

PM PEAK HOUR VOLUMES

INTERSECTION: Washington Blvd. and Pleasant View Drive

Ped = 3

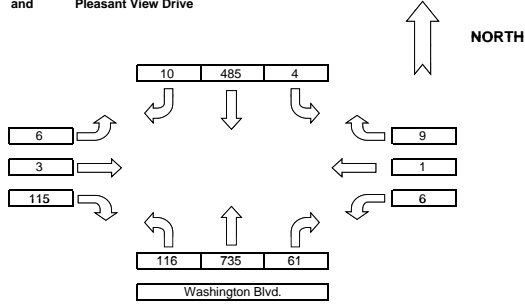
N-S STREET: Washington Blvd.
E-W STREET: Pleasant View Drive

PK HR VOLUME:	1,551
PHF:	0.95
PEAK HOUR:	
FROM:	TO:
4:45 PM	5:45 PM

COUNT DATE: June 18, 2015
Day of the Week: Thursday
NOTES:

COUNT TIME:
FROM: 4:00 PM
TO: 6:00 PM

Pleasant View Drive



PM Traffic

COUNT DATA INPUT:

Name: Lynda Name: Lynda Name: Lynda Name: Lynda

TIME PERIOD	FROM:	TO:	NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL 5' VOLUMES	TOTAL 15' VOLUMES	PEDESTRIAN	
			NBL	NBT	NBR	EBL	EBT	EBR	SBL	SBT	SBR	WBL	WBT	WBR			EW	N/S
4:00 PM	4:05 PM		12	53	6	2	1	7	0	30	1	0	0	1	113	365	0	0
4:05 PM	4:10 PM		15	54	5	2	0	6	0	50	0	0	0	132	379	0	0	
4:10 PM	4:15 PM		5	61	6	0	0	3	0	44	0	0	1	120	384	0	0	
4:15 PM	4:20 PM		7	59	4	0	0	9	0	46	1	1	0	127	372	1	0	
4:20 PM	4:25 PM		13	60	3	0	0	5	0	53	1	1	0	137	367	3	0	
4:25 PM	4:30 PM		12	44	5	1	0	7	1	34	2	2	0	108	353	0	0	
4:30 PM	4:35 PM		10	48	8	0	1	14	0	39	1	1	0	122	368	0	0	
4:35 PM	4:40 PM		4	57	3	0	1	7	1	45	0	2	1	123	380	0	0	
4:40 PM	4:45 PM		11	51	4	0	0	6	0	48	1	1	0	123	399	1	0	
4:45 PM	4:50 PM		10	57	8	1	1	4	0	53	0	0	0	134	410	0	0	
4:50 PM	4:55 PM		14	61	2	2	0	15	0	45	1	1	0	142	387	0	0	
4:55 PM	5:00 PM		9	54	9	0	0	13	0	45	1	0	0	134	372	1	0	
5:00 PM	5:05 PM		6	60	11	0	0	7	2	24	1	0	0	111	355	0	1	
5:05 PM	5:10 PM		6	63	3	0	0	7	1	44	0	1	0	127	364	0	0	
5:10 PM	5:15 PM		8	61	4	0	0	5	0	35	3	0	0	117	371	0	0	
5:15 PM	5:20 PM		8	69	4	0	0	7	0	32	0	1	0	120	383	0	0	
5:20 PM	5:25 PM		17	68	3	0	0	12	0	30	2	1	1	134	404	0	0	
5:25 PM	5:30 PM		9	52	7	1	1	10	0	49	0	0	0	129	400	0	1	
5:30 PM	5:35 PM		11	64	5	2	1	14	0	42	1	1	0	141	403	0	0	
5:35 PM	5:40 PM		7	68	2	0	0	8	1	43	0	1	0	130	389	0	0	
5:40 PM	5:45 PM		11	59	3	0	0	13	0	43	1	0	0	132	402	0	0	
5:45 PM	5:50 PM		8	55	3	1	1	8	1	48	1	0	0	127	404	0	0	
5:50 PM	5:55 PM		8	73	2	0	1	10	0	45	2	0	0	143	277	0	0	
5:55 PM	6:00 PM		11	62	5	1	0	11	1	39	1	0	2	134	134	0	0	

PM PEAK HOUR VOLUMES

Ped = 1

INTERSECTION: **450 East** and **3100 North**

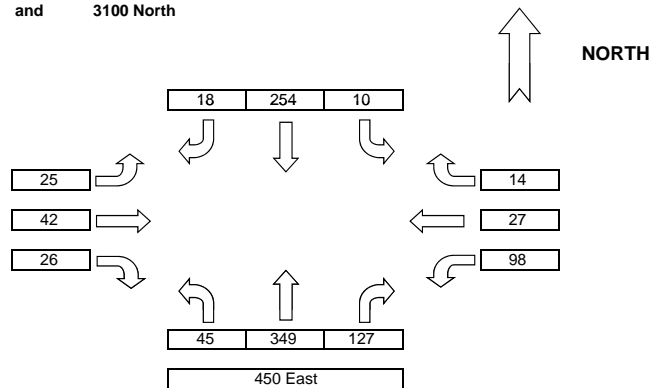
N-S STREET: **450 East**
E-W STREET: **3100 North**

PK HR VOLUME:	1,035
PHF:	0.94
PEAK HOUR:	
FROM:	TO:
4:35 PM	5:35 PM

COUNT DATE: **June 12, 2015**
Day of the Week: **Friday**
NOTES:

COUNT TIME:
FROM: **4:00 PM**
TO: **6:00 PM**

3100 North



PM Traffic

COUNT DATA INPUT:

Name: Hayley Name: Hayley Name: Hayley Name: Hayley

TIME PERIOD	FROM:	TO:	NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL 5' VOLUMES	TOTAL 15' VOLUMES	PEDESTRIAN	
			NBL	NBT	NBR	EBL	EBT	EBR	SBL	SBT	SBR	WBL	WBT	WBR			E/W	N/S
4:00 PM	4:05 PM		3	32	11	2	3	3	0	14	2	11	5	2	88	251	0	0
4:05 PM	4:10 PM		5	24	13	2	6	3	0	18	2	3	1	1	78	233	0	0
4:10 PM	4:15 PM		3	35	8	1	2	6	0	15	2	6	5	2	85	238	0	0
4:15 PM	4:20 PM		2	20	8	1	4	4	1	17	5	3	5	0	70	244	0	0
4:20 PM	4:25 PM		6	22	11	5	5	4	1	16	0	9	4	0	83	253	0	0
4:25 PM	4:30 PM		5	28	9	0	3	4	1	25	2	10	4	0	91	249	0	0
4:30 PM	4:35 PM		6	33	6	1	7	1	0	17	0	3	4	1	79	254	0	1
4:35 PM	4:40 PM		2	27	14	1	1	1	1	17	1	11	1	2	79	246	0	0
4:40 PM	4:45 PM		0	31	10	1	3	2	0	32	2	10	5	0	96	247	0	0
4:45 PM	4:50 PM		2	24	9	0	5	1	0	16	0	8	4	2	71	233	0	0
4:50 PM	4:55 PM		7	28	12	3	3	4	1	10	3	8	0	1	80	248	0	0
4:55 PM	5:00 PM		4	32	4	3	6	2	1	18	1	6	4	1	82	261	1	0
5:00 PM	5:05 PM		6	24	12	4	6	2	2	14	4	9	2	1	86	257	0	0
5:05 PM	5:10 PM		4	31	11	2	1	3	1	29	1	8	2	0	93	273	0	0
5:10 PM	5:15 PM		4	29	6	2	0	1	2	21	4	7	2	0	78	262	0	0
5:15 PM	5:20 PM		4	28	13	3	6	4	0	30	0	10	3	1	102	274	0	0
5:20 PM	5:25 PM		4	27	7	3	3	2	0	22	0	9	1	4	82	268	0	0
5:25 PM	5:30 PM		2	38	15	2	5	0	1	17	1	5	2	2	90	261	0	0
5:30 PM	5:35 PM		6	30	14	1	3	4	1	28	1	7	1	0	96	253	0	0
5:35 PM	5:40 PM		0	28	8	2	3	0	1	20	2	8	3	0	75	231	0	0
5:40 PM	5:45 PM		2	36	11	2	0	2	0	20	0	7	0	2	82	222	0	0
5:45 PM	5:50 PM		5	21	6	0	0	4	0	27	0	5	5	1	74	219	0	0
5:50 PM	5:55 PM		2	19	10	2	3	1	1	14	2	9	2	1	66	145	0	0
5:55 PM	6:00 PM		4	28	7	0	5	1	1	20	1	6	4	2	79	79	0	0

PM PEAK HOUR VOLUMES

INTERSECTION: 1050 East and 2600 North

Ped = 0

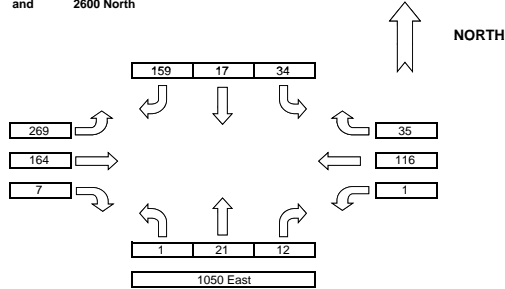
N-S STREET: 1050 East
E-W STREET: 2600 North

PK HR VOLUME:	836
PHF:	0.92
PEAK HOUR:	
FROM:	TO:
4:45 PM	5:45 PM

COUNT DATE: June 15, 2015
Day of the Week: Monday
NOTES:

COUNT TIME: FROM: 4:00 PM TO: 6:00 PM

2600 North



PM Traffic

COUNT DATA INPUT:

Name: Hayley Name: Hayley Name: Hayley Name: Hayley

TIME PERIOD	TO:	NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL 5' VOLUMES	TOTAL 15' VOLUMES	PEDESTRIAN	
		NBL	NBT	NBR	EBL	EBT	EBR	SBL	SBT	SBR	WBL	WBT	WBR			EW	N/S
4:00 PM	4:05 PM	1	1	0	19	8	1	0	0	10	1	2	0	43	181	0	0
4:05 PM	4:10 PM	0	1	0	20	14	1	0	1	14	0	12	2	65	187	0	0
4:10 PM	4:15 PM	1	4	1	34	8	0	1	0	14	0	9	1	73	177	0	0
4:15 PM	4:20 PM	0	1	0	16	10	0	2	3	11	1	4	1	49	162	0	0
4:20 PM	4:25 PM	0	1	1	21	6	0	3	1	13	0	6	3	55	170	1	0
4:25 PM	4:30 PM	1	2	0	23	8	0	1	0	14	1	7	1	58	180	0	0
4:30 PM	4:35 PM	0	1	0	19	9	0	6	5	10	0	4	3	57	180	0	0
4:35 PM	4:40 PM	0	4	0	20	12	0	7	1	12	0	8	1	65	202	0	0
4:40 PM	4:45 PM	1	1	1	20	14	0	2	0	9	0	9	1	58	206	0	0
4:45 PM	4:50 PM	0	3	0	22	20	0	4	0	14	0	10	6	79	216	0	0
4:50 PM	4:55 PM	0	1	1	20	18	0	3	1	14	0	9	2	69	207	0	0
4:55 PM	5:00 PM	0	1	1	17	11	1	3	1	17	0	14	2	68	207	0	0
5:00 PM	5:05 PM	0	1	0	24	16	2	2	1	13	0	8	3	70	194	0	0
5:05 PM	5:10 PM	0	2	1	22	10	0	2	0	17	0	11	4	69	179	0	0
5:10 PM	5:15 PM	0	3	0	14	12	2	3	1	8	1	8	3	55	183	0	0
5:15 PM	5:20 PM	0	1	1	19	9	1	2	1	12	0	7	2	55	198	0	0
5:20 PM	5:25 PM	0	0	4	28	8	0	2	0	17	0	14	0	73	215	0	0
5:25 PM	5:30 PM	0	3	0	21	11	1	5	1	15	0	10	4	71	212	0	0
5:30 PM	5:35 PM	0	0	1	29	15	0	2	3	10	0	9	2	71	227	0	0
5:35 PM	5:40 PM	0	5	1	24	16	0	1	3	10	0	10	0	70	214	0	0
5:40 PM	5:45 PM	1	1	2	29	18	0	5	5	12	0	6	7	86	224	0	0
5:45 PM	5:50 PM	1	2	0	16	10	0	5	1	13	0	5	5	58	193	0	0
5:50 PM	5:55 PM	1	1	0	20	10	2	3	1	12	0	19	11	80	135	0	11
5:55 PM	6:00 PM	1	1	1	19	13	0	1	1	5	0	11	2	55	55	1	0

Origin Destination and External Traffic

External Calculations			Trips	
Commercial	89.7	2.8% SF	42.94	38517
Manufacturing	1.61	0.1% SF	3.82	62
Institutional	340.28	10.7% SF	4.65	15823
Residential	6365	63.6% Units	9.52	60595
Parks	96.82	3.1%		
Roads	623.85	19.7%		
				114997

	Cordon Flow	% of Total	% used for External		
Pleasant View	8315	16%	5%	15	4800
Ogden Valley	1695	3%	5%	5	6300
I-15	12680	24%	25%	25	3000
Washington	22830	43%	50%	45	12600
Mountain Road	7055	13%	15%	10	1700
	52575				7800
	63%				22800

Unit/ SF assignment per Parcel

	Units/ acre 4.233		B		C		D		E		F	
	A Acres	Units	Acres	Units	Acres	Units	Acres	Units	Acres	Units	Acres	Units
Residential (Med)	312	1321	17	72	100	423	55	233	130	550	12	51
Residential (low) 2 units/ acre	329	658	378	756					35	70		
Residential (Very .5 units/ acre			294	147								
Residential (High 10 units/ acre									81	810		
	641	1979	689	975	100	423	55	233	246	1430	12	51
Commercial		0		0		0		0	0	0	11	110000

Trip Distribution by Parcel

			A	A	B	B	C	C	D	D	E	E
			Res Units	1979 Res Units	Res Units	975 Res Units	Res Units	423 Res Units	Res Units	233 Res Units	Res Units	1430
			Trips	18837 Trips	Trips	9282 Trips	Trips	4030 Trips	Trips	2216 Trips	Trips	13616
			Com sf	0 Com sf	Com sf	0 Com sf	Com sf	0 Com sf	Com sf	0 Com sf	Com sf	0
			Trips	0 Trips	Trips	0 Trips	Trips	0 Trips	Trips	0 Trips	Trips	0
Origin percentage	Total Trips		16%	18837	8%	9282	3%	4030	2%	2216	12%	13616
Prorated Origin	External Trips		6%	11867	3%	5847	1%	2539	1%	1396	4%	8578
	Net Internal Trips			3485		1717		746		410		2519
Road	From	To	Total Trips	9419 Total Trips	Total Trips	4641 Total Trips	Total Trips	2015 Total Trips	Total Trips	1108 Total Trips	Total Trips	6808
Washington Blvd	South	1700 North	24%	2260	24%	1114	25%	504	25%	277	24%	1634
Washington Blvd	1700 North	2600 North	41%	3862	41%	1903	41%	826	41%	454	33%	2247
Washington Blvd	2600 North	3100 North	72%	6781	72%	3341	79%	1592	12%	133	20%	1362
Washington Blvd	3100 North	Mountain Road	72%	6781	7%	325	11%	222	5%	55	3%	204
2600 North	West	Washington Blvd	16%	1507	16%	743	16%	322	16%	177	16%	1089
2600 North	Washington Blvd	Fruitland Blvd	5%	471	5%	232	5%	101	62%	687	55%	3744
2600 North	Fruitland Blvd	1050 East	3%	283	3%	139	3%	60	30%	332	15%	1021
2600 North	1050 East	Mountain Road	2%	188	2%	93	2%	40	5%	55	20%	1362
Mountain Road	South	2600 North	7%	659	7%	325	6%	121	6%	66	25%	1702
Mountain Road	2600 North	3100 North	7%	659	7%	325	2%	40	3%	33	15%	1021
Mountain Road	3100 North	Washington Blvd	15%	1413	15%	696	3%	60	3%	33	8%	545
Fruitland	Mountain Road	2600 North	4%	377	4%	186	3%	60	7%	78	3%	204
Monroe Blvd	South	2600 North	1%	94	1%	46	2%	40	2%	22	2%	136
Monroe Blvd	2600 North	3100 North	3%	283	3%	139	3%	60	100%	1108	4%	272
Monroe Blvd	3100 North	Mountain Road	4%	377	4%	186	2%	40	9%	100	3%	204
1050 East	2600 North	3100 North	2%	188	2%	93	2%	40	2%	22	17%	1157
300 East	2550 North	Pleasant View	3%	283	3%	139	50%	1007	2%	22	3%	204
150 East	1700 North	2600 North	4%	377	4%	186	20%	403	2%	22	4%	272
150 East	2600 North	Elberta Drive	4%	377	4%	186	50%	1007	2%	22	4%	272
Pleasant View	West	Washington Blvd	5%	471	5%	232	5%	101	5%	55	5%	340
2550 North	West	Washington Blvd	1%	94	1%	46	10%	201	1%	11	1%	68
1700 North	West	Washington Blvd	14%	1319	14%	650	14%	282	14%	155	14%	953
1700 North	Washington Blvd	Mountain Road	2%	188	2%	93	8%	161	2%	22	14%	953
2100 North	Washington Blvd	Fruitland Blvd	2%	188	2%	93	4%	81	4%	44	4%	272
2100 North	Fruitland Blvd	Mountain Road	2%	188	2%	93	4%	81	4%	44	4%	272
3100 North	Washington Blvd	East	4%	377	70%	3249	6%	121	12%	133	20%	1362

Trip Distribution by Parcel

			F	F	G	G	H	H	I	I	J	J	K	K		
			Res Units	51	Res Units	68	Res Units	1109	Res Units	377	Res Units	351	Res Units	305	7300	
			Trips	484	Trips	645	Trips	10558	Trips	3587	Trips	3345	Trips	2901	69501	
			Com sf	110000	Com sf	20000	Com sf	0	Com sf	900000	Com sf	40000	Com sf	0	1070000	
			Trips	4723	Trips	859	Trips	0	Trips	38646	Trips	1718	Trips	0	45946	
Origin percentage			Total Trips	5%	5207	1%	1504	9%	10558	37%	42233	4%	5062	3%	2901	115446
Prorated Origin			External Trips	2%	3280	0%	947	3%	6652	14%	26606	2%	3189	1%	1828	72731
			Net Internal Trips	963		278		1953		7813		937		537	21358	
Road	From	To	Total Trips	2603	Total Trips	752	Total Trips	5279	Total Trips	21116	Total Trips	2531	Total Trips	1451	57723	
Washington Blvd	South	1700 North	25%	651	25%	188	25%	1320	25%	5279	25%	633	25%	363	14222	
Washington Blvd	1700 North	2600 North	70%	1822	60%	451	24%	1267	60%	12670	22%	557	22%	319	26378	
Washington Blvd	2600 North	3100 North	21%	547	12%	90	8%	422	20%	4223	10%	253	10%	145	18890	
Washington Blvd	3100 North	Mountain Road	11%	286	5%	38	3%	158	10%	2112	10%	253	10%	145	10580	
2600 North	West	Washington Blvd	16%	417	16%	120	16%	845	16%	3379	16%	405	16%	232	9236	
2600 North	Washington Blvd	Fruitland Blvd	5%	130	60%	451	30%	1584	6%	1267	31%	785	31%	450	9902	
2600 North	Fruitland Blvd	1050 East	3%	78	30%	226	11%	581	3%	633	11%	278	11%	160	3792	
2600 North	1050 East	Mountain Road	2%	52	5%	38	10%	528	2%	422	11%	278	11%	160	3216	
Mountain Road	South	2600 North	6%	156	6%	45	25%	1320	2%	422	14%	354	14%	203	5374	
Mountain Road	2600 North	3100 North	14%	364	3%	23	9%	475	2%	422	5%	127	7%	102	3592	
Mountain Road	3100 North	Washington Blvd	3%	78	3%	23	8%	422	3%	633	3%	76	3%	44	4023	
Fruitland	Mountain Road	2600 North	3%	78	9%	68	35%	1848	3%	633	35%	886	35%	508	4925	
Monroe Blvd	South	2600 North	2%	52	2%	15	2%	106	20%	4223	40%	1012	40%	580	6328	
Monroe Blvd	2600 North	3100 North	3%	78	10%	75	4%	211	2%	422	2%	51	2%	29	2729	
Monroe Blvd	3100 North	Mountain Road	2%	52	9%	68	3%	158	2%	422	2%	51	2%	29	1687	
1050 East	2600 North	3100 North	2%	52	2%	15	2%	106	1%	211	1%	25	1%	15	1925	
300 East	2550 North	Pleasant View	50%	1302	2%	15	3%	158	2%	422	2%	51	2%	29	3633	
150 East	1700 North	2600 North	80%	2083	2%	15	4%	211	4%	845	4%	101	4%	58	4573	
150 East	2600 North	Elberta Drive	3%	78	2%	15	4%	211	2%	422	2%	51	2%	29	2671	
Pleasant View	West	Washington Blvd	5%	130	5%	38	5%	264	5%	1056	5%	127	5%	73	2886	
2550 North	West	Washington Blvd	20%	521	1%	8	1%	53	1%	211	1%	25	1%	15	1253	
1700 North	West	Washington Blvd	14%	364	14%	105	14%	739	8%	1689	70%	1772	70%	1016	9044	
1700 North	Washington Blvd	Mountain Road	8%	208	2%	15	14%	739	8%	1689	70%	1772	70%	1016	6857	
2100 North	Washington Blvd	Fruitland Blvd	4%	104	4%	30	28%	1478	4%	845	20%	506	20%	290	3932	
2100 North	Fruitland Blvd	Mountain Road	4%	104	4%	30	28%	1478	4%	845	20%	506	20%	290	3932	
3100 North	Washington Blvd	East	6%	156	12%	90	5%	264	6%	1267	2%	51	2%	29	7098	

Volume and Capacity Calculations

Road	From	To	Ownership	General Plan Classification	Existing/Future Roadway	Existing Speed	Existing Number of Lanes	Existing Capacity (No Build)
Washington Blvd	South	1700 North	UDOT	Arterial	Existing	50	5	30500
Washington Blvd	1700 North	2600 North	UDOT	Arterial	Existing	50	5	30500
Washington Blvd	2600 North	3100 North	North Ogden	Arterial	Existing	30	3	11500
Washington Blvd	3100 North	Mountain Road	North Ogden	Major Collector	Existing	30	3	11500
2600 North	West	Washington Blvd	UDOT	Arterial	Existing	40	5	30500
2600 North	Washington Blvd	Fruitland Blvd	North Ogden	Arterial	Existing	30	2	10500
2600 North	Fruitland Blvd	1050 East	North Ogden	Major Collector	Existing	30	2	10500
2600 North	1050 East	Mountain Road	North Ogden	Collector	Existing	30	2	10500
Mountain Road	South	2600 North	North Ogden	Collector	Existing	35	2	10500
Mountain Road	2600 North	3100 North	North Ogden	Collector	Unfinished			0
Mountain Road	3100 North	Washington Blvd	North Ogden	Collector	Unfinished	30	2	10500
Fruitland	Mountain Road	2600 North	North Ogden	Collector	Existing	30	2	10500
Monroe Blvd	South	2600 North	North Ogden	Major Collector	Unfinished			0
Monroe Blvd	2600 North	3100 North	North Ogden	Major Collector	Unfinished			0
Monroe Blvd	3100 North	Mountain Road	North Ogden	Collector	Existing	25	2	10500
1050 East	2600 North	3100 North	North Ogden	Major Collector	Existing	30	2	10500
300 East	2550 North	Pleasant View	North Ogden	Collector	Unfinished			0
150 East	1700 North	2600 North	North Ogden	Collector	Unfinished			0
150 East	2600 North	Elberta Drive	North Ogden	Collector	Unfinished			0
Pleasant View	West	Washington Blvd	North Ogden	Major Collector	Realignment	35	2	10500
2550 North	West	Washington Blvd	North Ogden	Major Collector	Existing	40	2	10500
1700 North	West	Washington Blvd	North Ogden	Collector	Unfinished			0
1700 North	Washington Blvd	Mountain Road	North Ogden	Major Collector	Existing	30	2	10500
2100 North	Washington Blvd	Fruitland Blvd	North Ogden	Collector	Existing	30	2	10500
2100 North	Fruitland Blvd	Mountain Road	North Ogden	Collector	Unfinished			0
3100 North	Washington Blvd	East	North Ogden	Major Collector	Existing	30	2	10500

Volume and Capacity Calculations

Road	From	To	UDOT Existing AADT	Count Existing AADT	Existing Traffic utilized in Study (2015, 2025)	Excess Capacity for Existing Traffic	Adjusted Existing Traffic for New Roads (2044)	2040 WFRC	Build Out TMP	Number of Lanes in Future	Future Capacity (Full Build Out)	Improvement	Recommended ROW
Washington Blvd	South	1700 North	22830	20577	22830	7670 C	22830		35000	5	30500		
Washington Blvd	1700 North	2600 North	22410	20558	22410	8090 C	16410	28000	30000	7	46000 ReStrip to 7 Lanes		
Washington Blvd	2600 North	3100 North	14425	20558	14425	-2925 E	5425		20000	5	30500 Widen to 5 Lanes		110
Washington Blvd	3100 North	Mountain Road		6233	6233	5267 C	6233	16000	16000	5	30500 Widen to 5 Lanes		
2600 North	West	Washington Blvd	12680	16354	12680	17820 C	15680	21000	18000	5	30500		
2600 North	Washington Blvd	Fruitland Blvd	11365	10419	11365	-865 E	11365	14000	16000	5	30500 Widen to 5 Lanes		110
2600 North	Fruitland Blvd	1050 East		6660	6660	3840 C	6660		3000	3	11500 Widen to 3 Lanes		84
2600 North	1050 East	Mountain Road	3070	3367	3070	7430 C	3070		1000	2	10500		
Mountain Road	South	2600 North	1615		1615	8885 C	1615		7000	2	10500		
Mountain Road	2600 North	3100 North				0 0	0		2000	2	10500 Build as a 2 lane Collector		66
Mountain Road	3100 North	Washington Blvd				10500 C	0		2000	2	10500 Build as a 2 lane Collector		66
Fruitland	Mountain Road	2600 North		2279	2279	8221 C	2279		11000	2	10500		
Monroe Blvd	South	2600 North				0 0	6000		9000	3	11500 Build as a 3 lane Major Collector		84
Monroe Blvd	2600 North	3100 North				0 0	10940		18000	3	11500 Build as a 3 lane Major Collector		84
Monroe Blvd	3100 North	Mountain Road			1000	9500 C	1000			2	10500		
1050 East	2600 North	3100 North	3880	4977	3880	6620 C	1940		2000	3	11500 Widen to 3 Lanes		84
300 East	2550 North	Pleasant View				0 0	0			2	10500 Build as a 2 lane Collector		66
150 East	1700 North	2600 North				0 0	0			2	10500 Build as a 2 lane Collector		66
150 East	2600 North	Elberta Drive				0 0	0			2	10500 Build as a 2 lane Collector		66
Pleasant View	West	Washington Blvd	3025	2335	3025	7475 C	6305		15000	3	11500 Widen to 3 Lanes with Realignment		84
2550 North	West	Washington Blvd			2855	7645 C	2855		1000	2	10500		84
1700 North	West	Washington Blvd				0 0	0		11000	2	10500 Build as a 2 lane Collector		66
1700 North	Washington Blvd	Mountain Road	2615	3219	2615	7885 C	2615		11000	3	11500 Widen to 3 Lanes		84
2100 North	Washington Blvd	Fruitland Blvd		100	1500	9000 C	1500		4000	2	10500		
2100 North	Fruitland Blvd	Mountain Road			0	0 0	0		4000	2	10500 Build as a 2 lane Collector		66
3100 North	Washington Blvd	East	1695	2958	1695	8805 C	1695		10000	3	11500 Widen to 3 Lanes		84

Volume and Capacity Calculations

Road	From	To	Total Trips from New Development	Full Build Out Total (New Trips + Existing)	Full Build Out Total (New Trips + Existing) ROUNDED	2044 Excess Capacity 2044 LOS	Total Trips (2025, Build)	Total Trips (2025, No Build)	2025 Total (Build)	2025 Total (Build) ROUNDED	2025 Excess Capacity Build 2025 LOS Build	2025 Total (No Build)	2025 Total (No Build) ROUNDED	2025 Excess Capacity No Build 2025 LOS No Build
Washington Blvd	South	1700 North	14222	37052	37000	-6500 E	4836	4836	27666	28000	2500 D	27666	28000	2500 D
Washington Blvd	1700 North	2600 North	26378	42788	43000	3000 D	8968	10044	25378	25000	21000 C	32454	32000	-1500 E
Washington Blvd	2600 North	3100 North	18890	24315	24000	6500 C	6423	6887	11848	12000	18500 C	21312	21000	-9500 F
Washington Blvd	3100 North	Mountain Road	10580	16813	17000	13500 C	3597	3871	9830	9800	20700 C	10104	10000	1500 C
2600 North	West	Washington Blvd	9236	24916	25000	5500 C	3140	3140	18820	19000	11500 C	15820	16000	14500 C
2600 North	Washington Blvd	Fruitland Blvd	9902	21267	21000	9500 C	3367	3367	14732	15000	15500 C	14732	15000	-4500 F
2600 North	Fruitland Blvd	1050 East	3792	10452	10000	1500 C	1289	1289	7949	7900	3600 C	7949	7900	2600 C
2600 North	1050 East	Mountain Road	3216	6286	6300	4200 C	1094	1094	4164	4200	6300 C	4164	4200	6300 C
Mountain Road	South	2600 North	5374	6989	7000	3500 C	1827	2997	3442	3400	7100 C	4612	4600	5900 C
Mountain Road	2600 North	3100 North	3592	3592	3600	6900 C	1221	0	1221	1200	9300 C	0	0	0 0
Mountain Road	3100 North	Washington Blvd	4023	4023	4000	6500 C	1368	0	1368	1400	9100 C	0	0	10500 C
Fruitland	Mountain Road	2600 North	4925	7204	7200	3300 C	1675	1675	3954	4000	6500 C	3954	4000	6500 C
Monroe Blvd	South	2600 North	6328	12328	12000	-500 E	2151	0	8151	8200	3300 C	0	0	0 0
Monroe Blvd	2600 North	3100 North	2729	13669	14000	-2500 E	928	0	11868	12000	-500 E	0	0	0 0
Monroe Blvd	3100 North	Mountain Road	1687	2687	2700	7800 C	573	984	1573	1600	8900 C	1984	2000	8500 C
1050 East	2600 North	3100 North	1925	3865	3900	7600 C	654	1631	2594	2600	8900 C	5511	5500	5000 C
300 East	2550 North	Pleasant View	3633	3633	3600	6900 C	1235	0	1235	1200	9300 C	0	0	0 0
150 East	1700 North	2600 North	4573	4573	4600	5900 C	1555	0	1555	1600	8900 C	0	0	0 0
150 East	2600 North	Elberta Drive	2671	2671	2700	7800 C	908	0	908	900	9600 C	0	0	0 0
Pleasant View	West	Washington Blvd	2886	9191	9200	2300 C	981	981	7286	7300	4200 C	4006	4000	6500 C
2550 North	West	Washington Blvd	1253	4108	4100	6400 C	426	426	3281	3300	7200 C	3281	3300	7200 C
1700 North	West	Washington Blvd	9044	9044	9000	1500 C	3075	0	3075	3100	7400 C	0	0	0 0
1700 North	Washington Blvd	Mountain Road	6857	9472	9500	2000 C	2331	2331	4946	4900	6600 C	4946	4900	5600 C
2100 North	Washington Blvd	Fruitland Blvd	3932	5432	5400	5100 C	1337	1337	2837	2800	7700 C	2837	2800	7700 C
2100 North	Fruitland Blvd	Mountain Road	3932	3932	3900	6600 C	1337	0	1337	1300	9200 C	0	0	0 0
3100 North	Washington Blvd	East	7098	8793	8800	2700 C	2413	2413	4108	4100	7400 C	4108	4100	6400 C

Volume and Capacity Calculations

Road	From	To	2025 Build Peak Hour ADT	2025 Build Peak Hour Capacity	2025 Build Peak Hour Excess Capacity	2025 Build Peak Hour LOS	2044 Build Peak Hour ADT	2044 Build Peak Hour Capacity	2044 Build Peak Hour Excess Capacity	2044 Build Peak Hour LOS
Washington Blvd	South	1700 North	3043	3355	312 D	4076	3355	-721 E		
Washington Blvd	1700 North	2600 North	2792	5060	2268 C	4707	5060	353 D		
Washington Blvd	2600 North	3100 North	1303	3355	2052 C	2675	3355	680 C		
Washington Blvd	3100 North	Mountain Road	1081	3355	2274 C	1849	3355	1506 C		
2600 North	West	Washington Blvd	2070	3355	1285 C	2741	3355	614 C		
2600 North	Washington Blvd	Fruitland Blvd	1620	3355	1735 C	2339	3355	1016 C		
2600 North	Fruitland Blvd	1050 East	874	1265	391 C	1150	1265	115 C		
2600 North	1050 East	Mountain Road	458	1155	697 C	692	1155	463 C		
Mountain Road	South	2600 North	379	1155	776 C	769	1155	386 C		
Mountain Road	2600 North	3100 North	134	1155	1021 C	395	1155	760 C		
Mountain Road	3100 North	Washington Blvd	150	1155	1005 C	443	1155	712 C		
Fruitland	Mountain Road	2600 North	435	1155	720 C	792	1155	363 C		
Monroe Blvd	South	2600 North	897	1265	368 C	1356	1265	-91 E		
Monroe Blvd	2600 North	3100 North	1305	1265	-40 E	1504	1265	-239 E		
Monroe Blvd	3100 North	Mountain Road	173	1155	982 C	296	1155	859 C		
1050 East	2600 North	3100 North	285	1265	980 C	425	1265	840 C		
300 East	2550 North	Pleasant View	136	1155	1019 C	400	1155	755 C		
150 East	1700 North	2600 North	171	1155	984 C	503	1155	652 C		
150 East	2600 North	Elberta Drive	100	1155	1055 C	294	1155	861 C		
Pleasant View	West	Washington Blvd	801	1265	464 C	1011	1265	254 C		
2550 North	West	Washington Blvd	361	1155	794 C	452	1155	703 C		
1700 North	West	Washington Blvd	338	1155	817 C	995	1155	160 C		
1700 North	Washington Blvd	Mountain Road	544	1265	721 C	1042	1265	223 C		
2100 North	Washington Blvd	Fruitland Blvd	312	1155	843 C	598	1155	557 C		
2100 North	Fruitland Blvd	Mountain Road	147	1155	1008 C	433	1155	722 C		
3100 North	Washington Blvd	East	452	1265	813 C	967	1265	298 C		

Future Projected Traffic Volume Estimates
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	1				2					
	1700 North/ Washington				2550 North/ Washington Blvd					
	Existing	Existing Method 1	Future Method 1	Future Method 2	Existing	Existing Method 1	Future Method 1	Future Method 2		
East	9500				3800					
West	9000				4100					
North	47000				47000					
South	39000				47000					
EBL	1	0	40	205	205	57	17	26	104	104
EBT	3	1	290	223	112	28	28	102	22	42
EBR	3	0	33	112	223	85	18	26	119	119
WBL	100	24	36	83	157	89	23	23	99	109
WBT	2	9	297	157	83	30	32	95	24	46
WBR	58	23	43	264	264	49	21	23	71	71
NBL	3	6	157	114	114	75	119	298	109	128
NBT	1170	1010	2150	2571	2571	1063	959	2269	2736	2736
NBR	121	152	165	96	96	99	136	285	108	108
SBL	62	144	199	243	243	67	127	285	95	95
SBT	798	1005	2186	1567	1567	801	951	2269	2061	2061
SBR	0	6	189	186	186	39	112	298	74	74
East	346	354	1030	1065	955	362	367	815	418	471
West	12	22	1006	997	923	314	325	845	452	513
North	2089	2189	4807	5036	5036	2076	2186	5170	5141	5141
South	2195	2197	4727	4541	4728	2212	2205	5170	5231	5261
K Factor	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
East	3145	3216	9360	9685	8682	3291	3339	7407	3802	4282
West	109	196	9148	9064	8391	2855	2954	7683	4106	4664
North	18991	19897	43703	45780	45782	18873	19875	47000	46734	46736
South	19955	19977	42974	41286	42982	20109	20048	47000	47556	47827

Future Projected Traffic Volume Estimates
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3					4				
2600 North/ Washington Blvd					Pleasant View Drive/ Washington				
21000					500				
25000					9200				
24000					21000				
47000					24000				
Existing	Existing Method 1	Future Method 1	Future Method 2		Existing	Existing Method 1	Future Method 1	Future Method 2	
280	204	253	261	421	6	17	81	86	85
412	369	485	585	618	3	4	274	11	16
434	275	424	956	672	115	21	91	358	195
176	151	332	557	340	6	3	3	1	12
199	287	434	248	388	1	1	117	2	10
15	113	199	20	113	9	2	2	8	10
322	342	740	648	577	116	117	230	385	185
601	590	1423	1298	1338	735	637	1093	1293	1225
252	242	646	830	480	61	43	15	27	21
66	153	301	91	153	4	36	13	7	7
425	499	1104	908	944	485	623	1075	695	722
111	214	342	93	328	10	96	200	125	96
1120	1315	2396	2331	2092	84	89	423	56	76
1758	1691	2678	2790	3004	251	256	992	967	587
1498	1773	3621	2671	3297	1249	1411	2463	2214	2145
2210	2099	4669	5198	4351	1518	1444	2506	2759	2360
0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
10182	11958	21784	21191	19018	764	809	3846	505	691
15982	15373	24342	25360	27309	2282	2326	9018	8788	5336
13618	16120	32917	24283	29973	11355	12829	22395	20124	19500
20091	19077	42447	47250	39555	13800	13125	22779	25084	21455

Future Projected Traffic Volume Estimates
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5					6			7		
3100 North/ 450 East					Monroe Blvd/ 3100 North			Monroe Blvd/ 2600 North		
8800					6600			17000		
5000					8800			21000		
17000					2700			14000		
24000					14000			12000		
Existing	Existing Method 1	Future Method 1	Future Method 2		Existing	Future Method 1		Existing	Future Method 1	
25	12	33	68	68	0	51	188	0	346	246
42	30	98	126	126	0	190	190	0	574	574
26	15	45	85	85	0	188	51	0	314	314
98	37	113	308	308	0	127	127	0	255	155
27	45	147	80	80	0	161	161	0	527	427
14	29	83	37	37	0	35	35	0	279	79
45	62	176	143	143	0	294	50	0	196	196
349	326	925	979	979	0	396	200	0	205	205
127	100	291	393	393	0	235	150	0	173	73
10	72	197	26	26	0	35	35	0	207	107
254	304	850	717	717	0	210	210	0	225	225
18	45	118	48	48	0	42	42	0	236	236
318	313	930	969	970	0	782	698	0	2014	1415
183	208	617	549	550	0	926	682	0	2193	1993
670	787	2207	1874	1875	0	768	710	0	1499	1098
899	844	2401	2625	2625	0	1449	788	0	1368	1168
0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
2891	2847	8453	8810	8818	0	7110	6345	0	18313	12864
1664	1895	5610	4987	5000	0	8417	6200	0	19938	18118
6091	7158	20066	17035	17045	0	6984	6455	0	13625	9982
8173	7673	21828	23865	23864	0	13174	7164	0	12438	10618

Future Projected Traffic Volume Estimates
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8 Monroe Blvd/ 1700 North			9 3100 North/ 1050 East				10 2600 North/ 1050 East			
Existing	Future Method 1		Existing	Existing Method 1	Future Method 1	Future Method 2		Existing	Existing Method 1	Future Method 1
0	156	156	8	14	38	38	38	269	175	203
0	160	160	49	53	248	190	190	164	182	499
0	156	84	33	28	110	133	110	7	30	33
0	112	63	68	55	59	14	55	1	14	16
0	136	136	63	69	213	193	193	116	135	435
0	112	62	6	26	21	1	21	35	77	95
0	203	103	26	44	65	177	65	1	5	2
0	339	339	86	89	86	46	86	21	11	3
0	171	71	114	65	41	50	65	12	3	1
0	171	71	3	20	7	1	20	34	84	37
0	339	289	35	58	44	15	44	17	53	19
0	203	139	3	14	11	19	19	159	142	70
0	863	563	303	289	589	449	544	362	495	1083
0	1015	778	182	222	685	750	615	716	669	1241
0	1320	1056	141	223	207	121	228	535	541	427
0	1320	949	362	340	405	434	425	59	117	74
0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
0	7849	5118	2755	2624	5354	4082	4945	3291	4504	9843
0	9224	7073	1655	2018	6226	6819	5591	6509	6086	11283
0	12000	9600	1282	2023	1886	1100	2073	4864	4920	3878
0	12000	8627	3291	3090	3678	3950	3864	536	1059	673

Future Projected Traffic Volume Estimates
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		11		12			
		Washington Blvd/ Mountain Road		Mountain Road/ 3100 North			
		4000		4000			
		4000		4000			
		2000		4000			
		10000		3600			
Future Method 2		Existing	Future Method 1		Existing	Future Method 1	
250	250	0	22	22	0	65	65
389	239	0	63	63	0	98	98
21	21	0	79	93	0	60	60
0	16	0	79	93	0	60	60
346	246	0	63	63	0	98	98
3	35	0	22	22	0	65	65
11	11	0	183	183	0	56	56
7	30	0	315	225	0	84	84
10	12	0	183	183	0	56	56
3	37	0	30	30	0	64	64
2	19	0	186	144	0	90	90
195	195	0	30	30	0	64	64
751	585	0	440	454	0	440	441
1211	962	0	440	454	0	440	441
461	566	0	605	473	0	431	432
51	109	0	1023	921	0	406	406
0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
6828	5318	0	4000	4127	0	4000	4009
11012	8745	0	4000	4127	0	4000	4009
4189	5145	0	5500	4300	0	3921	3927
465	991	0	9300	8373	0	3687	3691

Future Projected Traffic Volume Estimates
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13			14				15		16	17
Mountain Road/ 2600 North			2600 North/ Fruitland				Elberta/ 450 East		1700 North/ Mountain Road	2100 South/ Fruitland Drive
0			10000				0		0	2000
6300			17000				8000		4500	5400
3600			0				19000		7000	7200
7000			7200				21000		6000	5200
Existing	Future Method 1		Existing	Existing Method 1	Future Method 1	Future Method 2	Future Method 1			
0	102	82	0	1	0	0	114	73	114	
0	132		461	366	691	668	44	120	78	
0	174	280	67	101	204	266	123	64	89	
0	0		22	89	117	22	3	0	22	
0	31		245	359	638	331	7	38	39	
0	0		0	1	0	0	3	0	27	
0	176	200	104	30	99	414	414	310	91	101
0	200	180	2	4	223	0	879	270	177	
0	0		50	27	61	54	54	45	0	49
0	0		0	0	0	0	45	0	70	
0	151	120	0	0	88	0	864	280	204	
0	78	78	0	0	0	0	282	108	149	
0	163	0	778	842	1506	1075	1075	147	158	285
0	693	640	877	857	1631	1678	1679	880	495	570
0	531	460	2	6	311	0	0	2186	731	742
0	701	780	245	251	792	755	756	2223	705	642
0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
0	1484	0	7073	7654	13694	9775	9773	1333	1438	2589
0	6300	5818	7973	7789	14827	15255	15264	8000	4500	5182
0	4825	4182	18	55	2831	0	0	19875	6647	6743
0	6370	7091	2227	2279	7200	6868	6873	20208	6412	5833



Appendix B Intersection Analyses

Timings

1: Washington Blvd & 1700 North

8/28/2015

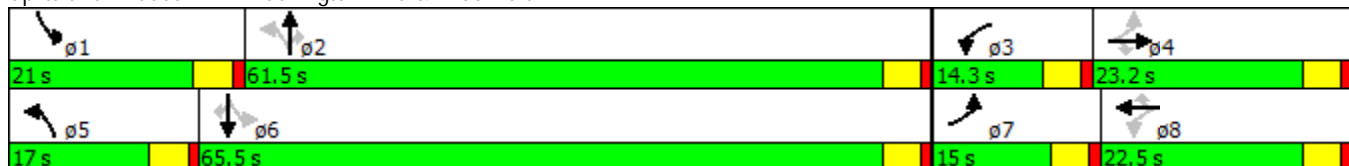


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑	↗	↘	↑	↗	↘	↑↑↑	↗	↘	↑↑↑	↗
Traffic Volume (vph)	205	112	223	157	83	264	114	2571	96	243	1567	186
Future Volume (vph)	205	112	223	157	83	264	114	2571	96	243	1567	186
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	15.0	23.2	23.2	14.3	22.5	22.5	17.0	61.5	61.5	21.0	65.5	65.5
Total Split (%)	12.5%	19.3%	19.3%	11.9%	18.8%	18.8%	14.2%	51.3%	51.3%	17.5%	54.6%	54.6%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effect Green (s)	23.6	13.1	13.1	21.8	12.2	12.2	65.9	57.2	57.2	76.5	63.4	63.4
Actuated g/C Ratio	0.21	0.12	0.12	0.19	0.11	0.11	0.58	0.51	0.51	0.68	0.56	0.56
v/c Ratio	0.72	0.55	0.62	0.61	0.43	0.79	0.51	1.05	0.12	0.85	0.58	0.20
Control Delay	52.8	57.2	15.3	47.2	54.0	31.3	18.6	61.5	4.3	55.0	17.9	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.8	57.2	15.3	47.2	54.0	31.3	18.6	61.5	4.3	55.0	17.9	3.3
LOS	D	E	B	D	D	C	B	E	A	D	B	A
Approach Delay		38.2			40.0			57.8			21.0	
Approach LOS		D			D			E			C	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 112.9	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay: 41.8	Intersection LOS: D
Intersection Capacity Utilization 92.4%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 1: Washington Blvd & 1700 North



Timings

2: Washington Blvd & 2550 North

8/28/2015



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	104	42	109	46	128	2736	108	95	2061	74
Future Volume (vph)	104	42	109	46	128	2736	108	95	2061	74
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	9.5	22.5	9.5	22.5	11.9	58.5	58.5	9.5	56.1	56.1
Total Split (%)	9.5%	22.5%	9.5%	22.5%	11.9%	58.5%	58.5%	9.5%	56.1%	56.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	13.9	8.9	14.9	11.1	60.0	54.3	54.3	54.9	49.9	49.9
Actuated g/C Ratio	0.16	0.10	0.17	0.12	0.67	0.61	0.61	0.62	0.56	0.56
v/c Ratio	0.49	0.63	0.66	0.46	0.60	0.93	0.11	0.56	0.76	0.08
Control Delay	39.3	25.1	50.8	24.6	24.9	24.1	2.2	22.9	17.6	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.3	25.1	50.8	24.6	24.9	24.1	2.2	22.9	17.6	1.1
LOS	D	C	D	C	C	C	A	C	B	A
Approach Delay		30.7		37.3		23.4			17.3	
Approach LOS		C		D		C			B	

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 89.1
 Natural Cycle: 100
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.93
 Intersection Signal Delay: 21.9
 Intersection LOS: C
 Intersection Capacity Utilization 88.7%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 2: Washington Blvd & 2550 North

9.5 s	58.5 s	9.5 s	22.5 s
11.9 s	56.1 s	9.5 s	22.5 s

Timings

3: Washington Blvd & 2600 North

8/28/2015

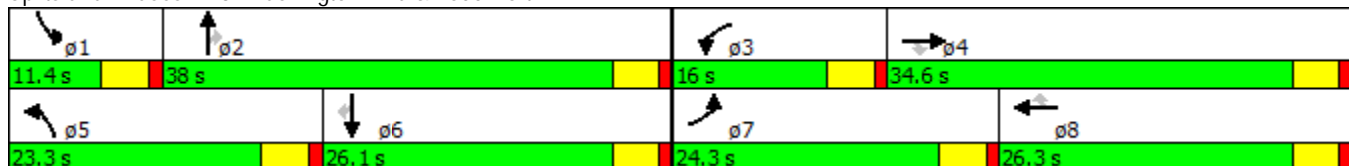


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑	↖	↖↗	↑↑	↖	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖
Traffic Volume (vph)	421	618	672	340	388	113	577	1338	480	153	944	328
Future Volume (vph)	421	618	672	340	388	113	577	1338	480	153	944	328
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	24.3	34.6	34.6	16.0	26.3	26.3	23.3	38.0	38.0	11.4	26.1	26.1
Total Split (%)	24.3%	34.6%	34.6%	16.0%	26.3%	26.3%	23.3%	38.0%	38.0%	11.4%	26.1%	26.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effect Green (s)	17.4	30.1	30.1	11.5	24.2	24.2	18.8	33.5	33.5	6.9	21.6	21.6
Actuated g/C Ratio	0.17	0.30	0.30	0.12	0.24	0.24	0.19	0.34	0.34	0.07	0.22	0.22
v/c Ratio	0.74	0.61	1.00	0.91	0.48	0.22	0.94	0.83	0.68	0.68	0.91	0.56
Control Delay	47.0	32.9	53.0	72.1	35.3	0.9	64.6	35.6	14.6	61.0	50.9	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.0	32.9	53.0	72.1	35.3	0.9	64.6	35.6	14.6	61.0	50.9	7.7
LOS	D	C	D	E	D	A	E	D	B	E	D	A
Approach Delay		44.2			45.6			38.4			42.1	
Approach LOS		D			D			D			D	

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.00
 Intersection Signal Delay: 41.7
 Intersection LOS: D
 Intersection Capacity Utilization 80.8%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 3: Washington Blvd & 2600 North



Timings

4: Washington Blvd & Pleasant View Drive

8/28/2015

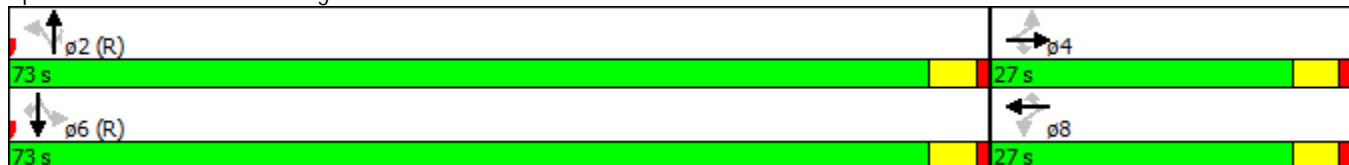


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (vph)	85	16	195	12	10	10	185	1225	21	7	722	96
Future Volume (vph)	85	16	195	12	10	10	185	1225	21	7	722	96
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	27.0	27.0	27.0	27.0	27.0	27.0	73.0	73.0	73.0	73.0	73.0	73.0
Total Split (%)	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	73.0%	73.0%	73.0%	73.0%	73.0%	73.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min
Act Effect Green (s)	11.9	11.9	11.9	11.9	11.9	11.9	79.1	79.1	79.1	79.1	79.1	79.1
Actuated g/C Ratio	0.12	0.12	0.12	0.12	0.12	0.12	0.79	0.79	0.79	0.79	0.79	0.79
v/c Ratio	0.54	0.08	0.56	0.08	0.05	0.05	0.37	0.46	0.02	0.02	0.27	0.08
Control Delay	52.3	37.4	11.6	37.6	36.7	13.5	6.1	4.4	1.4	3.4	3.4	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.3	37.4	11.6	37.6	36.7	13.5	6.1	4.4	1.4	3.4	3.4	0.9
LOS	D	D	B	D	D	B	A	A	A	A	A	A
Approach Delay		24.7			29.7			4.6			3.1	
Approach LOS		C			C			A			A	

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.56
 Intersection Signal Delay: 6.7
 Intersection LOS: A
 Intersection Capacity Utilization 60.7%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 4: Washington Blvd & Pleasant View Drive



Timings

5: Washington Blvd & 3100 North

8/28/2015

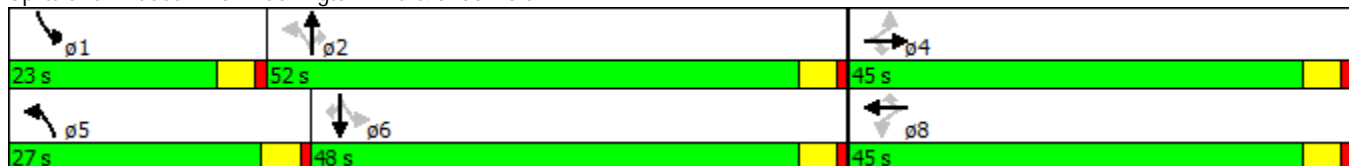


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (vph)	68	126	85	308	80	37	143	979	393	26	717	48
Future Volume (vph)	68	126	85	308	80	37	143	979	393	26	717	48
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	45.0	45.0	45.0	45.0	45.0	45.0	27.0	52.0	52.0	23.0	48.0	48.0
Total Split (%)	37.5%	37.5%	37.5%	37.5%	37.5%	37.5%	22.5%	43.3%	43.3%	19.2%	40.0%	40.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effect Green (s)	29.9	29.9	29.9	29.9	29.9	29.9	45.9	40.3	40.3	37.1	30.5	30.5
Actuated g/C Ratio	0.35	0.35	0.35	0.35	0.35	0.35	0.54	0.47	0.47	0.43	0.36	0.36
v/c Ratio	0.16	0.20	0.15	0.74	0.13	0.07	0.39	0.62	0.49	0.10	0.60	0.09
Control Delay	22.6	22.5	5.8	38.0	21.9	3.9	14.4	21.3	12.2	12.2	25.2	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.6	22.5	5.8	38.0	21.9	3.9	14.4	21.3	12.2	12.2	25.2	5.9
LOS	C	C	A	D	C	A	B	C	B	B	C	A
Approach Delay		17.5			32.0			18.3			23.6	
Approach LOS		B			C			B			C	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 85.6	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 21.5	Intersection LOS: C
Intersection Capacity Utilization 69.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 5: Washington Blvd & 3100 North



HCM Unsignalized Intersection Capacity Analysis

6: Monroe Street & 3100 North

8/28/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Right Turn Channelized												
Traffic Volume (veh/h)	51	190	188	127	161	35	294	396	235	35	210	42
Future Volume (veh/h)	51	190	188	127	161	35	294	396	235	35	210	42
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	54	200	198	134	169	37	309	417	247	37	221	44
Approach Volume (veh/h)		452			340			973			302	
Crossing Volume (veh/h)		392			780			291			612	
High Capacity (veh/h)		1017			745			1102			853	
High v/c (veh/h)		0.44			0.46			0.88			0.35	
Low Capacity (veh/h)		829			589			905			684	
Low v/c (veh/h)		0.55			0.58			1.07			0.44	

Intersection Summary												
Maximum v/c High											0.88	
Maximum v/c Low											1.07	
Intersection Capacity Utilization			68.9%			ICU Level of Service					C	

Timings

7: Monroe Street & 2600 North

8/28/2015

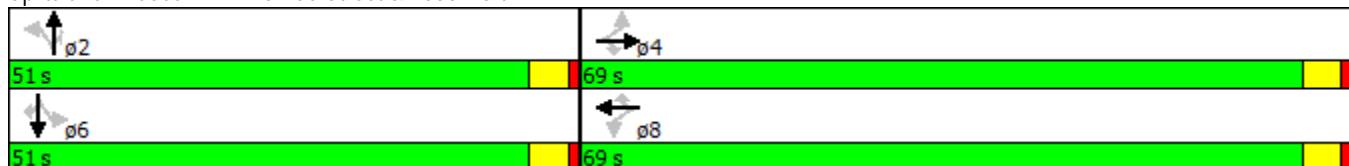


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↖	↖	↗	↖	↖	↗	↖	↖	↗	↖
Traffic Volume (vph)	246	574	314	155	427	79	196	205	73	107	225	236
Future Volume (vph)	246	574	314	155	427	79	196	205	73	107	225	236
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	8	8	8	2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	69.0	69.0	69.0	69.0	69.0	69.0	51.0	51.0	51.0	51.0	51.0	51.0
Total Split (%)	57.5%	57.5%	57.5%	57.5%	57.5%	57.5%	42.5%	42.5%	42.5%	42.5%	42.5%	42.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	Max	Max	Max	Max	Max	Max
Act Effect Green (s)	38.1	38.1	38.1	38.1	38.1	38.1	47.6	47.6	47.6	47.6	47.6	47.6
Actuated g/C Ratio	0.40	0.40	0.40	0.40	0.40	0.40	0.50	0.50	0.50	0.50	0.50	0.50
v/c Ratio	0.79	0.43	0.40	0.65	0.32	0.12	0.38	0.23	0.09	0.20	0.25	0.27
Control Delay	41.3	20.3	3.1	34.2	18.9	3.6	21.5	17.7	5.2	18.9	17.9	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.3	20.3	3.1	34.2	18.9	3.6	21.5	17.7	5.2	18.9	17.9	3.6
LOS	D	C	A	C	B	A	C	B	A	B	B	A
Approach Delay		20.1			20.7			17.3			12.2	
Approach LOS		C			C			B			B	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 94.9	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 18.2	Intersection LOS: B
Intersection Capacity Utilization 63.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: Monroe Street & 2600 North



Timings

8: Monroe Street & 1700 North

8/28/2015

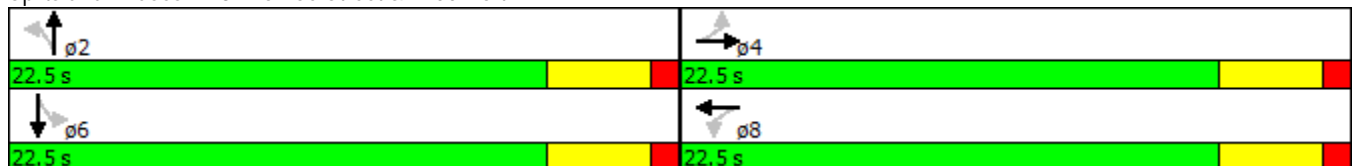


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗	↖	↗
Traffic Volume (vph)	156	160	63	136	103	339	71	289
Future Volume (vph)	156	160	63	136	103	339	71	289
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effect Green (s)	11.0	11.0	11.0	11.0	19.2	19.2	19.2	19.2
Actuated g/C Ratio	0.28	0.28	0.28	0.28	0.49	0.49	0.49	0.49
v/c Ratio	0.50	0.47	0.21	0.38	0.27	0.48	0.18	0.50
Control Delay	16.6	10.7	11.4	9.6	10.0	9.8	8.8	9.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.6	10.7	11.4	9.6	10.0	9.8	8.8	9.4
LOS	B	B	B	A	A	A	A	A
Approach Delay		13.0		10.0		9.8		9.4
Approach LOS		B		B		A		A

Intersection Summary

Cycle Length: 45	
Actuated Cycle Length: 39.2	
Natural Cycle: 45	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.50	
Intersection Signal Delay: 10.5	Intersection LOS: B
Intersection Capacity Utilization 64.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: Monroe Street & 1700 North



HCM Unsignalized Intersection Capacity Analysis

9: 1050 East & 3100 North

8/28/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	190	110	55	193	21	65	86	65	20	44	19
Future Volume (Veh/h)	38	190	110	55	193	21	65	86	65	20	44	19
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	40	200	116	58	203	22	68	91	68	21	46	20
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									4			
Median type		TWLTL			None							
Median storage (veh)		2										
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	225			316			700	679	258	690	726	214
vC1, stage 1 conf vol							338	338		330	330	
vC2, stage 2 conf vol							362	341		360	396	
vCu, unblocked vol	225			316			700	679	258	690	726	214
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			95			86	82	91	95	90	98
cM capacity (veh/h)	1344			1244			470	497	781	409	471	826
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Volume Total	40	316	58	225	227	87						
Volume Left	40	0	58	0	68	21						
Volume Right	0	116	0	22	68	20						
cSH	1344	1700	1244	1700	693	502						
Volume to Capacity	0.03	0.19	0.05	0.13	0.33	0.17						
Queue Length 95th (ft)	2	0	4	0	36	16						
Control Delay (s)	7.8	0.0	8.0	0.0	14.2	13.7						
Lane LOS	A		A		B	B						
Approach Delay (s)	0.9		1.6		14.2	13.7						
Approach LOS					B	B						
Intersection Summary												
Average Delay			5.4									
Intersection Capacity Utilization			44.2%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

10: 1050 East & 2600 North





















8/28/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR				
Lane Configurations																
Traffic Volume (veh/h)	250	239	21	16	246	35	11	30	12	37	19	195				
Future Volume (Veh/h)	250	239	21	16	246	35	11	30	12	37	19	195				
Sign Control	Free			Free			Stop			Stop						
Grade	0%			0%			0%			0%						
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95				
Hourly flow rate (vph)	263	252	22	17	259	37	12	32	13	39	20	205				
Pedestrians																
Lane Width (ft)																
Walking Speed (ft/s)																
Percent Blockage																
Right turn flare (veh)																
Median type	TWLTL				None											
Median storage veh	2															
Upstream signal (ft)																
pX, platoon unblocked																
vC, conflicting volume	296		274		1297		1119		263		1118		1112		278	
vC1, stage 1 conf vol					789		789				312		312			
vC2, stage 2 conf vol					508		330				807		800			
vCu, unblocked vol	296		274		1297		1119		263		1118		1112		278	
tC, single (s)	4.1		4.1		7.1		6.5		6.2		7.1		6.5		6.2	
tC, 2 stage (s)					6.1		5.5				6.1		5.5			
tF (s)	2.2		2.2		3.5		4.0		3.3		3.5		4.0		3.3	
p0 queue free %	79		99		90		88		98		84		93		73	
cM capacity (veh/h)	1265		1289		116		274		776		237		283		761	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2								
Volume Total	263	274	17	296	12	45	39	225								
Volume Left	263	0	17	0	12	0	39	0								
Volume Right	0	22	0	37	0	13	0	205								
cSH	1265	1700	1289	1700	116	337	237	662								
Volume to Capacity	0.21	0.16	0.01	0.17	0.10	0.13	0.16	0.34								
Queue Length 95th (ft)	20	0	1	0	8	11	14	38								
Control Delay (s)	8.6	0.0	7.8	0.0	39.7	17.3	23.2	13.2								
Lane LOS	A		A		E		C		C		B					
Approach Delay (s)	4.2		0.4		22.0		14.7									
Approach LOS					C		B									
Intersection Summary																
Average Delay			6.4													
Intersection Capacity Utilization			52.0%		ICU Level of Service				A							
Analysis Period (min)			15													





















HCM Unsignalized Intersection Capacity Analysis
 11: Washington Blvd & Mountain Road

8/28/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	22	63	93	93	63	22	183	225	183	30	144	30
Future Volume (vph)	22	63	93	93	63	22	183	225	183	30	144	30
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	23	66	98	98	66	23	193	237	193	32	152	32
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2				
Volume Total (vph)	23	164	98	89	193	430	32	184				
Volume Left (vph)	23	0	98	0	193	0	32	0				
Volume Right (vph)	0	98	0	23	0	193	0	32				
Hadj (s)	0.53	-0.38	0.53	-0.15	0.53	-0.28	0.53	-0.09				
Departure Headway (s)	7.5	6.6	7.5	6.8	6.5	5.7	7.1	6.4				
Degree Utilization, x	0.05	0.30	0.20	0.17	0.35	0.68	0.06	0.33				
Capacity (veh/h)	446	511	449	492	535	608	480	531				
Control Delay (s)	9.7	11.2	11.2	10.0	11.8	19.0	9.3	11.4				
Approach Delay (s)	11.0		10.6		16.8		11.1					
Approach LOS	B		B		C		B					
Intersection Summary												
Delay			13.9									
Level of Service			B									
Intersection Capacity Utilization			53.9%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
 12: Mountain Road & 3100 North

8/28/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Traffic Volume (vph)	65	98	60	60	98	65	56	84	56	64	90	64
Future Volume (vph)	65	98	60	60	98	65	56	84	56	64	90	64
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	68	103	63	63	103	68	59	88	59	67	95	67
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2				
Volume Total (vph)	68	166	63	171	59	147	67	162				
Volume Left (vph)	68	0	63	0	59	0	67	0				
Volume Right (vph)	0	63	0	68	0	59	0	67				
Hadj (s)	0.53	-0.23	0.53	-0.24	0.53	-0.25	0.53	-0.26				
Departure Headway (s)	6.6	5.8	6.6	5.8	6.6	5.8	6.6	5.8				
Degree Utilization, x	0.12	0.27	0.11	0.27	0.11	0.24	0.12	0.26				
Capacity (veh/h)	518	587	518	589	512	578	514	584				
Control Delay (s)	9.3	9.7	9.2	9.8	9.2	9.5	9.3	9.6				
Approach Delay (s)	9.6		9.6		9.4		9.6					
Approach LOS	A		A		A		A					
Intersection Summary												
Delay			9.5									
Level of Service			A									
Intersection Capacity Utilization			38.0%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

13: Mountain Road & 2600 North

9/2/2015

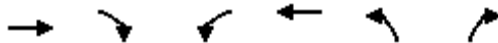


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	82	280	200	180	120	78
Future Volume (Veh/h)	82	280	200	180	120	78
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	86	295	211	189	126	82
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	778	167	208			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	778	167	208			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	72	66	85			
cM capacity (veh/h)	308	877	1363			
Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	
Volume Total	86	295	211	189	208	
Volume Left	86	0	211	0	0	
Volume Right	0	295	0	0	82	
cSH	308	877	1363	1700	1700	
Volume to Capacity	0.28	0.34	0.15	0.11	0.12	
Queue Length 95th (ft)	28	37	14	0	0	
Control Delay (s)	21.1	11.2	8.1	0.0	0.0	
Lane LOS	C	B	A			
Approach Delay (s)	13.4		4.3	0.0		
Approach LOS	B					
Intersection Summary						
Average Delay			6.9			
Intersection Capacity Utilization			36.7%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

14: Fruitland Drive & 2600 North

8/28/2015



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Right Turn Channelized						
Traffic Volume (veh/h)	668	266	22	331	414	54
Future Volume (veh/h)	668	266	22	331	414	54
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	703	280	23	348	436	57
Approach Volume (veh/h)	983			371	493	
Crossing Volume (veh/h)	23			436	703	
High Capacity (veh/h)	1360			982	793	
High v/c (veh/h)	0.72			0.38	0.62	
Low Capacity (veh/h)	1139			798	630	
Low v/c (veh/h)	0.86			0.46	0.78	
Intersection Summary						
Maximum v/c High	0.72					
Maximum v/c Low	0.86					
Intersection Capacity Utilization	64.8%			ICU Level of Service	C	

Timings

15: Washington Blvd & Elberta Drive

9/22/2015

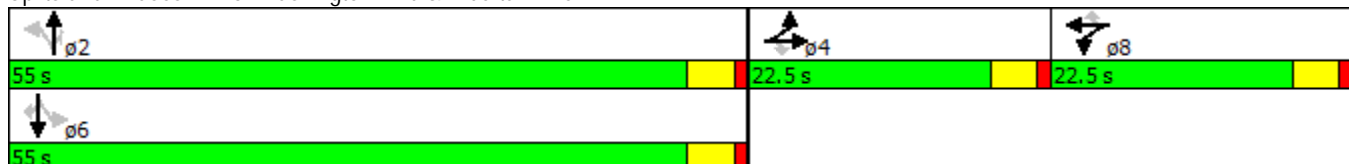


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (vph)	89	110	97	32	66	30	255	862	143	127	842	229
Future Volume (vph)	89	110	97	32	66	30	255	862	143	127	842	229
Turn Type	Split	NA	Perm	Split	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4			8	2		2	6		6
Detector Phase	4	4	4	8	8	8	2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	55.0	55.0	55.0	55.0	55.0	55.0
Total Split (%)	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	55.0%	55.0%	55.0%	55.0%	55.0%	55.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	Min	Min	Min	Min	Min	Min
Act Effect Green (s)	10.7	10.7	10.7	8.5	8.5	8.5	53.7	53.7	53.7	53.7	53.7	53.7
Actuated g/C Ratio	0.13	0.13	0.13	0.10	0.10	0.10	0.64	0.64	0.64	0.64	0.64	0.64
v/c Ratio	0.42	0.49	0.35	0.19	0.37	0.15	0.80	0.40	0.14	0.41	0.39	0.22
Control Delay	39.7	41.5	10.9	37.7	41.5	3.9	36.6	9.5	2.0	15.2	9.4	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.7	41.5	10.9	37.7	41.5	3.9	36.6	9.5	2.0	15.2	9.4	3.0
LOS	D	D	B	D	D	A	D	A	A	B	A	A
Approach Delay		31.0			31.6			14.1			8.8	
Approach LOS		C			C			B			A	

Intersection Summary

Cycle Length: 100	
Actuated Cycle Length: 84.3	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 14.4	Intersection LOS: B
Intersection Capacity Utilization 60.2%	ICU Level of Service B
Analysis Period (min) 15	




















Splits and Phases: 15: Washington Blvd & Elberta Drive



HCM Unsignalized Intersection Capacity Analysis

16: Fruitland Drive & 1700 North

9/22/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	2	170	2	2	2	73	130	2	2	130	63
Future Volume (Veh/h)	160	2	170	2	2	2	73	130	2	2	130	63
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	168	2	179	2	2	2	77	137	2	2	137	66
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	468	467	170	613	499	138	203			139		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	468	467	170	613	499	138	203			139		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	65	100	80	99	100	100	94			100		
cM capacity (veh/h)	480	465	874	307	446	910	1369			1445		
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1	SB 2					
Volume Total	168	181	6	77	139	2	203					
Volume Left	168	0	2	77	0	2	0					
Volume Right	0	179	2	0	2	0	66					
cSH	480	865	454	1369	1700	1445	1700					
Volume to Capacity	0.35	0.21	0.01	0.06	0.08	0.00	0.12					
Queue Length 95th (ft)	39	20	1	4	0	0	0					
Control Delay (s)	16.5	10.3	13.0	7.8	0.0	7.5	0.0					
Lane LOS	C	B	B	A		A						
Approach Delay (s)	13.2		13.0	2.8		0.1						
Approach LOS	B		B									
Intersection Summary												
Average Delay			6.9									
Intersection Capacity Utilization			40.3%	ICU Level of Service	A							
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
 17: Fruitland Drive & 2100 South

9/22/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Right Turn Channelized												
Traffic Volume (veh/h)	114	78	89	22	39	27	101	177	49	70	204	149
Future Volume (veh/h)	114	78	89	22	39	27	101	177	49	70	204	149
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	120	82	94	23	41	28	106	186	52	74	215	157
Approach Volume (veh/h)	296		92				344			446		
Crossing Volume (veh/h)	312				412			276			170	
High Capacity (veh/h)	1084				1001			1115			1212	
High v/c (veh/h)	0.27				0.09			0.31			0.37	
Low Capacity (veh/h)	889				815			917			1005	
Low v/c (veh/h)	0.33				0.11			0.38			0.44	
Intersection Summary												
Maximum v/c High	0.37											
Maximum v/c Low	0.44											
Intersection Capacity Utilization	60.5%				ICU Level of Service				B			

HCM Unsignalized Intersection Capacity Analysis

18: Mountain Road & Fruitland Drive

9/2/2015



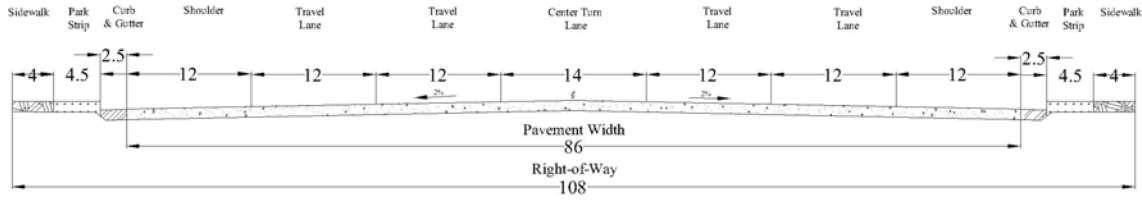
Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (veh/h)	73	89	110	272	254	80
Future Volume (Veh/h)	73	89	110	272	254	80
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	77	94	116	286	267	84
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	785	267	351			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	785	267	351			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	76	88	90			
cM capacity (veh/h)	327	772	1208			
Direction, Lane #	SE 1	SE 2	NE 1	NE 2	SW 1	SW 2
Volume Total	77	94	116	286	267	84
Volume Left	77	0	116	0	0	0
Volume Right	0	94	0	0	0	84
cSH	327	772	1208	1700	1700	1700
Volume to Capacity	0.24	0.12	0.10	0.17	0.16	0.05
Queue Length 95th (ft)	22	10	8	0	0	0
Control Delay (s)	19.4	10.3	8.3	0.0	0.0	0.0
Lane LOS	C	B	A			
Approach Delay (s)	14.4		2.4	0.0		
Approach LOS	B					
Intersection Summary						
Average Delay			3.7			
Intersection Capacity Utilization			33.5%	ICU Level of Service	A	
Analysis Period (min)			15			



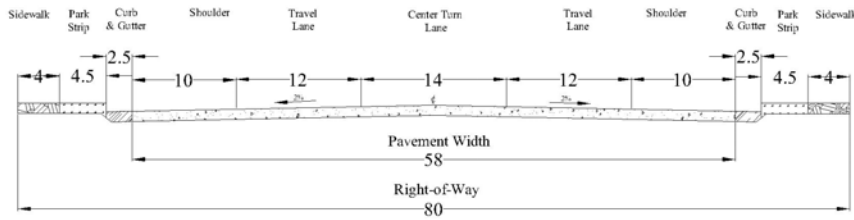
Appendix C North Ogden Cross-sections

Figure 19 - North Ogden City Cross-section Standards

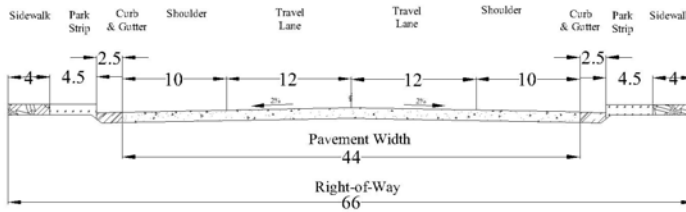
(1) Arterial Street



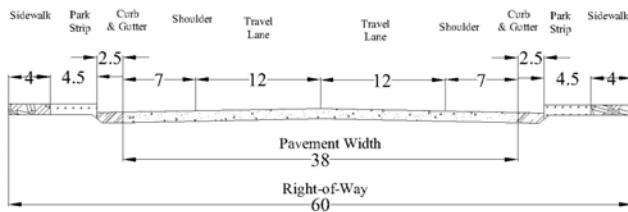
(2) Major Collector Street



(3) Collector Street



(4) Local Street





Appendix D IFFP Project Costs Analysis

**NORTH OGDEN CITY
STAFF REPORT**

TO: MAYOR AND CITY COUNCIL
FROM: DAVID ESPINOZA, PUBLIC WORKS DIRECTOR
SUBJECT: PUBLIC WORKS PARKING STRUCTURE HEATING
OPTIONS
DATE: 11/13/2015

TYPES OF HEAT

- ❖ Gas Air Blown- Units and Installation \$10, 200. Includes (3) 175 BTU units
Pros: Easiest to install, only 3 units
Cons: Loss of air when doors open, this form of heat warms the air not specific objects.

- ❖ Gas Radiant Heat- Units and Installation \$14, 427. Includes (2) 175 BTU x50' (2) 150 BTU x20'
Pros: Most efficient monthly heating cost, this form of heat will warm specific objects.
Cons: Need multiple units (approx.. 5), clearance issues (2' from ceiling; 6' from object) can only place these heaters in specific areas.

- ❖ Electric- Unit and Installation \$16, 698. Includes (2) 40kw units (2) 30kw units
Pros: Wouldn't need to run gas line from administration bldg.
Cons: Very expensive monthly cost (approx. 7x gas prices)

- ❖ Oil Burners- Unit and Installation \$26,000 Includes (2) 250 BTU units (2) 250 gal oil containers
Pros: Can burn used oil from fleet and citizens
Cons: Very messy, must purchase oil container units

MONTHLY RATE ESTIMATES

Gas Heaters \$.72 per unit per hour (3)

Radiant Heat \$.72 per unit per hour (4)

Electric \$7.00 per hour (4)

Oil Burner \$ minimal cost to run the blower

Standard Questar residential rates, (actual rate may be different) \$.80 per million BTU, operating cost for 650,000 btu's, as estimated, \$.72 per hour of operation.

Standard Pacific corp. residential rates, (actual rate may be different) \$.06 per KW/hr., operating cost for 140 kw, as estimated, \$7.20 per hour of operation.

OTHER CITIES AND THEIR HEATING METHODS

Payson City	Stored Indoors	Gas Heaters
Brigham City	Indoor and Outdoor	Gas Heaters
Layton City	Mostly Outdoors	Gas Heaters
Harrisville City	Indoor or Covered	Block heaters and Gas Heaters
South Ogden City	Indoor and Outdoor	Gas and Radiant Heat
Ogden City	Covered	Block heaters
Centerville City	Indoor	Radiant Heat (suggested installing fans)
Kaysville City	Outdoor	Older trucks on block heaters
Farr West	Indoor	Gas heaters
West Haven	Indoor	Gas heaters

It's my recommendation as the Public Works Director that the city purchase the air blown gas heaters. Within our vehicle storage building we are only trying to heat the temperature to around 40 degrees. It is the most economical and cost effective option for the city. I believe that the Public Works Dept. can keep the monthly cost down by keeping the thermostat fixed at 40 degrees, as well as shutting the heat off when trucks are going in and out of the building.

By installing these heating units we will be able to prolong the life of our trucks and equipment. These heating units will also make us better neighbors to citizens around the shop as well as more efficient snow plow drives, as the heat will allow us to get out on the roads quicker.

THE LAW OFFICES OF
ANDERSON CALL & WILKINSON, P.C.

A Professional Corporation
999 N. Washington Blvd.
Ogden, UT 84404
TELEPHONE (801) 675-6955

TO: North Ogden City
FROM: Jonathan Call, North Ogden City Attorney
DATE: November 5, 2015
RE: Municipal Code vs. City Code

I have been asked to write a simple code change to amend the name of our current city code and references to it to eliminate the use of different terms for referencing the city code. The two terms that have been used to identify the code are “municipal code” and “city code”. A preference for the term “city code” has been suggested so this ordinance should allow staff to update all the relevant provisions of our code to the preferred terminology.

ORDINANCE 2015-

AN ORDINANCE OF NORTH OGDEN CITY CLARIFYING CODE TERMS

WHEREAS: The City has over the past several years made changes to the City Code; and

WHEREAS: The City has recently recognized that there are some terms in the code which have the same meaning; and

WHEREAS: The City wishes to clarify the code to avoid confusion surrounding different words with the same meaning; and

NOW THEREFORE, BE IT ORDAINED by the North Ogden City Council that the language in Section 1 shall be amended as shown and language in Section 2 shall be replaced everywhere in the code where the described terms are found.

SECTION 1:

1-1-1: ADOPTION; TITLE; AUTHORITY

- A. Adoption; Authority: Pursuant to the provisions of Utah Code Annotated section 10-3-707, there is adopted the "North Ogden City Code", as compiled, edited and published by the authority of the city council
- B. Title; Citation; Reference: This code shall be known as the NORTH OGDEN CITY CODE and it shall be sufficient to refer to the code as the "North Ogden City Code" in any prosecution for the violation of any provision thereof or in any proceeding at law or equity. It shall be sufficient to designate any ordinance adding to, amending, correcting or repealing all or any part or portion thereof as an addition to, amendment to, correction or repeal of the "North Ogden City Code". Further reference may be had to the titles, chapters, sections and subsections of the "North Ogden City Code" and such references shall apply to that numbered title, chapter, section and subsection as it appears in the code.
- C. Reference Applies To Amendments: Whenever a reference is made to this code as the "North Ogden City Code" or to any portion thereof, or to any ordinance of the city, the reference shall apply to all amendments, corrections and additions heretofore, now or hereafter made

SECTION 2:

All references to the term "municipal code" whether singular or plural, or similar phrasing which was intended to reference the adopted code for North Ogden City shall be amended to read "city code" in all Titles, Chapters, and Sections of the current city code.

All references to the term "North Ogden City Municipal Code" whether singular or plural, or similar phrasing which was intended to reference the adopted code for North Ogden City shall be amended to read "North Ogden City Code" in all Titles, Chapters, and Sections of the current city code.

SECTION 2: This ordinance shall take effect upon adoption.

PASSED and ADOPTED this _____th day of _____ **2015.**

North Ogden City:

Brent R. Taylor
North Ogden City Mayor

CITY COUNCIL VOTE AS RECORDED:

	Aye	Nay
Council Member Bailey:	_____	_____
Council Member Satterthwaite:	_____	_____
Council Member Stoker:	_____	_____
Council Member Swanson:	_____	_____
Council Member Urry:	_____	_____
(In event of a tie vote of the Council):		
Mayor Taylor	_____	_____

ATTEST:

S. Annette Spendlove, MMC
City Recorder