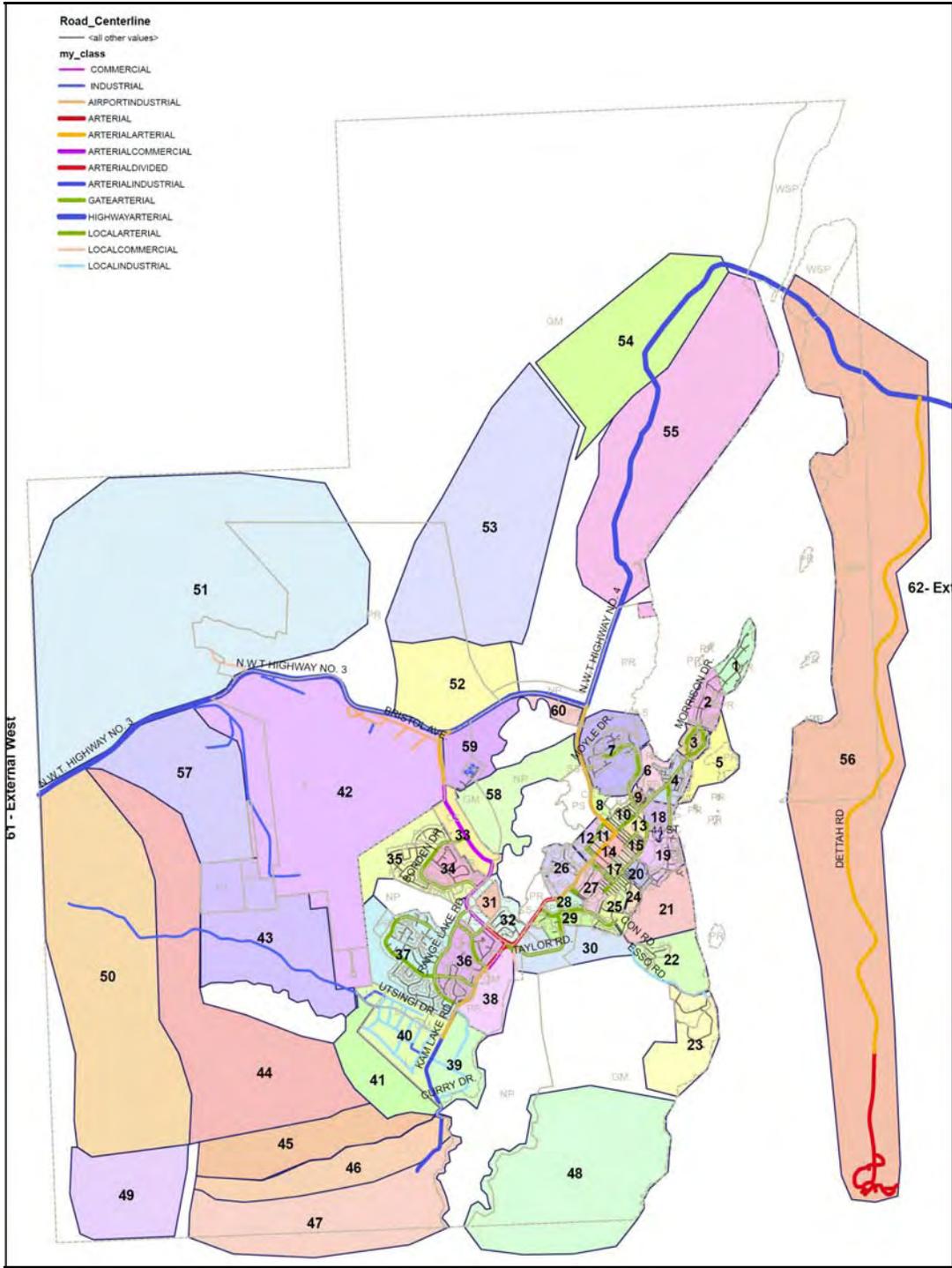
The OD survey was performed by telephone interview using a random sample of households throughout the City. Participants were asked to describe the trips they had made on the previous day. After data sorting some households were eliminated because of invalid data. Two survey data sets were combined: the “ME” data set (surveys conducted by ME2 Transportation Data) collected valid entries from 277 households and a subsequent “Ma” data set (surveys conducted by R.A. Malatest & Associates) with valid entries from 103 households, for a total of 380 households surveyed. Consistent with common OD survey practice, each trip was described in terms of its starting location (origin), ending location (destination), starting trip purpose (e.g., go to work, go to school, return home), mode(s) used (e.g., took transit, walked), start time and end time. Data were collected for trips that were made on a weekday between 7:00 a.m. and 7:00 p.m. (the times of greatest activity) and the sample was expanded to represent all households in the City. The resultant travel profiles were then modelled within the software.

## 2. TRAFFIC ANALYSIS ZONES

The model required that the City be divided into spatial areas (geographies). These are known as Traffic Analysis Zones, or TAZs. They are similar in concept to Census Tracts and to the zones that the City uses for land use planning, though generally they are smaller in size. So-called “land use” inputs – dwelling units and employment – are input for each TAZ. The total demand for travel by all modes grows or changes as these land use inputs change. The entire City, as well as the two highways leading out from the City, was captured in 66 TAZs. These are shown in **Exhibit 2-1**. The TAZs reflect existing neighbourhoods, downtown areas and ‘special [traffic] generators’ (i.e., the Swanton Hospital and the airport). To a practical extent, TAZs reflect different land uses by separating residential neighbourhoods from adjoining employment concentrations. The TAZs also were designed as ‘building blocks’ that can be aggregated to conform to the residential or employment zones that define the three land use scenarios of compact, dispersed and a hybrid.

The City provided the existing dwelling unit data for large, aggregate zones; existing employment data was taken from the 2006 Census of Canada data for the City. The City

provided the forecasts for both these data according to its aggregate zones, which HDR|iTRANS re-designated at the TAZ level. The disaggregation of dwelling units and employment data to the TAZ level was documented in an Excel workbook, which was provided to the City. The final disaggregation spreadsheet, as well as the other model workbooks will be provided to the City prior to the model training webinar. The City will then have the flexibility to test alternate development scenarios, according to these basic 'building block' TAZs. The disaggregation of dwelling units and employment is discussed in a later section.



**Exhibit 2-1: Traffic Analysis Zones Map**

### 3. EXISTING DEMAND

The OD survey was coded in terms of the 66 TAZs. It defined a ‘square’ (66 x 66) matrix of trips. For this model, we focused on the p.m. peak period condition because generally the p.m. peak period generates the greatest loading on the transportation network; and the p.m. peak period in particular comprises the greatest variety of trip purposes, such as stopping on the way home in the afternoon to go shopping, go to the gym, visit a friend, etc. The survey was calibrated in the model according to the traffic count data previously collected in autumn 2008; that is, around the time of the OD surveys.

The trip matrix can be sub-divided into tables according to trip type (work and non-work), by mode of travel (driver, passenger, walk, cycle, transit, other), or both. By developing a matrix according to auto users, for example, and assigning that demand to the road network in the model, the actual traffic volume flows on individual links can be estimated.

The method for setting up the model for the existing condition was as follows:

- OD survey data were sorted, cleaned, and combined (i.e., to represent all households in the City) in a Microsoft Access database.
- Origin purposes were assigned from the expanded OD survey data.
- Malatest & Associates and ME/2 data expansion factors were created for and applied to each OD survey record.
- Trip tables were exported for 3:45 to 5:44 p.m. trip start times (two hour p.m. peak). The two hour time frame was used to get a more complete representation of travel patterns due to the small sample size of the survey: this is consistent with common OD survey and modelling practice.

### 4. TRIP TYPE AND MODE SPLIT

After the total trip table for the two hour p.m. peak was exported, the trips were separated by purpose into two categories, the first being “Work” trips and the second “Non-work” trips. Work trips include all trips with an origin purpose of work OR a destination purpose of work. The categorization allows the different travel behaviour of each to be identified – in particular, the greater propensity of commuters to be more amenable to transit use. Forecasts were derived separately for each of the two matrices by using the Fratar, or growth factor, trip distribution process. This process allocates future travel as a function of growth in zonal households and jobs. The resultant two forecast matrices represent trips by all modes, so a mode split calculation was then applied in order to derive the resultant modes.

The percentage mode split can be based upon a number of factors, depending on the size of the city and the level of congestion. From the survey, the most appropriate factor was determined to be trip distance, which was characterized according to the six categories. This reflects people’s propensity to choose a mode, all else being equal, as a function of the distance.

Existing mode split by distance category and trip purpose was created through the following steps:

- Existing two hour p.m. peak trips were used as a base (3:45 to 5:44 p.m.).
- Average distance by mode was estimated using model zones.
- Overall mode split was calculated from OD Survey.
- Trips were divided into two purposes – Work and Non-work.
- Six trip distance categories were created (0 to 1 km, 1 to 2 km, 2 to 5 km, 5 to 10 km, 10 to 20, and 20 to 1,000 km).
- Trips were assigned to a distance category and purpose.
- Mode split was calculated by distance category for Work trips and Non-work trips.

The resultant percentage mode splits for each of six modes and for each trip distance category are summarized in **Table 4-1**. (A seventh category, “other / did not say,” was not considered in the analysis.)

**Table 4-1: Existing Mode Split by Distance Category (Work and Non-Work)**

Existing Mode Split by Distance Category										
Work			D	P	W	TR	C	TA	O / DNS	Total
Trip Distance (km)										
<b>0</b>	<b>to</b>	<b>1</b>	57%	5%	34%	0%	0%	0%	3%	100%
<b>1</b>	<b>to</b>	<b>2</b>	65%	7%	28%	1%	0%	0%	0%	100%
<b>2</b>	<b>to</b>	<b>5</b>	77%	16%	0%	2%	2%	0%	5%	100%
<b>5</b>	<b>to</b>	<b>10</b>	97%	2%	0%	0%	0%	0%	2%	100%
<b>10</b>	<b>to</b>	<b>20</b>	97%	2%	0%	0%	0%	0%	2%	100%
<b>20</b>	<b>to</b>	<b>1,000</b>	97%	2%	0%	0%	0%	0%	2%	100%
<b>ALL WORK TRIPS</b>			<b>72%</b>	<b>9%</b>	<b>14%</b>	<b>1%</b>	<b>1%</b>	<b>0%</b>	<b>2%</b>	<b>100%</b>

Existing Mode Split by Distance Category										
Non-Work			D	P	W	TR	C	TA	O / DNS	Total
Trip Distance (km)										
<b>0</b>	<b>to</b>	<b>1</b>	59%	13%	22%	0%	0%	0%	6%	100%
<b>1</b>	<b>to</b>	<b>2</b>	60%	14%	24%	3%	0%	0%	0%	100%
<b>2</b>	<b>to</b>	<b>5</b>	76%	13%	6%	1%	1%	0%	3%	100%
<b>5</b>	<b>to</b>	<b>10</b>	75%	8%	0%	5%	0%	11%	0%	100%
<b>10</b>	<b>to</b>	<b>20</b>	26%	74%	0%	0%	0%	0%	0%	100%
<b>20</b>	<b>to</b>	<b>1,000</b>	26%	74%	0%	0%	0%	0%	0%	100%
<b>ALL NON WORK TRIPS</b>			<b>68%</b>	<b>13%</b>	<b>13%</b>	<b>1%</b>	<b>1%</b>	<b>1%</b>	<b>3%</b>	<b>100%</b>

D= Driver, P= Passenger, W = Walk, TR = Transit, C = Cycling, TA = Taxi, O = Other, DNS = Did not say

Most p.m. peak trips recorded were under 10 km in length, resulting in a very small data set for the 10 km to 20 km and 20 km to 1,000 km ranges. For work trips, the longest trip recorded was in the 5 to 10 km range. The mode split calculated for the 5 km to 10 km range

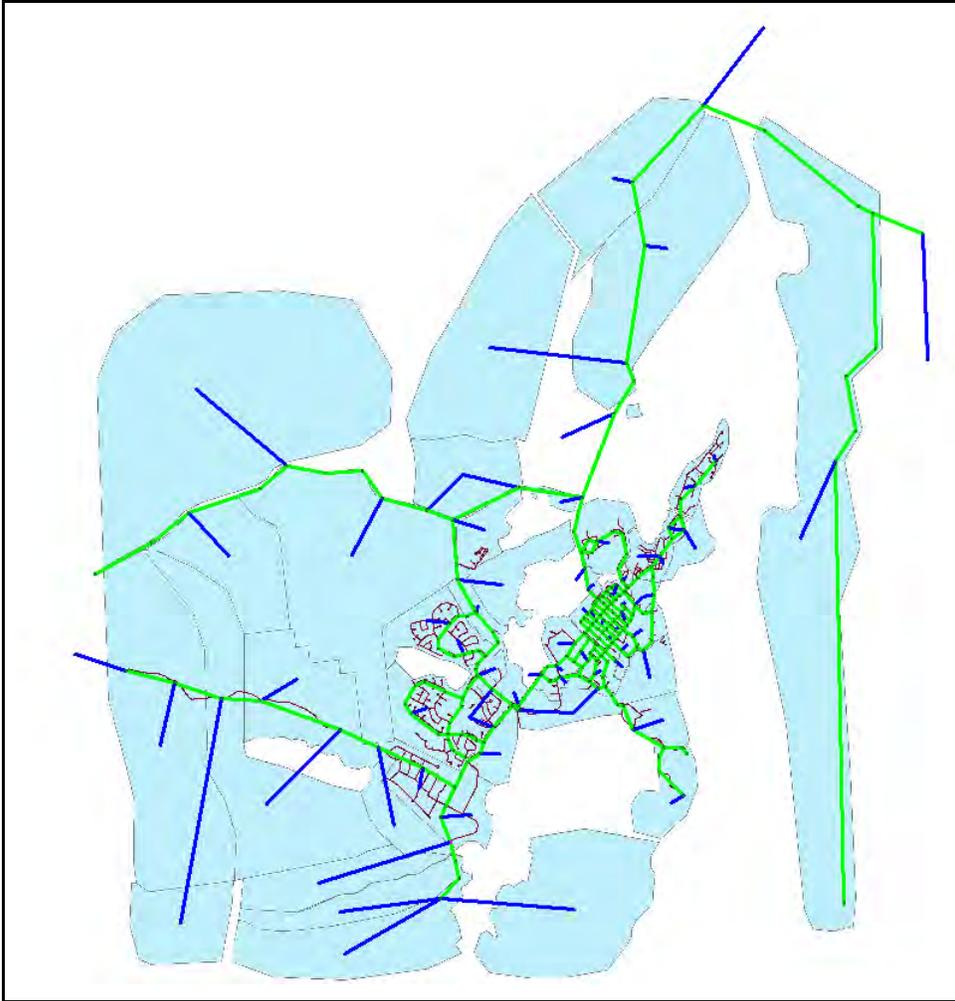
was used for the larger ranges to account for this data gap. For non-work trips, the longest trip recorded was in the 10 km to 20 km range. The very small data set for this range may have skewed the mode split towards passenger trips. Due to the small number of non-work trips greater than 10 km, this had negligible impact on the model.

The drive mode trips for the Work and Non-work trip purposes were combined, to yield a single, two-hour matrix of drive (i.e., auto vehicle) trips.

Note that all of the demand modelling work – as described in **Sections 3 and 4** - was conducted in the Excel workbooks, for convenience. This work could be conducted inside QRS; however, the use of the spreadsheet allows City staff to import zonal population and employment directly from its own spreadsheets. Using Excel workbooks as a base also allowed the project team to utilize OD data collected to better understand and predict travel patterns.

## 5. TRANSPORTATION NETWORK

The model requires a depiction of the transportation system. Essentially, this is the road network featuring arterial and collector routes. The road network was based upon the City's AutoCAD centre-line files, so it is quite accurate with respect to link lengths and intersection spacing. However, in modelling, local streets generally are excluded from the model because they represent too fine a level of analysis within each TAZ. This study in particular, and the majority of long-range planning studies, are not generally concerned with the capacity of individual local streets. Accordingly, the TAZs are depicted in this network as single points, or centroids. In turn, the centroids are connected to the primary road network, such as collectors, arterials, and highways, via centroid connectors. These connectors then represent, in aggregate, the local streets. The road network, including the TAZ centroids and centroid connectors, is displayed in **Exhibit 5-1**. The road network is shown in green while centroid connectors are blue.



**Exhibit 5-1: Model Road Network and Centroids**

The road network links are defined in the model according to several attributes including posted speed, capacity, and link length. These ‘links’ are connected to each other at ‘nodes’ (i.e., intersections). Thus, any TAZ is connected to any other TAZ via the road network allowing any driver to get from an origin to a destination.

The model allows for the testing of new roads, widened roads, or other improvements but it does not include sidewalks per se (they are assumed to be inherent to the road network). Cycling paths similarly are not included as they are also assumed to be inherent. However, by assigning transit demand to the road network the model can provide an indication of where transit routes are needed in forecast scenarios.

The following describes the creation of the QRSII model in General Network Editor:

- Major roadways, 66 centroids, and centroid connectors were drawn.
- The network was scaled graphically using measurements from Google Earth.
- Capacities were set at 800 vehicle/hour/lane (vphpl) for highways and 500 vphpl for all other roads, in accordance with standard traffic engineering practice.
- Road locations and lengths were set based on GIS information received from the City.
- Number of lanes were set based on data received from the City.
- Speeds were set based on input from the City. Three speeds were used: 70 km/h for Highway 3, 30 km/h for Old Town, and 45 km/h for all other roadways.
- As a starting point, no delay was assumed for all intersections.

After the model was created, the following QRS II settings were updated:

- Trip generation / distribution functions were set to read from an “AddVTrips” file.
- The “assume hourly volumes” factor was set to 1. This tells the model that the inputted volumes represent a one hour period and do not need further factoring.
- Vine building (i.e., paths between each origin and destination) was set as the assignment option, with 5 equilibrium iterations.
- Standard values were used for all other variables.

Existing p.m. peak hour trips were imported from the workbook demand model, as follows:

- The drive mode (i.e., auto vehicle) matrix for the two hour p.m. peak was converted to hourly values for the purposes of trip assignment, which typically is conducted for the peak hour only. (Standard traffic engineering practice uses hourly values.)
  - The hourly conversion factor used was 0.643. This was calculated based on data from the OD survey. It is the ratio of trips in the p.m. peak hour to trips in the two hour p.m. peak. The same factor was applied for all scenarios, horizons, and modes.
- The trip table was exported in a QRS II – readable format.

The trip assignment process is used to allocate trips between each origin and destination pair to the actual road network ‘path.’ Running the model in this way produced existing p.m. peak hour volumes on each link.

## 6. MODEL CALIBRATION

Before it can be used for forecasting, the model must be calibrated. The calibration process ensures that the simulated results provide a reasonable match with observed data – in particular, that the assigned volumes (which are the end product of the modelling) match observed traffic counts. The calibration was performed by assigning predicted inter-TAZ demand onto the road network, and then evaluating how closely the assigned demand matched the real traffic count data. Adjustments were then made either at the OD-level (changes in flows) or at the network level (changes in link attributes) where necessary to approximate counts more closely.

After the first run, the QRS II settings were adjusted for better modelling results. The settings were only adjusted once: the equilibrium iterations were increased from 5 to 20.

Before comparison between the model and real traffic count data, the traffic count data were reviewed for inconsistencies or unusual volumes. Daily volumes were counted at screenline (i.e., mid-block) locations. Available data from the week surrounding the traffic count date were reviewed for any anomalies on the day of the p.m. peak hour turning movement count. No significant discrepancies were found.

## 6.1 Aggregate Changes to Origin – Destination Table

The OD calibration was done in 17 iterations, each of which involved the following steps:

- The results from the previous iteration were reviewed. The absolute value of the model volume, the difference between the model and the traffic count, and the percentage of the difference were considered.
- Specific locations that were over- or under- forecasting were identified.
- Total origins and destinations in each zone were compared to the existing households and jobs in that zone for reasonableness.
- Percentage of trips in each zone (i.e., as a percentage of all trips generated by all zones) was compared to the percentage of existing households and jobs in that zone (again, as a percentage of all households and all jobs) for reasonableness. In other words, there is an expectation that the proportion of trips originating from or destined to a zone should approximate that zone's proportion of households and jobs. (There are exceptions where the number of trips may not be proportional. e.g. the airport.)
- Work origins, work destinations, non-work origins, and non-work destinations were adjusted based on the bullets above.
- Origins and destinations were normalized to be equal and new trips were distributed over the zones using the Fratar method<sup>1</sup>.
- In the latter iterations, work trips and non-work trips between specific pairs of zones were also adjusted.

In each iteration, the new trip tables were processed using the mode split by trip distance tables to determine vehicle trips. The vehicle trips were loaded into the QRS II model, the results were reviewed, and the transportation network was edited in GNE. Changes to the transportation network are described in the next section.

The aggregate adjustments to the origins and destinations for work and non-work trips are shown in **Table 6-1**. Adjustments to OD pairs are shown in **Table 6-2** and **Table 6-3** for work trips and non-work trips respectively.

The resultant adjusted, 'synthetic' matrices were used as the basis for the forecasts.

---

<sup>1</sup> The Fratar method iteratively factors origins and destinations until convergence is reached.

**Table 6-1: Aggregate Adjustments to Origins and Destinations**

WORK			NONWORK		
TAZ	O	D	TAZ	O	D
1	+40	+65	1	+40	+95
2	+25	+25	2	+35	+35
3	+25	+25	3	+35	+35
4	+30	+20	4	+30	+20
5	+10		6	+30	+50
6	+10		16	+20	+20
16	+40		18	+22	+40
18	+40		22	+30	+30
22	+5	+15	23	+6	+6
24		+150	24	+20	+40
26	+100		38	+50	
35			40	+20	+40
37	-30	+10	56	+40	+25
40	+275	+15	42	-70	-40
41	+100	+15	32	-140	-160
42	+20	+10			
43	+10	+5			
44	+10	+30			
45	+5				
46	+5				
47	+5				
48	+5				
50	+10				
52	+1				
53	+5				
54	+25	+12			
55	+25	+12			
56		+30			
59	+80	+70			
60		+20			
61	+30	+25			
64	+20	+12			
66	+20	+5			
63	-100	-100			
20	+30	+80			
32	-50	-200			
36	-30	-40			

**Table 6-2: Aggregate Adjustments to Work OD Pairs**

TAZ	9	11	12	13	14	15	16	18	19	20	29	32	33	39	40	41	42	60	TOTAL O
1														+2	+14	+14			<b>30</b>
2														+1	+3	+3			<b>7</b>
3														+1	+3	+3			<b>7</b>
12												+5	+5						<b>10</b>
16														+4	+23	+23			<b>50</b>
20																	-25		<b>-25</b>
26													+50	+8	+26	+26			<b>110</b>
27																	-20		<b>-20</b>
32	+1		+30											+2	+10	+10			<b>53</b>
33			+30																<b>30</b>
34														+2	+11	+11			<b>24</b>
35														+10	+62	+62			<b>134</b>
36	+1	+11		+3	+10	+4	+4		+8					+5	+28	+28		+20	<b>102</b>
37	+2	+19		+6	+16	+6	+8	+1	+14								+80	+30	<b>152</b>
42			+30		-40				-80	-40	-60								<b>-190</b>
<b>TOTAL D</b>	<b>4</b>	<b>30</b>	<b>90</b>	<b>9</b>	<b>-14</b>	<b>10</b>	<b>12</b>	<b>1</b>	<b>-58</b>	<b>-40</b>	<b>-60</b>	<b>5</b>	<b>55</b>	<b>35</b>	<b>180</b>	<b>180</b>	<b>35</b>	<b>50</b>	

**Table 6-3: Aggregate Adjustments to Non-work OD Pairs**

TAZ	1	2	3	4	6	8	9	12	13	14	15	16	18	19	26	28	31	32	33	34	35	36	37	38	39	40	41	42	65	TOTAL O
1																			+2	+1	+2	+2	+3		+1	+5	+5			21
2																			+2	+1	+2	+2	+3		+1	+3	+3			17
3																			+15						+1	+3	+3			22
4																	+1		+3	+2	+3	+2	+4							15
5																		+5												5
6																		+10	+1		+1	+1	+1							14
9																		+5	+1	+1	+1	+1	+2							11
10																		+10	+20											30
12																			+36											36
13																	+1		+3	+2	+3	+2	+4							15
14																	+2		+11	+6	+10	+9	+15	+1						54
15																	+1		+4	+2	+4	+3	+5							19
16																	+1		+5	+3	+5	+4	+7	+1	+4	+23	+23			76
19																	+2		+8	+5	+7	+7	+11	+1						41
26																			+99											99
28																				-	-									-40
31	+1	+1		+1					+1	+5	+2	+2		+3				+18		+20	+32	+52	+78							216
32																-10							-20					+80		50
33	+4	+4	24	+6	+1		+2	60	+6	+22	+8	+10	+1	+16	+166	-10		+5		+5	+8	+13	+20							371
34	+2	+2		+3	+1		+1		+3	+13	+5	+6		+9		-10														35
35	+4	+4		+5	+1		+2		+5	+21	+8	+9	+1	+15																75
36	+3	+3		+5	+1	20	+2		+5	+19	+7	+8	+1	+13														+20	107	
37	+5	+5		+8	+2	20	+3		+7	+30	+11	+13	+1	+22				-20										+20	127	
38				+1					+1	+3	+1	+1		+2																9
47																-10														-10
<b>TOTAL D</b>	<b>19</b>	<b>19</b>	<b>24</b>	<b>29</b>	<b>6</b>	<b>40</b>	<b>10</b>	<b>60</b>	<b>28</b>	<b>113</b>	<b>42</b>	<b>49</b>	<b>4</b>	<b>80</b>	<b>166</b>	<b>-40</b>	<b>8</b>	<b>33</b>	<b>210</b>	<b>28</b>	<b>58</b>	<b>98</b>	<b>133</b>	<b>3</b>	<b>7</b>	<b>34</b>	<b>34</b>	<b>80</b>	<b>40</b>	

## 6.2 Final Transportation Network

With each iteration of the OD table update, the transportation network was also reviewed and updated as required. The transportation network was updated to match route choices more closely with those indicated by the traffic count data. The following network attributes were changed:

- Link speed
- Link capacity
- Intersection with delay and left-turn and / or right-turn penalty
- Adjustment of geographic location of centroids and centroid connectors
- Addition of centroid connectors
- Addition of “dummy” links

One set of road links was also added to the model: Taylor Road was added from Forrest Drive to Old Airport Road.

Changes to link speeds and capacities are summarized in **Table 6-4**. It is important to note that the speeds coded into the model initially reflect only ‘starting points,’ and the new speeds listed in **Table 6-4** help achieve greater calibration.

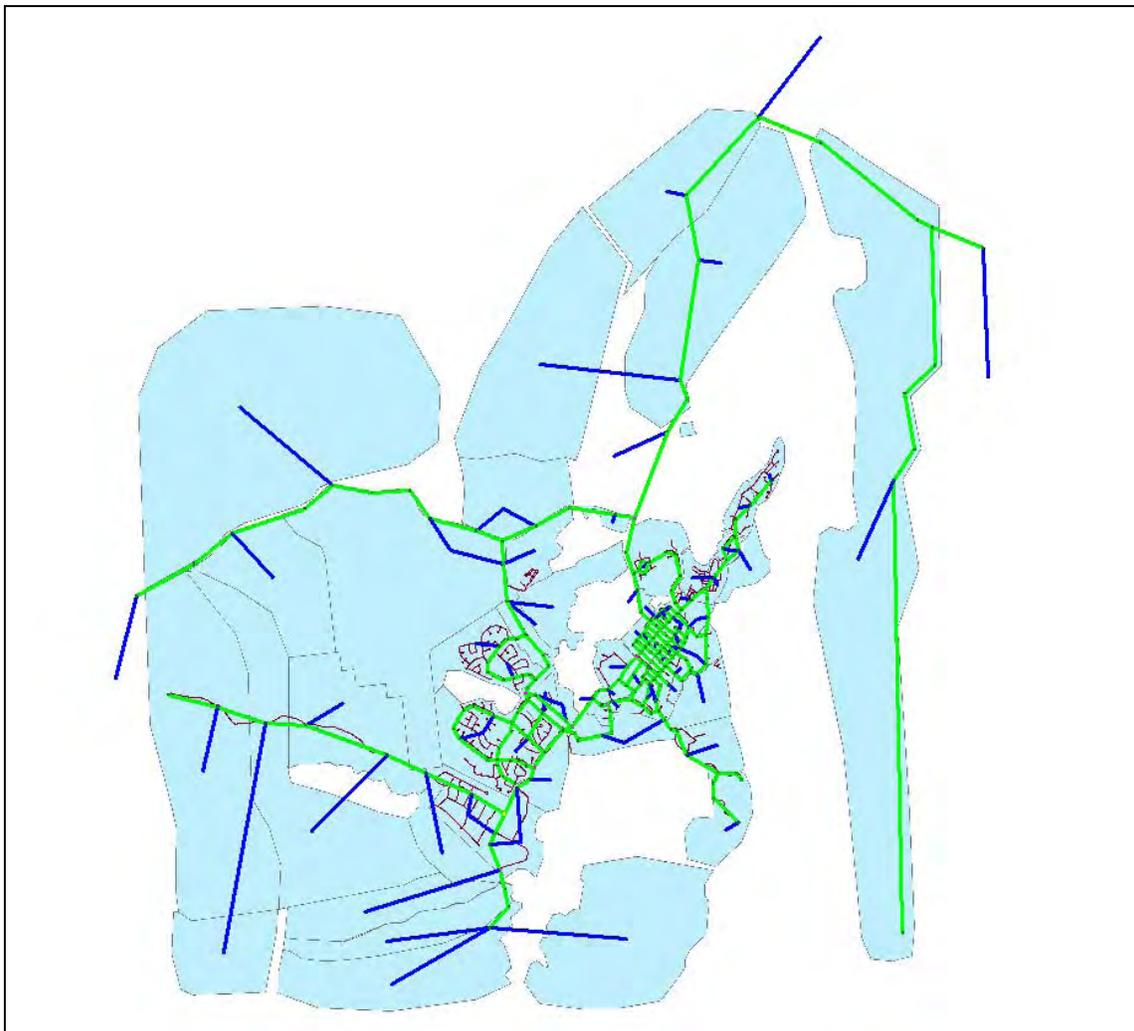
**Table 6-4: Aggregate Changes to Link Speeds and Capacities**

Link	From	To	Speed (km/h)	Capacity (vphpl)
Highway 3	Old Airport Road	Highway 4	85	800
Highway 3	Highway 4	Niven Gate	85	500
49 Avenue	52 Street	46 Street	40	500
51 Avenue	53 Street	43 Street	40	500
Old Airport Road	Franklin Avenue	East of Borden Drive S	45	550
Taylor Road	Forrest Drive	Franklin Avenue	40	500
Franklin Avenue	53 Street	Old Airport Road	45	550
50A Avenue	54 Street	57 Street	40	500
49 Street	49 Avenue	North of 49 Avenue	45	550
57 Street	51A Avenue	Franklin Avenue	40	500
51A Avenue	57 Street	Forrest Drive	40	500
46 Street	50 Avenue	49 Avenue	30	500
Finlayson Road	Kam Lake Road	Range Lake Road	40	500

Turn penalties were introduced at the following intersections. These penalties are intended to approximate the delay in moving through the intersection, which in turn makes other routes more attractive – again enhancing calibration:

- Highway 3 / Highway 4 (left)
- Kam Lake Road / Finlayson Drive (left and right)
- Forrest Drive / Taylor Road (left and right)
- 50 Avenue / 54 Street (left)

Changes to the geographic representation of the model and addition of dummy links can be seen by comparing **Exhibit 5-1** with **Exhibit 6-1**. Dummy links allowed assignment from certain centroid connectors to be more accurately distributed on either side of important intersections. Dummy links were given capacities less than 10 vphpl and speeds less than 5 km/h so as to not be used as shortcutting routes.



**Exhibit 6-1: Calibrated Transportation Network**

## 7. HOUSEHOLD AND EMPLOYMENT ASSIGNMENT

Disaggregation of household and job data was completed for existing and forecast scenarios using development scenarios of Compact (C), Hybrid (H), and Dispersed (D) and horizon years 33,000 and 55,000. This section describes the method used to disaggregate the data and the operation of the disaggregation Excel workbooks. The proposed household and job estimates used for the existing and forecast land uses are included as **Appendix A**.

The workbooks include a description of the O-D forecasting assumptions and calculations used to split the City of Yellowknife population data and 2006 Census of Canada employment data into the respective 66 TAZ. The workbooks have been provided to the City. The workbook refers to the zones shown in **Exhibit 2-1**. Four zones are not shown on the map: 63 (Ruth Inch Pool), 64 (Vee Lake), 65 (Legislative Assembly), and 66 (Solid Waste Facility).

The method used to disaggregate the data is somewhat complex and the effort to set it up was exhaustive. However, the resultant workbooks can be changed and manipulated easily for future planning work by the City of Yellowknife. A description of each worksheet in the Excel workbooks is provided below starting with the workbook for households:

- *Worksheet 1: Source* – These are the City of Yellowknife Smart Growth forecast number of households for each time horizon and development scenario. The values are the total number of households in that horizon and scenario. The horizons and scenarios correspond with the Smart Growth plan and are:
  - Horizons
    - Existing
    - 33,000 (33)
    - 55,000 (55)
  - Scenarios
    - Compact (C): growth focused near already developed areas.
    - Hybrid (H): some growth in new areas and some densification of existing areas.
    - Dispersed (D): most growth in new areas.
- *Worksheet 2: TAZ assign existing* – This worksheet assigns the existing households from Smart Growth zones A-O into the 66 TAZ, to match Yellowknife existing dwelling units profile.
- *Worksheet 3 to Worksheet 6: TAZ Assignment tabs* – These worksheets are grouped into horizon years and each horizon include one worksheet for each scenario. Tabs are colour coded for ease of use. These tabs assign the forecast households from Smart Growth zones A-O to the 66 TAZ.
- *Worksheet 7: Final Table* – This is the input into the model/fratar process – essentially the growth for each TAZ from the existing condition.

Disaggregation of jobs data was slightly more complicated as the 2006 Census Employment zones needed to be mapped to the forecast Yellowknife Employment Zones and then both had to be mapped to all 66 TAZs. A description of each worksheet in the workbook is as follows:

- *Worksheet 1: Source* – These are the Census Existing Employment data and Yellowknife Smart Growth forecast for employment. The horizons and scenarios are the same as for households.
- *Worksheet 2: TAZ assign existing* – This worksheet assigns the existing Census employment from zones 086-133 into the 66 TAZ.
- *Worksheet 3 to Worksheet 6: TAZ Assignment tabs* – These tabs are grouped into horizon years and each horizon includes one worksheet for each scenario. Tabs are colour coded for ease of use. These tabs assign the forecast jobs from Smart Growth zones A-O to the 66 TAZ.
- *Worksheet 7: Final Table* – This is the input into the model / Fratar process – essentially the growth for each TAZ from the existing condition.

The final existing and forecast household and job estimates in each TAZ are included in **Appendix B**.

## 8. FORECAST DEMAND

The ‘synthetic’ existing (base) matrix developed from the O-D information is used as a base matrix to generate forecast demand. To generate the traffic forecast, this base year matrix is subjected to a Fratar (‘growth factoring’) procedure, whereby the magnitude of trips increases as a function of increases in TAZ-level, households, and employment. The growth factoring procedure captures the impacts of the proposed land use scenarios, in terms of both magnitude and distribution. TAZs that today have no households or jobs are ‘seeded’ with a unit value (1 trip), in order to ensure that a future land use growth is reflected properly (i.e., a TAZ empty today will not otherwise register growth in the future). By assigning the resultant matrix to today’s road and transit networks, we can determine how traffic is expected to grow, and then determine where the deficiencies are. We can use ‘desire lines’ (i.e., strong flows between TAZs) to identify options to address the deficiencies – including, for example, improvements to transit.

We can also vary the share of transit (or of other modes such as walking and cycling), by factoring the trip matrices accordingly. From the OD survey and model, we can understand existing travel patterns, including the average distanced travelled by users of each mode. This information can be used as a proxy to estimate forecast mode split. Estimations can be compared and adjusted using proxies from other Canadian urban areas and OD surveys for areas that reflect similar land use and sustainability characteristics. This is a technique we have used in several other studies, and allows significant flexibility to examine alternate network improvements / land use scenarios while ensuring the shares are based upon observable – hence, defensible and proven – situations.

The development of growth factors and the forecasting of future traffic based on existing conditions involved the following steps:

1. Growth factors were created for each horizon and scenario. Details are summarized in **Section 7**.
2. Trip tables by purpose were created:
  - a) Trip purpose from the OD Survey were separated into Work and Non-work
3. Forecast 33,000 C, H, D, and 50,000 C, H, D trip tables by purpose were created using existing two hour p.m. peak trips as a base (3:45 to 5:44):
  - a) Existing origins and destinations were developed for each TAZ. TAZ with origins or destinations of 0 trips were increased to 1 trip to allow for potential future growth.
  - b) Work trips in each TAZ were factored up using employment factors for the origin and household factors for the destination.
  - c) Some zones have only employment or only households.
    - i) For zones with only employment, but no households, both origin and destination were factored using the employment factor.
    - ii) For zones with only households, but no employment, both origin and destination were factor using the household factor.
  - d) Non-work trips in each TAZ were factored up using household factors for both origin and destination.
    - i) For zones with only employment, but no households, non-work origins and destinations were factored using the employment factor.
  - e) Work trips for each zone were capped at 2 origins per job and 2 destinations per household.
    - i) For zones with only employment, but no households, both origins and destinations were capped at 2 per job.
    - ii) For zones with only households, but no employment, both origin and destination were capped at 2 per household.
  - f) Non-work trips for each zone were capped at 2 origins per household and 2 destinations per household.
    - i) For zones with only employment, but no households, both origins and destinations were capped at 2 per job.
  - g) In cases where the cap resulted in a total number of trips less than the existing number of trips in the base model, the existing number of trips in the base model was used.
  - h) For TAZ where there were 25 or more jobs than households, and where forecasting using the employment factor would result in a higher number of trips, the employment factor was used. These are marked in the worksheet as “edited for EMP”. The forecast trips were reviewed for reasonableness keeping in mind the overall character of the zone (i.e. retail, airport, residential, etc.).
  - i) The total number of work trips was factored to be the same across all scenarios in the same horizon year. The total number of non-worked trips was also factored to be the same across all scenarios in the same horizon year.

- j) Work origins and destinations were factored so that work origins = work destinations. Similarly, non-work origins and destinations were factored so that non-work origins = non-work destinations.
- k) Starting with the existing trip table, each trip pair was factored iteratively until the origins and destinations matched the factored origins and destinations.

The result of the process described above was trip tables for work and non-work two hour p.m. peak trips by all modes for each of the horizons and scenarios.

From our experience, we determined that it was reasonable to assume that people’s travel patterns within a distance category would stay the same, unless investment in infrastructure makes another mode more appealing. Accordingly, given the SmartGrowth strategy and this study’s focus on alternative transportation modes, it was assumed that the City’s priority will be to invest in transit, cycling, and pedestrian infrastructure.

As a result, with these types of investments assumed to be in place, for all forecast scenarios and horizons, we reasonably assumed the following changes to the mode split:

- An increase in walking for very short trips
- A reduction in walking for mid-length trips where transit options are improved (change assigned to transit)
- An increase in cycling for trips up to 10 km
- An increase in transit based on mode split research of comparable small communities<sup>1</sup> with developed transit systems. Longer distance trips are less likely to be transit for work trips
- A reduction of driver trips

The resultant new mode splits by distance category were proposed and accepted by the City, as summarized in **Table 8-1**.

**Table 8-1: Forecast Mode Split by Distance Category**

Mode Split by Distance Category – FORECAST SCENARIOS									
Work	D	P	W	TR	C	TA	O / DNS	Total	
Trip Distance (km)									
<b>0 to 1</b>	49%	5%	36%	4%	2%	0%	4%	100%	
<b>1 to 2</b>	62%	7%	26%	4%	1%	0%	0%	100%	
<b>2 to 5</b>	75%	15%	0%	4%	3%	0%	3%	100%	
<b>5 to 10</b>	94%	2%	0%	2%	1%	0%	1%	100%	
<b>10 to 20</b>	97%	2%	0%	0%	0%	0%	1%	100%	
<b>20 to 1,000</b>	97%	2%	0%	0%	0%	0%	1%	100%	

<sup>1</sup> City of Stratford, ON; City of Timmins, ON; City of Brandon, MB; City of Belleville, ON; City of Fredericton, NB.

Mode Split by Distance Category – FORECAST SCENARIOS									
Non-Work		D	P	W	TR	C	TA	O / DNS	Total
Trip Distance (km)									
0	to 1	50%	13%	24%	5%	2%	0%	6%	100%
1	to 2	58%	14%	22%	5%	1%	0%	0%	100%
2	to 5	73%	11%	6%	5%	2%	0%	3%	100%
5	to 10	74%	8%	0%	5%	1%	11%	1%	100%
10	to 20	26%	74%	0%	0%	0%	0%	0%	100%
20	to 1,000	26%	74%	0%	0%	0%	0%	0%	100%

Origin and destination trip tables for the 33,000 C, H, D and 50,000 C, H, D scenarios were then developed for each mode:

- Forecast work and non-work trips were assigned to a distance category.
- Forecast mode split was applied to trips in each distance category.
- List was developed with trips by mode for each O-D pair.
- Trip tables for each mode were created.
- Overall mode split for each horizon and scenario was calculated, as shown in **Table 8-2** for 33,000 and **Table 8-3** for 50,000.

**Table 8-2: Forecast Mode Split 33,000 Horizon**

	D	P	W	TR	C	TA	O / DNS
<b>ALL WORK TRIPS - EX</b>	72%	9%	14%	1%	1%	0%	3%
<b>ALL WORK TRIPS – 33,000 Dispersed Scenario</b>	80%	7%	7%	3%	2%	0%	2%
<b>ALL WORK TRIPS – 33,000 Hybrid Scenario</b>	78%	8%	8%	3%	2%	0%	2%
<b>ALL WORK TRIPS – 33,000 Compact Scenario</b>	75%	8%	9%	3%	2%	0%	2%
<b>ALL NON WORK TRIPS - EX</b>	68%	13%	13%	1%	1%	1%	3%
<b>ALL NON - WORK TRIPS – 33,000 Dispersed Scenario</b>	60%	21%	9%	4%	1%	2%	2%
<b>ALL NON - WORK TRIPS – 33,000 Hybrid Scenario</b>	63%	17%	10%	5%	1%	2%	2%
<b>ALL NON - WORK TRIPS – 33,000 Compact Scenario</b>	66%	12%	11%	5%	2%	2%	2%
<b>ALL TRIPS - EX</b>	70%	11%	14%	1%	1%	0%	3%
<b>ALL TRIPS – 33,000 Dispersed Scenario</b>	71%	13%	8%	3%	1%	1%	2%
<b>ALL TRIPS – 33,000 Hybrid Scenario</b>	71%	12%	9%	4%	2%	1%	2%
<b>ALL TRIPS – 33,000 Compact Scenario</b>	71%	10%	10%	4%	2%	1%	2%

**Table 8-3: Forecast Mode Split 50,000 Horizon**

	D	P	W	TR	C	TA	O / DNS <sup>1</sup>
<b>ALL WORK TRIPS - Existing</b>	72%	9%	14%	1%	1%	0%	3%
<b>ALL WORK TRIPS – 50,000 Dispersed Scenario</b>	85%	5%	5%	2%	1%	0%	1%
<b>ALL WORK TRIPS – 50,000 Hybrid Scenario</b>	82%	6%	6%	3%	1%	0%	2%
<b>ALL WORK TRIPS – 50,000 Compact Scenario</b>	77%	7%	8%	3%	2%	0%	2%
<b>ALL NON WORK TRIPS - Existing</b>	68%	13%	13%	1%	1%	1%	3%
<b>ALL NON - WORK TRIPS – 50,000 Dispersed Scenario</b>	53%	32%	7%	3%	1%	2%	2%
<b>ALL NON - WORK TRIPS – 50,000 Hybrid Scenario</b>	59%	22%	8%	4%	1%	3%	2%
<b>ALL NON - WORK TRIPS – 50,000 Compact Scenario</b>	63%	16%	10%	5%	1%	3%	2%
<b>ALL TRIPS - Existing</b>	70%	11%	14%	1%	1%	0%	3%
<b>ALL TRIPS – 50,000 Dispersed Scenario</b>	71%	17%	6%	3%	1%	1%	2%
<b>ALL TRIPS – 50,000 Hybrid Scenario</b>	72%	13%	7%	3%	1%	1%	2%
<b>ALL TRIPS – 50,000 Compact Scenario</b>	71%	11%	9%	4%	2%	1%	2%

The resulting two hour p.m. peak trip tables by mode were multiplied by an the hourly factor of 0.643, developed from the existing OD data, to calculate p.m. peak hour trip tables by mode. The vehicle table was assigned to the transportation network using QRS II.

## 9. RESULTS

The total number of trips by mode in each horizon and scenario is shown in **Table 9-1**. The total number of trips in the 33,000 horizon increased by 83% over the existing; the 50,000 horizon increased by 226% over existing. The trips per horizon increased at a higher rate than the population for that horizon; this is expected, since the number of trips per household typically increases over time. The number of walking and cycling trips are higher in the compact scenario than in the hybrid or dispersed scenarios, since trip distances are shorter.

**Table 9-1: Total Trips by Mode**

		Trips By Mode							Total
		D	P	W	T	C	T	O	
Scenario	Existing	6300	970	1000	100	60	50	220	<b>8710</b>
	33,000 Compact	11380	1600	1590	640	280	120	350	<b>15960</b>

<sup>1</sup> In the forecast the O/DNS mode share was retained to account for ‘other’ trips.

		<b>Trips By Mode</b>								
			<b>D</b>	<b>P</b>	<b>W</b>	<b>T</b>	<b>C</b>	<b>T</b>	<b>O</b>	<b>Total</b>
		<b>Hybrid</b>	11370	1890	1390	600	260	130	320	<b>15960</b>
		<b>Dispersed</b>	11340	2110	1280	550	240	130	310	<b>15960</b>
	<b>50,000</b>	<b>Compact</b>	20100	3230	2560	1070	460	320	590	<b>28330</b>
		<b>Hybrid</b>	20320	3800	2040	940	390	320	510	<b>28330</b>
		<b>Dispersed</b>	20060	4820	1670	750	310	270	440	<b>28330</b>

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## Appendices

		<b>Total Households</b>						
			<b>33,000</b>			<b>50,000</b>		
<b>Smart Growth Plan Zone</b>	<b>Existing</b>	<b>33000 Compact</b>	<b>33000 Hybrid</b>	<b>33000 Dispersed</b>	<b>50000 Compact</b>	<b>50000 Hybrid</b>	<b>50000 Dispersed</b>	
A	Downtown/City Centre	2634	3774	3334	2784	4624	3984	2984
B	Old Airport Road	309	1109	709	459	1459	1109	609
C	Old Town	380	530	480	480	630	580	530
D	Niven Lake	204	1404	1304	1054	1504	1504	1054
E	Range Lake North	760	810	810	810	835	835	835
F	Range Lake South	1846	1896	1896	1896	1921	1921	1921
G	Taylor Road	374	849	974	674	849	974	674
H	Tin Can Hill	207	707	1047	1007	1057	1047	1007
I	Kam Lake	120	255	205	180	455	380	230
J	Negus Point	6	6	406	1246	1206	1631	1296
K	Highway 4 North	0	0	0	550	1950	2150	2250
L	Grace Lake.	0	0	175	0	600	975	1000
M	Kam Lake East	0	0	0	0	0	0	1000
N	East Shore (Dettah)	50	50	50	250	50	50	550
O	City West End	0	0	0	0	0	0	1200
<b>Total Households</b>		6890	11390	11390	11390	17140	17140	17140

Smart Growth Plan Zone		Total Employment					
		33,000			50,000		
		33000 Compact	33000 Hybrid	33000 Dispersed	50000 Compact	50000 Hybrid	50000 Dispersed
A	Downtown/City Centre	2350	1400	650	5000	2900	950
B	Old Town	400	300	100	700	450	200
C	Old Airport Road/Capital Area West	1075	700	400	2700	1700	800
D	Kam Lake	500	500	300	650	650	500
E	Range Lake North	175	175	75	300	300	175
F	Range Lake South	175	200	50	375	400	150
G	Niven Lake	175	175	50	375	375	75
H	Con Mine/Tin Can Hill/Negus Point	400	550	600	1300	1500	1100
I	Airport	300	350	500	800	850	1300
K	Engle Business District	950	1150	1500	1275	1400	1500
L	Grace Lake/Engle West	100	500	900	700	1000	2400
M	Kam Lake East	0	400	400	0	1050	1400
N	Highway 4 North	400	500	1100	2000	2600	2600
O	Giant Mine	150	100	150	450	600	500
P	East Shore (Dettah)	125	275	500	425	775	1500
Q	Long Lake North/West	0	0	0	0	500	1900
<b>Total Employment</b>		<b>7275</b>	<b>7275</b>	<b>7275</b>	<b>17050</b>	<b>17050</b>	<b>17050</b>

**Original 2006 Statistics Canada Census Data - Employment by Census Tract**

Census Zone	Existing Jobs
086	1415
087	325
088	65
089	395
090	105
091	75
092	40
093	55
098	65
099	605
100	140
101	85
102	65
103	65
104	685
105	4005
106	115
107	135
108	55
109	60
111	465
112	115
113	1465
114	200
133	40
-	1
<b>Total Employment</b>	<b>10840</b>

TAZ	Total Households						
	Existing	33,000			50,000		
		33000 C	33000 H	33000 D	50000 C	50000 H	50000 D
1	80	90	82	82	107	99	90
2	91	101	91	91	120	110	101
3	91	101	91	91	120	110	101
4	118	133	120	120	158	145	133
5	1	5	5	5	6	6	5
6	1	53	48	48	63	58	53
7	204	1404	1304	1054	1504	1504	1054
8	1	38	33	28	46	40	30
9	53	75	67	56	92	80	60
10	132	189	167	139	231	199	149
11	132	189	167	139	231	199	149
12	1	38	33	28	46	40	30
13	53	75	67	56	92	80	60
14	132	189	167	139	231	199	149
15	53	75	67	56	92	80	60
16	105	151	133	111	185	159	119
17	132	189	167	139	231	199	149
18	1	48	43	43	57	52	48
19	342	472	417	348	578	498	373
20	527	717	633	529	879	757	567
21	1	42	63	60	63	63	60
22	31	42	63	60	63	63	60
23	6	6	406	1246	1206	1631	1296
24	176	622	921	886	930	921	886
25	290	396	350	292	486	418	313
26	395	547	483	404	670	578	433
27	290	396	350	292	486	418	313
28	1	38	33	28	46	40	30
29	374	594	682	472	594	682	472
30	1	255	292	202	255	292	202
31	25	67	43	28	88	67	37
32	256	621	397	257	817	621	341
33	25	78	50	32	102	78	43
34	304	324	324	324	334	334	334
35	456	486	486	486	501	501	501
36	738	758	758	758	768	768	768
37	1108	1138	1138	1138	1153	1153	1153
38	1	20	16	14	36	30	18
39	24	38	31	27	68	57	35
40	96	138	111	97	246	205	124
41	1	59	47	41	105	87	53
42	1	0	0	0	0	0	0
43	1	0	0	0	0	0	0
44	1	0	0	0	0	0	0
45	1	0	88	0	0	488	300
46	1	0	88	0	600	488	200
47	1	0	0	0	0	0	500
48	1	0	0	0	0	0	1000
49	1	0	0	0	0	0	300
50	1	0	0	0	0	0	900
51	1	0	0	0	0	0	0
52	1	0	0	138	1950	1075	563
53	1	0	0	413	0	1075	1688
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63	1	0	0	0	0	0	0
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65	1	0	0	0	0	0	0
66	1	0	0	0	0	0	0

TAZ	Total Employment						
	Existing	33,000			50,000		
		33000 C	33000 H	33000 D	50000 C	50000 H	50000 D
1	40	100	85	55	145	108	70
2	10	70	55	25	115	78	40
3	10	70	55	25	115	78	40
4	67	127	112	82	172	134	97
5	38	78	68	48	108	83	58
6	90	150	135	105	195	158	120
7	16	191	191	66	391	391	91
8	17	182	115	63	367	220	84
9	16	180	114	61	366	219	82
10	887	1052	985	933	1237	1090	954
11	1402	1566	1500	1447	1752	1605	1468
12	679	843	777	724	1029	882	745
13	372	537	470	418	722	575	439
14	1144	1308	1242	1189	1494	1347	1210
15	401	495	457	427	601	517	439
16	372	466	428	398	572	488	410
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19	135	276	219	174	435	309	192
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23	6	66	89	96	201	231	171
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25	55	219	153	100	405	258	121
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29	117	277	337	357	637	717	557
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47	6	6	6	6	6	6	6
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62	1	0	0	0	0	0	0
63	1	0	0	0	0	0	0
64	1	0	0	0	0	0	0
65	73	73	73	73	73	73	73
66	2	2	2	2	2	2	2



# Appendix G: High Level Scenario Review

# 1. HIGH LEVEL SCENARIO REVIEW

This section describes the future transportation networks for each scenario. During the process, both intermediate and long-term horizons were analyzed. The intermediate-term is provided in **Appendix E**, and the long-term future transportation analysis for each of the three growth scenarios is described in this section.

## 1.1 Long-Term, Compact Scenario

The long-term Compact scenario was constructed by analyzing future transit, cycling, walking, and vehicle demand patterns. The impact on each mode is described below and followed by a graphical summary of the proposed improvements in **Exhibit G-1**.

### ***Transit***

Transit service was intensified between current nodes and future nodes to provide better service to Tin Can Hill / Con Mine area.

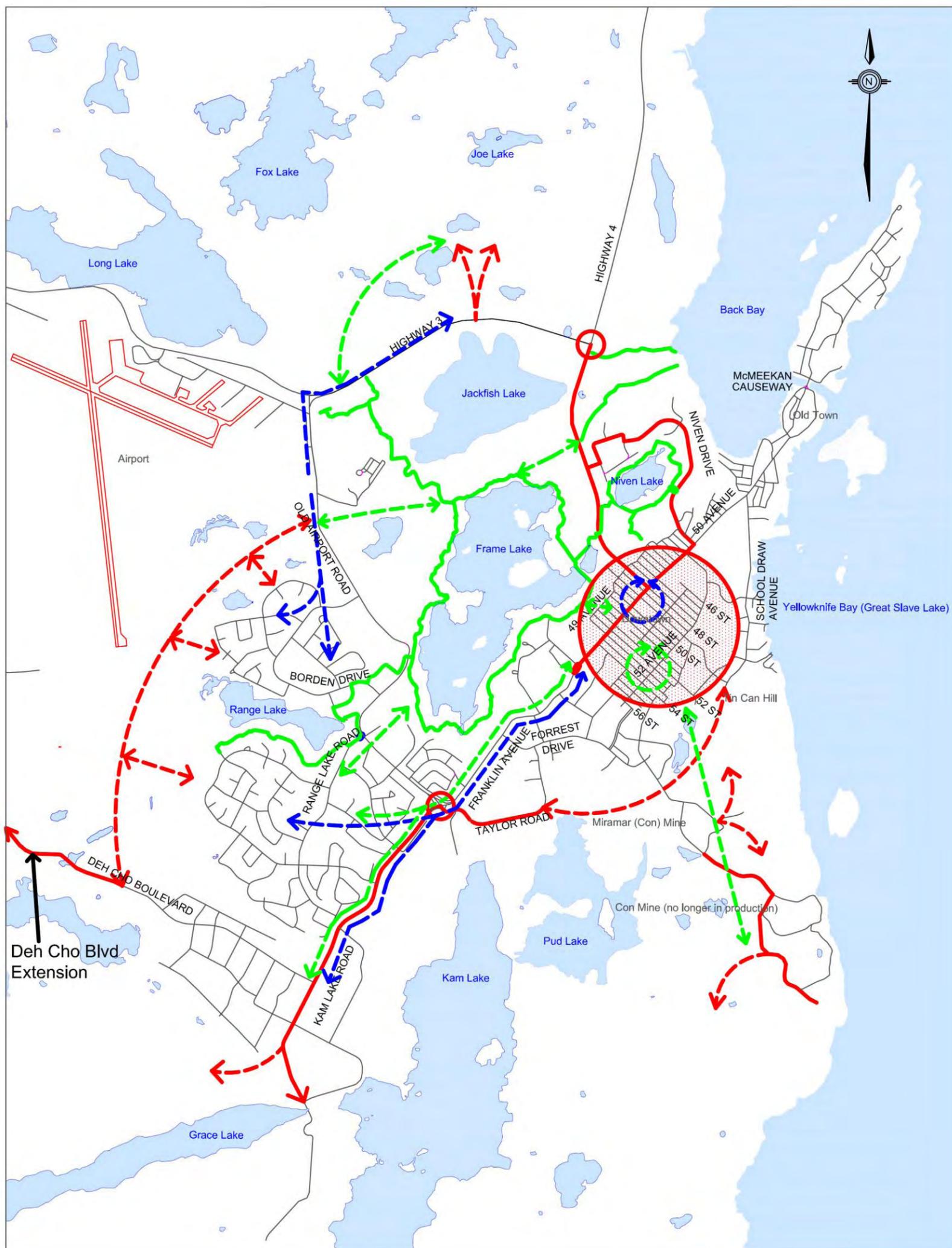
### ***Cycling and Pedestrian***

The active network was expanded from the existing state to improve connectivity throughout the city and especially to the southern development areas.

### ***Road Infrastructure***

The road network was reviewed and the following was proposed:

- *Franklin Avenue*: Maintain 4 lanes through downtown core;
- *Old Airport Road*: Widen to a 4-lane cross-section where required;
- *Highway 4*: Widen to 4 lanes north of downtown;
- *Kam Lake Road*: Widen to 4 lanes southwest of Old Airport Road; and,
- *New Roads*: Minor linkages required for connectivity:
  - South of Deh Cho Boulevard;
  - West of Kam Lake Road;
  - North of Highway 3; and,
  - In and south of Tin Can Hill / Con Mine.



**Legend**

- Improvements to Existing Infrastructure
- - - New Infrastructure Connection
- Existing Active Connection
- - - New Active Connection
- - - Desirable Transit Connection

Exhibit G-1: Proposed Improvements – Long-Term, Compact Scenario

## 1.2 Long-term, Hybrid Scenario

The long-term Hybrid scenario was constructed by analyzing transit, cycling, walking, and vehicle demand patterns. The impact on each mode is described below and followed by a graphical summary of the proposed improvements in **Exhibit G-2**.

### ***Transit***

Transit service was expanded to provide more complete coverage and service between the proposed northern and southern development areas.

### ***Cycling and Pedestrian***

The active network was expanded from the existing state to improve connectivity throughout the city and especially to the northern development areas.

### ***Road Infrastructure***

The road network was reviewed and the following was proposed:

- *Franklin Avenue*: Maintain 4 lanes through downtown core;
- *Old Airport Road*: Widen to a 4-lane cross-section where required;
- *Highway 4*: Widen to 5 lanes north of downtown;
- *Kam Lake Road*: Widen to 5 lanes southwest of Old Airport Road; and,
- *New Roads*: Additional linkages required for connectivity:
  - South of Deh Cho Boulevard;
  - West of Kam Lake Road;
  - North of Highway 3; and,
  - In and south of Tin Can Hill / Con Mine.

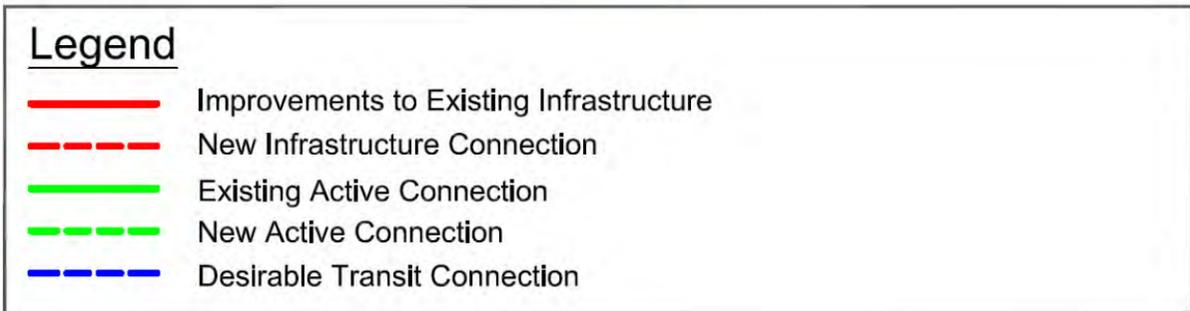
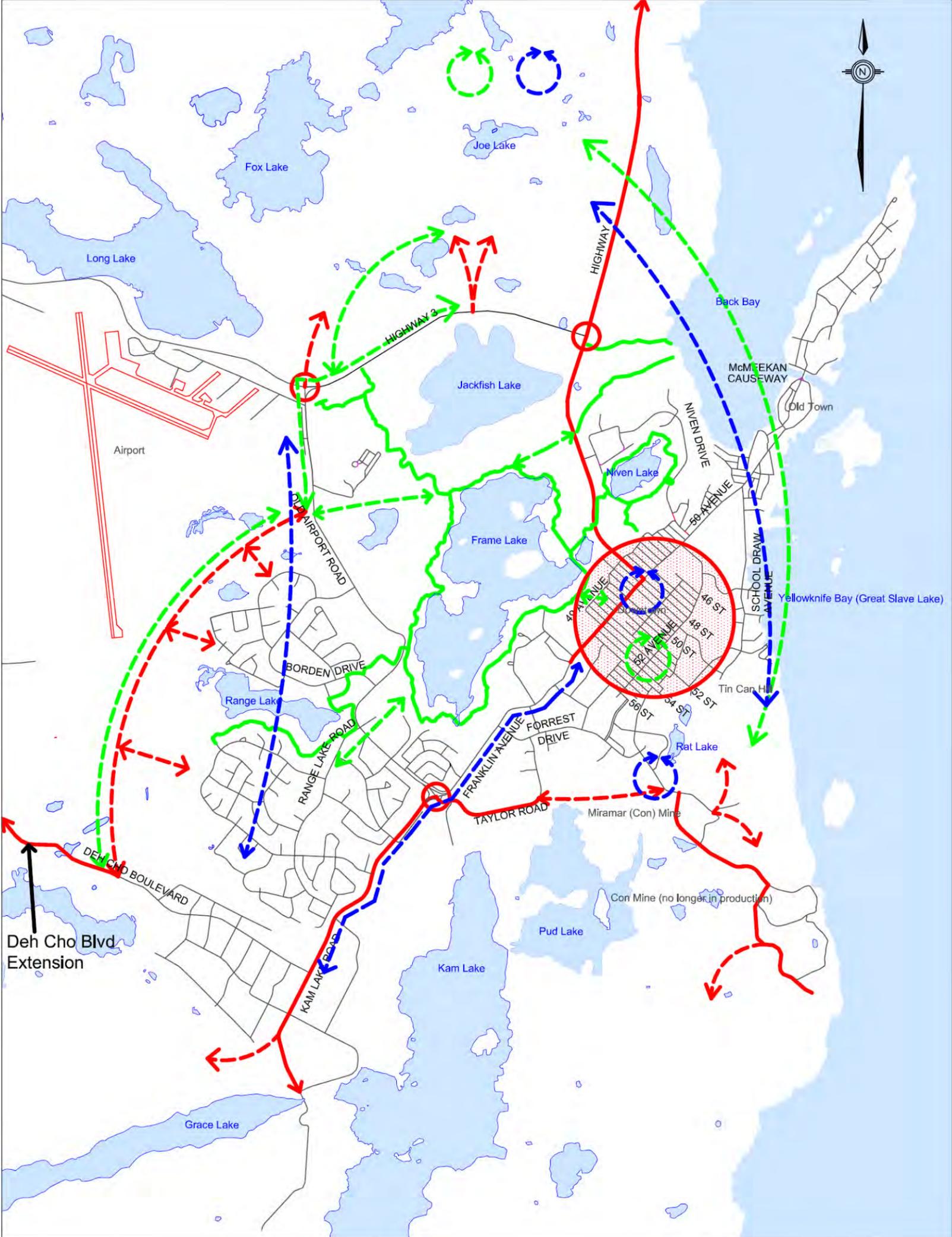


Exhibit G-2: Proposed improvements – Long-Term, Hybrid Scenario

## 1.3 Long-term, Dispersed Scenario

The long-term Dispersed scenario was constructed by analyzing transit, cycling, walking, and vehicle demand patterns. The impact on each mode is described below and followed by a graphical summary of the proposed improvements in **Exhibit G-3**.

### ***Transit***

A large expansion of transit service area was required in order to provide service and coverage between intensified northern and southern development areas.

### ***Cycling and Pedestrian***

A large expansion of the active transportation network, including on and off-street facilities, was required to provide alternative mode connectivity between northern and southern development areas.

### ***Road Infrastructure***

The road network was reviewed and the following was proposed:

- *Franklin Avenue*: Widen to 6 lanes southwest of downtown and 4 lanes in the downtown;
- *Old Airport Road*: Widen to 4 lanes north from Co-op corner;
- *Highway 4*: Widen to 6 lanes north of downtown;
- *Kam Lake Road*: Widen to 6 lanes southwest of Old Airport Road; and,
- *New Roads*: Extensive linkages into new development areas:
  - South and west of Deh Cho Boulevard;
  - West of Kam Lake Road;
  - North of Highway 3; and,
  - In and south of Tin Can Hill / Con Min.

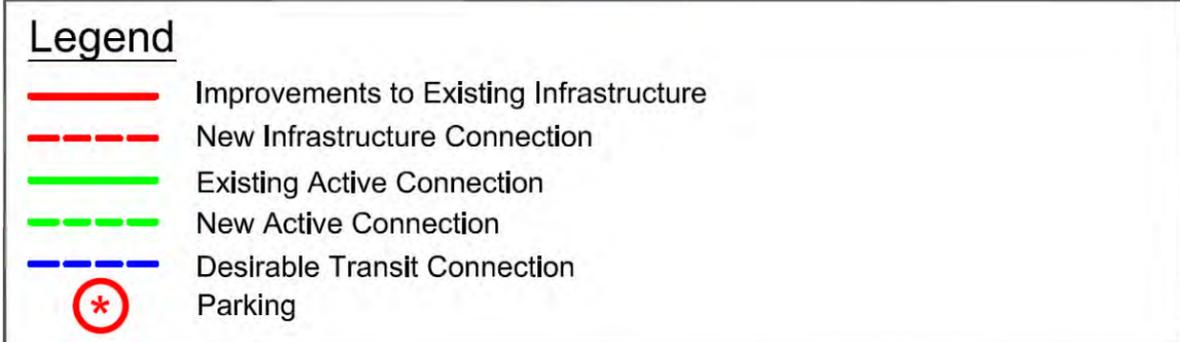
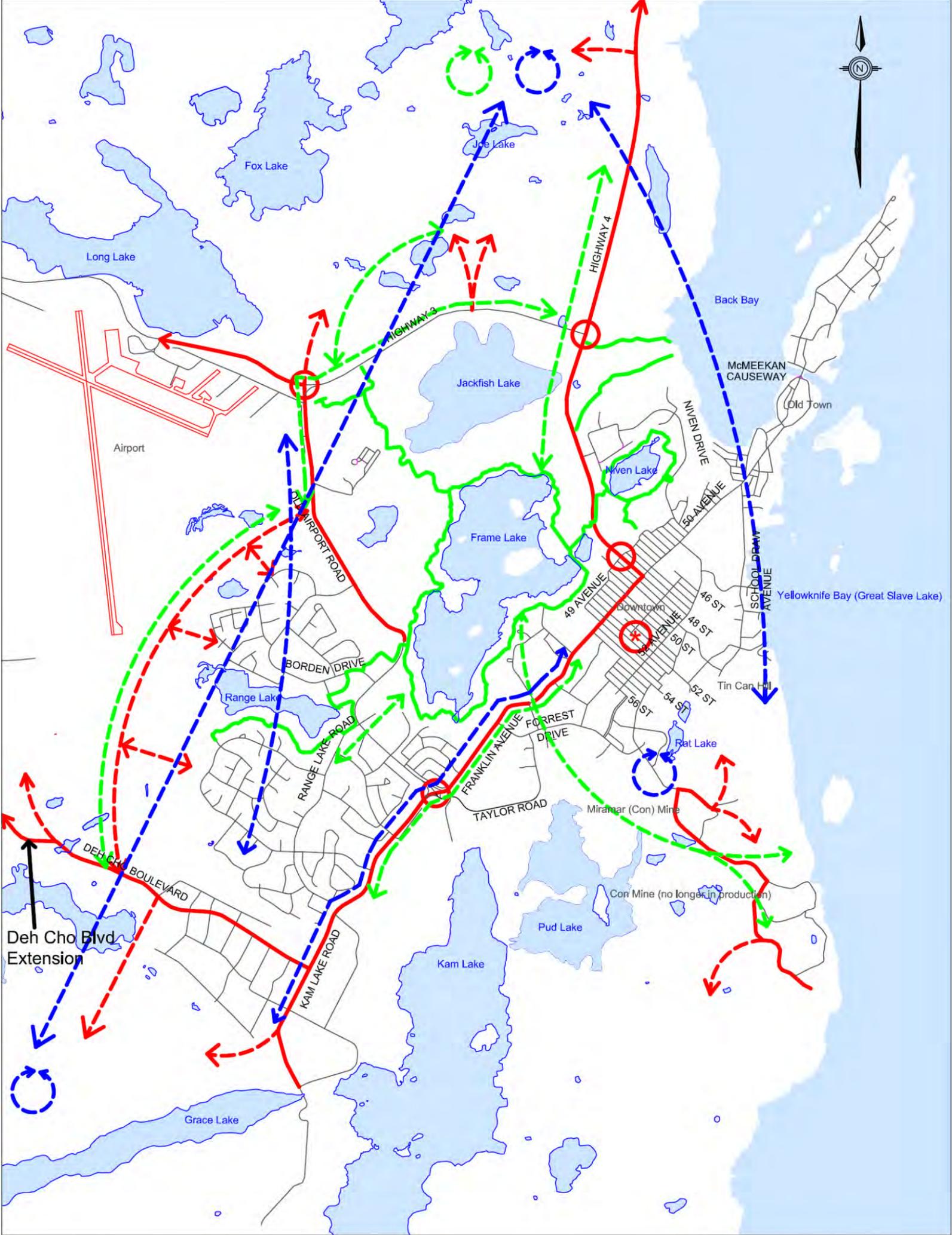
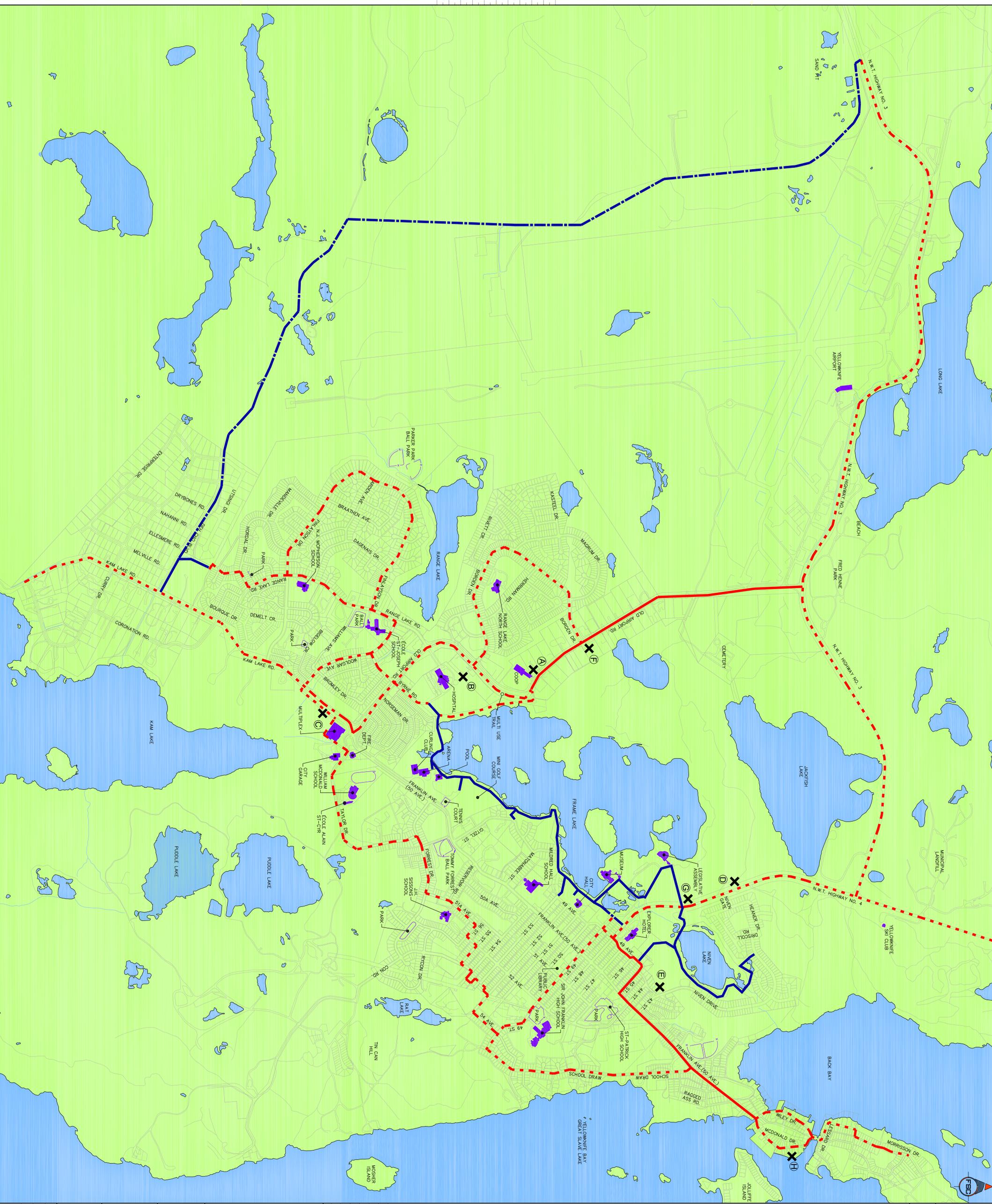


Exhibit G-3: Proposed Improvements – Long-Term, Dispersed Scenario



# Appendix H: Existing Bicycle Route Improvement Plans



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- LEGEND**
- PROPOSED LANE
  - PROPOSED ROUTE
  - EXISTING MULTI USE TRAIL
  - PROPOSED MULTI USE TRAIL
  - HOT SPOTS
  - A- AREA IN THE VICINITY OF THE YELLOWKNIFE CO-OP
  - B- THE AREA BEHIND STANTON HOSPITAL
  - C- THE MULTIPLEX AREA
  - D- HIGHWAY #4
  - E- 43<sup>RD</sup> STREET, NO LEFT HAND TURN PERMITTED
  - F- OLD AIRPORT RD. AT BORDEN AVE.
  - G- HIGHWAY #4
  - H- MACDONALD DR.

NO.	REVISION DESCRIPTION	DATE REVISION

**FSC ARCHITECTS & ENGINEERS**  
 4510 - 52ND STREET, S.D., WILKINSON, N.T.  
 TEL: (867) 920-2885 FAX: (867) 920-4319

**BICYCLE ROUTING CITY OF YELLOWKNIFE**

LOCATION: YELLOWKNIFE, NT

SCALE: 1:7500

DATE: 2008-08-20

PROJECT NO: 2008-0880

DATE: 2008-08-20

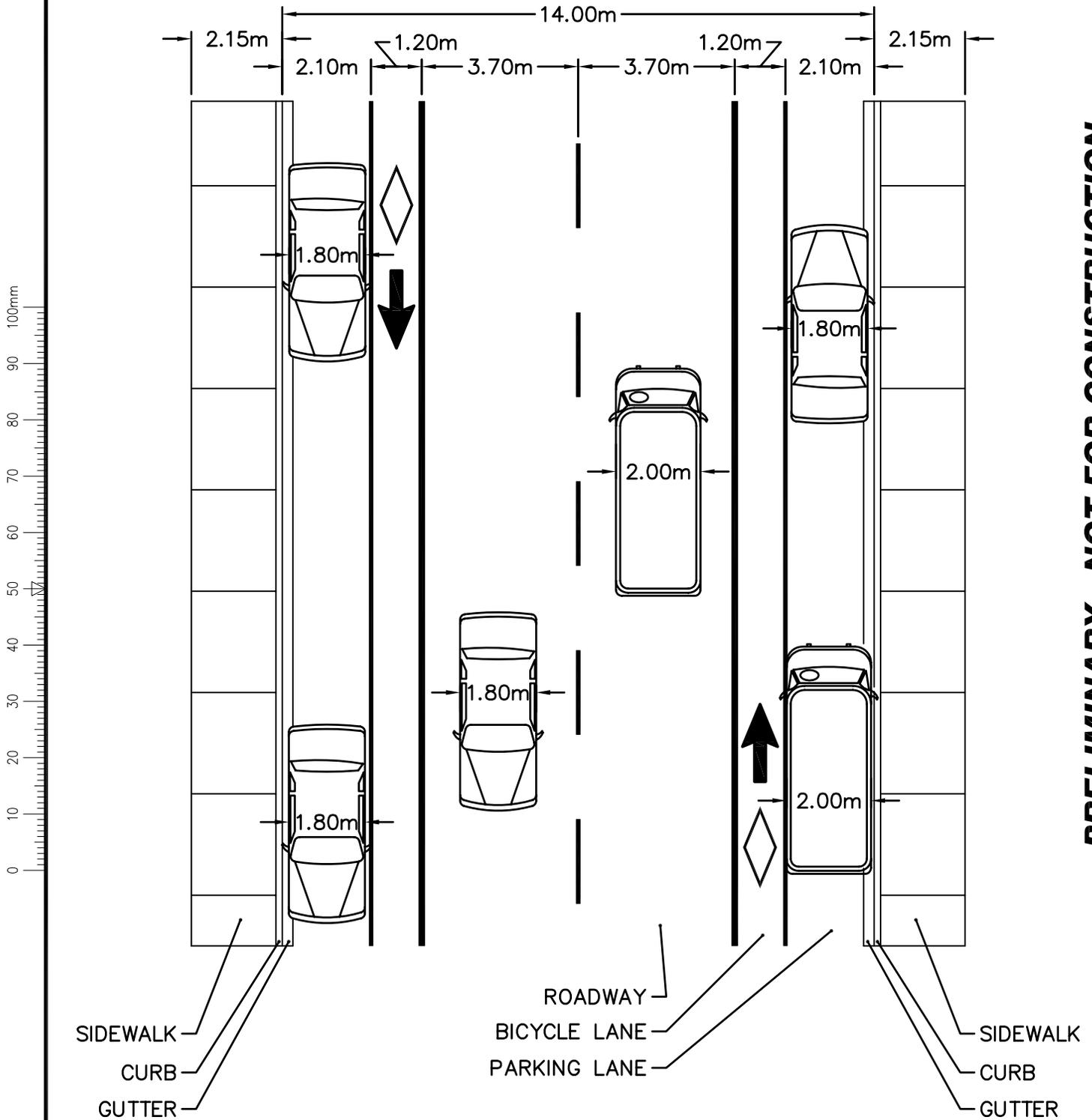
PROJECT NO: 2008-0880

DATE: 2008-08-20

PROJECT NO: 2008-0880

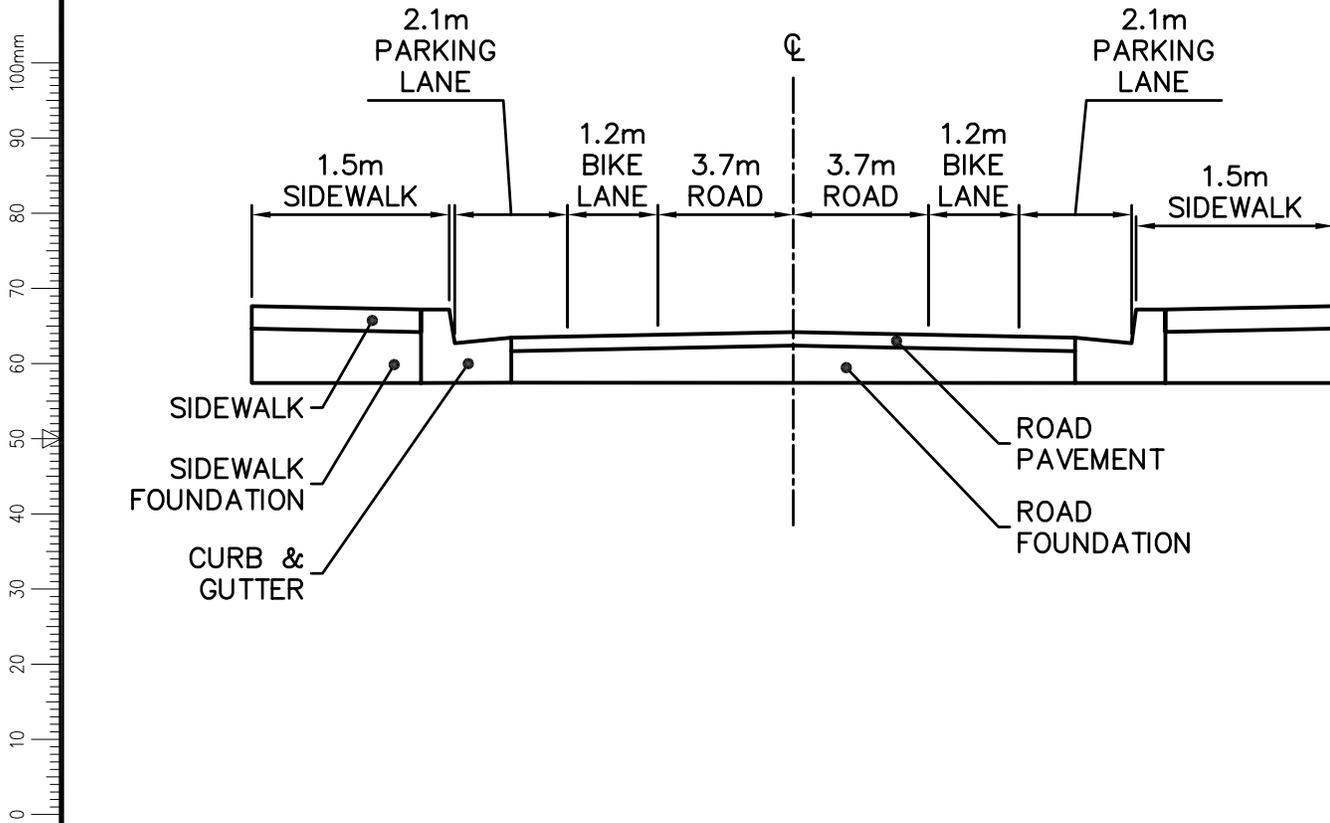
DATE: 2008-08-20

# ROAD STRIPING BIKE LANE ON 49TH AVE.



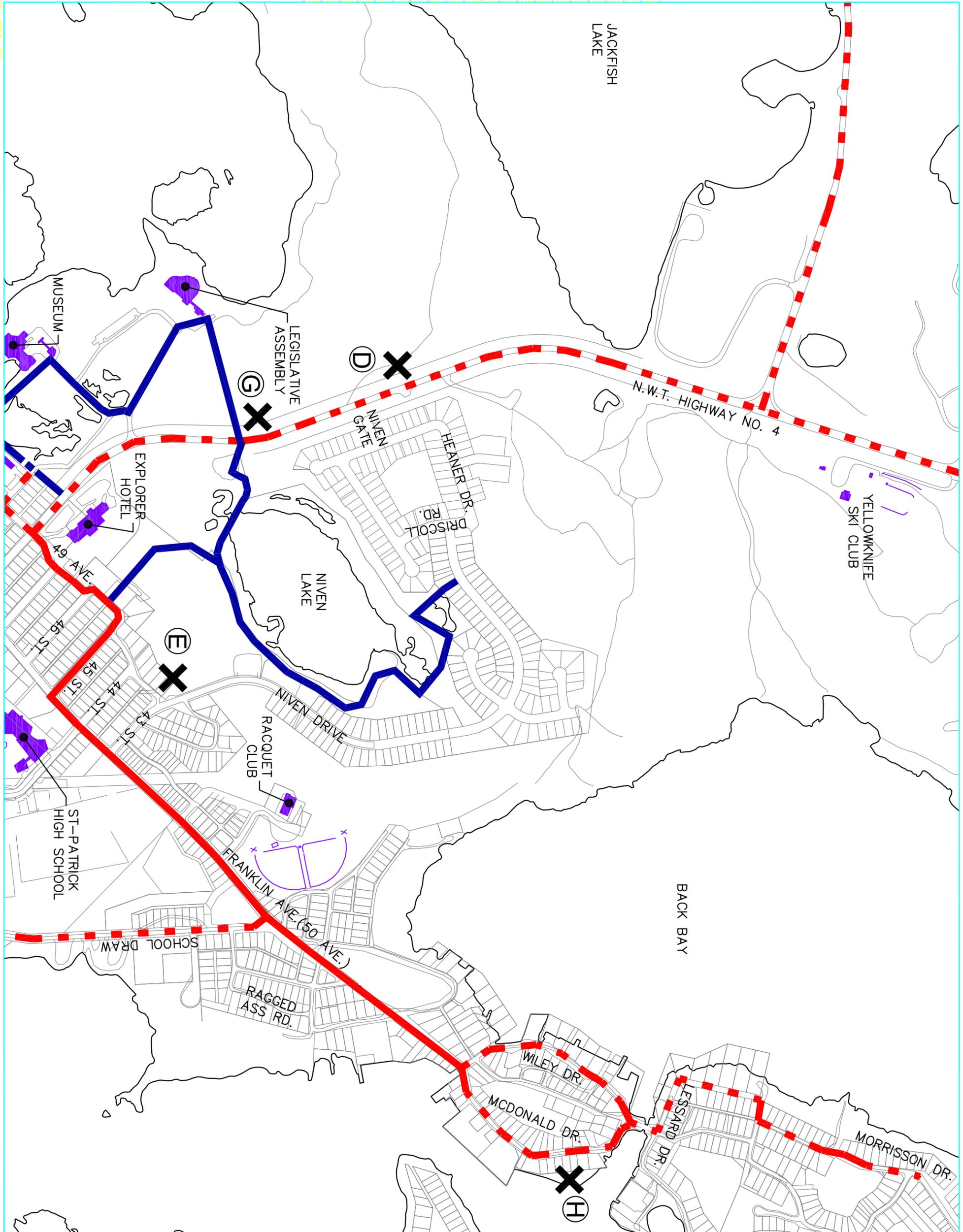
PROJECT TITLE <b>BICYCLE LANE CITY OF YELLOWKNIFE</b>		CLIENT PROJECT NO. -	FSC PROJECT NO. 2008-0850
LOCATION YELLOWKNIFE, NT		DRAWN BY FG	CHECKED BY PR
DRAWING TITLE 49TH AVENUE BICYCLE ROUTING		SCALE 1: 7.5	DATE 2008-09-18
 4910 - 53RD STREET, P.O. BOX 1777, YELLOWKNIFE, NT, X1A 2P4, CANADA TEL: (867) 920-2882 FAX: 920-4319		<b>C2</b> OF 12	

# 45TH STREET PROPOSED BIKE LANE



**PRELIMINARY - NOT FOR CONSTRUCTION**

PROJECT TITLE <b>BICYCLE LANE CITY OF YELLOWKNIFE</b>		CLIENT PROJECT NO. -	FSC PROJECT NO. 2008-0850
 4910 - 53RD STREET, P.O. Box 1777, YELLOWKNIFE, NT, X1A 2P4, CANADA TEL: (867) 920-2882 FAX: 920-4319	LOCATION YELLOWKNIFE, NT	DRAWN BY FG	CHECKED BY PR
	DRAWING TITLE <b>44TH AVENUE - CROSS SECTION PROPOSED BICYCLE ROUTING</b>	SCALE N.T.S.	DATE 2008-09-18
		DRAWING NO. <b>C3</b>	



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NO.	REVISION DESCRIPTION	DATE ISSUED

- LEGEND**
- PROPOSED LANE
  - PROPOSED ROUTE
  - EXISTING MULTI USE TRAIL
  - PROPOSED MULTI USE TRAIL
  - HOT SPOTS

**FSC ARCHITECTS & ENGINEERS**  
 4910 - 53RD STREET, P.O. BOX 1777,  
 YELLOWKNIFE, NT, X1A 2P4, CANADA  
 TEL: (867) 920-2882 FAX: 920-4319

**BICYCLE ROUTING**  
**CITY OF**  
**YELLOWKNIFE**

LOCATION  
 YELLOWKNIFE, NT

DRAWING TITLE  
 Proposed Bicycle Routes & Lanes  
 Old Town, Niven, Yellowknife  
 Access Road (48th St.)

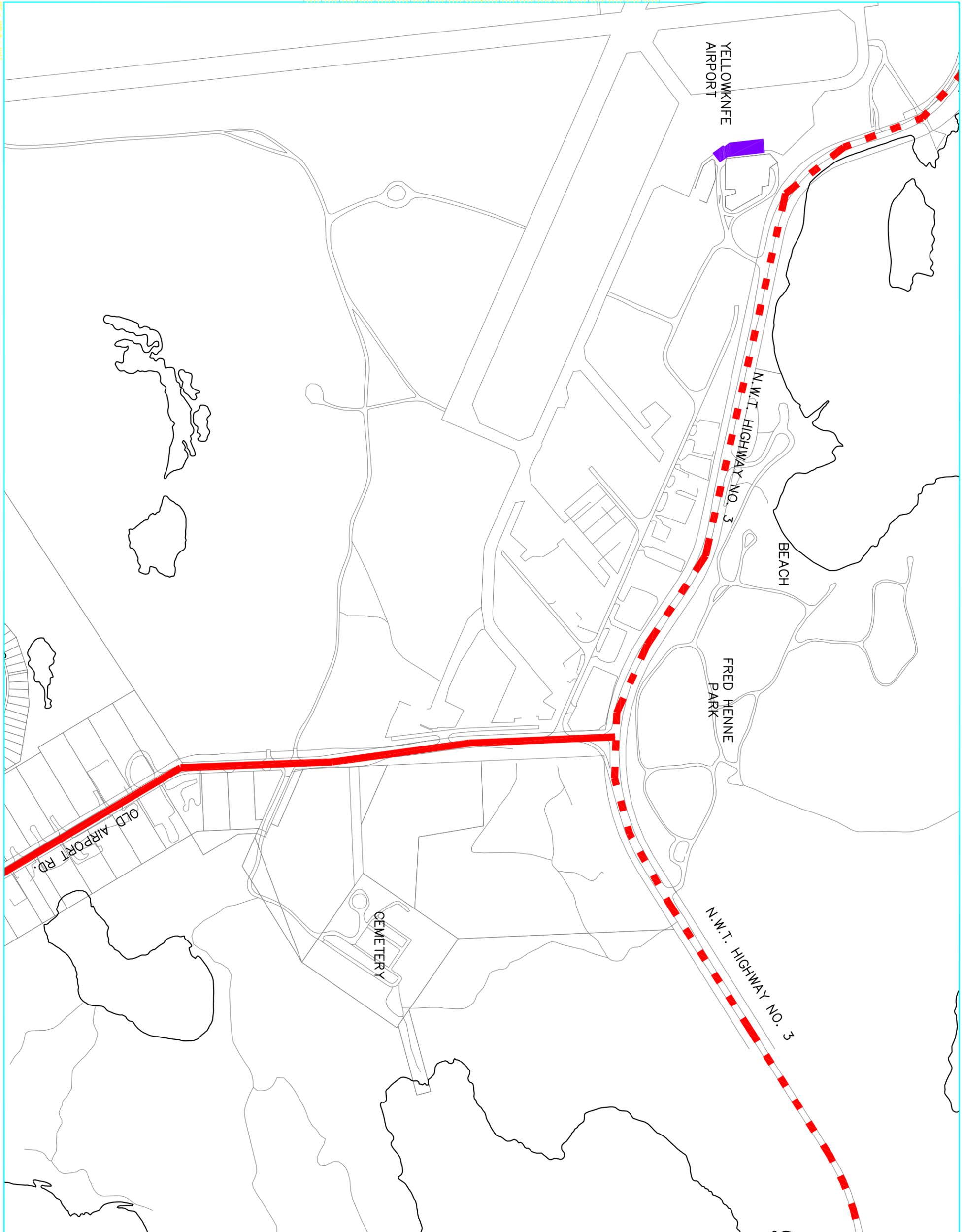
DRAWN BY  
 FG/LM SCALE 1: 7500

CHECKED BY  
 PR CLIENT PROJECT NO.

FSC PROJECT NO.  
 2008-0850

DRAWING NO.  
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NO.	REVISION DESCRIPTION	DATE ISSUED

- LEGEND**
- PROPOSED LANE
  - PROPOSED ROUTE
  - EXISTING MULTI USE TRAIL
  - PROPOSED MULTI USE TRAIL
  - HOT SPOTS

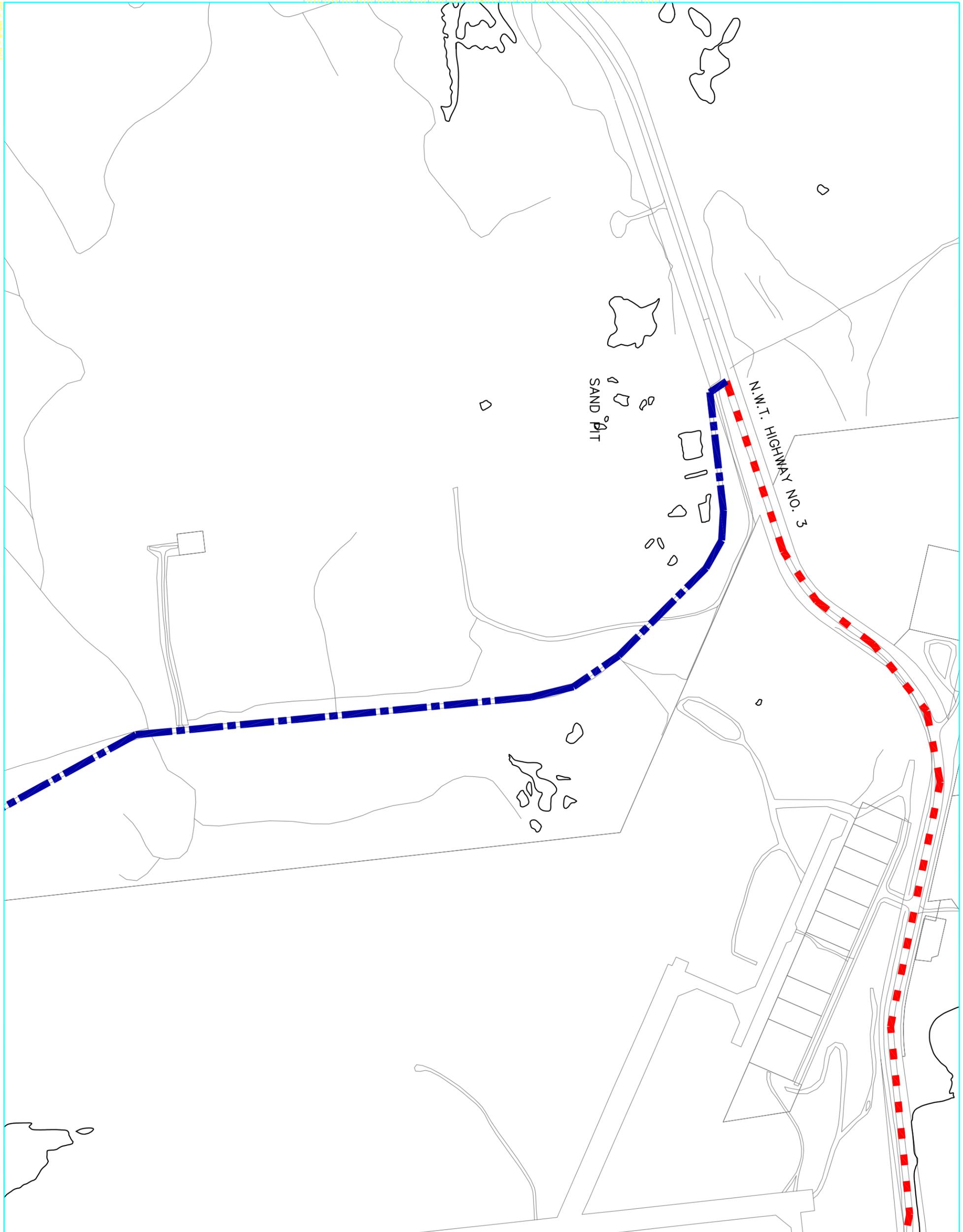
**FSC**  
**ARCHITECTS & ENGINEERS**  
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 YELLOWKNIFE, NT, X1A 2P4, CANADA  
 TEL: (867) 920-2882 FAX: 920-4319

**PROJECT TITLE**  
**BICYCLE ROUTING**  
**CITY OF**  
**YELLOWKNIFE**

**LOCATION**  
 YELLOWKNIFE, NT

**DRAWING TITLE**  
 Proposed Bicycle Routes & Lanes  
 Highway no. 3, Airport,  
 Old Airport Road North

<b>DRAWN BY</b> FG/LM	<b>SCALE</b> 1: 7500
<b>CHECKED BY</b> PR	<b>CLIENT PROJECT NO.</b> -
<b>FSC PROJECT NO.</b> 2008-0850	<b>DRAWING NO.</b> B-5



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  - REFER TO RULER IN BINDING MARGIN TO VERIFY IF SHEET HAS BEEN REDUCED OR ENLARGED.

NO.	REVISION DESCRIPTION	DATE ISSUED
00	ISSUED FOR .....	YYYYMMDD

- LEGEND**
- PROPOSED LANE
  - PROPOSED ROUTE
  - EXISTING MULTI USE TRAIL
  - PROPOSED MULTI USE TRAIL
  - HOT SPOTS

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 YELLOWKNIFE, NT, X1A 2P4, CANADA  
 TEL: (867) 920-2882 FAX: 920-4319

**BICYCLE ROUTING**  
**CITY OF**  
**YELLOWKNIFE**  
 LOCATION  
 YELLOWKNIFE, NT

**DRAWING TITLE**  
 Proposed Bicycle Routes & Lanes  
 Highway no. 3, Sand Pit  
 Shooting Range Access Road

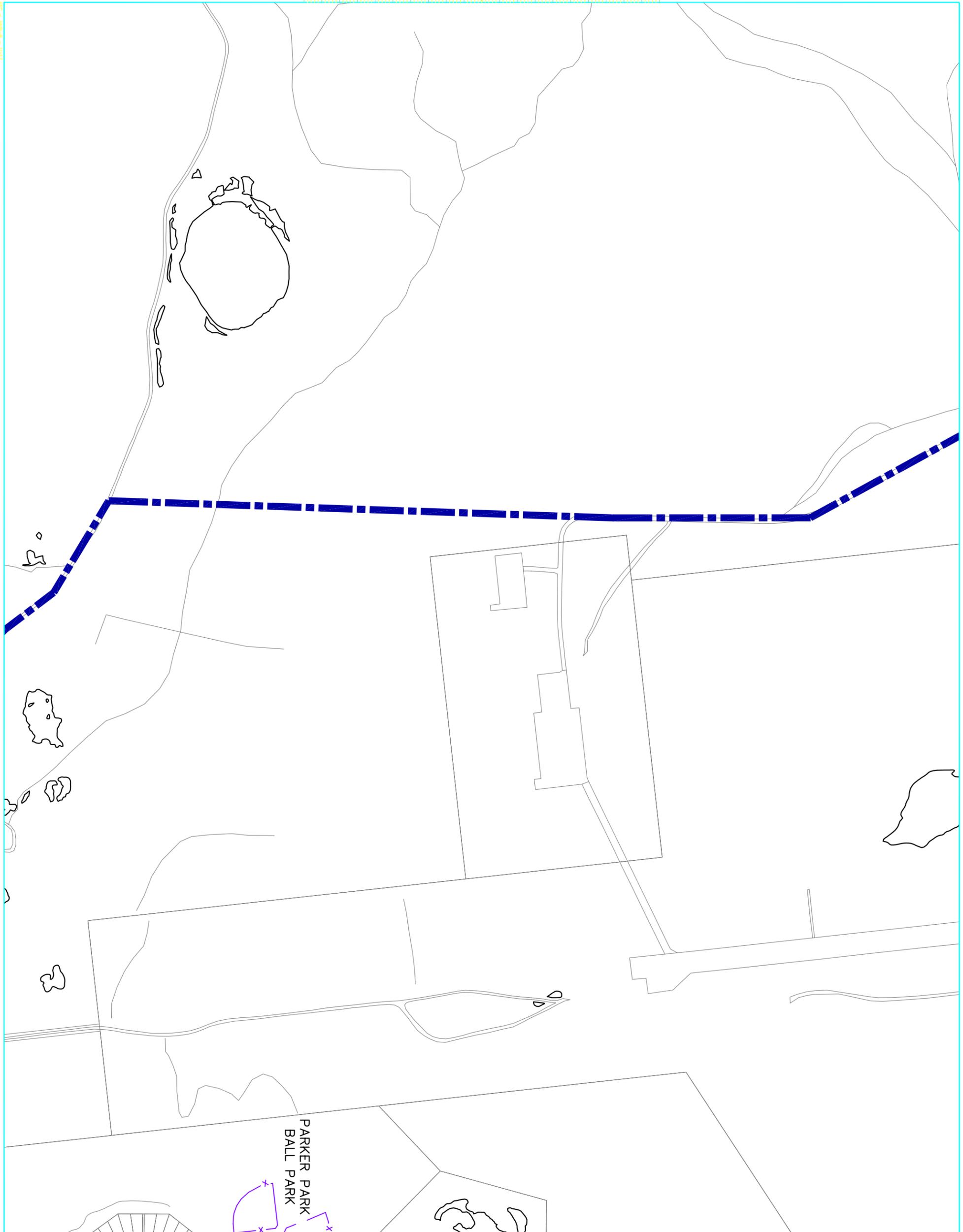
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 FG/LM **SCALE**  
 1: 7500

**CHECKED BY**  
 PR **CLIENT PROJECT NO.**

**FSC PROJECT NO.**  
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**B-6**

0 10 20 30 40 50 60 70 80 90 100mm



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NO.	REVISION DESCRIPTION	DATE ISSUED
00	ISSUED FOR .....	YYYYMMDD

- LEGEND**
- PROPOSED LANE
  - PROPOSED ROUTE
  - EXISTING MULTI USE TRAIL
  - PROPOSED MULTI USE TRAIL
  - HOT SPOTS

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 YELLOWKNIFE, NT, X1A 2P4, CANADA  
 TEL: (867) 920-2882 FAX: 920-4319

**BICYCLE ROUTING**  
**CITY OF**  
**YELLOWKNIFE**  
 LOCATION  
 YELLOWKNIFE, NT

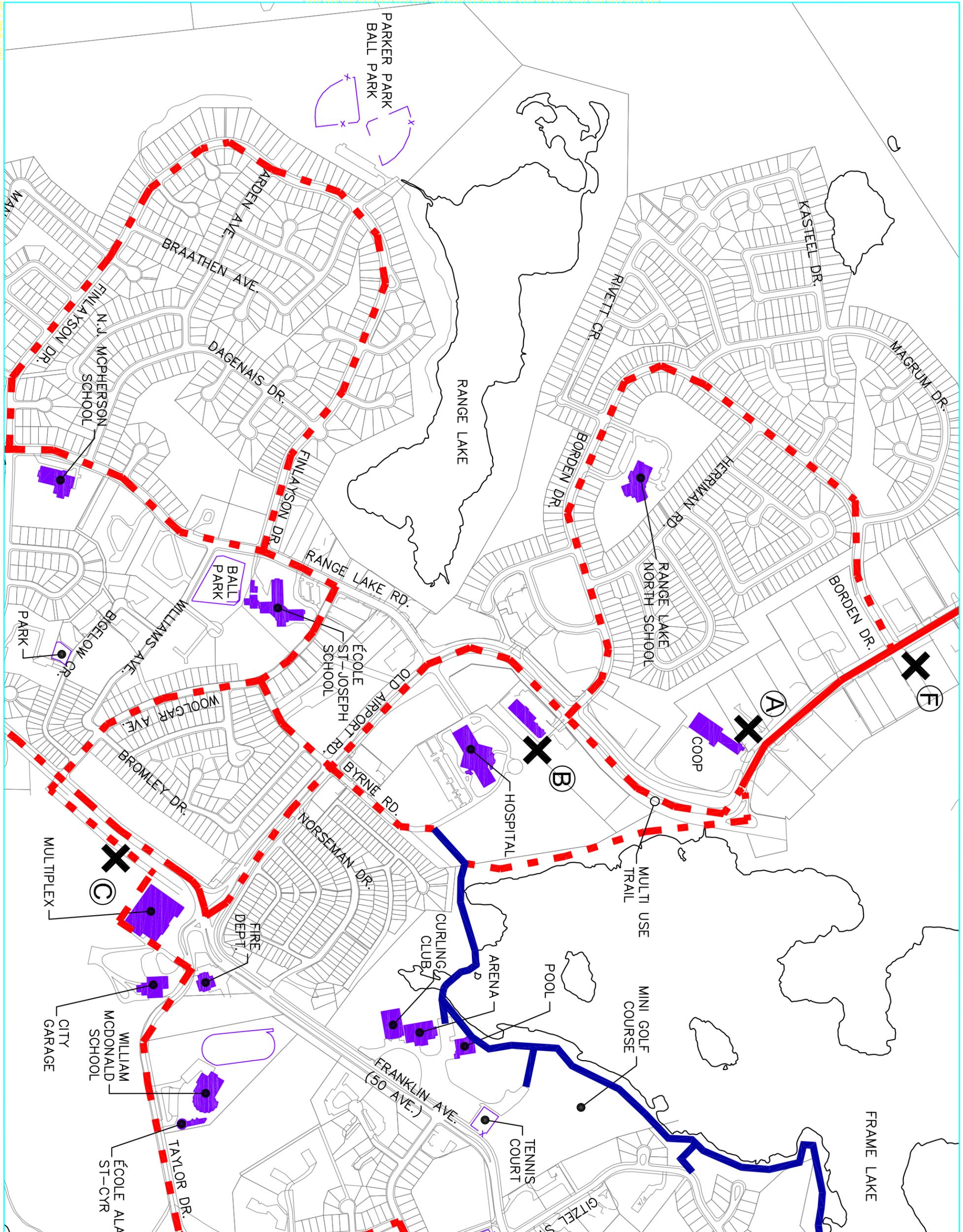
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 Proposed Bicycle Routes & Lanes  
 Access Road to new Industrial  
 Subdivision, Deh Cho Blvd.,

**DRAWN BY**  
 FG/LM **SCALE**  
 1: 7500

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NO.	REVISION DESCRIPTION	DATE ISSUED
00	ISSUED FOR .....	YYYYMMDD

**LEGEND**

PROPOSED LANE	
PROPOSED ROUTE	
EXISTING MULTI USE TRAIL	
PROPOSED MULTI USE TRAIL	
HOT SPOTS	

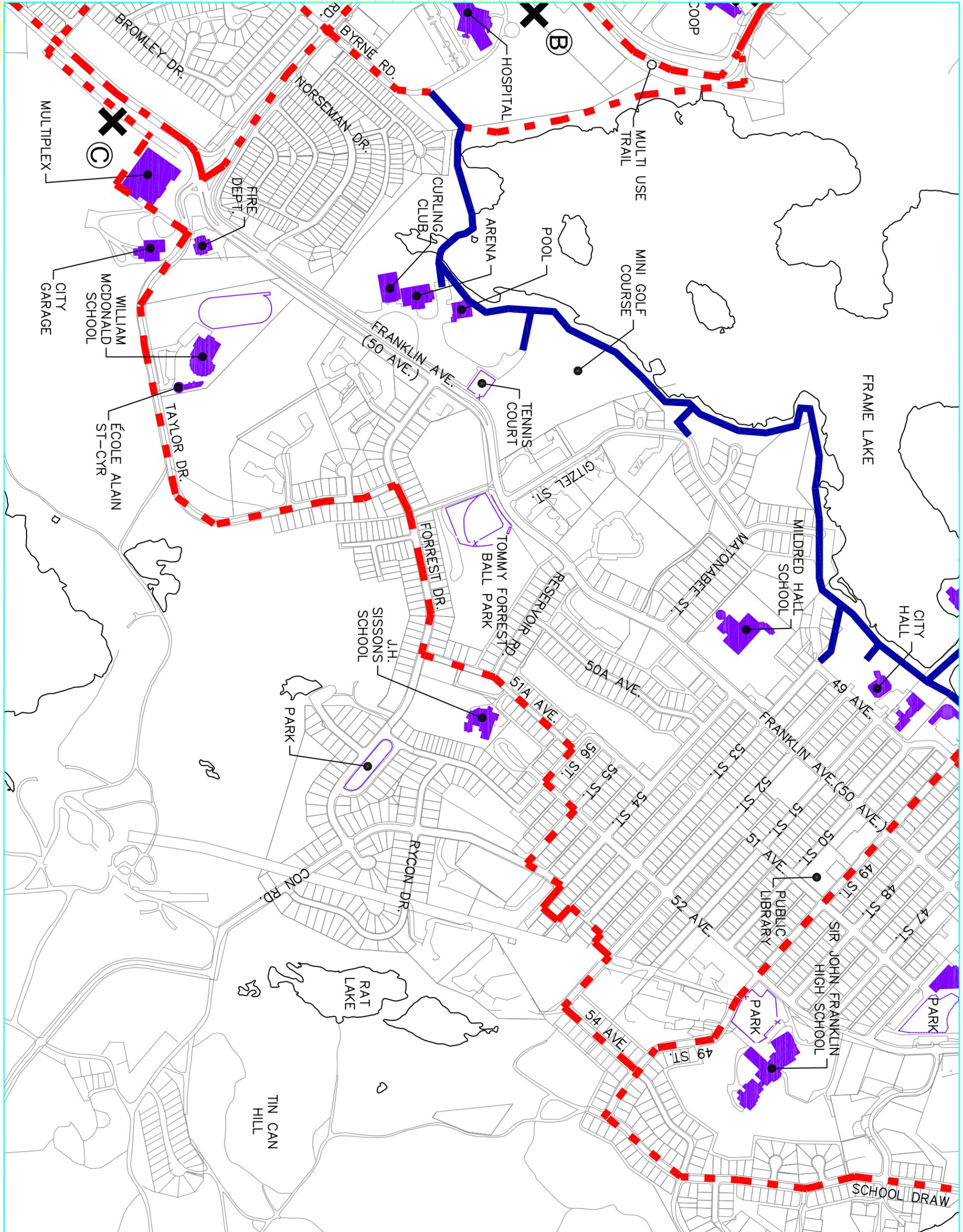
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 YELLOWKNIFE, NT, X1A 2P4, CANADA  
 TEL: (867) 920-2882 FAX: 920-4319

**BICYCLE ROUTING**  
**CITY OF**  
**YELLOWKNIFE**

LOCATION  
 YELLOWKNIFE, NT

DRAWING TITLE  
 Proposed Bicycle Routes & Lanes  
 Old Airport Rd., Borden Dr.  
 Finlayson Dr., Woolgar Ave.,

DRAWN BY	FG/LM	SCALE	1: 7500
CHECKED BY	PR	CLIENT PROJECT NO.	
FSC PROJECT NO.	2008-0850	DRAWING NO.	<b>B-8</b>



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NO.	REVISION DESCRIPTION	DATE ISSUED
00	ISSUED FOR .....	YYYYMMDD

**LEGEND**

- PROPOSED LANE:
- PROPOSED ROUTE:
- EXISTING MULTI USE TRAIL:
- PROPOSED MULTI USE TRAIL:
- HOT SPOTS:

**FSC ARCHITECTS & ENGINEERS**  
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 TEL: (867) 920-2882 FAX: 920-4319

**PROJECT TITLE**  
**BICYCLE ROUTING**  
**CITY OF**  
**YELLOWKNIFE**  
 LOCATION  
 YELLOWKNIFE, NT

**DRAWING TITLE**  
 Proposed Bicycle Routes & Lanes  
 Downtown, School Draw,  
 Forrest Dr., Frame Lake South

**DRAWN BY**  
 FG/LM

**CHECKED BY**  
 PR

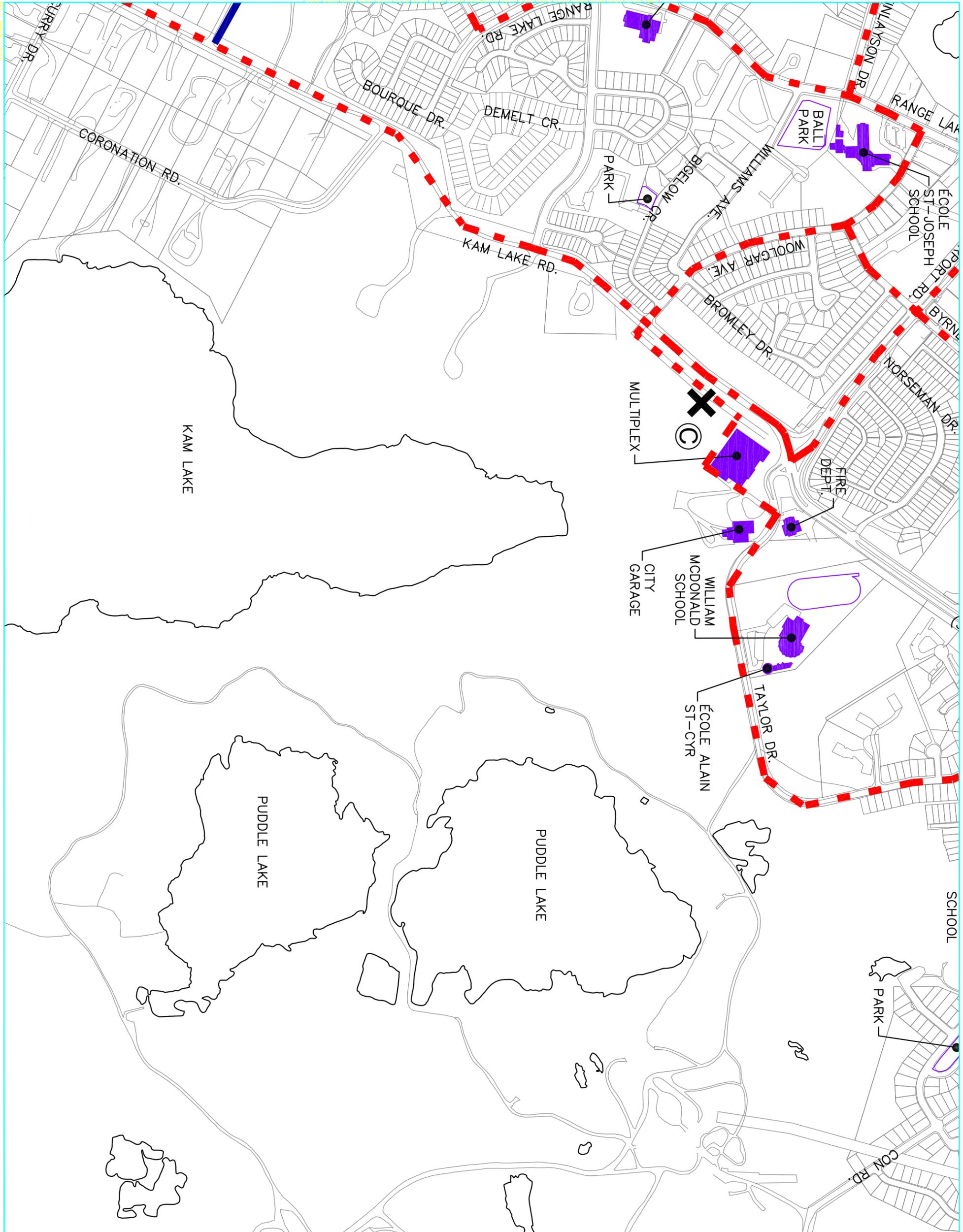
**FSC PROJECT NO.**  
 2008-0850

**DRAWING NO.**  
**B-9**

**SCALE**  
 1: 7500

**CLIENT PROJECT NO.**

of 12



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NO.	REVISION DESCRIPTION	DATE ISSUED
00	ISSUED FOR .....	YYYYMMDD

**LEGEND**

PROPOSED LANE	
PROPOSED ROUTE	
EXISTING MULTI USE TRAIL	
PROPOSED MULTI USE TRAIL	
HOT SPOTS	

**FSC ARCHITECTS & ENGINEERS**  
 4910 - 53RD STREET, P.O. BOX 1777,  
 YELLOWKNIFE, NT, X1A 2P4, CANADA  
 TEL: (867) 920-2882 FAX: 920-4319

**BICYCLE ROUTING**  
**CITY OF**  
**YELLOWKNIFE**

LOCATION  
 YELLOWKNIFE, NT

DRAWING TITLE  
**Proposed Bicycle Routes & Lanes**  
**Puddle Lake (no route)**

DRAWN BY  
 FG/LM

CHECKED BY  
 PR

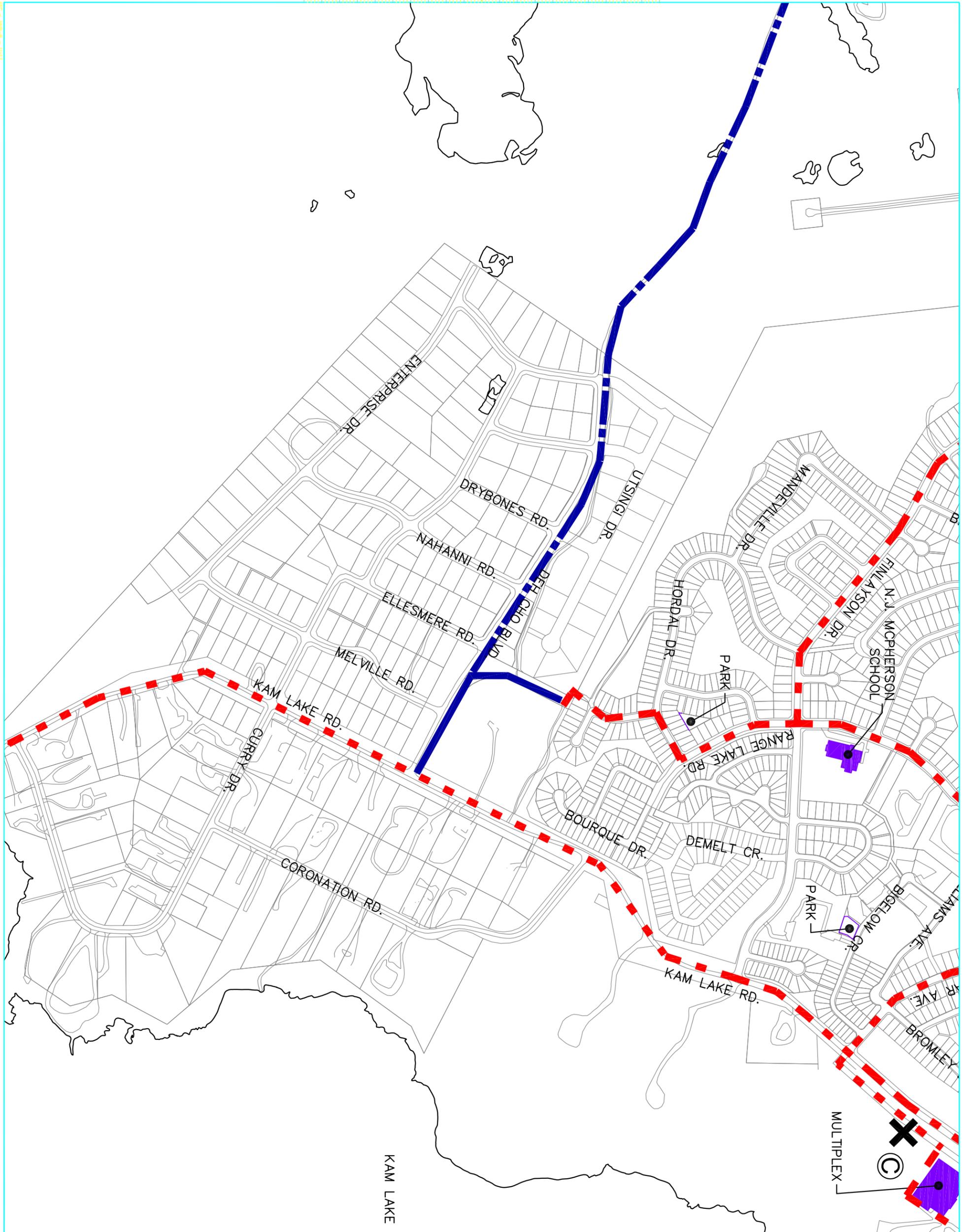
FSC PROJECT NO.  
 2008-0850

DRAWING NO.  
**B-10**

SCALE  
 1: 7500

CLIENT PROJECT NO.

DATE ISSUED



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- DO NOT SCALE FROM DRAWINGS.
- CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE BEFORE PROCEEDING WITH THIS WORK.
- REFER TO RULER IN BINDING MARGIN TO VERIFY IF SHEET HAS BEEN REDUCED OR ENLARGED.

NO.	REVISION DESCRIPTION	DATE ISSUED
00	ISSUED FOR .....	YYYYMMDD

**LEGEND**

PROPOSED LANE	
PROPOSED ROUTE	
EXISTING MULTI USE TRAIL	
PROPOSED MULTI USE TRAIL	
HOT SPOTS	

**FSC ARCHITECTS & ENGINEERS**  
 4910 - 53RD STREET, P.O. BOX 1777,  
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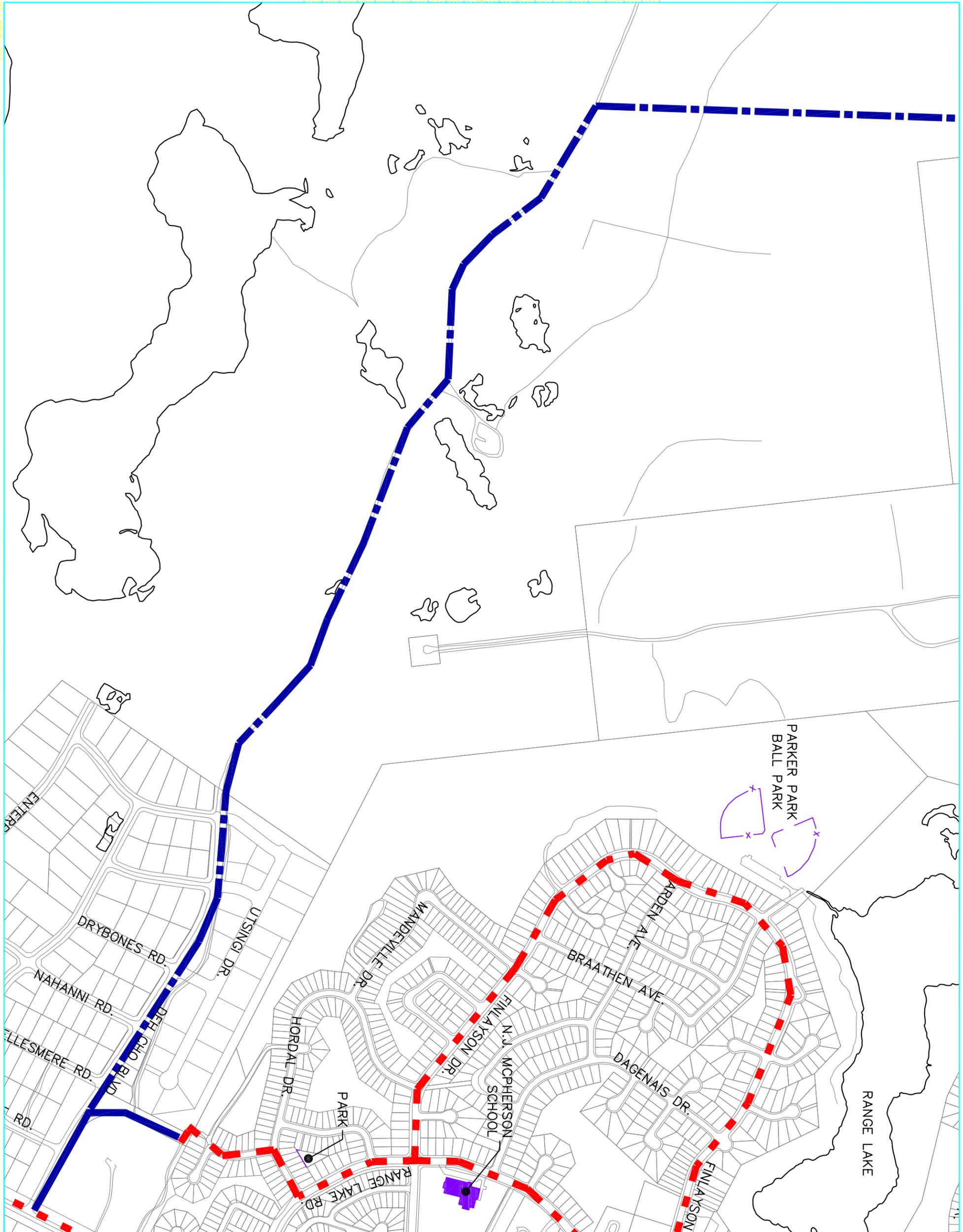
**BICYCLE ROUTING**  
**CITY OF**  
**YELLOWKNIFE**

LOCATION  
 YELLOWKNIFE, NT

DRAWING TITLE  
 Proposed Bicycle Routes & Lanes  
 Kam Lake, Deh Cho Blvd,  
 Finlayson Dr., Multiplex

DRAWN BY FG/LM	SCALE 1: 7500
CHECKED BY PR	CLIENT PROJECT NO.

FSC PROJECT NO. 2008-0850  
 DRAWING NO. **B-11**



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NO.	REVISION DESCRIPTION	DATE ISSUED
00	ISSUED FOR .....	YYYYMMDD

**LEGEND**

PROPOSED LANE	
PROPOSED ROUTE	
EXISTING MULTI USE TRAIL	
PROPOSED MULTI USE TRAIL	
HOT SPOTS	

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**BICYCLE ROUTING**  
**CITY OF**  
**YELLOWKNIFE**

LOCATION  
 YELLOWKNIFE, NT

DRAWING TITLE  
 Proposed Bicycle Routes & Lanes  
 Deh Cho Blvd. link with new  
 Industrial Subdivision

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FSC PROJECT NO.  
 2008-0850

SCALE  
 1: 7500

CLIENT PROJECT NO.

DRAWING NO.  
**B-12**

OF 12