

APPENDIX A

TRAFFIC IMPACT STUDY FORM

CITY OF ALBUQUERQUE

TRAFFIC IMPACT STUDY (TIS) FORM

APPLICANT: Adam Miera DATE OF REQUEST: 3 / 5 / 2020 ZONE ATLAS PAGE(S): J10.K10

CURRENT:

LEGAL DESCRIPTION:

ZONING NR-BP (Nonresidential Business Park) LOT OR TRACT # LT11,12,13 BLOCK # 7201

PARCEL SIZE (AC/SQ. FT.) 2.86, 2.56, 2.92 = (3.34) SUBDIVISION NAME Meridian Business Park

REQUESTED CITY ACTION(S):

ANNEXATION ☐

SITE DEVELOPMENT PLAN:

ZONE CHANGE ☐: From _____ To _____

SUBDIVISION* ☐ AMENDMENT ☐

SECTOR, AREA, FAC, COMP PLAN ☐

BUILDING PERMIT ☐ ACCESS PERMIT ☒

AMENDMENT (Map/Text) ☐

BUILDING PURPOSES ☐ OTHER ☐

*includes platting actions

PROPOSED DEVELOPMENT: Shipping/Delivery Facility

GENERAL DESCRIPTION OF ACTION: Existing building, proposed parking lot

NO CONSTRUCTION/DEVELOPMENT ☐

OF UNITS: _____

NEW CONSTRUCTION ☐

BUILDING SIZE: 45K (sq. ft.)

EXPANSION OF EXISTING DEVELOPMENT ☐

Note: changes made to development proposals / assumptions, from the information provided above, will result in a new TIS determination.

APPLICANT OR REPRESENTATIVE

Adam Miera (WHPacific)

DATE 3-5-2020

(To be signed upon completion of processing by the Traffic Engineer)

Planning Department, Development & Building Services Division, Transportation Development Section -
2ND Floor West, 600 2nd St. NW, Plaza del Sol Building, City, 87102, phone 924-3991

TRAFFIC IMPACT STUDY (TIS) REQUIRED: YES ☒ NO ☐ BORDERLINE ☐

THRESHOLDS MET? YES ☒ NO ☐ MITIGATING REASONS FOR **NOT** REQUIRING TIS: PREVIOUSLY STUDIED: ☐

Notes:

If a TIS is required: a scoping meeting (as outlined in the development process manual) must be held to define the level of analysis needed and the parameters of the study. **Any subsequent changes to the development proposal identified above may require an update or new TIS.**

PE. PBC

TRAFFIC ENGINEER

3-5-2020

DATE

Required TIS **must be completed prior to applying to the EPC and/or the DRB.** Arrangements must be made prior to submittal if a variance to this procedure is requested and noted on this form, otherwise the application may not be accepted or deferred if the arrangements are not complied with.

TIS -SUBMITTED / /
-FINALIZED / /

TRAFFIC ENGINEER

DATE

Revised January 20, 2011

APPENDIX B
HISTORIC GROWTH CHARTS

HISTORIC GROWTH RATE TABLE

B

A
Annual
Increase
(Tredline)

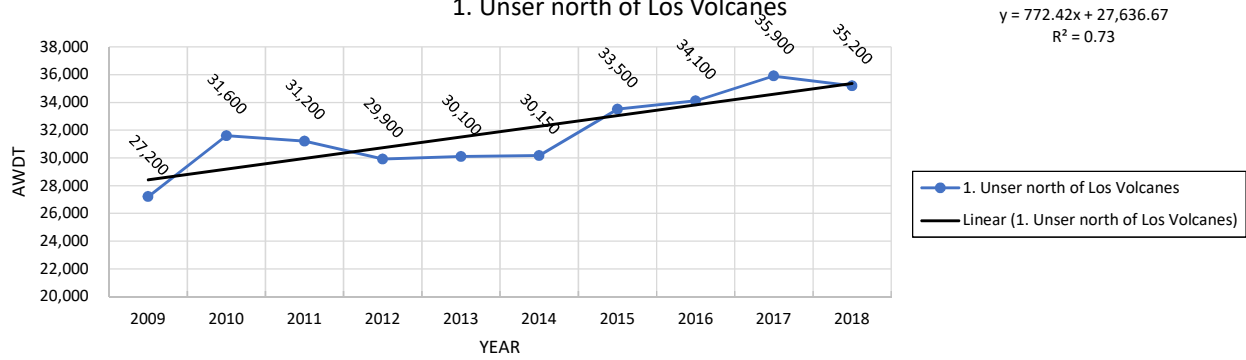
veh/day	Growth Rate=A/B	Growth Rate %	Growth Rate USE
772	0.02	2.2%	2.2%
1,220	0.04	4.1%	2.0%
102	0.00	0.4%	0.5%
213	0.01	0.6%	0.6%
281	0.01	0.7%	0.7%
15	0.00	0.1%	0.5%
294	0.03	3.0%	3.0%
36	0.01	0.6%	0.6%
62	0.01	1.0%	1.0%
189	0.02	2.1%	2.1%
158	0.04	4.0%	4.0%
39	0.01	1.4%	1.4%
132	0.03	3.1%	3.1%

notes

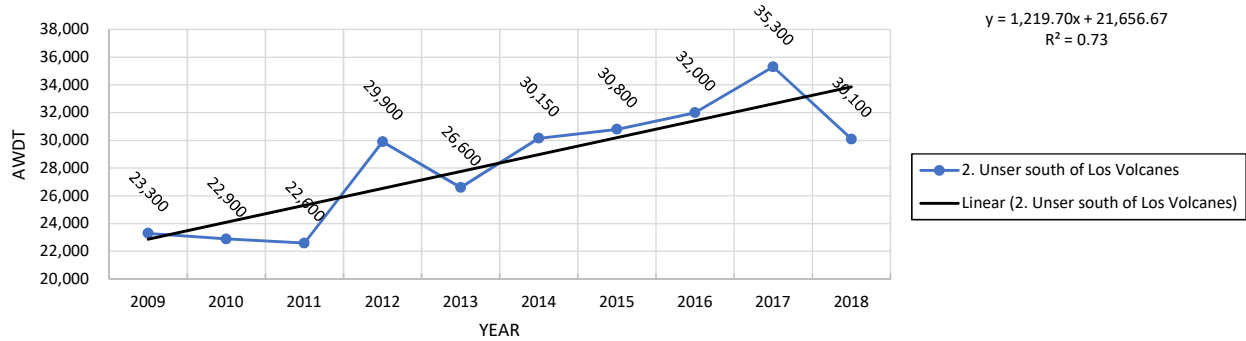
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
1. Unser north of Los Volcanes	27,200	31,600	31,200	29,900	30,100	30,150	33,500	34,100	35,900	35,200
2. Unser south of Los Volcanes	23,300	22,900	22,600	29,900	26,600	30,150	30,800	32,000	35,300	30,100
3. Unser south of Bluewater	31,800	21,300	21,000	29,900	25,800	26,310	26,400	29,200	25,700	26,800
4. Coors north of Los Volcanes	38,800	36,600	32,200	34,900	36,200	37,610	37,100	38,500	21,600	22,600
5. Coors south of Los Volcanes	41,400	34,200	33,800	35,600	31,300	31,290	32,100	37,600	39,600	41,400
6. Coors south of Bluewater	32,400	32,000	33,300	32,800	32,200	32,240	33,400	34,700	36,500	28,200
7. Los Volcanes between Unser and Airport	6,500	6,500	6,500	6,400	6,300	6,170	6,300	6,600	9,300	9,700
8. Los Volcanes between Airport and Coors	5,700	5,700	5,700	5,600	5,500	6,070	6,200	6,500	5,500	5,800
9. Bluewater between Unser and Airport	4,800	4,700	4,700	5,500	5,400	5,410	4,600	4,800	4,800	6,100
10. Bluewater between Airport and Coors	5,600	5,500	10,500	10,300	10,100	10,140	7,800	8,100	8,100	9,200
11. Airport between Los Volcanes and Bluewater	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	4,000
12. Airport between Bluewater and Central	2,400	2,400	2,400	2,300	2,200	2,240	2,500	2,600	2,700	2,700
13. Gallatin north of Los Volcanes	2,900	2,900	2,900	2,900	2,800	3,060	3,100	3,200	4,000	4,200

reviewed google earth from 2009-2012 and 2018and cant understand why such a shift if traffic volumes over those years. Will use 2% growth rate to match closer to north leg
Removed years 2017 and 2018, analyzed 8 years instead. Those years seem to be an anomaly

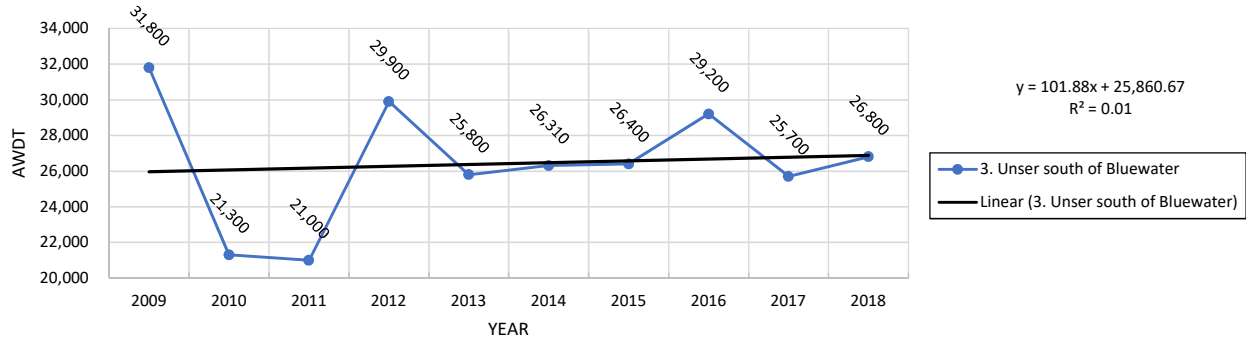
1. Unser north of Los Volcanes

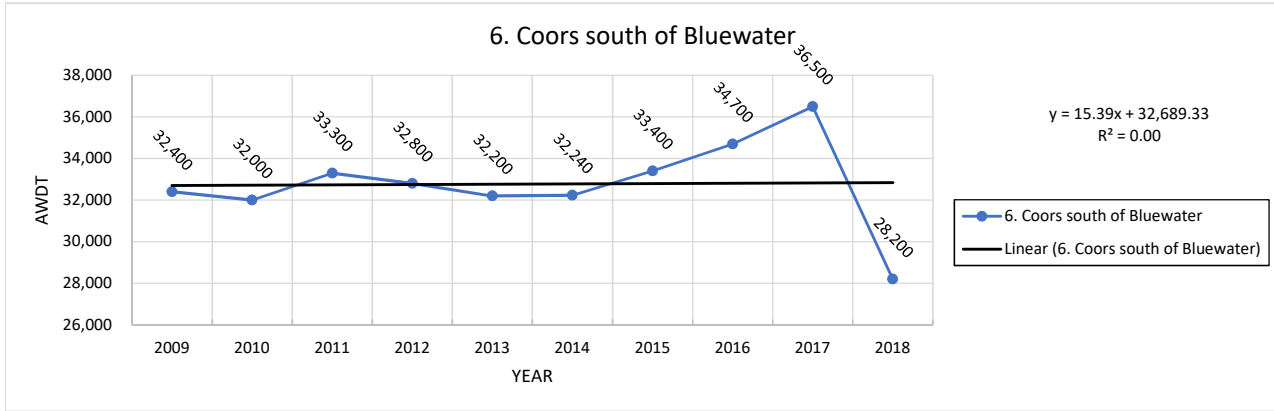
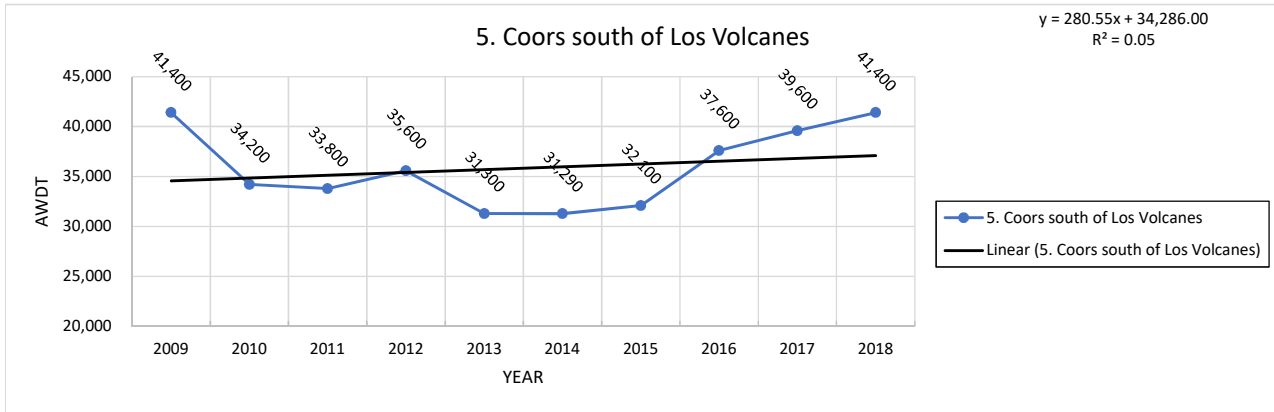
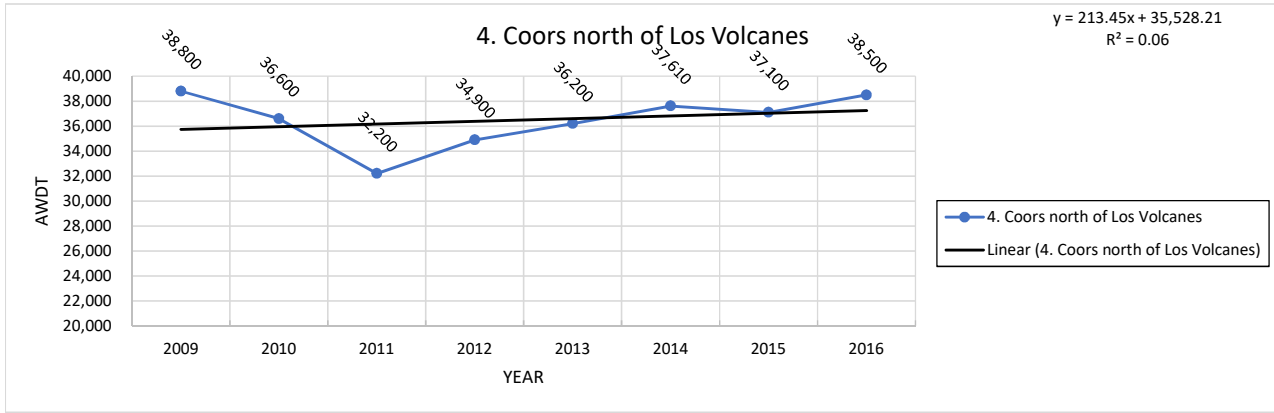


2. Unser south of Los Volcanes

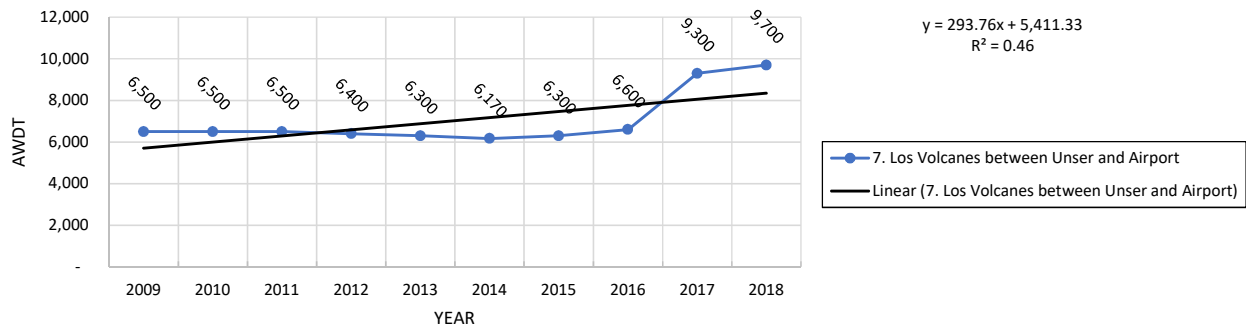


3. Unser south of Bluewater

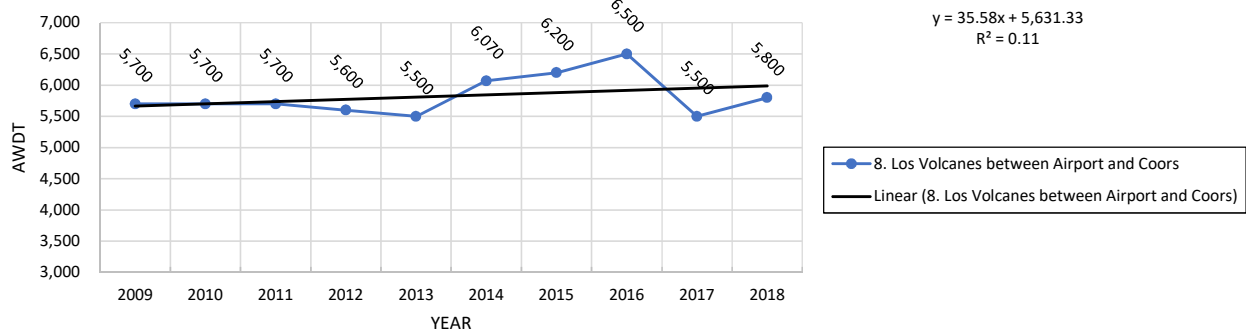




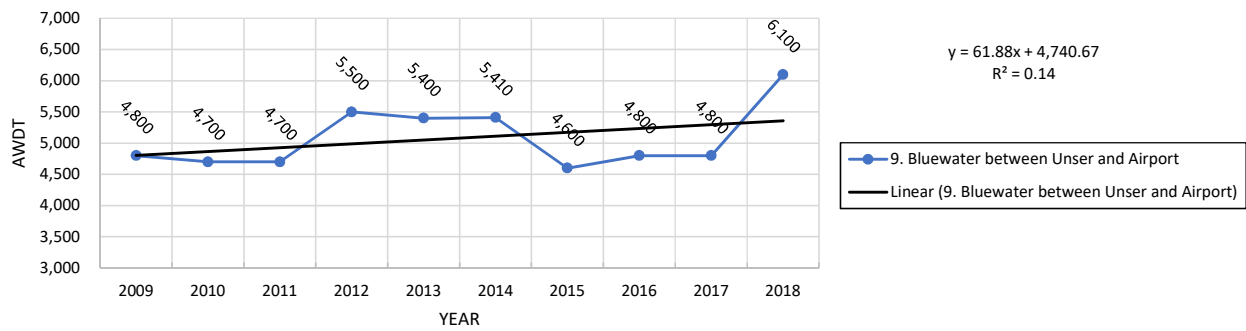
7. Los Volcanes between Unser and Airport



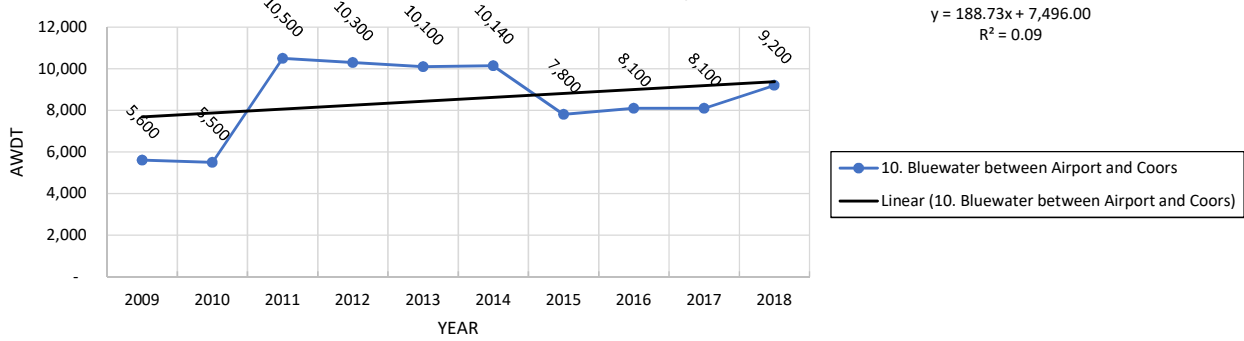
8. Los Volcanes between Airport and Coors



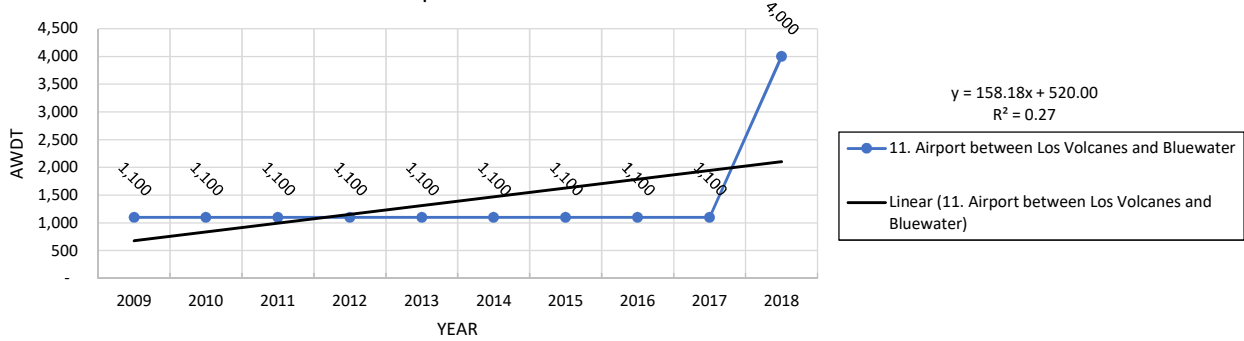
9. Bluewater between Unser and Airport



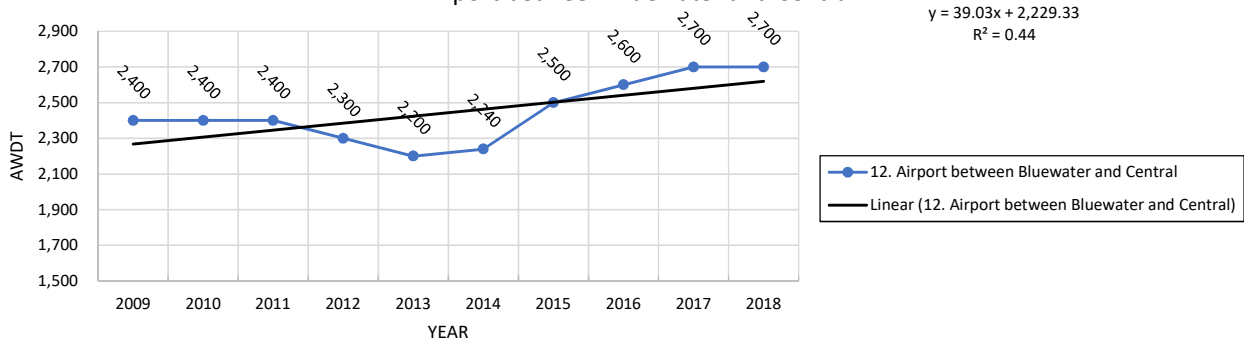
10. Bluewater between Airport and Coors



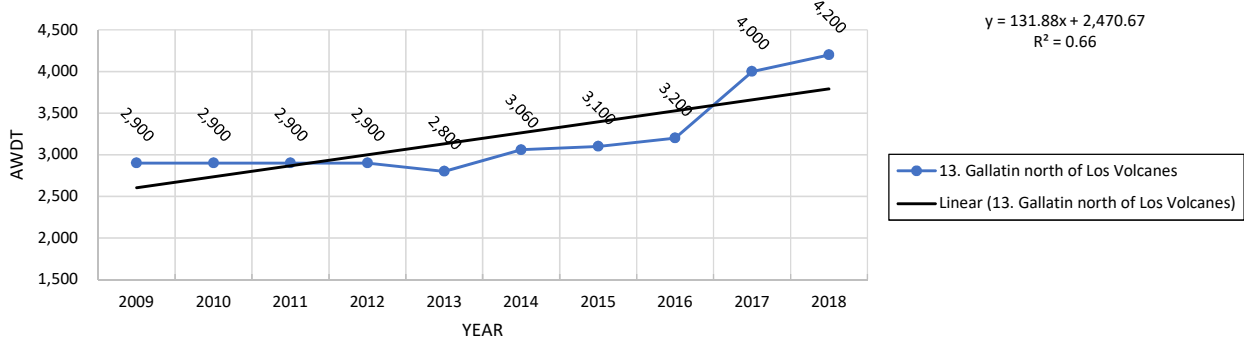
11. Airport between Los Volcanes and Bluewater



12. Airport between Bluewater and Central



13. Gallatin north of Los Volcanes



APPENDIX C

TURNING MOVEMENT COUNTS/TRAFFIC PROJECTION

AM No-Build

P_{20} = Projected volume

P_0 = Current Volume

e = Constant

r = Growth Rate =

t = Time =

$$P_{20} = P_0 e^{rt}$$

10 Years

2 Years

Intersection 1	growth rate 0.5%			3.0%			2.0%			2.2%		
	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Year 2018	283	81	13	88	76	193	29	1606	209	285	776	109
Projected to 2020	286	82	13	93	81	205	30	1672	218	298	811	114
BEK				2		4			13	28		
Total Year 2020	286	82	13	95	81	209	30	1672	231	326	811	114
Year 2030	300	86	14	129	109	282	37	2042	282	406	1010	142

Intersection 2	growth rate 0.5%			1.0%			0.5%			2.0%		
	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Year 2018	90	40	37	29	19	48	21	1375	79	105	622	52
Projected to 2020	91	40	37	30	19	49	21	1389	80	109	647	54
BEK								12			2	
Total Year 2020	91	40	37	30	19	49	21	1401	80	109	649	54
Year 2030	96	42	39	33	21	54	22	1473	84	133	793	66

Intersection 3	growth rate 2.1%			0.5%			0.5%			0.7%		
	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Year 2018	259	97	53	35	59	87	69	1204	16	33	840	119
Projected to 2020	270	101	55	35	60	88	70	1216	16	33	852	121
BEK								7			1	
Total Year 2020	270	101	55	35	60	88	70	1223	16	33	853	121
Year 2030	333	125	68	37	63	92	73	1286	17	36	915	129

Intersection 4	growth rate 0.6%			0.7%			0.6%					
	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Year 2018	131	-	44				59	1039	-	-	692	122
Projected to 2020	133	-	45				60	1054	-	-	700	123
Coors Park/Sell	9							25			16	6
BEK			1				7					
Total Year 2020	142		46				67	1079			716	129
Year 2030	150		48				72	1157			761	137

Intersection 5	growth rate 1.0%			2.1%						4.0%		
	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Year 2020	103	212	-	-	184	125				123	-	60
Year 2030	114	234	-	-	227	154				183	-	90

Intersection 6	growth rate 0.5%						4.0%			4.0%		
	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Year 2020	20	-	15		-		21	101	-	-	135	14
Year 2030	21	-	16		-		31	151	-	-	201	21

Intersection 7	growth rate 3.0%			0.6%			4.0%					
	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Year 2020	-	190	67	64	183	-	55	-	108			
BEK		1			7							
Total Year 2020		191	67	64	190		55		108			
Year 2030	-	258	90	68	202	-	82	-	161			

Intersection 8	growth rate 3.0%			0.6%			0.5%			3.1%		
	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Year 2018	290	237	22	17	214	27	7	4	75	5	5	216
Projected to 2020	308	252	23	17	217	27	7	4	76	5	5	230
BEK	41					7				1		6
Total Year 2020	349	252	23	17	217	34	7	4	76	6	5	236
Year 2030	471	340	32	18	230	36	7	4	80	9	7	322

Intersection 9	growth rate 3.0%			3.0%			0.5%					
	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Year 2020	-	411	28	12	809	-	35	-	24		-	
Year 2030	-	555	38	16	1092	-	37	-	25		-	

Intersection 10	growth rate 1.0%			2.1%			1.4%					
	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Year 2020	-	374	49	43	290	-	84	-	100		-	
Year 2030	-	413	54	53	358	-	97	-	115		-	

PM No-Build

P₂₀= Projected volume

$$P_{20} = P_0 e^{rt}$$

P₀= Current Volume

e= Constant

r= Growth Rate=

t= Time=

10 Years 2 Years

growth rate 0.5% 3.0% 2.0% 2.2%												
Intersection 1	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Year 2018	159	51	30	132	71	221	21	1072	114	192	1231	108
Year 2020	161	52	30	140	75	235	22	1116	119	201	1286	113
BEK				15		33			6	15		
Total Year 2020	161	52	30	155	75	268	22	1116	125	216	1286	113
Year 2030	169	54	32	209	102	361	27	1363	152	269	1603	141

growth rate 0.5% 1.0% 0.5% 2.0%												
Intersection 2	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Year 2018	92	50	39	87	92	156	35	918	89	61	1271	104
Projected to 2020	93	51	39	89	94	159	35	927	90	63	1323	108
BEK								6		1	14	
Total Year 2020	93	51	39	89	94	159	35	933	90	64	1337	108
Year 2030	98	53	41	98	104	176	37	981	95	79	1633	132

growth rate 2.1% 0.5% 0.5% 0.7%												
Intersection 3	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Year 2018	252	101	89	46	55	72	98	1039	22	102	1325	176
Projected to 2020	263	105	93	46	56	73	99	1049	22	103	1344	178
BEK								4			9	
Total Year 2020	263	105	93	46	56	73	99	1053	22	103	1353	178
Year 2030	324	130	115	49	58	76	104	1107	23	111	1451	191

68

growth rate 0.6% 0.7% 0.6%												
Intersection 4	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Year 2018	160	-	89		-		60	1081	-	-	1590	131
Projected to 2020	162		90				61	1096			1609	133
Coors Park/Sell	26							72			78	28
BEK			9				4					
Total Year 2020	188		99				65	1168			1687	161
Year 2030	200		105				70	1253			1792	171

growth rate 1.0% 2.1% 4.0%												
Intersection 5	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Year 2020	21	225	-	-	310	86				86	-	25
Year 2030	23	249	-	-	382	106				128	-	37

growth rate 0.5% 4.0% 4.0%												
Intersection 6	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Year 2020	10	-	15				10	97	-	-	34	15
Year 2030	11	-	16				15	145	-	-	51	22

growth rate 3.0% 0.6% 4.0%												
Intersection 7	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Year 2020	-	211	12	39	146	-	50	-	79	-		
BEK		9			4							
Total Year 2020	-	220	12	39	150		50		79			
Year 2030	-	297	16	41	159	-	75	-	118			

growth rate 3.0% 0.6% 0.5% 3.1%												
Intersection 8	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Year 2018	133	161	10	4	231	23	34	3	6	12	1	147
Projected to 2020	141	171	11	4	234	23	34	3	6	13	1	156
BEK	21					4				9		48
Total Year 2020	162	171	11	4	234	27	34	3	6	22	1	204
Year 2030	219	231	14	4	248	29	36	3	6	30	1	279

growth rate 3.0% 3.0% 0.5%												
Intersection 9	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Year 2020	-	307	8	7	513	-	23	-	12	-	-	-
Year 2030	-	414	11	9	692	-	24	-	13	-	-	-

growth rate 1.0% 2.1% 1.4%												
Intersection 10	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Year 2020	-	427	31	21	268	-	44	-	67	-	-	-
Year 2030	-	472	34	26	331	-	51	-	77	-	-	-

AM Build

P_{20} = Projected volume

P_0 = Current Volume

e = Constant

r = Growth Rate=

t = Time=

$$P_{20}=P_0e^{rt}$$

10 Years

growth rate			0.5%			3.0%			2.0%			2.2%		
Intersection 1	Eastbound			Westbound			Northbound			Southbound				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Year 2020	286	82	13	100	81	233	30	1686	231	361	832	114		
Year 2030	300	86	14	136	109	314	37	2059	282	450	1037	142		

growth rate			0.5%			1.0%			0.5%			2.0%		
Intersection 2	Eastbound			Westbound			Northbound			Southbound				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Year 2020	91	40	37	44	19	63	21	1401	108	130	654	54		
Year 2030	96	42	39	48	21	70	22	1473	113	159	799	66		

growth rate			2.1%			0.5%			0.5%			0.7%		
Intersection 3	Eastbound			Westbound			Northbound			Southbound				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Year 2020	279	101	64	35	60	88	91	1223	16	33	858	135		
Year 2030	344	125	79	37	63	92	95	1286	17	36	920	144		

growth rate			0.6%			0.7%			0.6%			
Intersection 4	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Year 2020	151		51				67	1088			730	143
Year 2030	160	-	54	-			72	1167	-	-	776	152

growth rate			1.0%			2.1%			4.0%			
Intersection 5	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Year 2020	131	217	-	-	198	153	-			142	-	74
Year 2030	145	240	-	-	244	189	-			212	-	110

growth rate			0.5%			4.0%			4.0%			
Intersection 6	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Year 2020	25	-	25	-			21	115	-	-	149	28
Year 2030	26	-	26	-			31	172	-	-	222	42

growth rate			3.0%			0.6%			4.0%						
Intersection 7	Eastbound			Westbound			Northbound			Southbound					
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
Year 2020	0	196	81	78	190	0	64	0	117	0	0	0			
Year 2030	-	265	109	83	202	-	95	-	175	-					

growth rate			3.0%			0.6%			0.5%			3.1%		
Intersection 8	Eastbound			Westbound			Northbound			Southbound				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Year 2020	349	266	44	24	226	34	16	4	81	6	5	236		
Year 2030	471	359	60	26	240	36	17	4	85	9	7	322		

growth rate			3.0%			3.0%			0.5%			
Intersection 9	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Year 2020	-	446	28	12	828	-	44	-	24	-		
Year 2030	-	602	38	16	1118	-	46	-	25	-		

growth rate			1.0%			2.1%			1.4%			
Intersection 10	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Year 2020	-	393	54	43	325	-	91	-	100	-		
Year 2030	-	434	60	53	401	-	105	-	115	-		

growth rate			0.5%			4.0%			4.0%			
DRIVEWAY A	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Year 2020	14	-	24	-			56	242	-	-	155	14
Year 2030	15	-	25	-			84	361	-	-	231	21

growth rate			0.5%			0.5%			0.5%			
DRIVEWAY B	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Year 2020	-	35	0	-	35	-	-	-	5	-		
Year 2030	-	37	0	-	37	-	-	-	5	-		

growth rate			0.5%			0.5%			0.5%			0.5%			
DRIVEWAY C	Eastbound			Westbound			Northbound			Southbound					
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
Year 2020	0	35		14	21	0	9	14	9	0	21	0			
Year 2030	0	37	0	15	22	0	9	15	9	0	22	0			

growth rate			0.5%			0.5%			0.5%			0.5%			
DRIVEWAY D	Eastbound			Westbound			Northbound			Southbound					
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
Year 2020	21	226			244	14				5		9			
Year 2030	22	238			257	15				5		9			

growth rate			0.5%			0.5%			0.5%			0.5%		
DRIVEWAY E	Eastbound			Westbound			Northbound			Southbound				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Year 2020		226			244							5		
Year 2030		238			257							5		

PM Build

P_{20} = Projected volume

P_0 = Current Volume

e = Constant

r = Growth Rate=

t = Time=

$$P_{20} = P_0 e^{rt}$$

10 Years

growth rate												
0.5%			3.0%			2.0%			2.2%			
Intersection 1												
Eastbound			Westbound			Northbound			Southbound			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Year 2020	161	52	30	156	75	273	22	1119	125	221	1289	113
Year 2030	169	54	32	211	102	368	27	1366	152	275	1607	141

growth rate												
0.5%			1.0%			0.5%			2.0%			
Intersection 2												
Eastbound			Westbound			Northbound			Southbound			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Year 2020	93	51	39	92	94	162	35	933	94	67	1338	108
Year 2030	98	53	41	101	104	179	37	981	99	82	1634	132

growth rate												
2.1%			0.5%			0.5%			0.7%			
Intersection 3												
Eastbound			Westbound			Northbound			Southbound			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Year 2020	265	105	95	46	56	73	102	1053	22	103	1354	180
Year 2030	327	130	117	49	58	76	107	1107	23	111	1452	194

growth rate												
0.6%			0.7%			0.6%						
Intersection 4												
Eastbound			Westbound			Northbound			Southbound			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Year 2020	190		100			65	1170				1689	163
Year 2030	202	-	106	-	-	70	1255	-	-	-	1794	173

growth rate												
1.0%			2.1%			4.0%						
Intersection 5												
Eastbound			Westbound			Northbound			Southbound			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Year 2020	25	226	-	-	312	90		-	90	-	28	
Year 2030	28	250	-	-	385	111		-	134	-	42	

growth rate												
0.5%			4.0%			4.0%						
Intersection 6												
Eastbound			Westbound			Northbound			Southbound			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Year 2020	11	-	17		-	12	100	-	-	36	17	
Year 2030	12	-	18		-	18	149	-	-	54	25	

growth rate												
3.0%			0.6%			4.0%						
Intersection 7												
Eastbound			Westbound			Northbound			Southbound			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Year 2020		221	14	41	150		52		81			
Year 2030	-	298	19	44	159	-	78	-	121	-	-	

growth rate												
3.0%			0.6%			0.5%			3.1%			
Intersection 8												
Eastbound			Westbound			Northbound			Southbound			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Year 2020	162	173	14	5	236	27	36	3	7	22	1	204
Year 2030	219	233	18	5	250	29	38	3	7	30	1	279

Intersection 9	growth rate 3.0%			3.0%			0.5%					
	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Year 2020	-	312	9	7	517	-	25	-	12	-		
Year 2030	-	421	12	9	698	-	26	-	13	-		

Intersection 10	growth rate 1.0%			2.1%			1.4%					
	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Year 2020	-	431	32	21	273	-	45	-	67	-		
Year 2030	-	476	35	26	337	-	52	-	77	-		

DRIVEWAY A	growth rate 0.5%						4.0%			4.0%		
	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Year 2020	3	-	5	-			7	109	-	-	112	2
Year 2030	3	-	5	-			10	163	-	-	167	3

DRIVEWAY B	growth rate 0.5%			0.5%			0.5%					
	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Year 2020	-	25			25	-	0	0	1	-		
Year 2030	-	26			26	-	0	0	1	-		

DRIVEWAY C	growth rate 0.5%			0.5%			0.5%			0.5%		
	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Year 2020		25		3	22		2	3	2		3	
Year 2030		26		3	23		2	3	2		3	

DRIVEWAY D	growth rate 0.5%			0.5%			0.5%			0.5%		
	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Year 2020	3	128			335	2				1		2
Year 2030	3	135			352	2				1		2

DRIVEWAY E	growth rate 0.5%			0.5%			0.5%			0.5%		
	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Year 2020		128			335							1
Year 2030		135			352							1

1112963982
target↓↓

00
↑↑target

152918091529

1: Unser and Los Volcanes

Raw Count Date:

Unser

imbaltarget346
0←409
0←346

RNSE0.51.50.6-
%17%56%27%0%
bal1665372600
↔↓↘↗
%16%58%25%0%
raw1605722500
↔↓↘↗

raw%bal%RNSE
↖30563%↖43260%7.3
←184%←314%3.1
↙16334%↙25836%7.4
↘00%↘00%-

target833
←721
←486

254→
502→
579target

Los Volcanes

-0%0↘0%0↘
10.757%284↘60%152↘
6.110%49→8%21→
9.834%169↘32%81↘
RNSE%bal%raw

816964816
target↓↓
imbal00

↑↑target
140515141748

Local OD Raw

local_ord	1	2	3	4	est	tgt	err
1	0	165	1072	168	1405	1748	0.20
2	163	0	305	18	486	833	0.42
3	572	250	0	160	982	1112	0.12
4	81	21	152	0	254	579	0.56
est	816	436	1529	346			
tgt	816	437	1529	346			
err	0.00	0.00	0.00	0.00			1.29

target833
←721
←486

Local OD Estimated

local_ord	1	2	3	4	est	tgt	err
1	0	209	1093	212	1514	1748	0.13
2	258	0	432	31	721	833	0.13
3	537	260	0	166	963	1112	0.13
4	169	49	284	0	502	579	0.13
est	964	518	1809	409			
tgt	816	437	1529	346			
err	0.18	0.19	0.18	0.18			1.27

436→0
518→0
437targetimbal

2: Unser & Bluewater

Raw Count Date:

Unser

RNSE	1.1	5.9	1.0	-
%	41%	43%	16%	0%
bal	346	361	133	0
←	←	↓	←	↓
%	37%	49%	14%	0%
raw	367	493	145	0
←	←	↓	←	↓

imbal	target	612
0	←	537
0	←	612

0	0	imbal
↑	↑	target
1835	1611	1835

Local OD Raw				est	tgt	err
local_od	1	2	3	4		
1	0	98	1612	215	1925	1242 0.55
2	71	0	40	30	141	138 0.02
3	493	145	0	367	1005	724 0.39
4	141	15	183	0	339	476 0.29
est	705	258	1835	612		
tgt	706	258	1835	612		
err	0.00	0.00	0.00	0.00		1.25

raw	%	bal	%	RNSE
40	28%	53	33%	2.1
30	21%	38	24%	1.5
71	50%	69	43%	0.2
0	0%	0	0%	-

target	138
←	160
←	141

2

Bluewater

-	0%	0	↔	0%	0	↔
11.4	61%	337	↓	54%	183	↓
2.6	5%	25	→	4%	15	→
4.1	34%	190	↓	42%	141	↓
RNSE	%	bal		%	raw	

339	→
552	→
476	target

0	215	1612	98	raw
0%	11%	84%	5%	%
0	153	1221	68	bal
0%	11%	85%	5%	%
-	4.2	9.7	3.0	RNSE

Local OD Estimated				est	tgt	err
local_od	1	2	3	4		
1	0	68	1221	153	1442	1242 0.16
2	69	0	53	38	160	138 0.16
3	361	133	0	346	840	724 0.16
4	190	25	337	0	552	476 0.16
est	620	226	1611	537		
tgt	706	258	1835	612		
err	0.12	0.12	0.12	0.12		1.13

258	→	0
226	→	0
258	target	imbal

706	620	705
target	↓	↓
imbal	0	0

↑	↑	target
1925	1442	1242

9: Los Volcanes & Silver Creek
Raw Count Date:

Local OD Raw				est	tgt	err
local_od	1	2	4			
1	0	18	42	60	60	0.00
2	8	0	791	799	833	0.04
4	30	419	0	449	437	0.03
est	38	437	833			
tgt	40	437	833			
err	0.05	0.00	0.00			0.12

imbal	target	833
0	←	844
0	←	833

raw		bal		RNSE	
←	791	←	809	99%	0.6
└	8	└	12	1%	1.4
└	0	└	0	0%	-

target	833
←	821
←	799

449	→
439	→
437	target

Los Volcanes

-	0%	0	↺	0%	0	↺
0.4	94%	411	→	93%	419	→
0.4	6%	28	└	7%	30	└
RNSE	%	bal		%	raw	

Silver Creek

40	40	38
target	↓	↓
imbal	0	0

9

raw		bal		RNSE
└	42	└	18	
0	70%	0	35	59%
└	35	└	24	41%
0	1.1	0	1.4	1.4

Local OD Estimated				est	tgt	err
local_od	1	2	4			
1	0	24	35	59	60	0.02
2	12	0	809	821	833	0.01
4	28	411	0	439	437	0.00
est	40	435	844			
tgt	40	437	833			
err	0.00	0.00	0.01			0.05

437	→	0
435	→	0
437	target	imbal

↑	↑	target
60	59	60

248310248

target↓↓

00imbal

↑↑target

351308351

8: Los Volcanes & Gallatin

Raw Count Date:

Gallatin

RNSE12.12.38.2-

%95%0%5%0%

bal2951140

↲↓↲↲

%60%3%38%0%

raw1487930

↲↓↲↲

imbaltarget833

0←694

0←833

raw%bal%RNSE

↲13617%↲41%11.3

←64981%←32798%12.6

↲172%↲10%3.9

↲00%↲00%-

Local OD Raw

local_od	1	2	3	4	est	tgt	err
1	0	19	5	36	60	60	0.00
2	17	0	136	649	802	265	2.03
3	7	93	0	148	248	248	0.00
4	16	106	210	0	332	437	0.24
est	40	218	351	833			
tgt	40	218	351	833			
err	0.00	0.00	0.00	0.00			2.27

target265

←332

←802

8

Los Volcanes

-0%0↲0%0↲

6.459%303↲63%210↲

6.634%174→32%106→

4.36%33↲5%16↲

RNSE%bal%raw

↲0↲↲1↲↲

0%60%8%32%%

07213bal

0%95%1%4%%

-6.01.83.7RNSE

Local OD Estimated

local_od	1	2	3	4	est	tgt	err
1	0	3	1	72	76	60	0.27
2	1	0	4	327	332	265	0.25
3	1	14	0	295	310	248	0.25
4	33	174	303	0	510	437	0.17
est	35	191	308	694			
tgt	40	218	351	833			
err	0.13	0.12	0.12	0.17			1.47

403540

target↓↓

imbal000

↑↑target

607660

7: Los Volcanes & Airport
Raw Count Date:

Local OD Raw				est	tgt	err
local_od	1	2	4			
1	0	60	61	121	121	0.00
2	40	0	164	204	204	0.00
4	60	158	0	218	218	0.00
est	100	218	225			
tgt	150	318	265			
err	0.33	0.31	0.15			0.80

imbal	target	265
0	←	231
0	←	225

raw		bal		RNSE	
←	164	80%	←	176	73% 0.9
↵	40	20%	↵	64	27% 3.8
↶	0	0%	↶	0	0% -

target	204
←	240
←	204

218	→
257	→
218	target

Los Volcanes

-	0%	0	↶	0%	0	↶
2.5	74%	190	→	72%	158	→
0.9	26%	67	↵	28%	60	↵
RNSE	%	bal		%	raw	

Airport

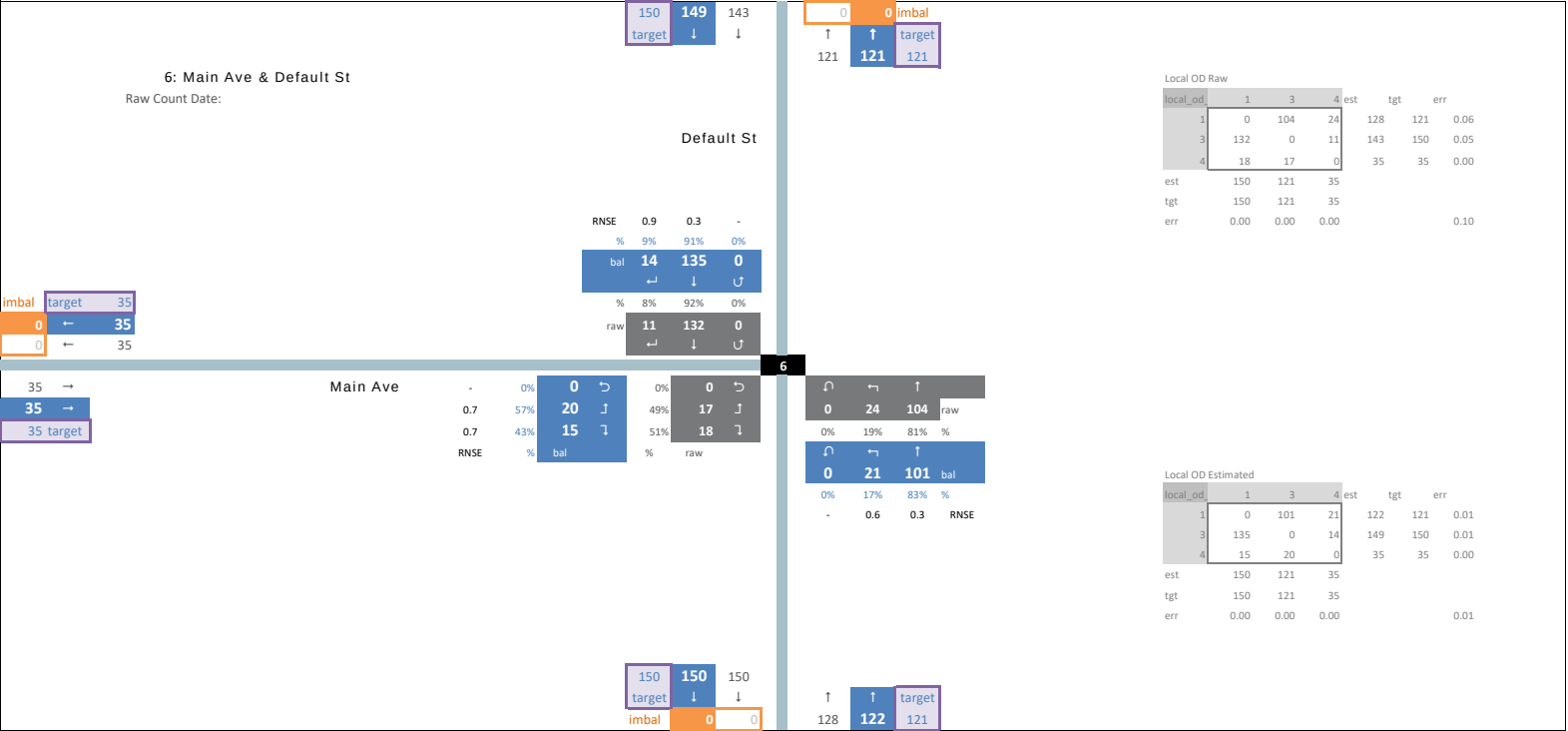
150	131	100
target	↓	↓
imbal	0	0

7

raw		bal		RNSE	
↶	0	61	60	raw	
↶	0	55	87	bal	
0%	39%	61%	%		
-	0.8	3.5	RNSE		

Local OD Estimated				est	tgt	err
local_od	1	2	4			
1	0	87	55	142	121	0.17
2	64	0	176	240	204	0.18
4	67	190	0	257	218	0.18
est	131	277	231			
tgt	150	318	265			
err	0.13	0.13	0.13			0.91

218	→	0
277	→	0
318	target	imbal



imbal

target

35

0

←

35

0

←

35

35

→

35

→

35

target

Main Ave

-

0%

0

↻

0%

0

↻

0.7

57%

20

↘

49%

17

↘

0.7

43%

15

↙

51%

18

↙

RNSE

%

bal

%

raw

150

target

150

↓

150

↓

imbal

0

0

6

0

0

imbal

↑

↑

target

128

122

121

Local OD Raw

local_od	1	3	4	est	tgt	err
1	0	104	24	128	121	0.06
3	132	0	11	143	150	0.05
4	18	17	0	35	35	0.00
est	150	121	35			
tgt	150	121	35			
err	0.00	0.00	0.00			0.10

Local OD Estimated

local_od	1	3	4	est	tgt	err
1	0	101	21	122	121	0.01
3	135	0	14	149	150	0.01
4	15	20	0	35	35	0.00
est	150	121	35			
tgt	150	121	35			
err	0.00	0.00	0.00			0.01

5: Bluewater & Airport
Raw Count Date:

Airport

RNSE	0.0	3.5	-
%	33%	67%	0%
bal	60	123	0
	↲	↲	↲
%	40%	60%	0%
raw	60	90	0
	↲	↲	↲

imbal	target	138
0	←	244
0	←	307

0	0	imbal
↑	↑	target
208	228	121

Local OD Raw				est	tgt	err
local_od	2	3	4			
2	0	105	247	352	352	0.00
3	90	0	60	150	150	0.00
4	155	103	0	258	258	0.00
est	245	208	307			
tgt	447	121	138			
err	0.45	0.72	1.22			2.40

raw		%	bal		%	RNSE
↲	105	30%	↲	125	40%	2.0
←	247	70%	←	184	60%	4.0
↲	0	0%	↲	0	0%	-

target	352
←	309
←	352

5

Bluewater

-	0%	0	↲	0%	0	↲
0.0	33%	103	↲	40%	103	↲
4.6	67%	212	→	60%	155	→
RNSE	%	bal		%	raw	

258	→
315	→
258	target

245	→	0
335	→	0
447	target	imbal

Local OD Estimated				est	tgt	err
local_od	2	3	4			
2	0	142	163	305	352	0.13
3	157	0	0	157	150	0.05
4	270	1	0	271	258	0.05
est	427	143	163			
tgt	447	121	138			
err	0.04	0.18	0.18			0.64

10: Bluewater & Airport
Raw Count Date:

Local OD Raw

local_od	1	2	4	est	tgt	err
1	0	77	116	193	194	0.01
2	140	0	212	352	352	0.00
4	178	169	0	347	447	0.22
est	318	246	328			
tgt	87	447	352			
err	2.66	0.45	0.07			3.40

imbal

target	352
0	← 374
0	← 328

	raw	%	bal	%	RNSE
←	212	60%	← 290	87%	5.4
└	140	40%	└ 43	13%	8.2
⌋	0	0%	⌋ 0	0%	-

target 352

← 333
← 352

347 →

423 →
447 target

Bluewater

-	0%	0	↶	0%	0	↷
15.8	88%	374	→	49%	169	→
9.7	12%	49	└	51%	178	└
RNSE	%	bal		%	raw	

10

	raw	%	bal	%	RNSE
↶	0	116	77	raw	
↶	0	60%	40%	%	
↶	0	84	100	bal	
↶	0%	46%	54%	%	
-	3.0	2.6	RNSE		

246 →

474 →
447 target
imbal

Local OD Estimated

local_od	1	2	4	est	tgt	err
1	0	100	84	184	194	0.05
2	43	0	290	333	352	0.05
4	49	374	0	423	447	0.05
est	92	474	374			
tgt	87	447	352			
err	0.06	0.06	0.06			0.34

87 target 92 318

target	↓	↓
imbal	0	0

193 184 194 target

4: Coors and Los Volcanes

Raw Count Date:

Coors

10219501021

target↓↓

00imbal

↑↑target

180813491177

imbaltarget204

0←231

0←204

RNSE7.90.5-

%4%96%0%

bal359150

↔↓↕

%12%88%0%

raw1228990

↔↓↕

318→

294→

318target

Los Volcanes

-0%0↗0%0↗

11.113%37↘60%191↘

11.587%257↘40%127↘

RNSE%bal%

raw%

108611721026

target↓↓

imbal00

↑↑target

169915081699

Local OD Raw

local_od	1	3	4	est	tgt	err
1	0	1617	82	1699	1699	0.00
3	899	0	122	1021	1021	0.00
4	127	191	0	318	318	0.00
est	1026	1808	204			
tgt	1086	1177	204			
err	0.06	0.54	0.00			0.59

Local OD Estimated

local_od	1	3	4	est	tgt	err
1	0	1312	196	1508	1699	0.11
3	915	0	35	950	1021	0.07
4	257	37	0	294	318	0.08
est	1172	1349	231			
tgt	1086	1177	204			
err	0.08	0.15	0.13			0.62

3: Coors & Bluewater
Raw Count Date:

Coors

RNSE	0.7	0.6	1.1	-
%	10%	81%	9%	0%
bal	112	907	103	0
←	←	↓	←	↓
%	10%	82%	8%	0%
raw	105	889	92	0
←	←	↓	←	↓

imbal	target	352
0	←	340
0	←	351

0	0	imbal
↑	↑	target
1519	1644	1699

Local OD Raw				est	tgt	err
local_od	1	2	3	4		
1	0	122	1199	106	1427	1427 0.00
2	42	0	52	140	234	234 0.00
3	889	92	0	105	1086	1086 0.00
4	88	91	268	0	447	447 0.00
est	1019	305	1519	351		
tgt	1054	306	1699	352		
err	0.03	0.00	0.11	0.00		0.15

raw	%	bal	%	RNSE
52	22%	64	26%	1.7
140	60%	138	57%	0.2
42	18%	40	17%	0.3
0	0%	0	0%	-

target	234
←	242
←	234

Bluewater

-	0%	0	↩	0%	0	↩
2.1	65%	302	↓	60%	268	↓
0.6	18%	85	→	20%	91	→
1.4	16%	75	↓	20%	88	↓
RNSE	%	bal		%	raw	

447	→
462	→
447	target

0	106	1199	122	raw
0%	7%	84%	9%	%
0	90	1278	108	bal
0%	6%	87%	7%	%
-	1.6	2.3	1.3	RNSE

Local OD Estimated				est	tgt	err
local_od	1	2	3	4		
1	0	108	1278	90	1476	1427 0.03
2	40	0	64	138	242	234 0.03
3	907	103	0	112	1122	1086 0.03
4	75	85	302	0	462	447 0.03
est	1022	296	1644	340		
tgt	1054	306	1699	352		
err	0.03	0.03	0.03	0.03		0.26

305	→	0
296	→	0
306	target	imbal

1054	1022	1019
target	↓	↓
imbal	0	0

↑	↑	target
1427	1476	1427

1: Unser and Los Volcanes
Raw Count Date:

Unser

RNSE	2.3	4.7	3.1	-
%	8%	86%	5%	0%
bal	117	1254	79	0
	↔	↓	↔	↕
%	9%	85%	7%	0%
raw	145	1430	112	0
	↔	↓	↔	↕

imbal	target	264
0	↔	315
0	↔	264

0	0	imbal
↑	↑	target
1394	1669	1394

Local OD Raw						
local_od	1	2	3	4	est	err
1	0	190	889	106	1185	2045 0.42
2	145	0	370	13	528	528 0.00
3	1430	112	0	145	1687	1687 0.00
4	223	15	135	0	373	373 0.00
est	1798	317	1394	264		
tgt	1353	317	1394	264		
err	0.33	0.00	0.00	0.00		0.75

raw	%	bal	%	RNSE
↕	370	70%	↕	291
↔	13	2%	↔	12
↕	145	27%	↕	151
↕	0	0%	↕	0
				0%

target	528
↔	454
↔	528

Los Volcanes

-	0%	0	↔	0%	0	↔
3.3	30%	97	↕	36%	135	↕
1.0	3%	11	↔	4%	15	↔
0.7	66%	212	↕	60%	223	↕
RNSE	%	bal		%	raw	

373	↔
320	↔
373	target

↕	↕	↑	↕
0	106	889	190
0%	9%	75%	16%
↕	↕	↑	↕
0	186	1281	289
0%	11%	73%	16%
-	7.8	13.1	7.2
			RNSE

317	↔	0
379	↔	0
317	target	imbal

Local OD Estimated						
local_od	1	2	3	4	est	err
1	0	289	1281	186	1756	2045 0.14
2	151	0	291	12	454	528 0.14
3	1254	79	0	117	1450	1687 0.14
4	212	11	97	0	320	373 0.14
est	1617	379	1669	315		
tgt	1353	317	1394	264		
err	0.20	0.20	0.20	0.19		1.35

1353	1617	1798
target	↓	↓
imbal	0	0

↑	↑	target
1185	1756	2045

2: Unser & Bluewater
Raw Count Date:

Unser

RNSE	7.8	0.1	3.7	-
%	20%	76%	4%	0%
bal	305	1155	66	0
	←	↓	↔	↗
%	14%	83%	3%	0%
raw	196	1159	42	0
	↔	↓	↔	↗

imbal	target	560
0	←	514
0	←	560

0	0	imbal
↑	↑	target
1019	1484	1626

Local OD Raw						
local_od	1	2	3	4	est	tgt
1	0	42	814	196	1052	1052
2	87	0	130	168	385	385
3	1159	42	0	196	1397	1397
4	112	56	75	0	243	243
est	1358	140	1019	560		
tgt	1356	140	1626	560		
err	0.00	0.00	0.37	0.00		0.37

raw	%	bal	%	RNSE
130	34%	264	62%	11.8
168	44%	120	28%	3.7
87	23%	40	9%	5.0
0	0%	0	0%	-

target	385
←	424
←	385

Bluewater

243	→	Bluewater	-	0%	0	↔	0%	0	↔
267	→		10.6	63%	167	↘	31%	75	↘
243 target			1.6	16%	44	→	23%	56	→
			5.3	21%	56	↘	46%	112	↘
			RNSE	%	bal		%	raw	

1356	1251	1358
target	↓	↓
imbal	0	0

0	196	814	42	raw
0%	19%	77%	4%	%
0	89	1053	19	bal
0%	8%	91%	2%	%
-	7.6	8.4	3.5	RNSE

Local OD Estimated						
local_od	1	2	3	4	est	tgt
1	0	19	1053	89	1161	1052
2	40	0	264	120	424	385
3	1155	66	0	305	1526	1397
4	56	44	167	0	267	243
est	1251	129	1484	514		
tgt	1356	140	1626	560		
err	0.08	0.08	0.09	0.08		0.72

140	→	0
129	→	0
140	target	imbal

9: Los Volcanes & Silver Creek
Raw Count Date:

Local OD Raw

local_od	1	2	4	est	tgt	err
1	0	10	25	35	35	0.00
2	6	0	503	509	528	0.04
4	9	307	0	316	317	0.00
est	15	317	528			
tgt	15	317	528			
err	0.00	0.00	0.00			0.04

imbal	target	528
0	←	536
0	←	528

raw	%	bal	%	RNSE
← 503	99%	← 513	99%	0.4
Γ 6	1%	Γ 7	1%	0.4
⌋ 0	0%	⌋ 0	0%	-

target	528
←	520
←	509

316 →
315 →
317 target

Los Volcanes

-	0%	0	↗	0%	0	↗
0.0	97%	307	→	97%	307	→
0.3	3%	8	↘	3%	9	↘
RNSE	%	bal		%	raw	

raw	%	bal	%	RNSE
⌋ 0	71%	⌋ 10	71%	0.4
⌋ 23	34%	⌋ 12	34%	0.6
-	0.4	0.6		

317 →	0
319 →	0
317 target	imbal

Local OD Estimated

local_od	1	2	4	est	tgt	err
1	0	12	23	35	35	0.00
2	7	0	513	520	528	0.02
4	8	307	0	315	317	0.01
est	15	319	536			
tgt	15	317	528			
err	0.00	0.01	0.02			0.04

Silver Creek

15	15	15
target	↓	↓
imbal	0	0

↑	↑	target
35	35	35

8: Los Volcanes & Gallatin
Raw Count Date:

Gallatin

RNSE	5.5	0.7	5.2	-
%	94%	0%	5%	0%
bal	215	1	12	0
	↖	↓	↙	↗
%	75%	1%	24%	0%
raw	148	2	48	0
	↖	↓	↙	↗

imbal	target	528
0	←	467
0	←	528

0	0	imbal
↑	↑	target
111	144	156

Local OD Raw				est	tgt	err
local_od	1	2	3	4		
1	0	15	2	18	35	35 0.00
2	6	0	0	362	368	190 0.94
3	2	48	0	148	198	198 0.00
4	7	165	109	0	281	317 0.11
est	15	228	111	528		
tgt	15	228	156	528		
err	0.00	0.00	0.29	0.00		1.34

raw	%	bal	%	RNSE
↖	0	0	0%	-
←	362	↖	218	100% 7.6
↙	6	↙	1	0%
↗	0	↗	0	0%

target	190
←	219
←	368

Los Volcanes

-	0%	0	↗	0%	0	↗
3.3	41%	143	↘	39%	109	↘
2.1	55%	192	→	59%	165	→
1.9	3%	12	↙	2%	7	↙
RNSE	%	bal		%	raw	

281	→
347	→
317	target

↖	↖	↑	↗	raw
0	18	2	15	
0%	51%	6%	43%	%
↖	↖	↑	↗	
0	34	1	5	bal
0%	85%	3%	13%	%
-	3.8	0.7	2.6	RNSE

228	→	0
209	→	0
228	target	imbal

Local OD Estimated				est	tgt	err
local_od	1	2	3	4		
1	0	5	1	34	40	35 0.14
2	1	0	0	218	219	190 0.15
3	1	12	0	215	228	198 0.15
4	12	192	143	0	347	317 0.09
est	14	209	144	467		
tgt	15	228	156	528		
err	0.07	0.08	0.08	0.12		0.88

15	14	15
target	↓	↓
imbal	0	0

↑	↑	target
35	40	35

7: Los Volcanes & Airport

Raw Count Date:

Local OD Raw

local_od	1	2	4	est	tgt	err
1	0	40	67	107	107	0.00
2	29	0	123	152	190	0.20
4	20	219	0	239	228	0.05
est	49	259	190			
tgt	49	259	190			
err	0.00	0.00	0.00			0.25

imbal	target	190
0	←	196
0	←	190

raw	%	bal	%	RNSE
← 123	81%	← 146	79%	2.1
Γ 29	19%	Γ 39	21%	1.9
↱ 0	0%	↱ 0	0%	-

target	190
← 185	
← 152	

239	→
223	→
228	target

Los Volcanes

-	0%	0	↱	0%	0	↱
0.5	95%	211	→	92%	219	→
1.8	5%	12	Γ	8%	20	Γ
RNSE	%	bal		%	raw	

raw	%	bal	%	RNSE
↱ 0	63%	↱ 40	37%	
↱ 0	50%	↱ 55	52%	
-	2.1	2.4		

259	→	0
266	→	0
259	target	imbal

Airport

49	51	49
target	↓	↓
imbal	0	0

↑ 107	↑ 105	target 107
-------	-------	------------

Local OD Estimated

local_od	1	2	4	est	tgt	err
1	0	55	50	105	107	0.02
2	39	0	146	185	190	0.03
4	12	211	0	223	228	0.02
est	51	266	196			
tgt	49	259	190			
err	0.04	0.03	0.03			0.17

6: Main Ave & Default St
Raw Count Date:

49	49	49
target	↓	↓

0	0	imbal
↑	↑	target
107	107	107

RNSE	0.0	0.0	-
%	31%	69%	0%
bal	15	34	0
	↲	↓	↵
%	31%	69%	0%
raw	15	34	0
	↲	↓	↵

imbal	target	25
0	←	25
0	←	25

Local OD Raw				est	tgt	err
local_od	1	3	4			
1	0	97	10	107	107	0.00
3	34	0	15	49	49	0.00
4	15	10	0	25	25	0.00
est	49	107	25			
tgt	49	107	25			
err	0.00	0.00	0.00			0.00

6

25	→
25	→
25	target

Main Ave

-	0%	0	↷	0%	0	↷
0.0	40%	10	↵	40%	10	↵
0.0	60%	15	↵	60%	15	↵
RNSE	%	bal		%	raw	

↷	↵	↑
0	10	97
0%	9%	91%
0	10	97
0%	9%	91%
-	0.0	0.0
		RNSE

Local OD Estimated				est	tgt	err
local_od	1	3	4			
1	0	97	10	107	107	0.00
3	34	0	15	49	49	0.00
4	15	10	0	25	25	0.00
est	49	107	25			
tgt	49	107	25			
err	0.00	0.00	0.00			0.00

49	49	49
target	↓	↓
imbal	0	0

↑	↑	target
107	107	107

5: Bluewater & Airport
Raw Count Date:

Airport

RNSE	0.0	12.7	-
%	23%	77%	0%
bal	25	86	0
	↙	↔	↗
%	51%	49%	0%
raw	25	24	0
	↙	↔	↗

0	0	imbal
↑	↑	target
107	107	107

Local OD Raw

local_od	2	3	4	est	tgt	err
2	0	64	360	424	300	0.41
3	24	0	25	49	49	0.00
4	451	43	0	494	140	2.53
est	475	107	385			
tgt	475	107	385			
err	0.00	0.00	0.00			2.94

imbal	target	385
0	←	335
0	←	385

raw		%	bal		%	RNSE
↖	64	15%	↖	86	22%	2.8
←	360	85%	←	310	78%	2.6
↙	0	0%	↙	0	0%	-

target	300
←	396
←	424

5

Bluewater

-	0%	0	↗	0%	0	↗
3.4	9%	21	↘	9%	43	↘
10.6	91%	225	→	91%	451	→
RNSE	%	bal		%	raw	

475	→	0
311	→	0
475	target	imbal

Local OD Estimated

local_od	2	3	4	est	tgt	err
2	0	86	310	396	300	0.32
3	86	0	1	87	49	0.78
4	246	0	0	246	140	0.76
est	332	86	311			
tgt	475	107	385			
err	0.30	0.20	0.19			2.54

494	→
246	→
140	target

10: Bluewater & Airport

Raw Count Date:

Local OD Raw

local_od	1	2	4	est	tgt	err
1	0	69	46	115	115	0.00
2	20	0	254	274	300	0.09
4	30	406	0	436	475	0.08
est	50	475	300			
tgt	50	475	300			
err	0.00	0.00	0.00			0.17

imbal	target	300
0	←	312
0	←	300

	raw	%	bal	%	RNSE
←	254	93%	←	268	93% 0.9
↱	20	7%	↱	21	7% 0.2
↲	0	0%	↲	0	0% -

target	300
←	289
←	274

436	→
458	→
475	target

Bluewater

-	0%	0	↲	0%	0	↲
1.0	93%	427	→	93%	406	→
0.2	7%	31	↱	7%	30	↱
RNSE	%	bal		%	raw	

10

	raw	%	bal	%	RNSE
↲	0	46	↲	69	raw
↱	0	44	↱	67	bal
-	0.3	0.2			RNSE

475	→	0
494	→	0
475	target	imbal

Airport

50	52	50
target	↓	↓
imbal	0	0

↑	↑	target
115	111	115

Local OD Estimated

local_od	1	2	4	est	tgt	err
1	0	67	44	111	115	0.03
2	21	0	268	289	300	0.04
4	31	427	0	458	475	0.04
est	52	494	312			
tgt	50	475	300			
err	0.04	0.04	0.04			0.23

4: Coors and Los Volcanes
Raw Count Date:

Coors

RNSE	7.9	5.9	-
%	1%	99%	0%
bal	18	1339	0
	↙	↓	↗
%	8%	92%	0%
raw	95	1139	0
	↙	↓	↗

imbal	target	190
0	←	186
0	←	190

Los Volcanes

-	0%	0	↗	0%	0	↗
9.1	9%	25	↘	49%	128	↘
11.2	91%	259	↖	51%	131	↖
RNSE	%	bal		%	raw	

4

↖	↙	↑	
0	95	1136	raw
0%	8%	92%	%
↖	↙	↑	
0	168	1219	bal
0%	12%	88%	%
-	7.5	2.5	RNSE

Local OD Raw

local_od	1	3	4	est	tgt	err
1	0	1136	95	1231	1363	0.10
3	1139	0	95	1234	1234	0.00
4	131	128	0	259	259	0.00
est	1270	1264	190			
tgt	1744	1264	190			
err	0.27	0.00	0.00			0.37

Local OD Estimated

local_od	1	3	4	est	tgt	err
1	0	1219	168	1387	1363	0.02
3	1339	0	18	1357	1234	0.10
4	259	25	0	284	259	0.10
est	1598	1244	186			
tgt	1744	1264	190			
err	0.08	0.02	0.02			0.33

3: Coors & Bluewater
Raw Count Date:

Coors

RNSE	3.1	1.0	2.7	-
%	9%	83%	8%	0%
bal	154	1474	141	0
	↘	↓	↗	↗
%	7%	87%	6%	0%
raw	120	1512	112	0
	↘	↓	↗	↗

0	0	imbal
↑	↑	target
1162	1337	1363

Local OD Raw

local_od	1	2	3	4	est	tgt	err
1	0	112	991	120	1223	1223	0.00
2	25	0	37	60	122	122	0.00
3	1512	112	0	120	1744	1744	0.00
4	285	56	134	0	475	475	0.00
est	1822	280	1162	300			
tgt	1736	280	1363	300			
err	0.05	0.00	0.15	0.00			0.20

raw		%	bal		%	RNSE
↖	37	30%	↖	51	41%	2.3
←	60	49%	←	55	45%	0.6
↙	25	20%	↙	17	14%	1.6
↰	0	0%	↰	0	0%	-

target	122
↖	123
↖	122

Bluewater

-	0%	0	↘	0%	0	↘
6.2	43%	206	↖	28%	134	↖
0.0	12%	56	↗	12%	56	↗
3.8	46%	221	↖	60%	285	↖
RNSE	%	bal		%	raw	

↖	↖	↑	↖	raw
0	120	991	112	
0%	10%	81%	9%	%
↖	↖	↑	↖	
0	86	1080	79	bal
0%	7%	87%	6%	%
-	3.1	2.8	3.1	RNSE

280	↗	0
276	↖	0
280	target	imbal

Local OD Estimated

local_od	1	2	3	4	est	tgt	err
1	0	79	1080	86	1245	1223	0.02
2	17	0	51	55	123	122	0.01
3	1474	141	0	154	1769	1744	0.01
4	221	56	206	0	483	475	0.02
est	1712	276	1337	295			
tgt	1736	280	1363	300			
err	0.01	0.01	0.02	0.02			0.12

↑	↑	target
1223	1245	1223

1736	1712	1822
target	↓	↓
imbal	0	0

imbal	target	300
0	↖	295
0	↖	300

475	↗
483	↗
475	target

APPENDIX D
HIGHWAY CAPACITY SOFTWARE

HCS7 Signalized Intersection Results Summary

General Information		Intersection Information	
Agency		Duration, h	0.250
Analyst		Area Type	Other
Jurisdiction		Time Period	PHF
Urban Street		Analysis Year	2020
Intersection	#1 Unser/Los Volcanes	File Name	2020 AM No Build UNSER .xus
Project Description	2020-AM NO BUILD		

General Information		Intersection Information	
Agency		Duration, h	0.250
Analyst		Area Type	Other
Jurisdiction		Time Period	PHF
Urban Street		Analysis Year	2020
Intersection	#1 Unser/Los Volcanes	File Name	2020 PM No Build UNSER.xus
Project Description	2020- PM NO BUILD		

Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	286	82	13	95	81	209	30	1672	231	236	811	114

Demand Information		EB			WB			NB			SB		
Approach Movement		L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		161	52	30	155	75	268	22	1116	125	216	1286	113

Signal Information		EB		WB		NB		SB			
Cycle, s	120.0	Reference Phase	2	End	Green	2.0	0.1	68.9	7.8	3.1	17.1
Offset, s	118	Reference Point	On	Simult. Gap E/W	Yellow	4.0	3.0	3.0	0.0	0.0	3.5
Uncordinated	No	Simult. Gap E/W	On	Simult. Gap N/S	Red	0.5	0.5	1.0	0.5	0.0	2.0
Force Mode	Fixed	Simult. Gap N/S	On	Simult. Gap N/S	Red	0.5	0.5	1.0	0.5	0.0	2.0

Signal Information		EB		WB		NB		SB			
Cycle, s	130.0	Reference Phase	2	End	Green	1.7	3.2	69.8	10.5	1.3	22.2
Offset, s	127	Reference Point	On	Simult. Gap E/W	Yellow	4.0	3.0	3.0	0.0	0.0	3.5
Force Mode	Fixed	Simult. Gap N/S	On	Simult. Gap N/S	Red	0.5	0.5	1.0	0.8	0.0	2.0

Timer Results		EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		7	4	3	8	5	2	1	6
Case Number		1.1	4.0	1.1	3.0	1.1	3.0	1.1	3.0
Phase Duration, s		14.4	25.7	11.3	22.6	6.5	72.9	10.1	76.5
Change Period, ($\gamma + R_c$), s		3.8	5.5	3.5	5.5	4.5	5.5	3.5	5.5
Max Allow Headway (MAH), s		3.1	3.2	3.1	3.2	3.0	0.0	3.0	0.0
Queue Clearance Time (g_s), s		12.6	7.9	7.9	16.3	2.9		6.4	
Green Extension Time (g_e), s		0.0	0.8	0.1	0.8	0.0	0.0	0.3	0.0
Phase Call Probability		1.00	1.00	0.97	1.00	0.66		0.99	
Max Out Probability		1.00	0.00	0.00	0.00	0.00		0.00	

Timer Results		EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		7	4	3	8	5	2	1	6
Case Number		1.1	4.0	1.1	3.0	1.1	3.0	1.1	3.0
Phase Duration, s		14.3	27.7	15.6	29.0	6.2	73.8	12.9	80.5
Change Period, ($\gamma + R_c$), s		3.8	5.5	3.5	5.5	4.5	5.5	3.5	5.5
Max Allow Headway (MAH), s		3.1	3.3	3.1	3.3	3.0	0.0	3.0	0.0
Queue Clearance Time (g_s), s		12.4	6.8	12.1	22.6	2.8		9.1	
Green Extension Time (g_e), s		0.0	0.9	0.0	0.9	0.0	0.0	0.4	0.0
Phase Call Probability		1.00	1.00	1.00	1.00	0.58		1.00	
Max Out Probability		1.00	0.00	1.00	0.00	0.00		0.00	

Movement Group Results													
Approach Movement		EB			WB			NB			SB		
		L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (v), veh/h		311	103		103	88	203	33	1817	191	158	541	71
Adjusted Saturation Flow Rate (s), veh/h/in		1810	1854		1767	1900	1572	1810	1685	1572	1767	1766	1610
Queue Service Time (g_s), s		10.6	5.9		5.9	5.0	14.3	0.9	0.0	4.4	4.4	11.1	2.4
Cycle Queue Clearance Time (g_c), s		10.6	5.9		5.9	5.0	14.3	0.9	0.0	4.4	11.1	2.4	
Green Ratio (g/c)		0.24	0.17		0.21	0.14	0.20	0.58	0.56	0.63	0.59	0.68	
Capacity (c), veh/h		354	312		306	270	310	514	2840	883	301	2092	1095
Volume-to-Capacity Ratio (X)		0.879	0.331		0.338	0.326	0.655	0.063	0.640	0.217	0.524	0.259	0.065
Back of Queue (Q), ft/in (95 th percentile)		250.4	122		118.7	106.7	242.5	15.6	13.6	66.1	68.4	203.5	87.1
Back of Queue (Q), veh/in (95 th percentile)		10.0	4.9		4.6	4.3	9.5	0.6	0.5	2.6	2.7	7.9	3.5
Queue Storage Ratio (RQ) (95 th percentile)		1.67	0.41		0.79	0.24	1.62	0.03	0.01	0.44	0.12	0.20	0.58
Uniform Delay (d^+), s/veh		45.2	43.9		40.2	46.3	44.4	11.2	0.0	7.1	8.7	16.0	9.1
Incremental Delay (d_s), s/veh		20.8	0.2		0.2	0.3	0.9	0.0	1.1	0.6	0.5	0.3	0.1
Initial Queue Delay (d_s), s/veh		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh		66.0	44.2		40.4	46.5	45.3	11.2	1.1	7.7	9.2	16.3	9.2
Level of Service (LOS)		E	D		D	D	D	B	A	A	A	B	A
Approach Delay, s/veh / LOS		60.6	E		44.3	D	D	1.9	A		14.2	B	
Intersection Delay, s/veh / LOS		15.8											
Intersection Delay, s/veh / LOS		B											

Movement Group Results												
Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
	7	4	14	3	8	18	5	2	12	1	6	16
	175	77		168	82	275	24	1213	103	213	1268	105
	1810	1813		1767	1900	1572	1810	1685	1572	1767	1766	1610
	10.4	4.8		10.1	4.8	20.6	0.8	0.0	0.0	7.1	36.2	4.3
	10.4	4.8		10.1	4.8	20.6	0.8	0.0	0.0	7.1	36.2	4.3
	0.25	0.17		0.26	0.18	0.25	0.54	0.53	0.53	0.61	0.58	0.66
	373	309		395	343	398	205	2656	826	424	2038	1059
	0.469	0.249		0.427	0.238	0.691	0.116	0.457	0.125	0.503	0.622	0.100
Assigned Movement	205.3	98		200.7	102.1	325	14.3	6.4	3.3	112.4	547.5	177.4
	8.2	3.9		7.8	4.1	12.7	0.6	0.3	0.1	4.4	21.4	7.1
	1.37	0.33		1.34	0.23	2.17	0.02	0.01	0.02	0.19	0.55	1.18
	40.5	46.7		39.1	45.6	44.0	17.8	0.0	0.0	10.7	25.8	11.9
	0.3	0.2		0.3	0.1	0.8	0.1	0.6	0.3	0.3	1.1	0.1
	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	40.8	46.8		39.3	45.7	44.8	17.9	0.6	0.3	11.0	26.9	12.0
	D	D		D	D	D	B	A	A	B	C	B
	42.6	D		43.2	D	D	0.9	A		23.8	C	
	19.5											
Intersection Delay, s/veh / LOS												

Multimodal Results		EB		WB		NB		SB	
Pedestrian LOS Score / LOS		2.68	C	2.61	C	2.12	B	1.89	B
Bicycle LOS Score / LOS		1.17	A	1.14	A	1.61	B	1.52	B

Multimodal Results		EB		WB		NB		SB	
Pedestrian LOS Score / LOS		2.65	C	2.61	C	2.12	B	1.91	B
Bicycle LOS Score / LOS		0.90	A	1.35	A	1.22	A	1.93	B

HCS7 Signalized Intersection Results Summary

General Information			Intersection Information			
Agency			Duration, h	0.250		
Analyst			Area Type	Other		
Jurisdiction			PHF	0.92		
Urban Street			Analysis Period	1> 7:00		
Intersection						
Project Description						

Demand Information											
Approach Movement		EB		WB		NB		SB			
Demand (v), veh/h		L	T	R	L	T	R	L	T	R	
		91	40	37	30	19	49	21	1401	80	109 649 54

Signal Information											
Cycle, s	120.0	Reference Phase	2								
Offset, s	100	Reference Point	Begin								
Uncoordinated	No	Simult. Gap E/W	On	Green	2.0	2.5	81.3	7.6	8.0	0.0	
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.0	0.0	4.0	4.0	0.0	0.0	
				Red	0.5	0.0	1.0	0.5	1.5	0.0	

Timer Results											
Assigned Phase		EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT		
Case Number		7	4		8	5	2	1	6		
Phase Duration, s		12.1	25.6		13.5	5.5	86.3	8.0	88.9		
Change Period, (Y+R), s		4.5	5.5		5.5	3.5	5.5	3.5	5.5		
Max Allow Headway (MAH), s		3.1	3.2		3.2	3.0	0.0	3.0	0.0		
Queue Clearance Time (g _s), s		7.9	6.3		5.7	2.7	4.4				
Green Extension Time (g _e), s		0.0	0.3		0.3	0.0	0.0	0.2	0.0		
Phase Call Probability		0.96	1.00		1.00	0.67		0.98			
Max Out Probability		1.00	0.00		0.00	0.00		0.00			

Movement Group Results											
Approach Movement		EB		WB		NB		SB			
Assigned Movement		L	T	R	L	T	R	L	T	R	
Adjusted Flow Rate (v), veh/h		7	4	14	3	8	18	5	2	12	1 6 16
Adjusted Saturation Flow Rate (s), veh/h/in		99	73		33	21	50	33	2199	119	118 705 40
Queue Service Time (g _s), s		1810	1772		1317	1900	1572	1810	1766	1572	1767 1766 1610
Cycle Queue Clearance Time (g _c), s		5.9	4.3		2.8	1.2	3.7	0.7	58.8	1.1	2.4 0.0 0.2
Green Ratio (g/c)		0.15	0.17		0.07	0.07	0.07	0.69	0.67	0.72	0.69 0.69
Capacity (c), veh/h		255	297		148	126	105	598	2380	1059	159 2455 1119
Volume-to-Capacity Ratio (X)		0.388	0.245		0.221	0.163	0.478	0.055	0.924	0.113	0.745 0.287 0.036
Back of Queue (Q), ft/in (95 th percentile)		119.2	84		43.3	26.5	67.7	10.3	501.5	15.6	108.5 4.6 3.7
Back of Queue (Q), veh/in (95 th percentile)		4.8	3.4		1.7	1.1	2.6	0.4	19.6	0.6	4.2 0.2 0.1
Queue Storage Ratio (RQ) (95 th percentile)		1.19	0.17		0.29	0.05	0.45	0.06	0.50	0.06	0.54 0.00 0.02
Uniform Delay (d _r), s/veh		46.3	43.4		53.6	52.9	54.0	5.9	10.8	2.2	29.6 0.0 1.4
Incremental Delay (d _s), s/veh		0.4	0.2		0.3	0.2	1.3	0.0	5.4	0.1	2.6 0.3 0.1
Initial Queue Delay (d _s), s/veh		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0 0.0 0.0
Control Delay (d _s), s/veh		46.6	43.5		53.9	53.1	55.3	5.9	16.2	2.3	32.1 0.3 1.4
Level of Service (LOS)		D	D		D	D	E	A	B	A	C A A A
Approach Delay, s/veh / LOS		45.3		D	54.4		D	15.3		B	4.7 A A
Intersection Delay, s/veh / LOS		15.3									

Multimodal Results											
Approach Movement		EB		WB		NB		SB			
Pedestrian LOS Score / LOS		2.46	B		2.49	B		2.07	B		1.88 B
Bicycle LOS Score / LOS		0.77	A		0.66	A		1.83	B		1.20 A

HCS7 Signalized Intersection Results Summary

General Information		Intersection Information				
Agency		Duration, h	0.250			
Analyst		Area Type	Other			
Jurisdiction		PHF	0.92			
Urban Street		Analysis Period	1> 7:00			
Intersection	#2 Unser/Bluewater	File Name	2020 PM No Build UNSER.xus			
Project Description	2020- PM NO BUILD					

Demand Information											
Approach Movement		EB		WB		NB		SB			
Demand (v), veh/h		L	T	R	L	T	R	L	T	R	
		93	51	39	89	94	159	35	933	90	64 1337 108

Signal Information											
Cycle, s	130.0	Reference Phase	2								
Offset, s	127	Reference Point	Begin								
Uncoordinated	No	Simult. Gap E/W	On	Green	3.0	0.6	84.3	8.0	15.7	0.0	
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.0	0.0	4.0	4.0	0.0	0.0	
				Red	0.5	0.0	1.0	0.5	1.5	0.0	

Timer Results											
Assigned Phase		EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT		
Case Number		7	4		8	5	2	1	6		
Phase Duration, s		12.5	33.6		21.2	6.5	89.3	7.0	89.9		
Change Period, (Y+R), s		4.5	5.5		5.5	3.5	5.5	3.5	5.5		
Max Allow Headway (MAH), s		3.1	3.2		3.2	3.0	0.0	3.0	0.0		
Queue Clearance Time (g _s), s		8.2	7.8		14.8	3.4		3.8			
Green Extension Time (g _e), s		0.0	0.9		0.8	0.1	0.0	0.1	0.0		
Phase Call Probability		0.97	1.00		1.00	0.87		0.92			
Max Out Probability		1.00	0.00		0.00	0.00		0.00			

Movement Group Results											
Approach Movement		EB		WB		NB		SB			
Assigned Movement		L	T	R	L	T	R	L	T	R	
Adjusted Flow Rate (v), veh/h		7	4	14	3	8	18	5	2	12	1 6 16
Adjusted Saturation Flow Rate (s), veh/h/in		101	95		97	102	159	56	1481	141	70 1453 101
Queue Service Time (g _s), s		1810	1768		1291	1900	1572	1810	1766	1572	1767 1766 1610
Cycle Queue Clearance Time (g _c), s		6.2	5.8		9.3	6.5	12.8	1.4	26.7	2.8	1.8 0.0 1.2
Green Ratio (g/c)		0.20	0.22		0.12	0.12	0.12	0.67	0.64	0.64	0.67 0.65 0.65
Capacity (c), veh/h		259	383		211	229	189	332	2278	1014	259 2293 1045
Volume-to-Capacity Ratio (X)		0.390	0.247		0.459	0.446	0.838	0.167	0.650	0.139	0.269 0.634 0.097
Back of Queue (Q), ft/in (95 th percentile)		124.6	112.8		138.4	139.6	229.2	21.7	299	41.2	27.9 19.8 18.7
Back of Queue (Q), veh/in (95 th percentile)		5.0	4.5		5.4	5.6	9.0	0.9	11.7	1.6	1.1 0.8 0.7
Queue Storage Ratio (RQ) (95 th percentile)		1.25	0.23		0.92	0.28	1.53	0.12	0.30	0.15	0.14 0.02 0.09
Uniform Delay (d _r), s/veh		44.7	42.2		54.4	53.1	55.9	7.3	9.2	5.2	10.6 0.0 3.2
Incremental Delay (d _s), s/veh		0.4	0.1		0.6	0.5	3.7	0.1	1.3	0.2	0.2 1.3 0.2
Initial Queue Delay (d _s), s/veh		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0 0.0 0.0
Control Delay (d _s), s/veh		45.0	42.3		54.9	53.6	59.7	7.4	10.4	5.4	10.8 1.3 3.3
Level of Service (LOS)		D	D		D	D	E	A	B	A	B A A A
Approach Delay, s/veh / LOS		43.7		D	56.7		E	9.9		A	1.9 A
Intersection Delay, s/veh / LOS		12.6									

Multimodal Results											
Approach Movement		EB		WB		NB		SB			
Pedestrian LOS Score / LOS		2.46	B		2.49	B		2.09	B		1.89 B
Bicycle LOS Score / LOS		0.81	A		1.08	A		1.44	A		1.83 B

HCS7 Signalized Intersection Results Summary

General Information						Intersection Information												
Agency						Analysis Date	5/12/2020			Area Type	Other			Duration, h	0.250			
Analyst						Time Period				PHF	0.92							
Jurisdiction						Analysis Year	2020			Analysis Period	1> 7:00							
Urban Street						File Name	2020 AM No Build COORS.xus											
Intersection																		
Coors																		
#3 Coors/Bluewater																		
Project Description	2020- AM NO BUILD																	
Demand Information																		
Approach Movement						EB			WB			NB			SB			
Demand (v), veh/h						L	T	R	L	T	R	L	T	R	L	T	R	
						270	101	55	35	60	88	70	1223	16	33	853	121	
Signal Information																		
Cycle, s		120.0	Reference Phase	2														
Offset, s		118	Reference Point	End														
Uncoordinated		No	Simult. Gap E/W	On	Green	10.9	1.2	43.2	12.1	34.3	0.0							
Force Mode		Fixed	Simult. Gap N/S	On	Yellow	3.0	0.0	4.5	3.0	3.8	0.0							
					Red	0.5	0.0	1.5	0.5	1.5	0.0							
Timer Results																		
Assigned Phase		EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT									
		7	4		8	5	2	1	6									
Case Number		1.0	3.0		7.3	1.1	4.0	1.1	4.0									
Phase Duration, s		15.6	55.2		39.6	15.6	50.4	14.4	49.2									
Change Period, (Y+R c), s		3.5	5.3		5.3	3.5	6.0	3.5	6.0									
Max Allow Headway (MAH), s		3.1	3.1		3.1	3.0	0.0	3.0	0.0									
Queue Clearance Time (g s), s		14.1	6.3		7.2	4.8	3.0	3.0	0.0									
Green Extension Time (g e), s		0.0	0.7		0.7	0.0	0.0	0.0	0.0									
Phase Call Probability		1.00	1.00		1.00	1.00		1.00										
Max Out Probability		1.00	0.00		0.00	0.00		0.00										
Movement Group Results																		
Approach Movement						EB			WB			NB			SB			
Assigned Movement						L	T	R	L	T	R	L	T	R	L	T	R	
						7	4	14	3	8	18	5	2	12	1	6	16	
Adjusted Flow Rate (v), veh/h						293	110	55	103	92	76	896	446	27	539	256		
Adjusted Saturation Flow Rate (s), veh/h/ln						1810	1900	1610	1653	1572	1810	1856	1847	1767	1856	1740		
Queue Service Time (g s), s						12.1	4.3	2.1	1.8	4.7	2.8	14.6	14.8	1.0	14.8	15.1		
Cycle Queue Clearance Time (g c), s						12.1	4.3	2.1	5.2	4.7	2.8	14.6	14.8	1.0	14.8	15.1		
Green Ratio (g/c)						0.40	0.42	0.52	0.29	0.38	0.46	0.37	0.37	0.45	0.36	0.36		
Capacity (c), veh/h						572	790	832	514	592	405	1373	683	313	1336	626		
Volume-to-Capacity Ratio (X)						0.513	0.139	0.067	0.201	0.156	0.188	0.652	0.652	0.086	0.403	0.409		
Back of Queue (Q), ft/ln (90 th percentile)						238.1	88.2	34.6	106.5	83.1	54.4	169.3	187.1	20.3	268.1	260		
Back of Queue (Q), veh/ln (90 th percentile)						9.5	3.5	1.4	4.3	3.2	2.2	6.6	7.3	0.8	10.5	10.4		
Queue Storage Ratio (RQ) (90 th percentile)						1.19	0.22	0.17	1.06	0.83	0.22	0.17	0.19	0.16	0.27	0.27		
Uniform Delay (d), s/veh						26.5	21.7	14.5	32.4	24.8	18.5	11.7	12.1	19.0	35.1	35.9		
Incremental Delay (d s), s/veh						3.3	0.4	0.2	0.9	0.6	1.0	2.4	4.8	0.5	0.9	1.9		
Initial Queue Delay (d s), s/veh						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Control Delay (d), s/veh						29.8	22.1	14.7	33.3	25.3	19.6	14.1	16.8	19.5	36.0	37.8		
Level of Service (LOS)						C	C	B	C	C	C	B	B	B	D	D		
Approach Delay, s/veh / LOS						26.1	C	B	29.5	C	15.3	B	36.0		D			
Intersection Delay, s/veh / LOS						23.9											C	
Multimodal Results																		
Pedestrian LOS Score / LOS						EB			WB			NB			SB			
						2.58	C	2.60	C	1.93	B	2.12	B				B	
Bicycle LOS Score / LOS						1.24	A	0.81	A	1.27	A	1.09	A				A	

HCS7 Signalized Intersection Results Summary

General Information						Intersection Information											
Agency		Analysis Date	5/12/2020	Area Type	Other	Duration, h	0.250										
Analyst		Time Period		PHF	0.92												
Jurisdiction	Urban Street	Analysis Year	2020	Analysis Period	> 7:00												
Intersection	#3 Coors/Bluewater	File Name	2020 PM No Build COORS.xus														
Project Description	2020- PM NO BUILD																
Demand Information																	
Approach Movement						EB			WB			NB			SB		
Demand (v), veh/h						L	T	R	L	T	R	L	T	R	L	T	R
						263	105	93	46	56	73	99	1053	22	103	1353	178
Signal Information																	
Cycle, s	130.0	Reference Phase	2														
Offset, s	68	Reference Point	End														
Uncoordinated	No	Simult. Gap E/W	On	Green	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
				Red	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Timer Results																	
Assigned Phase				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT						
				7	4		8	5	2	1	6						
Case Number				1.0	3.0		7.3	1.1	4.0	1.1	4.0						
Phase Duration, s				15.6	50.7		35.1	15.6	63.7	15.6	63.7						
Change Period, (Y+R c), s				3.5	5.3		5.3	3.5	6.0	3.5	6.0						
Max Allow Headway (MAH), s				0.0	0.0		0.0	0.0	0.0	0.0	0.0						
Queue Clearance Time (g s), s				0.0	0.0		0.0	0.0	0.0	0.0	0.0						
Green Extension Time (g e), s				0.0	0.0		0.0	0.0	0.0	0.0	0.0						
Phase Call Probability				0.00	0.00		0.00	0.00	0.00	0.00	0.00						
Max Out Probability				0.00	0.00		0.00	0.00	0.00	0.00	0.00						
Movement Group Results																	
Approach Movement				EB		WB		NB		SB							
Assigned Movement				L	T	R	L	T	R	L	T	R	L	T	R		
				7	4	14	3	8	18	5	2	12	1	6	16		
Adjusted Flow Rate (v), veh/h				0	0	0	0	0	0	0	0	0	0	0	0		
Adjusted Saturation Flow Rate (s), veh/h/ln				0	0	0	0	0	0	0	0	0	0	0	0		
Queue Service Time (g s), s				0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Cycle Queue Clearance Time (g c), s				0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Green Ratio (g/C)				0.34	0.35	0.44		0.23	0.32	0.54	0.44	0.44	0.54	0.44	0.44		
Capacity (c), veh/h				462	664	712		407	507	269	1647	816	403	1647	775		
Volume-to-Capacity Ratio (X)				0.618	0.172	0.125		0.273	0.150	0.399	0.473	0.473	0.304	0.472	0.749		
Back of Queue (Q), ft/ln (90 th percentile)				118.6	114.8	74.4		133.6	81.9	79.7	72.7	91	86.5	452.5	434.4		
Back of Queue (Q), veh/ln (90 th percentile)				4.7	4.6	3.0		5.3	3.2	3.2	2.8	3.6	3.4	17.7	17.4		
Queue Storage Ratio (RQ) (90 th percentile)				0.59	0.29	0.37		1.34	0.82	0.32	0.07	0.09	0.69	0.45	0.44		
Uniform Delay (d r), s/veh				36.3	29.3	21.4		41.2	31.4	21.9	4.4	5.0	15.0	24.3	23.8		
Incremental Delay (d s), s/veh				6.1	0.6	0.4		1.7	0.6	0.4	1.0	2.0	1.7	2.8	5.9		
Initial Queue Delay (d s), s/veh				0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Control Delay (d), s/veh				42.4	29.8	21.8		42.9	32.0	26.3	5.3	6.9	16.7	27.1	29.7		
Level of Service (LOS)				D	C	C		D	C	C	A	B	C	B	C		
Approach Delay, s/veh / LOS				35.7	D		38.4	D		7.6	A		27.2		C		
Intersection Delay, s/veh / LOS				22.4 C													
Multimodal Results																	
Pedestrian LOS Score / LOS				EB		WB		NB		SB							
				2.59	C	2.61	C	1.92	B	2.12					B		
Bicycle LOS Score / LOS				1.29	A	0.80	A	1.19	A	1.46					A		

HCS7 Signalized Intersection Results Summary

General Information			Intersection Information			
Agency			Duration, h	0.250		
Analyst			Area Type	Other		
Jurisdiction			PHF	0.92		
Urban Street			Analysis Period	1> 7:00		
Intersection						
Project Description						

Demand Information		EB			WB			NB			SB		
Approach Movement		L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		142		46				67	1079				716 129

Signal Information																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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HCS7 Two-Way Stop-Control Report

General Information

Analyst

Agency/Co.

Date Performed

Analysis Year

Time Analyzed

Intersection Orientation

Project Description

AM

WHP

5/12/2020

2020

North-South

AM NO BUILD

Site Information

Intersection

Jurisdiction

East/West Street

North/South Street

Peak Hour Factor

Analysis Time Period (hrs)

#6 - Airport and Meridian

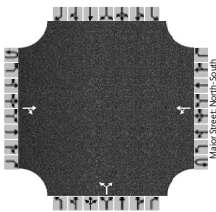
Meridian

Airport

0.92

0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound							
	U	L	T	U	L	T	U	L	T	U	L	T	R				
Priority		10	11	12		7	8	9		1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0		0	0	1	0	0	0	1	0
Configuration				LR							LT						TR
Volume (veh/h)		20		15							21	101				135	14
Percent Heavy Vehicles (%)		3		3							3						
Proportion Time Blocked																	
Percent Grade (%)				0													
Right Turn Channelized																	
Median Type Storage																	

Critical and Follow-up Headways

Undivided																	
Base Critical Headway (sec)	7.1		6.2							4.1							
Critical Headway (sec)	6.43		6.23							4.13							
Base Follow-Up Headway (sec)	3.5		3.3							2.2							
Follow-Up Headway (sec)	3.53		3.33							2.23							

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)	38									23							
Capacity, c (veh/h)	748									1411							
v/c Ratio	0.05									0.02							
95% Queue Length, Q ₉₅ (veh)	0.2									0.0							
Control Delay (s/veh)	10.1									7.6							
Level of Service (LOS)	B									A							
Approach Delay (s/veh)	10.1										1.4						
Approach LOS	B																

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#6 - 2020 AM NO BUILD.xtw

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HCS7 Two-Way Stop-Control Report

General Information

Analyst

Agency/Co.

Date Performed

Analysis Year

Time Analyzed

Intersection Orientation

Project Description

AM

WHP

5/12/2020

2020

North-South

PM NO BUILD

Site Information

Intersection

Jurisdiction

East/West Street

Airport

Peak Hour Factor

Analysis Time Period (hrs)

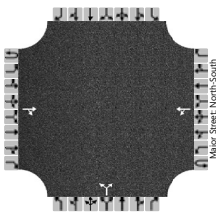
#6 -Airport and Meridian

Meridian

0.92

0.25

Lanes



Vehicle Volumes and Adjustments

Approach

Movement

Priority

Number of Lanes

Configuration

Volume (veh/h)

Percent Heavy Vehicles (%)

Proportion Time Blocked

Percent Grade (%)

Right Turn Channelized

Median Type | Storage

Eastbound

Westbound

Northbound

Southbound

U

L

T

U

L

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U

L

T

U

L

T

R

10

11

12

7

8

9

1U

1

2

3

4U

4

5

0

1

0

0

0

0

0

0

1

0

0

0

1

LR

LT

TR

10

15

3

3

0

15

97

3

Undivided

Critical and Follow-up Headways

Base Critical Headway (sec)

Critical Headway (sec)

Base Follow-Up Headway (sec)

Follow-Up Headway (sec)

7.1

6.43

3.5

3.53

6.2

6.23

3.3

3.33

4.1

4.13

2.2

2.23

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)

Capacity, c (veh/h)

v/c Ratio

95% Queue Length, Q₉₅ (veh)

Control Delay (s/veh)

Level of Service (LOS)

Approach Delay (s/veh)

Approach LOS

27

925

0.03

0.1

9.0

A

9.0

A

11

1546

0.01

0.0

7.3

A

0.7

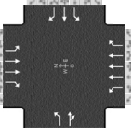
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HCS7000 TWSC Version 7.8.5

#6 - 2020 PM NO BUILD.xtw

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HCS7 Signalized Intersection Results Summary

General Information				Intersection Information					
Agency		Analysis Date	5/12/2020	Duration, h	0.250				
Analyst		Time Period	PHF	Area Type	Other				
Jurisdiction		Analysis Year	2020	PHF	0.92				
Urban Street		File Name	2020 AM Build UNSER_xus	Analysis Period	1> 7:00				
Intersection	#1 Unser/Los Volcanes								
Project Description	2020-AM BUILD								

Demand Information				WB				NB				SB			
Approach Movement				L	T	R		L	T	R		L	T	R	
Demand (v), veh/h				286	82	13	100	81	233	30	1686	231	361	832	114

Signal Information				EB				WB				NB				SB			
Cycle, s				L	T	R		L	T	R		L	T	R		L	T	R	
120.0	Reference Phase	2																	
118	Reference Point	End																	
Offset, s				Green	2.0	2.4	65.2	8.0	2.9	18.5									
Uncoordinated	No	Simult. Gap E/W	On	Yellow	4.0	3.0	3.0	3.0	0.0	3.5									
Force Mode	Fixed	Simult. Gap N/S	On	Red	0.5	0.5	1.0	0.5	0.0	2.0									

Timer Results				EBT				WBL				WBT				NBL				NBT				SBL				SBT	
Assigned Phase				7	4			3		8			5			2			1					6					
Case Number				1.1	4.0			1.1	3.0			1.1	3.0			3.0	1.1					1.1	3.0						
Phase Duration, s				14.4	26.8			11.5	24.0			6.5	69.2			12.4	75.1					12.4	75.1						
Change Period, ($Y+R_c$), s				3.8	5.5			3.5	5.5			4.5	5.5			5.5	3.5					3.5	5.5						
Max Allow Headway (MAH), s				3.1	3.2			3.1	3.2			3.0	0.0			3.0	3.0					3.0	0.0						
Queue Clearance Time (g_s), s				12.6	7.4			8.1	17.6			3.0	8.6			8.6	3.0					8.6	3.0						
Green Extension Time (g_e), s				0.0	0.8			0.1	0.8			0.0	0.0			0.0	0.4					0.0	0.0						
Phase Call Probability				1.00	1.00			0.97	1.00			0.66			1.00							1.00							
Max Out Probability				1.00	0.00			0.00	0.00			0.00			0.00							0.00							

Movement Group Results				EB				WB				NB				SB			
Approach Movement				L	T	R		L	T	R		L	T	R		L	T	R	
Assigned Movement				7	4	14	3	8	18	5	2	12	1	6	16	1	6	16	
Adjusted Flow Rate (v), veh/h				311	98	109	88	227	33	1833	191	220	506	64		220	506	64	
Adjusted Saturation Flow Rate (s), veh/hln				1810	1870	1767	1900	1572	1810	1685	1572	1767	1766	1610		1767	1766	1610	
Queue Service Time (g_s), s				10.6	5.4	6.1	4.9	15.6	1.0	0.0	5.1	6.6	10.3	2.2		6.6	10.3	2.2	
Cycle Queue Clearance Time (g_c), s				10.6	5.4	6.1	4.9	15.6	1.0	0.0	5.1	6.6	10.3	2.2		6.6	10.3	2.2	
Green Ratio (g/c)				0.25	0.18	0.22	0.15	0.23	0.55	0.53	0.53	0.62	0.58	0.67		0.62	0.58	0.67	
Capacity (c), veh/h				370	332	327	292	359	524	2684	835	325	2050	1077		325	2050	1077	
Volume-to-Capacity Ratio (X)				0.841	0.294	0.332	0.301	0.633	0.062	0.683	0.229	0.676	0.247	0.060		0.676	0.247	0.060	
Back of Queue (Q), ft/ln (95 th percentile)				228	113.6	122.7	105	258.9	17.1	16.4	78.3	104.5	190.6	79.1		104.5	190.6	79.1	
Back of Queue (Q), veh/ln (95 th percentile)				9.1	4.5	4.8	4.2	10.1	0.7	0.6	3.1	4.1	7.4	3.2		4.1	7.4	3.2	
Queue Storage Ratio (RQ) (95 th percentile)				1.52	0.38	0.82	0.23	1.73	0.03	0.02	0.52	0.18	0.19	0.53		0.18	0.19	0.53	
Uniform Delay (d_r), s/veh				44.0	42.8	38.9	45.1	41.8	12.6	0.0	9.0	9.7	16.1	9.5		9.7	16.1	9.5	
Incremental Delay (d_z), s/veh				15.1	0.2	0.2	0.2	0.7	0.0	1.4	0.6	0.9	0.3	0.1		0.9	0.3	0.1	
Initial Queue Delay (d_s), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	
Control Delay (d), s/veh				59.0	43.0	39.2	45.3	42.5	12.6	1.4	9.6	10.6	16.4	9.6		10.6	16.4	9.6	
Level of Service (LOS)				E	D	D	D	D	D	D	A	A	B	B		A	B	B	
Approach Delay, s/veh / LOS				55.2	E	42.2	D	D	2.4	A	14.2	B				14.2	B		
Intersection Delay, s/veh / LOS				15.4															

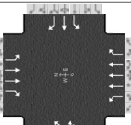
Multimodal Results				EB				WB				NB				SB			
Pedestrian LOS Score / LOS				2.68	C	2.61	C	2.61	C	2.12	B	1.90	B			1.90	B		
Bicycle LOS Score / LOS				1.16	A	1.19	A	1.19	A	1.62	B	1.65	B			1.65	B		

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HCS7 Signalized Intersection Results Summary

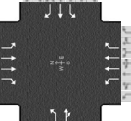
General Information				Intersection Information					
Agency		Analysis Date	5/12/2020	Duration, h	0.250				
Analyst		Time Period	PHF	Area Type	Other				
Jurisdiction		Analysis Year	2020	PHF	0.92				
Urban Street		File Name	2020 PM Build UNSER.xus	Analysis Period	1> 7:00				
Intersection	#1 Unser/Los Volcanes								
Project Description	2020- PM BUILD								

Demand Information				EB				WB				NB				SB			
Approach Movement				L	T	R		L	T	R		L	T	R		L	T	R	
Demand (v), veh/h				161	52	30	156	75	273	22	1119	125	221	1289	113				

Signal Information				EBT				WBL				WBT				NBL				SBT			
Cycle, s				L	T	R		L	T	R		L	T	R		L	T	R		L	T	R	
130.0	Reference Phase	2																					
127	Reference Point	End																					
Offset, s				Green	1.7	3.5	69.1	10.5	1.3	22.5													
Uncoordinated	No	Simult. Gap E/W	On	Yellow	4.0	3.0	3.0	3.0	0.0	3.5													
Force Mode	Fixed	Simult. Gap N/S	On	Red	0.5	0.5	1.0	0.8	0.0	2.0													

Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				7	4	3	8	5	2	1	6
Case Number				1.1	4.0	1.1	3.0	1.1	3.0	1.1	3.0
Phase Duration, s				14.3	28.0	15.6	29.3	6.2	73.1	13.2	80.1
Change Period, ($Y+R_c$), s				3.8	5.5	3.5	5.5	4.5	5.5	3.5	5.5
Max Allow Headway (MAH), s				3.1	3.3	3.1	3.3	3.0	0.0	3.0	0.0
Queue Clearance Time (g_s), s				12.4	7.3	12.1	22.9	2.8	9.4	9.4	
Green Extension Time (g_e), s				0.0	0.9	0.0	0.9	0.0	0.0	0.4	0.0
Phase Call Probability				1.00	1.00	1.00	1.00	0.58		1.00	
Max Out Probability				1.00	0.00	1.00	0.00	0.00		0.00	

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency		Analysis Date	5/12/2020	Duration, h	0.250		
Analyst		Time Period	PHF	Area Type	Other		
Jurisdiction		Analysis Year	2020	PHF	0.92		
Urban Street	Unser	Analysis Period	1> 7:00				
Intersection	#2 Unser/Bluewater	File Name	2020 AM Build UNSER_xus				
Project Description	2020-AM BUILD						

Demand Information				WB				NB				SB			
Approach Movement				L	T	R		L	T	R		L	T	R	
Demand (v), veh/h				91	40	37	44	19	63	21	1401	108	130	654	54

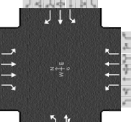
Signal Information				EB				WB				NB			
Cycle, s	120.0	Reference Phase	2	L	T	R		L	T	R		L	T	R	
Offset, s	100	Reference Point	Begin	Green	2.0	0.3	80.1	7.6	8.0	0.0		Green	2.0	0.3	80.1
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.0	3.0	4.0	4.0	4.0	0.0		Yellow	3.0	3.0	4.0
Force Mode	Fixed	Simult. Gap N/S	On	Red	0.5	0.5	1.0	0.5	1.5	0.0		Red	0.5	0.5	1.0

Timer Results				EBT				WBL				WBT			
Assigned Phase				L	T	R		L	T	R		L	T	R	
Case Number	7	4	14	4	14	3	8	18	5	2	12	8	18	5	2
Phase Duration, s	12.1	25.6		4.0	4.0	5.3	21	65	33	2196	163	5.3	5.3	1.1	3.0
Change Period, ($Y+R_c$), s	4.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Allow Headway (MAH), s	3.1	3.2		3.2	3.2	3.2	3.2	3.2	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Queue Clearance Time (g_s), s	7.9	6.3		6.8	6.8	6.8	6.8	6.8	2.7	2.7	2.7	5.5	5.5	5.5	5.5
Green Extension Time (g_e), s	0.0	0.4		0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.2	0.2	0.2	0.2
Phase Call Probability	0.96	1.00		1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	0.99	0.99	0.99	0.99
Max Out Probability	1.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Movement Group Results				WB				NB				SB			
Approach Movement	L	T	R	L	T	R		L	T	R		L	T	R	
Assigned Movement	7	4	14	3	8	18		5	2	12		1	6	16	
Adjusted Flow Rate (v), veh/h	99	73		48	21	65		33	2196	163		141	711	40	
Adjusted Saturation Flow Rate (s), veh/hln	1810	1772		1317	1900	1572		1810	1766	1572		1767	1766	1610	
Queue Service Time (g_s), s	5.9	4.3		4.2	1.2	4.8		0.7	61.9	1.6		3.5	0.0	0.2	
Cycle Queue Clearance Time (g_c), s	5.9	4.3		4.2	1.2	4.8		0.7	61.9	1.6		3.5	0.0	0.2	
Green Ratio (g/c)	0.15	0.17		0.07	0.07	0.07		0.68	0.66	0.66		0.73	0.69	0.69	
Capacity (c), veh/h	255	297		148	127	105		587	2343	1043		171	2455	1119	
Volume-to-Capacity Ratio (X)	0.388	0.245		0.324	0.163	0.623		0.056	0.937	0.156		0.828	0.290	0.036	
Back of Queue (Q), ft/ln (95 th percentile)	119.2	84		64.4	26.5	90.1		10.9	557.4	23		130.6	4.7	3.7	
Back of Queue (Q), veh/ln (95 th percentile)	4.8	3.4		2.5	1.1	3.5		0.4	21.8	0.9		5.1	0.2	0.1	
Queue Storage Ratio (RQ) (95 th percentile)	1.19	0.17		0.43	0.05	0.60		0.06	0.56	0.08		0.65	0.00	0.02	
Uniform Delay (d'), s/veh	46.2	43.3		54.2	52.8	54.5		6.3	12.0	2.4		32.7	0.0	1.4	
Incremental Delay (d_z), s/veh	0.4	0.2		0.5	0.2	2.2		0.0	0.1	0.2		3.9	0.3	0.1	
Initial Queue Delay (d_s), s/veh	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	
Control Delay (d), s/veh	46.6	43.5		54.7	53.1	56.8		6.3	18.1	2.6		36.6	0.3	1.4	
Level of Service (LOS)	D	D		D	D	E		D	B	A		D	A	A	
Approach Delay, s/veh / LOS	45.3	D	D	55.5	E			16.9	B			6.1	A		
Intersection Delay, s/veh / LOS	17.0														

Multimodal Results				WB				NB				SB			
Pedestrian LOS Score / LOS	2.46	B		2.49	B			2.07	B			1.88	B		
Bicycle LOS Score / LOS	0.77	A		0.71	A			1.86	B			1.22	A		

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency		Analysis Date	5/12/2020	Duration, h	0.250		
Analyst		Time Period	PHF	Area Type	Other		
Jurisdiction		Analysis Year	2020	PHF	0.92		
Urban Street	Unser	Analysis Period	1> 7:00				
Intersection	#2 Unser/Bluewater	File Name	2020 PM Build UNSER.xus				
Project Description	2020- PM BUILD						

Demand Information				WB				NB				SB			
Approach Movement				L	T	R		L	T	R		L	T	R	
Demand (v), veh/h				93	51	39	92	94	162	35	933	94	67	1338	108

Signal Information				EB				WB				NB			
Cycle, s	130.0	Reference Phase	2	L	T	R		L	T	R		L	T	R	
Offset, s	127	Reference Point	Begin	Green	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Uncoordinated	No	Simult. Gap E/W	On	Yellow	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On	Red	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Timer Results				EBT				WBL				WBT			
Assigned Phase				L	T	R		L	T	R		L	T	R	
Case Number	7	4	14	4	14	3	8	18	5	2	12	8	18	5	2
Phase Duration, s	12.5	33.9		4.0	4.0	5.3	21	65	33	2196	163	5.3	5.3	1.1	3.0
Change Period, ($Y+R_c$), s	4.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Allow Headway (MAH), 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	0.0	0.0
Queue Clearance Time (g_s), 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	0.0	0.0
Green Extension Time (g_e), 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	0.0	0.0
Phase Call Probability	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max Out Probability	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Movement Group Results				WB				NB				SB			
Approach Movement	L	T	R	L	T	R		L	T	R		L	T	R	
Assigned Movement	7	4	14	3	8	18		5	2	12		1	6	16	
Adjusted Flow Rate (v), veh/h	0	0		0	0	0		0	0	0		0	0	0	
Adjusted Saturation Flow Rate (s), veh/hln	0	0		0	0	0		0	0	0		0	0	0	
Queue Service Time (g_s), s	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	
Cycle Queue Clearance Time (g_c), s	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	
Green Ratio (g/c)	0.20	0.22		0.12	0.12	0.12		0.66	0.64	0.64		0.67	0.65	0.65	
Capacity (c), veh/h	262	386		214	233	193		332	2267	1009		255	2286	1042	
Volume-to-Capacity Ratio (X)	0.386	0.245		0.468	0.439	0.840		0.168	0.654	0.147		0.285	0.636	0.097	
Back of Queue (Q), ft/ln (95 th percentile)	124.2	112.4		143.1	139.2	233		22	328.9	46.5		29.5	20	19	
Back of Queue (Q), veh/ln (95 th percentile)	5.0	4.5		5.6	5.6	9.1		0.9	12.8	1.8		1.2	0.8	0.8	
Queue Storage Ratio (RQ) (95 th percentile)	1.24	0.22		0.95	0.28	1.55		0.12	0.33	0.17		0.15	0.02	0.10	
Uniform Delay (d'), s/veh	44.4	41.9		54.2	52.9	55.8		7.4	10.0	5.6		11.1	0.0	3.2	
Incremental Delay (d_z), s/veh	0.3	0.1		0.6	0.5	3.7		0.1	1.3	0.3		0.2	1.4	0.2	
Initial Queue Delay (d_s), s/veh	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	
Control Delay (d), s/veh	44.8	42.1		54.8	53.4	59.5		7.5	11.3	5.9		11.3	1.4	3.4	
Level of Service (LOS)	D	D		D	D	E		D	B	A		B	A	A	
Approach Delay, s/veh / LOS	43.5	D	D	56.5	E			10.7	B			1.9	A		
Intersection Delay, s/veh / LOS	13.0														

Multimodal Results				WB				NB				SB			
Pedestrian LOS Score / LOS	2.46	B		2.49	B			2.09	B			1.89	B		
Bicycle LOS Score / LOS	0.81	A		1.09	A			1.44	A			1.83	B		

HCS7 Signalized Intersection Results Summary

General Information		Intersection Information			
Agency		Analysis Date	5/12/2020	Duration, h	0.250
Analyst		Area Type	Other		
Jurisdiction		Time Period	PHF		0.92
Urban Street		Analysis Year	2020	Analysis Period	1 > 7:00
Intersection	#3 Coors/Bluewater	File Name	2020 AM Build COORS.xus		
Project Description	2020-AM BUILD				

Demand Information		EB				WB				NB				SB			
Approach Movement		L	T	R		L	T	R		L	T	R		L	T	R	
Demand (v), veh/h		279	101	64	35	60	88	91	1223	16				33	858	135	

Signal Information		EB				WB				NB				SB			
Cycle, s	120.0	Reference Phase	2			Reference Phase	2			Reference Phase	2			Reference Phase	2		
Offset, s	118	End	Green	10.9	1.2	43.2	12.1	34.3	0.0	0.0				Green	12.1	29.8	0.0
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.0	0.0	4.5	3.0	3.8	0.0				Yellow	3.0	4.5	3.0
Force Mode	Fixed	Simult. Gap N/S	On	Red	0.5	0.0	1.5	0.5	1.5	0.0				Red	0.5	1.5	0.0

Timer Results		EBL				EBT				WBL				WBT				NBL				NBT				SBL				SBT			
Assigned Phase		7				4				8				8				5				2				1				6			
Case Number		1.0				3.0				7.3				7.3				1.1				4.0				1.1				4.0			
Phase Duration, s		15.6				55.2				39.6				39.6				15.6				50.4				14.4				49.2			
Change Period, (Y+R), s		3.5				5.3				5.3				5.3				3.5				6.0				3.5				6.0			
Max Allow Headway (MAH), s		3.1				3.1				3.1				3.1				3.0				0.0				3.0				0.0			
Queue Clearance Time (g _s), s		14.1				6.3				7.2				7.2				5.7				3.0				3.0				3.0			
Green Extension Time (g _e), s		0.0				0.7				0.7				0.7				0.1				0.0				0.0				0.0			
Phase Call Probability		1.00				1.00				1.00				1.00				1.00				1.00				1.00				1.00			
Max Out Probability		1.00				0.00				0.00				0.00				0.01				0.00				0.00				0.00			

Movement Group Results		EB				WB				NB				SB				
		L	T	R		L	T	R		L	T	R		L	T	R		
Approach Movement																		
Assigned Movement		7	4	14		3	8	18	5	2	12	1	6	16				
Adjusted Flow Rate (v), veh/h		303	110	65		103	92	99	896	446	27	554	261					
Adjusted Saturation Flow Rate (s), veh/h/in		1810	1900	1610		1653	1572	1810	1856	1847	1767	1856	1729					
Queue Service Time (g_s), s		12.1	4.3	2.4		1.8	4.7	3.7	14.6	14.8	1.0	15.2	15.6					
Cycle Queue Clearance Time (g_c), s		12.1	4.3	2.4		5.2	4.7	3.7	14.6	14.8	1.0	15.2	15.6					
Green Ratio (g/C)		0.40	0.42	0.52		0.29	0.38	0.46	0.37	0.37	0.45	0.36	0.36					
Capacity (c), veh/h		572	790	832		514	592	399	1373	683	313	1336	622					
Volume-to-Capacity Ratio (X)		0.530	0.139	0.078		0.201	0.156	0.248	0.652	0.652	0.087	0.414	0.420					
Back of Queue (Q), ft/in (90 th percentile)		246.3	88.2	41		106.5	83.1	72.3	169.3	187.1	20.5	274.8	265.9					
Back of Queue (Q), veh/in (90 th percentile)		9.9	3.5	1.6		4.3	3.2	2.9	6.6	7.3	0.8	10.7	10.6					
Queue Storage Ratio (RQ) (90 th percentile)		1.23	0.22	0.20		1.06	0.83	0.29	0.17	0.19	0.16	0.27	0.27					
Uniform Delay (d_r), s/veh		26.9	21.7	14.6		32.4	24.8	18.9	11.7	12.1	19.0	35.3	36.1					
Incremental Delay (d_s), s/veh		3.5	0.4	0.2		0.9	0.6	1.5	2.4	4.8	0.5	0.9	2.0					
Initial Queue Delay (d_s), s/veh		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
Control Delay (d_s), s/veh		30.4	22.1	14.8		33.3	25.3	20.4	14.1	16.8	19.5	36.3	38.2					
Level of Service (LOS)		C	C	B		C	C	C	C	B	B	B	D					
Approach Delay, s/veh / LOS		26.3				29.5			15.4			36.3						
Intersection Delay, s/veh / LOS		24.1																C

Multimodal Results		EB				WB				NB				SB			
Pedestrian LOS Score / LOS		2.58				C				2.60				C			
Bicycle LOS Score / LOS		1.28				A				0.81				A			

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HCS™ Streets Version 7.8.5

Generated: 9/4/2020 4:07:44 PM

HCS7 Signalized Intersection Results Summary

General Information		Intersection Information			
Agency		Analysis Date	5/12/2020	Duration, h	0.250
Analyst		Area Type	Other		
Jurisdiction		Time Period	PHF		0.92
Urban Street		Analysis Year	2020	Analysis Period	1 > 7:00
Intersection	#3 Coors/Bluewater	File Name	2020 PM Build COORS.xus		
Project Description	2020- PM BUILD				

Demand Information		EB				WB				NB				SB			
Approach Movement		L	T	R		L	T	R		L	T	R		L	T	R	
Demand (v), veh/h		285	105	95	46	56	73	102	1053	22				103	1354	180	

Signal Information		EB				WB				NB				SB			
Cycle, s	130.0	Reference Phase	2			Reference Phase	2			Reference Phase	2			Reference Phase	2		
Offset, s	68	End	Green	12.1	57.7	12.1	29.8	0.0	0.0	0.0				Green	12.1	29.8	0.0
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.0	4.5	3.0	3.8	0.0	0.0				Yellow	3.0	4.5	3.0
Force Mode	Fixed	Simult. Gap N/S	On	Red	0.5	1.5	0.5	1.5	0.0	0.0				Red	0.5	1.5	0.0

Timer Results		EBL				EBT				WBL				WBT				NBL				NBT				SBL				SBT			
Assigned Phase		7				4				8				8				5				2				1				6			
Case Number		1.0				3.0				7.3				7.3				1.1				4.0				1.1				4.0			
Phase Duration, s		15.6				50.7				35.1				35.1				15.6				63.7				15.6				63.7			
Change Period, (Y+R), s		3.5				5.3				5.3				5.3				3.5				6.0				3.5				6.0			
Max Allow Headway (MAH), s		3.1				3.2				3.2				3.2				3.0				0.0				3.0				0.0			
Queue Clearance Time (g _s), s		14.1				7.4				9.1				9.1				5.9				3.0				3.0				3.0			
Green Extension Time (g _e), s		0.0				0.7				0.7				0.7				0.1				0.0				0.1				0.1			
Phase Call Probability		1.00				1.00				1.00				1.00				1.00				1.00				1.00				1.00			
Max Out Probability		1.00				0.00				0.00				0.00				0.01				0.00				0.03				0.03			

Movement Group Results		EB				WB				NB				SB					
Approach Movement		L	T	R		L	T	R		L	T	R		L	T	R			
Assigned Movement		7	4	14		3	8	18		5	2	12		1	6	16			
Adjusted Flow Rate (v), veh/h		288	114	91		111	76	111		778	386	122		1232	581				
Adjusted Saturation Flow Rate (s), veh/h/in		1810	1900	1610		1599	1572	1810		1856	1839	1767		1856	1745				
Queue Service Time (g s), s		12.1	5.4	4.4		4.6	4.5	3.9		5.3	5.9	4.5		33.3	33.2				
Cycle Queue Clearance Time (g c), s		12.1	5.4	4.4		7.1	4.5	3.9		5.3	5.9	4.5		33.3	33.2				
Green Ratio (g/C)		0.34	0.35	0.44		0.23	0.32	0.54		0.44	0.44	0.54		0.44	0.44				
Capacity (c), veh/h		462	664	712		407	507	269		1647	816	403		1647	775				
Volume-to-Capacity Ratio (X)		0.623	0.772	0.728		0.273	0.150	0.412		0.473	0.473	0.304		0.474	0.751				
Back of Queue (Q), ft/in (90 th percentile)		121.8	114.8	76.3		133.6	81.9	82.6		72.7	91	86.5		154.4	435				
Back of Queue (Q), veh/in (90 th percentile)		4.9	4.6	3.1		5.3	3.2	3.3		2.8	3.6	3.4		17.7	17.4				
Queue Storage Ratio (RQ) (90 th percentile)		0.61	0.29	0.38		1.34	0.82	0.33		0.07	0.09	0.69		0.45	0.45				
Uniform Delay (d), s/veh		36.4	29.3	21.4		41.2	31.4	22.1		4.4	5.0	15.0		24.3	23.8				
Incremental Delay (d 2), s/veh		6.2	0.6	0.4		1.7	0.6	4.6		1.0	2.0	1.7		2.8	5.9				
Initial Queue Delay (d 3), s/veh		0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0				
Control Delay (d), s/veh		42.6	29.8	21.8		42.9	32.0	26.7		5.3	6.9	16.7		27.1	29.8				
Level of Service (LOS)		D	C	C		D	C	C		A	A	B		C	C				
Approach Delay, s/veh / LOS		35.8				38.4				7.7				27.2				C	
Intersection Delay, s/veh / LOS		22.5																	

HCS7 Signalized Intersection Results Summary

General Information			Intersection Information		
Agency			Duration, h	0.250	
Analyst		Analysis Date	5/12/2020	Area Type	Other
Jurisdiction		Time Period		PHF	0.92
Urban Street		Analysis Year	2020	Analysis Period	1> 7:00
Intersection	#4 Coors/Los Volcanes	File Name	2020 AM Build COORS.xus		
Project Description	2020-AM BUILD				

Demand Information		WB				NB				SB			
Approach Movement		EB		L		T		R		L		T	
Demand (v), veh/h		151		51		67		1088		730		143	

Signal Information		WB				NB				SB			
Cycle, s		120.0		Reference Phase		2		Begin		1		2	
Offset, s		100		Reference Point		On		0.0		0.0		0.0	
Uncoordinated		No		Simult. Gap E/W		On		0.0		0.0		0.0	
Force Mode		Fixed		Simult. Gap N/S		On		0.0		0.0		0.0	

Timer Results		WB				NB				SB			
Assigned Phase		4		EBT		WBL		WBT		EBL		EBT	
Case Number		9.0		13.5		5.5		3.1		7.5		0.4	
Phase Duration, s		13.5		5.5		3.1		7.5		0.4		1.00	
Change Period, (Y+R), s		13.5		5.5		3.1		7.5		0.4		0.00	
Max Allow Headway (MAH), s		13.5		5.5		3.1		7.5		0.4		0.00	
Queue Clearance Time (g _s), s		13.5		5.5		3.1		7.5		0.4		0.00	
Green Extension Time (g _e), s		13.5		5.5		3.1		7.5		0.4		0.00	
Phase Call Probability		1.00		0.00		0.00		0.00		0.00		0.00	
Max Out Probability		0.00		0.00		0.00		0.00		0.00		0.00	

Movement Group Results		WB				NB				SB			
Approach Movement		L		T		R		L		T		R	
Assigned Movement		7		14		45		164		646		299	
Adjusted Flow Rate (v), veh/h		164		45		13.5		5.5		3.1		7.5	
Adjusted Saturation Flow Rate (s), veh/h/in		1757		1610		1810		1685		1856		1700	
Queue Service Time (g _s), s		5.5		3.1		1.2		3.8		1.2		3.8	
Cycle Queue Clearance Time (g _c), s		5.5		3.1		1.2		3.8		1.2		3.8	
Green Ratio (g/c)		0.07		0.09		0.83		0.84		0.79		0.79	
Capacity (c), veh/h		234		150		510		4254		2916		1336	
Volume-to-Capacity Ratio (X)		0.701		0.296		0.196		0.382		0.222		0.224	
Back of Queue (Q), ft/in (90 th percentile)		109.8		56.1		10.6		23.2		3.3		6.5	
Back of Queue (Q), veh/in (90 th percentile)		4.4		2.2		0.4		0.9		0.1		0.3	
Queue Storage Ratio (RQ) (90 th percentile)		0.44		0.19		0.05		0.02		0.00		0.01	
Uniform Delay (d _r), s/veh		54.8		50.7		3.2		0.7		0.0		0.0	
Incremental Delay (d _s), s/veh		1.4		0.4		0.1		0.2		0.2		0.4	
Initial Queue Delay (d _s), s/veh		0.0		0.0		0.0		0.0		0.0		0.0	
Control Delay (d _s), s/veh		56.3		51.1		3.3		0.9		0.2		0.4	
Level of Service (LOS)		E		D		A		A		A		A	
Approach Delay, s/veh / LOS		55.2		E		0.0		0.0		1.1		A	
Intersection Delay, s/veh / LOS		4.7		A		0.2		A		A		A	

Multimodal Results		WB				NB				SB			
Pedestrian LOS Score / LOS		2.63		C		2.48		B		0.62		A	
Bicycle LOS Score / LOS		F		A		1.18		A		1.01		A	

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HCS7 Signalized Intersection Results Summary

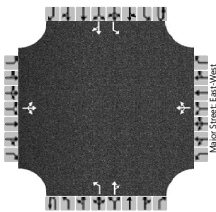
General Information		Intersection Information		
Agency		Duration, h	0.250	
Analyst		Analysis Date	5/12/2020	
Jurisdiction		Time Period	PHF	
Urban Street		Analysis Year	2020	
Intersection	Coors	File Name	Analysis Period	
Project Description	#4 Coors/Los Volcanes	2020 PM Build	COORS.xus	
2020 - PM BUILD				

Demand Information		WB				NB				SB			
Approach Movement		EB		L		T		R		L		T	
Demand (v), veh/h		190		100		65		1170		1689		163	

Signal Information		WB				NB				SB			
Cycle, s		130.0		Reference Phase		2		Begin		1		2	
Offset, s		100		Reference Point		On		0.0		0.0		0.0	
Uncoordinated		No		Simult. Gap E/W		On		0.0		0.0		0.0	
Force Mode		Fixed		Simult. Gap N/S		On		0.0		0.0		0.0	

Timer Results		WB				NB				SB			
Assigned Phase		4		EBT		WBL		WBT		EBL		EBT	
Case Number		9.0		15.7		5.5		3.1		9.6		0.7	
Phase Duration, s		15.7		5.5		3.1		9.6		0.7		1.00	
Change Period, (Y+R), s		15.7		5.5		3.1		9.6		0.7		0.00	
Max Allow Headway (MAH), s		15.7		5.5		3.1		9.6		0.7		0.00	
Queue Clearance Time (g _s), s		15.7		5.5		3.1		9.6		0.7		0.00	
Green Extension Time (g _e), s		15.7		5.5		3.1		9.6		0.7		0.00	
Phase Call Probability		1.00		0.00		0.00		0.00		0.00		0.00	
Max Out Probability		0.00		0.00		0.00		0.00		0.00		0.00	

Movement Group Results		WB				NB
------------------------	--	----	--	--	--	----

HCS7 Two-Way Stop-Control Report																	
General Information				Site Information													
Analyst	AM			Intersection				# 8 Los Volcanes/Gallatin									
Agency/Co.	WHP			Jurisdiction				Los Volcanes									
Date Performed	5/12/2020			East/West Street				Gallatin									
Analysis Year	2020			North/South Street				0.80									
Time Analyzed				Peak Hour Factor				0.25									
Intersection Orientation	East-West			Analysis Time Period (hrs)													
Project Description	AM BUILD																
Lanes																	
																	
Vehicle Volumes and Adjustments																	
Approach Movement	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	0	1	1	0	0	1	1	0	0	1	0	0	0	1	0	1	
Configuration		L		TR		L		TR		LTR				LTR			
Volume (veh/h)		349	266	44		24	266	34		16	4	81		6	5	236	
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3	
Proportion Time Blocked																	
Percent Grade (%)										0						0	
Right Turn Channelized																	
Median Type Storage	Left Only 9																
Critical and Follow-up Headways																	
Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2	
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23	
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3	
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33	
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)		436				30						126			309		
Capacity, c (veh/h)		1178				1166						331			478		
v/c Ratio		0.37				0.03						0.38			0.65		
95% Queue Length, Q ₉₅ (veh)		1.7				0.1						1.7			4.5		
Control Delay (s/veh)		9.8				8.2						22.4			25.3		
Level of Service (LOS)		A				A						C			D		
Approach Delay (s/veh)		5.2				0.6				22.4				25.3			
Approach LOS										C				D			
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HCS7 Two-Way Stop-Control Report

General Information

Analyst

Agency/Co.

Date Performed

Analysis Year

Time Analyzed

Intersection Orientation

Project Description

AM

WHP

5/12/2020

2020

East-West

PM BUILD

Site Information

Intersection

Jurisdiction

East/West Street

Gallatin

Peak Hour Factor

Analysis Time Period (hrs)

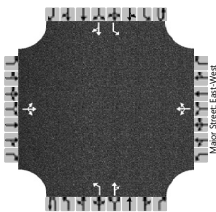
8 Los Volcanes/Gallatin

Los Volcanes

0.80

0.25

Lanes



Vehicle Volumes and Adjustments

Approach Movement	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0	0	1	0	0	0	1	0	0
Configuration		L	TR			L	TR			LTR				LTR		
Volume (veh/h)		162	173	14		5	236	27		36	3	7		22	1	204
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0						0
Right Turn Channelized																
Median Type Storage	Left Only															
Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		203				6						58			284	
Capacity, c (veh/h)		1225				1328						198			657	
v/c Ratio		0.17				0.00						0.29			0.43	
95% Queue Length, Q ₉₅ (veh)		0.6				0.0						1.2			2.2	
Control Delay (s/veh)		8.5				7.7						30.5			14.6	
Level of Service (LOS)		A				A						D			B	
Approach Delay (s/veh)		4.0				0.1				30.5					14.6	
Approach LOS						D									B	

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HCS7 Two-Way Stop-Control Report

General Information

Analyst

Agency/Co.

Date Performed

Analysis Year

Time Analyzed

Intersection Orientation

Project Description

AM

WHP

5/12/2020

2020

East-West

AM BUILD

Site Information

Intersection

Jurisdiction

East/West Street

North/South Street

Peak Hour Factor

Analysis Time Period (hrs)

#9 Los Volcanes/ Silver C

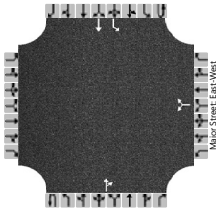
Los Volcanes

Silver Creek

0.92

0.25

Lanes



Vehicle Volumes and Adjustments

Approach

Movement

Priority

Number of Lanes

Configuration

Volume (veh/h)

Percent Heavy Vehicles (%)

Proportion Time Blocked

Percent Grade (%)

Right Turn Channelized

Median Type | Storage

Eastbound

Westbound

Northbound

Southbound

U L T R

U L T R

U L T R

U L T R

1U 1 2 3

4U 4 5 6

7 8 9

10 11 12

0 0 1 0

1 1 1 0

0 1 0

0 0 0

TR

L T

LR

446 28

12 828

24

3

3

</

HCS7 Two-Way Stop-Control Report

General Information

Analyst

Agency/Co.

Date Performed

Analysis Year

Time Analyzed

Intersection Orientation

Project Description

AM

WHP

5/12/2020

2020

East-West

PM BUILD

Site Information

Intersection

Jurisdiction

East/West Street

North/South Street

Peak Hour Factor

Analysis Time Period (hrs)

#9 Los Volcanes/ Silver C

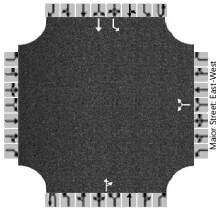
Los Volcanes

Silver Creek

0.92

0.25

Lanes



Vehicle Volumes and Adjustments

Approach

Movement

Priority

Number of Lanes

Configuration

Volume (veh/h)

Percent Heavy Vehicles (%)

Proportion Time Blocked

Percent Grade (%)

Right Turn Channelized

Median Type | Storage

Eastbound

Westbound

Northbound

Southbound

U L T R

U L T R

U L T R

U L T R

1U 1 2 3

4U 4 5 6

7 8 9

10 11 12

0 0 1 0

0 1 1 0

TR

LR

312 9

7 517

25

12

3

3

0

Left Only

9

Critical and Follow-up Headways

Base Critical Headway (sec)

Critical Headway (sec)

Base Follow-Up Headway (sec)

Follow-Up Headway (sec)

4.1

4.13

2.2

2.23

7.1

6.43

3.5

3.53

6.2

6.23

3.3

3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)

Capacity, c (veh/h)

v/c Ratio

95% Queue Length, Q₉₅ (veh)

Control Delay (s/veh)

Level of Service (LOS)

Approach Delay (s/veh)

Approach LOS

8

1204

0.01

0.0

8.0

A

0.1

40

591

0.07

0.2

11.5

B

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#9 - 2020 PM BUILDxw

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HCS7 Two-Way Stop-Control Report

General Information

Analyst

Agency/Co.

Date Performed

Analysis Year

Time Analyzed

Intersection Orientation

Project Description

AM

WHP

5/13/2020

2020

North-South

AM BUILD

Site Information

Intersection

Jurisdiction

East/West Street

North/South Street

Peak Hour Factor

Analysis Time Period (hrs)

DRIVEWAY A

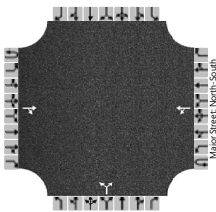
DRIVEWAY A

AIRPORT

0.92

0.25

Lanes



Vehicle Volumes and Adjustments

Approach Movement	Eastbound			Westbound			Northbound			Southbound			
	U	L	T	U	L	T	U	L	T	U	L	T	
Priority		10	11		7	8		9	1U	1	2	3	4U
Number of Lanes		0	1		0	0		0	0	0	1	0	0
Configuration		LR						LT					
Volume (veh/h)		14			24					56	242		
Percent Heavy Vehicles (%)		3			3					3			
Proportion Time Blocked													
Percent Grade (%)		0											
Right Turn Channelized													
Median Type Storage		Undivided											

Critical and Follow-up Headways

Base Critical Headway (sec)	7.1	6.2	4.1
Critical Headway (sec)	6.43	6.23	4.13
Base Follow-Up Headway (sec)	3.5	3.3	2.2
Follow-Up Headway (sec)	3.53	3.33	2.23

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)	41	61
Capacity, c (veh/h)	655	1385
v/c Ratio	0.06	0.04
95% Queue Length, Q ₉₅ (veh)	0.2	0.1
Control Delay (s/veh)	10.9	7.7
Level of Service (LOS)	B	A
Approach Delay (s/veh)	10.9	1.8
Approach LOS	B	

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DRIVEWAY A 2020 AM BUILD.txtw

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HCS7 Two-Way Stop-Control Report

General Information

Analyst

Agency/Co.

Date Performed

Analysis Year

Time Analyzed

Intersection Orientation

Project Description

AM

WHP

5/13/2020

2020

North-South

PM BUILD

Site Information

Intersection

Jurisdiction

East/West Street

North/South Street

Peak Hour Factor

Analysis Time Period (hrs)

DRIVEWAY A

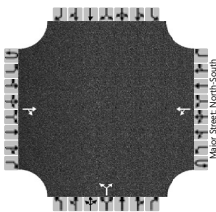
DRIVEWAY A

AIRPORT

0.92

0.25

Lanes



Vehicle Volumes and Adjustments

Approach

Movement

Priority

Number of Lanes

Configuration

Volume (veh/h)

Percent Heavy Vehicles (%)

Proportion Time Blocked

Percent Grade (%)

Right Turn Channelized

Median Type | Storage

Eastbound

Westbound

Northbound

Southbound

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HCS7 Two-Way Stop-Control Report

General Information

Analyst

AM

Intersection

DRIVEWAY B

Agency/Co.

WHP

Jurisdiction

MERIDIAN

Date Performed

5/13/2020

East/West Street

DRIVEWAY B

Analysis Year

2020

North/South Street

0.92

Time Analyzed

Peak Hour Factor

0.25

Intersection Orientation

East-West

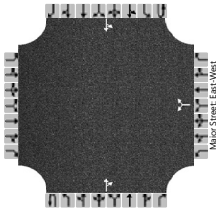
Analysis Time Period (hrs)

0.25

Project Description

AM BUILD

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9	10	11	12	
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0	0	0	0	0
Configuration				TR		LT						LR				
Volume (veh/h)			35	0		0	35			0		5				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)					4.1				7.1		6.2
Critical Headway (sec)					4.13				6.43		6.23
Base Follow-Up Headway (sec)					2.2				3.5		3.3
Follow-Up Headway (sec)					2.23				3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)					0				5		
Capacity, c (veh/h)					1566				1031		
v/c Ratio					0.00				0.01		
95% Queue Length, Q ₉₅ (veh)					0.0				0.0		
Control Delay (s/veh)					7.3				8.5		
Level of Service (LOS)					A				A		
Approach Delay (s/veh)					0.0				8.5		
Approach LOS									A		

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HCS™ TWSC Version 7.8.5

DRIVEWAY B 2020 AM BUILD.txtw

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HCS7 Two-Way Stop-Control Report

General Information

Analyst

Agency/Co.

Date Performed

Analysis Year

Time Analyzed

Intersection Orientation

Project Description

AM

WHP

5/13/2020

2020

East-West

PM BUILD

Site Information

Intersection

Jurisdiction

East/West Street

North/South Street

Peak Hour Factor

Analysis Time Period (hrs)

DRIVEWAY B

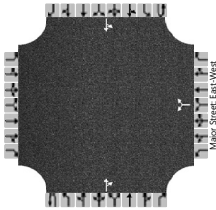
MERIDIAN

DRIVEWAY B

0.92

0.25

Lanes



Vehicle Volumes and Adjustments

Approach Movement	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT						LR				
Volume (veh/h)			25	0		3	25			0		1				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2
Critical Headway (sec)						4.13				6.43		6.23
Base Follow-Up Headway (sec)						2.2				3.5		3.3
Follow-Up Headway (sec)						2.23				3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						3					1		
Capacity, c (veh/h)						1580					1045		
v/c Ratio						0.00					0.00		
95% Queue Length, Q ₉₅ (veh)						0.0					0.0		
Control Delay (s/veh)						7.3					8.4		
Level of Service (LOS)						A					A		
Approach Delay (s/veh)						0.8					8.4		
Approach LOS											A		

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HCS7000 TWSC Version 7.8.5

DRIVEWAY B 2020 PM BUILD.txtw

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HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	Analyst	Analysis Date	Area Type	Duration	h	0.250	
Jurisdiction		Time Period	PHF			Other	
Urban Street		Analysis Year	2020	Analysis Period		1> 7:00	
Intersection	#1 Unser/Los Volcanes	File Name	2030 AM No Build UNSER .xus				
Project Description	2030-AM NO BUILD						

Demand Information											
Approach Movement		EB	T	R	L	T	R	L	T	R	SB
Demand (v), veh/h		300	86	14	129	109	282	37	2042	282	406

Signal Information											
Cycle, s	120.0	Reference Phase	2								
Offset, s	118	Reference Point	End	Green	2.5	3.4	60.3	9.7	1.2	22.0	
Uncoordinated	No	Simult. Gap E/W	On	Yellow	4.0	3.0	3.0	0.0	0.0	3.5	
Force Mode	Fixed	Simult. Gap N/S	On	Red	0.5	0.5	1.0	0.5	0.0	2.0	

Timer Results		EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		7	4	3	8	5	2	1	6
Case Number		14.4	4.0	1.1	3.0	1.1	3.0	1.1	3.0
Phase Duration, s		14.4	28.7	13.2	27.5	7.0	64.3	13.9	71.1
Change Period, (Y+R), s		3.8	5.5	3.5	5.5	4.5	5.5	3.5	5.5
Max Allow Headway (MAH), s		3.1	3.2	3.1	3.2	3.0	0.0	3.0	0.0
Queue Clearance Time (g _s), s		12.6	7.5	9.6	21.0	3.3		9.9	
Green Extension Time (g _e), s		0.0	1.0	0.1	1.0	0.0	0.0	0.4	0.0
Phase Call Probability		1.00	1.00	0.99	1.00	0.74		1.00	
Max Out Probability		1.00	0.00	0.00	0.00	0.00		0.00	

Movement Group Results											
Approach Movement		L	T	R	L	T	R	L	T	R	SB
Assigned Movement		7	4	14	3	8	18	5	2	12	1
Adjusted Flow Rate (v), veh/h		326	101	140	118	280	40	2220	247	244	607
Adjusted Saturation Flow Rate (s), veh/hln		1810	1875	1767	1900	1572	1810	1685	1572	1767	1766
Queue Service Time (g _s), s		10.6	5.5	7.6	6.5	19.0	1.3	9.4	0.6	7.9	13.9
Cycle Queue Clearance Time (g _c), s		10.6	5.5	7.6	6.5	19.0	1.3	9.4	0.6	7.9	13.9
Green Ratio (g/C)		0.27	0.19	0.26	0.18	0.27	0.51	0.49	0.49	0.59	0.55
Capacity (c), veh/h		385	361	369	347	425	441	2472	769	280	1934
Volume-to-Capacity Ratio (X)		0.847	0.280	0.380	0.342	0.660	0.091	0.898	0.321	0.871	0.314
Back of Queue (Q), ft/ln (95 th percentile)		244.4	115.1	151.4	138.1	300.8	23.3	80	17.4	159.5	252.7
Back of Queue (Q), veh/ln (95 th percentile)		9.8	4.6	5.9	5.5	11.7	0.9	3.1	0.7	6.2	9.9
Queue Storage Ratio (RQ) (95 th percentile)		1.63	0.38	1.01	0.31	2.01	0.04	0.08	0.12	0.27	0.25
Uniform Delay (d _r), s/veh		42.8	41.3	35.6	42.8	38.9	14.8	0.8	0.7	20.6	20.1
Incremental Delay (d _s), s/veh		15.2	0.2	0.2	0.2	0.7	0.0	5.7	1.1	3.1	0.4
Initial Queue Delay (d _s), s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d _s), s/veh		58.0	41.5	35.8	43.0	39.6	14.8	6.5	1.8	23.7	20.5
Level of Service (LOS)		E	D	D	D	D	B	A	A	C	C
Approach Delay, s/veh / LOS		54.1	D	D	39.3	D	6.1	A	A	20.6	C
Intersection Delay, s/veh / LOS		17.9									

Multimodal Results											
Pedestrian LOS Score / LOS		2.68	C	2.61	C	2.13	B	1.91	B		SB
Bicycle LOS Score / LOS		1.19	A	1.38	A	1.87	B	1.88	B		B

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency		Analysis Date	5/12/2020	Area Type	Other	Duration, h	0.250
Analyst		Time Period		PHF	0.92		
Jurisdiction	Urban Street	Analysis Year	2020	Analysis Period	1> 7:00		
Intersection	#1 Unser/Los Volcanes	File Name	2030 PM No Build UNSER.xus				
Project Description							

Demand Information											
Approach Movement		EB	T	R	L	T	R	L	T	R	SB
Demand (v), veh/h		169	54	32	209	102	361	27	1363	152	269

Signal Information											
Cycle, s	130.0	Reference Phase	2								
Offset, s	127	Reference Point	End	Green	2.1	6.0	60.1	10.5	1.3	26.8	
Uncoordinated	No	Simult. Gap E/W	On	Yellow	4.0	3.0	3.0	0.0	0.0	3.5	
Force Mode	Fixed	Simult. Gap N/S	On	Red	0.5	0.5	1.0	0.8	0.0	2.0	

Timer Results		EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		7	4	3	8	5	2	1	6
Case Number		14.3	4.0	1.1	3.0	1.1	3.0	1.1	3.0
Phase Duration, s		14.3	34.3	15.6	35.6	6.6	64.1	16.0	73.6
Change Period, (Y+R), s		3.8	5.5	3.5	5.5	4.5	5.5	3.5	5.5
Max Allow Headway (MAH), s		3.1	3.3	3.1	3.3	3.0	0.0	3.0	0.0
Queue Clearance Time (g _s), s		12.3	6.6	14.1	29.0	3.1		12.1	
Green Extension Time (g _e), s		0.0	1.2	0.0	1.1	0.0	0.0	0.4	0.0
Phase Call Probability		1.00	1.00	1.00	1.00	0.65		1.00	
Max Out Probability		1.00	0.00	1.00	0.00	0.00		0.00	

Movement Group Results											
Approach Movement		L	T	R	L	T	R	L	T	R	SB
Assigned Movement		7	4	14	3	8	18	5	2	12	1
Adjusted Flow Rate (v), veh/h		184	78	227	111	371	29	1482	127	257	1533
Adjusted Saturation Flow Rate (s), veh/hln		1810	1818	1767	1900	1572	1810	1685	1572	1767	1766
Queue Service Time (g _s), s		10.3	4.6	12.1	6.2	27.0	1.1	9.1	1.2	10.1	51.5
Cycle Queue Clearance Time (g _c), s		10.3	4.6	12.1	6.2	27.0	1.1	9.1	1.2	10.1	51.5
Green Ratio (g/C)		0.30	0.22	0.31	0.23	0.33	0.47	0.45	0.45	0.56	0.52
Capacity (c), veh/h		421	402	464	439	515	123	2278	709	360	1850
Volume-to-Capacity Ratio (X)		0.437	0.195	0.490	0.252	0.719	0.239	0.650	0.179	0.714	0.829
Back of Queue (Q), ft/ln (90 th percentile)		181.6	92.5	223.1	127.6	374	21.2	84.1	22.3	133.7	714
Back of Queue (Q), veh/ln (90 th percentile)		7.3	3.7	8.7	5.1	14.6	0.8	3.3	0.9	5.2	27.9
Queue Storage Ratio (RQ) (90 th percentile)		1.21	0.31	1.49	0.28	2.49	0.04	0.08	0.15	0.23	0.71
Uniform Delay (d _r), s/veh		35.5	41.2	35.5	40.8	38.4	26.5	4.0	3.6	15.1	36.4
Incremental Delay (d _s), s/veh		0.3	0.1	0.3	0.1	1.4	0.4	1.5	0.6	0.6	2.5
Initial Queue Delay (d _s), s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d _s), s/veh		35.7	41.3	35.8	40.9	39.9	26.9	5.4	4.1	15.6	39.0
Level of Service (LOS)		D	D	D	D	D	C	A	A	B	D
Approach Delay, s/veh / LOS		37.4	D	D	38.7	D	5.7	A	A	34.3	C
Intersection Delay, s/veh / LOS		24.8									

Multimodal Results											
Pedestrian LOS Score / LOS		2.65	C	2.61	C	2.13	B	1.93	B		SB
Bicycle LOS Score / LOS		0.92	A	1.66	B	1.39	A	2.29	B		B

HCS7 Signalized Intersection Results Summary

General Information		Intersection Information				
Agency		Analysis Date	5/12/2020	Area Type	PHF	Other
Analyst		Time Period		PHF		0.92
Jurisdiction		Analysis Year	2020	Analysis Period	1> 7:00	
Urban Street		Unser				
Intersection	#2 Unser/Bluewater	File Name	2030 AM No Build	UNSER .xus		
Project Description	2030-AM NO BUILD					

Demand Information		EB			WB			NB			SB		
Approach Movement		L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		96	42	39	33	21	54	22	1473	84	133	793	66

Signal Information												
Cycle, s	120.0	Reference Phase	2									
Offset, s	100	Reference Point	Begin									
Uncoordinated	No	Simult. Gap E/W	On	Green	2.2	1.9	78.0	8.0	8.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.0	3.0	4.0	4.0	4.0	0.0	0.0	0.0
				Red	0.5	0.5	1.0	0.5	1.5	0.0	0.0	0.0
												
												

Timer Results											
Assigned Phase		EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT		
Case Number		7	4	4	8	5	2	1	6		
Phase Duration, s		10	4.0	5.3	5.1	1.1	3.0	1.1	3.0		
Phase Duration, s		12.5	26.0	13.5	5.7	83.0	11.1	88.3			
Change Period, (Y+R c), s		4.5	5.5	5.5	3.5	5.5	5.5	3.5	5.5		
Max Allow Headway (MAH), s		3.1	3.2	3.2	3.2	3.0	0.0	3.0	0.0		
Queue Clearance Time (g s), s		8.2	6.5	6.1	2.9			7.4			
Green Extension Time (g e), s		0.0	0.4	0.3	0.0	0.0	0.0	0.2	0.0		
Phase Call Probability		0.97	1.00	1.00	1.00	0.73		0.99			
Max Out Probability		1.00	0.00		0.00	0.00		0.00			

Movement Group Results															
Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g_s), s Cycle Queue Clearance Time (g_c), s Green Ratio (g/c) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (95 th percentile) Back of Queue (Q), veh/ln (95 th percentile) Queue Storage Ratio (RQ) (95 th percentile) Uniform Delay (d_r), s/veh Incremental Delay (d_2), s/veh Initial Queue Delay (d_s), s/veh Control Delay (d), s/veh Level of Service (LOS) Approach Delay, s/veh / LOS Intersection Delay, s/veh / LOS	EB			WB			NB			SB					
	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R
	7	4	14	3	8	18	5	2	12	1	6	16			
	104	77		36	23	55	40	2664	143	145	862	53			
	1810	1770		1312	1900	1572	1810	1766	1572	1767	1766	1610			
	6.2	4.5		3.1	1.4	4.1	0.9	77.5	1.4	5.4	0.0	0.0			
	6.2	4.5		3.1	1.4	4.1	0.9	77.5	1.4	5.4	0.0	0.0			
	0.15	0.17		0.07	0.07	0.07	0.66	0.65	0.65	0.73	0.69	0.69			
	259	302		147	126	105	514	2281	1015	171	2438	1111			
	0.404	0.255		0.244	0.180	0.530	0.077	1.168	0.141	0.844	0.354	0.048			
	125.8	88.9		47.8	29.3	75.6	14.2	1409. 3	19.1	187.9	6.3	1.1			
	5.0	3.6		1.9	1.2	3.0	0.6	55.1	0.7	7.3	0.2	0.0			
	1.26	0.18		0.32	0.06	0.50	0.08	1.41	0.07	0.94	0.01	0.01			
46.1	43.1		53.7	52.9	54.2	7.0	13.8	2.5	36.7	0.0	0.0				
0.4	0.2		0.3	0.3	1.5	0.0	77.7	0.1	4.3	0.4	0.1				
0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
46.4	43.3		54.1	53.2	55.7	7.0	91.5	2.6	41.0	0.4	0.1				
	D	D		D	D	E	A	F	A	D	A	A			
	45.1	D		54.7	D		85.8	F		5.9		A			
	63.1													E	

Multimodal Results		EB		WB		NB		SB	
Pedestrian LOS Score / LOS		2.47	B	2.49	B	2.07	B	1.88	B
Bicycle LOS Score / LOS		0.79	A	0.68	A	1.90	B	1.36	A

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HCS7 Signalized Intersection Results Summary

General Information		Intersection Information				
Agency		Analysis Date	5/12/2020	Area Type	PHF	Other
Analyst		Time Period		PHF		0.92
Jurisdiction		Analysis Year	2020	Analysis Period	1> 7:00	
Urban Street		Unser				
Intersection	#2 Unser/Bluewater	File Name	2030 PM No Build	UNSER.xus		
Project Description	2030- PM NO BUILD					

Demand Information		EB			WB			NB			SB		
Approach Movement		L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		98	53	41	98	104	176	37	981	95	79	1633	132

Signal Information													
Cycle, s	130.0	Reference Phase		2									
Offset, s	127	Reference Point		Begin									
Uncoordinated	No	Simult. Gap E/W		On	Green	3.6	0.6	82.0	8.3	17.0	0.0		
Force Mode	Fixed	Simult. Gap N/S		On	Yellow	3.0	0.0	4.0	4.0	4.0	0.0		
					Red	0.5	0.0	1.0	0.5	1.5	0.0		
													
													
													
													
													
													
													
													
													
													
													
													
													
													
													
													
													

Timer Results											
Assigned Phase		EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT		
Case Number		7	4	4	8	5	2	1	6		
Phase Duration, s		12.8	35.3		5.3	1.1	3.0	1.1	3.0		
Change Period, (Y+R c), s		4.5	5.5		5.5	3.5	5.5	5.5	5.5		
Max Allow Headway (MAH), s		3.1	3.2		3.2	3.0	0.0	3.0	0.0		
Queue Clearance Time (g s), s		8.4	7.9		16.1	3.8		4.3			
Green Extension Time (g e), s		0.0	1.0		0.9	0.1	0.0	0.1	0.0		
Phase Call Probability		0.98	1.00		1.00	0.92		0.95			
Max Out Probability		1.00	0.00		0.00	0.00		0.00			

Movement Group Results															
Approach Movement Assigned Movement Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln Queue Service Time (g_s), s Cycle Queue Clearance Time (g_c), s Green Ratio (g/c) Capacity (c), veh/h Volume-to-Capacity Ratio (X) Back of Queue (Q), ft/ln (90 th percentile) Back of Queue (Q), veh/ln (90 th percentile) Queue Storage Ratio (RQ) (90 th percentile) Uniform Delay (d_r), s/veh Incremental Delay (d_z), s/veh Initial Queue Delay (d_s), s/veh Control Delay (d_l), s/veh Level of Service (LOS) Approach Delay, s/veh / LOS Intersection Delay, s/veh / LOS	EB			WB			NB			SB					
	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R
	7	4	14	3	8	18	5	2	12	1	6	16			
	107	99		107	113	175	68	1814	174	86	1775	123			
	1810	1767		1286	1900	1572	1810	1766	1572	1767	1766	1610			
	6.4	5.9		10.2	7.1	14.1	1.8	45.4	3.6	2.3	0.0	1.7			
	6.4	5.9		10.2	7.1	14.1	1.8	45.4	3.6	2.3	0.0	1.7			
	0.21	0.23		0.13	0.13	0.13	0.65	0.63	0.63	0.66	0.63	0.63			
	269	405		224	249	206	273	2215	986	183	2232	1017			
	0.395	0.244		0.476	0.454	0.849	0.251	0.819	0.176	0.468	0.795	0.121			
126.1	115.9		143.7	144	225.2	27.8	462	53	54.7	43.3	26.8				
5.0	4.6		5.6	5.8	8.8	1.1	18.0	2.1	2.1	1.7	1.1				
1.26	0.23		0.96	0.29	1.50	0.15	0.46	0.19	0.27	0.04	0.13				
43.4	40.9		53.5	52.2	55.2	7.8	13.0	5.7	19.6	0.0	3.9				
0.4	0.1		0.6	0.5	3.7	0.1	2.6	0.3	0.7	3.0	0.2				
0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
43.8	41.0		54.1	52.7	58.9	7.9	15.6	5.9	20.3	3.0	4.2				
D	D		D	D	E	A	B	A	C	A	A				
	42.5	D		55.8	E		14.5	B		3.8		A			
	14.7													B	

Multimodal Results									
Approach	Movement	EB	WB		NB		SB		
	Pedestrian LOS Score / LOS	2.46	B	2.49	B	2.10	B	1.89	
	Bicycle LOS Score / LOS	0.83	A	1.14	A	1.48	A	2.12	

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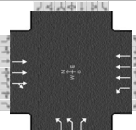
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HCS7 Signalized Intersection Results Summary

General Information				Intersection Information												
Agency				Analysis Date	5/12/2020		Duration, h		0.250							
Analyst				Time Period			Area Type		Other							
Jurisdiction				Analysis Year	2020		PHF		0.92							
Urban Street				File Name	2030 AM No Build COORS.xus		Analysis Period		1> 7:00							
Intersection																
Project Description																
2030- AM NO BUILD																
Demand Information																
Approach Movement				EB				WB				NB		SB		
Demand (v), veh/h				L	T	R	L	T	R	L	T	R	L	T	R	
				333	125	68	37	63	92	73	1286	17	36	915	129	
Signal Information				2												
Cycle, s	120.0	Reference Phase	End													
Offset, s	118	Reference Point	On	Green	10.9	1.2	43.2	12.1	34.3	0.0						
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.0	0.0	4.5	3.0	3.8	0.0						
Force Mode	Fixed	Simult. Gap N/S	On	Red	10.5	0.0	1.5	0.5	1.5	0.0						
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT					
Assigned Phase				7	4			5	2	1	6					
Case Number				1.0	3.0	7.3	1.1	4.0	1.1	4.0	1.1	4.0				
Phase Duration, s				15.6	55.2	39.6	15.6	50.4	14.4	49.2						
Change Period, ($V+R \pm$), s				3.5	5.3	5.3	3.5	6.0	3.5	6.0	3.5	6.0				
Max Allow Headway (MAH), s				3.1	3.1	3.1	3.1	3.0	0.0	3.0	3.0	0.0				
Queue Clearance Time (g_s), s				14.1	7.4	7.6	4.9	7.4	3.1	3.1						
Green Extension Time (g_e), s				0.0	0.8	0.7	0.0	0.0	0.0	0.0	0.0	0.0				
Phase Call Probability				1.00	1.00	1.00	1.00	1.00	1.00	1.00						
Max Out Probability				1.00	0.00	0.00	0.00	0.00	0.00	0.00						
Movement Group Results																
Approach Movement				EB				WB				NB		SB		
Assigned Movement				L	T	R	L	T	R	L	T	R	L	T	R	
				7	4	14	3	8	18	5	2	12	1	6	16	
Adjusted Flow Rate (v), veh/h				362	136	70	109	97	79	942	469	29	572	271		
Adjusted Saturation Flow Rate (s), veh/h/in				1810	1900	1610	1636	1572	1810	1856	1846	1767	1856	1740		
Queue Service Time (g_s), s				12.1	5.4	2.6	2.1	4.9	2.9	16.1	16.4	1.1	15.8	16.2		
Cycle Queue Clearance Time (g_c), s				12.1	5.4	2.6	5.6	4.9	2.9	16.1	16.4	1.1	15.8	16.2		
Green Ratio (g/C)				0.40	0.42	0.52	0.29	0.38	0.46	0.37	0.37	0.45	0.36	0.36		
Capacity (c), veh/h				567	790	832	509	592	392	1373	683	303	1336	626		
Volume-to-Capacity Ratio (X)				0.639	0.172	0.084	0.214	0.163	0.203	0.686	0.686	0.097	0.428	0.433		
Back of Queue (Q), ft/in (90 th percentile)				145	111	43.8	112.6	87.3	57.2	178.7	198.9	22.1	284.5	275.5		
Back of Queue (Q), veh/in (90 th percentile)				5.8	4.4	1.8	4.5	3.4	2.3	7.0	7.8	0.9	11.1	11.0		
Queue Storage Ratio (RQ) (90 th percentile)				0.73	0.28	0.22	1.13	0.87	0.23	0.18	0.20	0.18	0.28	0.28		
Uniform Delay (d_1), s/veh				29.3	22.1	14.6	32.5	24.8	18.7	11.9	12.3	19.2	35.6	36.3		
Incremental Delay (d_2), s/veh				5.4	0.5	0.2	1.0	0.6	1.2	2.8	5.5	0.6	1.0	2.1		
Initial Queue Delay (d_3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Control Delay (d), s/veh				34.7	22.5	14.8	33.5	25.4	19.9	14.7	17.8	19.9	36.6	38.5		
Level of Service (LOS)				C	C	B	C	C	C	B	B	B	D	D		
Approach Delay, s/veh / LOS				29.4	C	B	C	C	C	B	B	B	D	D		
Intersection Delay, s/veh / LOS				25.0										C		
Multimodal Results																
Pedestrian LOS Score / LOS				EB				WB				NB		SB		
				2.58	C	2.60	C	1.93	B	2.12	A	1.13	B			
Bicycle LOS Score / LOS				1.42	A	0.83	A	1.31	A	1.13	A	1.13	A			

HCS7 Signalized Intersection Results Summary

General Information		Intersection Information	
Agency		Duration, h	0.250
Analyst		Area Type	Other
Jurisdiction		Time Period	PHF
Urban Street		Analysis Year	2020
Intersection	#4 Coors/Los Volcanes	File Name	2030 AM No Build COORS.xus
Project Description	2030-AM NO BUILD		



Demand Information		WB		NB		SB	
Approach Movement		L	T	R	L	T	R
Demand (v), veh/h		150	48	72	1157	761	137

Signal Information		EB		WB		NB		SB	
Cycle, s	120.0	Reference Phase	2	Begin					
Offset, s	100	Reference Point	On	Simult. Gap E/W	On	Simult. Gap N/S	On	Simult. Gap S/E	On
Uncoordinated	No	Simult. Gap E/W	On	Simult. Gap E/W	On	Simult. Gap N/S	On	Simult. Gap S/E	On
Force Mode	Fixed	Simult. Gap N/S	On	Simult. Gap N/S	On	Simult. Gap S/E	On	Simult. Gap S/E	On

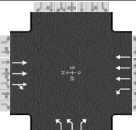
Timer Results		EBL		EBT		WBL		WBT		NBL		NBT		SBL		SBT	
Assigned Phase				4						5		2				6	
Case Number				9.0						1.0		4.0				8.3	
Phase Duration, s				13.5						6.9		106.5				99.7	
Change Period, (Y+R), s				5.5						3.5		5.5				5.5	
Max Allow Headway (MAH), s				3.1						3.0		0.0				0.0	
Queue Clearance Time (g _s), s				7.4						3.3		0.0				0.0	
Green Extension Time (g _e), s				0.4						0.2		0.0				0.0	
Phase Call Probability				1.00						0.97							
Max Out Probability				0.00						0.00							

Movement Group Results												
Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
	7	14					5	2		6	16	
	163	41					109	1747		652	305	
	1757	1610					1810	1685		1856	1723	
	5.4	2.9					1.3	6.0		14.4	0.0	
	5.4	2.9					1.3	6.0		14.4	0.0	
	0.07	0.09					0.83	0.84		0.78	0.78	
	234	152					506	4254		2912	1352	
	0.697	0.271					0.215	0.411		0.224	0.226	
Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
	108.8	51.8					11.5	36.5		3.3	6.6	
	4.4	2.1					0.5	1.4		0.1	0.3	
	0.44	0.17					0.05	0.04		0.00	0.01	
	54.8	50.5					3.3	1.1		0.0	0.0	
	1.4	0.4					0.1	0.2		0.2	0.4	
	0.0	0.0					0.0	0.0		0.0	0.0	
	56.2	50.8					3.4	1.4		0.2	0.4	
	E	D					A	A		A	A	
Level of Service (LOS)												
Approach Delay, s/veh / LOS												
Intersection Delay, s/veh / LOS												
4.7												

Multimodal Results		EB		WB		NB		SB	
Pedestrian LOS Score / LOS		2.63	C	2.50	C	0.62	A	2.04	B
Bicycle LOS Score / LOS			F		A	1.22	A	1.01	A

HCS7 Signalized Intersection Results Summary

General Information		Intersection Information	
Agency		Duration, h	0.250
Analyst		Area Type	Other
Jurisdiction		Time Period	PHF
Urban Street		Analysis Year	2020
Intersection	#4 Coors/Los Volcanes	File Name	2030 PM No Build COORS.xus
Project Description	2030-PM NO BUILD		



Demand Information		EB			WB			NB			SB		
Approach Movement		L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		200		105				70	1253			1792	171

Signal Information		EB		WB		NB		SB	
Cycle, s	130.0	Reference Phase	2	Begin					
Offset, s	100	Reference Point	On	Simult. Gap E/W	On	Simult. Gap N/S	On	Simult. Gap S/E	On
Uncoordinated	No	Simult. Gap E/W	On	Simult. Gap E/W	On	Simult. Gap N/S	On	Simult. Gap S/E	On
Force Mode	Fixed	Simult. Gap N/S	On	Simult. Gap N/S	On	Simult. Gap S/E	On	Simult. Gap S/E	On

Timer Results		EBL		EBT		WBL		WBT		NBL		NBT		SBL		SBT	
Assigned Phase				4						5		2				6	
Case Number				9.0						1.0		4.0				8.3	
Phase Duration, s				16.2						6.7		113.8				107.2	
Change Period, (Y+R), s				5.5						3.5		5.5				5.5	
Max Allow Headway (MAH), s				3.1						3.0		0.0				0.0	
Queue Clearance Time (g _s), s				10.0						3.2		0.0				0.0	
Green Extension Time (g _e), s				0.7						0.0		0.0				0.0	
Phase Call Probability				1.00						0.96							
Max Out Probability				0.00						0.00							

Movement Group Results												
Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	14					5	2		6	16	
Adjusted Flow Rate (v), veh/h	217		103				86	1547		1439	693	
Adjusted Saturation Flow Rate (s), veh/h/in	1757		1610				1810	1685		1856	1771	
Queue Service Time (g_s), s	7.9		8.0				1.2	13.8		46.3	0.0	
Cycle Queue Clearance Time (g_c), s	7.9		8.0				1.2	13.8		46.3	0.0	
Green Ratio (g/c)	0.08		0.11				0.82	0.83		0.78	0.78	
Capacity (c), veh/h	288		171				181	4213		2902	1385	
Volume-to-Capacity Ratio (X)	0.755		0.603				0.477	0.367		0.496	0.501	
Back of Queue (Q), ft/in (90 th percentile)	147.9		139				68.8	150		11.3	22.4	
Back of Queue (Q), veh/in (90 th percentile)	5.9		5.6				2.8	5.9		0.4	0.9	
Queue Storage Ratio (RQ) (90 th percentile)	0.59		0.46				0.31	0.15		0.01	0.02	
Uniform Delay (d'), s/veh	58.4		55.5				17.9	4.4		0.0	0.0	
Incremental Delay (d_s), s/veh	1.5		1.3				0.6	0.2		0.6	1.3	
Initial Queue Delay (d_s), s/veh	0.0		0.0				0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	59.9		56.7				18.5	4.7		0.6	1.3	
Level of Service (LOS)	E		E				B	A		A	A	
Approach Delay, s/veh / LOS	58.9		E		0.0		5.4	A		0.8		A
Intersection Delay, s/veh / LOS	7.2											

Multimodal Results		EB		WB		NB		SB	
Pedestrian LOS Score / LOS		2.63	C	2.48	B	0.63	A	2.05	B
Bicycle LOS Score / LOS			F		A	1.28	A	1.66	B

HCS7 Two-Way Stop-Control Report

General Information

Analyst

Agency/Co.

Date Performed

Analysis Year

Time Analyzed

Intersection Orientation

Project Description

AM

WHP

5/12/2020

2030

North-South

AM NO BUILD

Site Information

Intersection

Jurisdiction

East/West Street

North/South Street

Peak Hour Factor

Analysis Time Period (hrs)

#6 - Airport and Meridian

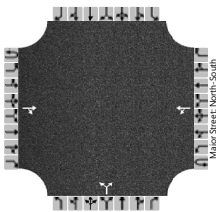
Meridian

Airport

0.92

0.25

Lanes



Vehicle Volumes and Adjustments

Approach Movement	Eastbound			Westbound			Northbound			Southbound			
	U	L	T	U	L	T	U	L	T	U	L	T	R
Priority		10	11		7	8		1U	1		4U	4	5
Number of Lanes		0	1		0	0		0	0		0	0	1
Configuration			LR						LT				TR
Volume (veh/h)		21				16			31		151		201
Percent Heavy Vehicles (%)		3				3			3				21
Proportion Time Blocked													
Percent Grade (%)		0											
Right Turn Channelized													
Median Type Storage	Undivided												

Critical and Follow-up Headways

Base Critical Headway (sec)	7.1			6.2				4.1					
Critical Headway (sec)	6.43			6.23				4.13					
Base Follow-Up Headway (sec)	3.5			3.3				2.2					
Follow-Up Headway (sec)	3.53			3.33				2.23					

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		40						34					
Capacity, c (veh/h)		631						1319					
v/c Ratio		0.06						0.03					
95% Queue Length, Q ₉₅ (veh)		0.2						0.1					
Control Delay (s/veh)		11.1						7.8					
Level of Service (LOS)		B						A					
Approach Delay (s/veh)		11.1											
Approach LOS		B						1.5					

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#6 - 2030 AM NO BUILD.xtw

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HCS7 Two-Way Stop-Control Report

General Information

Analyst

Agency/Co.

Date Performed

Analysis Year

Time Analyzed

Intersection Orientation

Project Description

AM

WHP

5/12/2020

2030

North-South

PM NO BUILD

Site Information

Intersection

Jurisdiction

East/West Street

North/South Street

Peak Hour Factor

Analysis Time Period (hrs)

#6 -Airport and Meridian

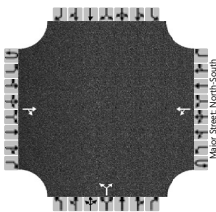
Meridian

Airport

0.92

0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound				
	U	L	T	U	L	T	U	L	T	U	L	T	R	
Priority		10	11		7	8		1U	1	2	3	4U	4	5
Number of Lanes		0	1		0	0		0	0	1	0	0	0	1
Configuration			LR						LT					TR
Volume (veh/h)		11				16				15	145			51
Percent Heavy Vehicles (%)		3				3			3					22
Proportion Time Blocked														
Percent Grade (%)			0											
Right Turn Channelized														
Median Type Storage	Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)	7.1			6.2					4.1					
Critical Headway (sec)	6.43			6.23					4.13					
Base Follow-Up Headway (sec)	3.5			3.3					2.2					
Follow-Up Headway (sec)	3.53			3.33					2.23					

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			29							16				
Capacity, c (veh/h)			860							1512				
v/c Ratio			0.03							0.01				
95% Queue Length, Q ₉₅ (veh)			0.1							0.0				
Control Delay (s/veh)			9.3							7.4				
Level of Service (LOS)			A							A				
Approach Delay (s/veh)			9.3							0.8				
Approach LOS			A											

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HCS7 Two-Way Stop-Control Report

General Information

Analyst

Agency/Co.

Date Performed

Analysis Year

Time Analyzed

Intersection Orientation

Project Description

AM

WHP

5/12/2020

2030

East-West

AM NO BUILD

Site Information

Intersection

Jurisdiction

North/South Street

Peak Hour Factor

Analysis Time Period (hrs)

8 Los Volcanes/Gallatin

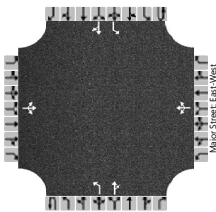
Los Volcanes

Gallatin

0.90

0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6	7	8	9		10	11	12	
Priority	0	1	1	0	0	1	1	0	0	1	0		0	1	0	
Number of Lanes																
Configuration		L		TR		L		TR		LTR				LTR		
Volume (veh/h)	471	340	32		18	230	36		7	4	80		9	7	322	
Percent Heavy Vehicles (%)	3				3				3	3	3		3	3	3	
Proportion Time Blocked																
Percent Grade (%)									0							0
Right Turn Channelized																
Median Type Storage	Left Only															
	9															

Critical and Follow-up Headways

Base Critical Headway (sec)	4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)	4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)	2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)	2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)	523				20						101				376
Capacity, c (veh/h)	1260				1140						323				450
v/c Ratio	0.42				0.02						0.31				0.84
95% Queue Length, Q ₉₅ (veh)	2.1				0.1						1.3				8.1
Control Delay (s/veh)	9.9				8.2						21.1				42.1
Level of Service (LOS)	A				A						C				E
Approach Delay (s/veh)	5.5				0.5				21.1						42.1
Approach LOS									C						E

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HCS7 Two-Way Stop-Control Report

General Information

Analyst

Agency/Co.

Date Performed

Analysis Year

Time Analyzed

Intersection Orientation

Project Description

AM

WHP

5/12/2020

2030

East-West

PM NO BUILD

Site Information

Intersection

Jurisdiction

East/West Street

North/South Street

Peak Hour Factor

Analysis Time Period (hrs)

8 Los Volcanes/Gallatin

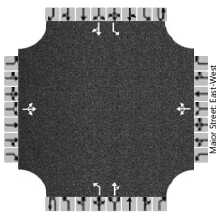
Los Volcanes

Gallatin

0.92

0.25

Lanes



Vehicle Volumes and Adjustments

Approach Movement	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6	7	8	9		10	11	12	
Number of Lanes	0	1	1	0	0	1	1	0	0	1	0		0	1	0	
Configuration		L		TR		L		TR		LTR				LTR		
Volume (veh/h)		219	231	14	4	248	29		36	3	6		30	1	279	
Percent Heavy Vehicles (%)		3			3				3	3	3		3	3	3	
Proportion Time Blocked																
Percent Grade (%)									0							0
Right Turn Channelized																
Median Type Storage	Left Only															
	9															

Critical and Follow-up Headways

Base Critical Headway (sec)	4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)	4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)	2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)	2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)	238				4						49				337
Capacity, c (veh/h)	1254				1292						128				657
v/c Ratio	0.19				0.00						0.38				0.51
95% Queue Length, Q ₉₅ (veh)	0.7				0.0						1.6				2.9
Control Delay (s/veh)	8.5				7.8						49.8				16.1
Level of Service (LOS)	A				A						E				C
Approach Delay (s/veh)	4.0				0.1				49.8						16.1
Approach LOS									E						C

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HCS7 Two-Way Stop-Control Report

General Information

Analyst

Agency/Co.

Date Performed

Analysis Year

Time Analyzed

Intersection Orientation

Project Description

AM

WHP

5/12/2020

2030

East-West

AM NO BUILD

Site Information

Intersection

Jurisdiction

East/West Street

North/South Street

Peak Hour Factor

Analysis Time Period (hrs)

#10 Bluewater & Airport

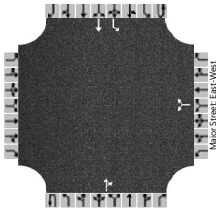
Bluewater

Airport

0.92

0.25

Lanes



Vehicle Volumes and Adjustments

Approach Movement	Eastbound			Westbound			Northbound			Southbound		
	U	L	T	U	L	T	U	L	T	U	L	T
Priority	1U	1	2	3	4U	4	5	6		7	8	9
Number of Lanes	0	0	1	0	0	1	1	0	0	1	0	0
Configuration				TR		L	T			LR		
Volume (veh/h)			413	54		53	358		97		115	
Percent Heavy Vehicles (%)					3				3		3	
Proportion Time Blocked												
Percent Grade (%)										0		
Right Turn Channelized												
Median Type Storage	Left Only											
	9											

Critical and Follow-up Headways

Base Critical Headway (sec)					4.1				7.1		6.2
Critical Headway (sec)					4.13				6.43		6.23
Base Follow-Up Headway (sec)					2.2				3.5		3.3
Follow-Up Headway (sec)					2.23				3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)					58					230	
Capacity, c (veh/h)					1052					570	
v/c Ratio					0.05					0.40	
95% Queue Length, Q ₉₅ (veh)					0.2					1.9	
Control Delay (s/veh)					8.6					15.5	
Level of Service (LOS)					A					C	
Approach Delay (s/veh)					1.1					15.5	
Approach LOS										C	

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#10 - 2030 AM NO BUILD.xdw

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HCS7 Two-Way Stop-Control Report

General Information

Analyst

Agency/Co.

Date Performed

Analysis Year

Time Analyzed

Intersection Orientation

Project Description

AM

WHP

5/12/2020

2030

East-West

PM NO BUILD

Site Information

Intersection

Jurisdiction

North/South Street

Peak Hour Factor

Analysis Time Period (hrs)

#10 Bluewater & Airport

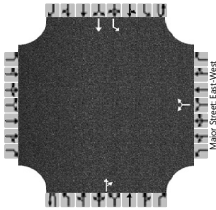
Bluewater

Airport

0.92

0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	U	L	T	U	L	T	U	L	T	U	L	T
Priority	1U	1	2	3	4U	4	5	6		7	8	9
Number of Lanes	0	0	1	0	0	1	1	0		0	1	0
Configuration				TR		L	T			LR		
Volume (veh/h)			472	34		26	331		51		77	
Percent Heavy Vehicles (%)						3			3		3	
Proportion Time Blocked												
Percent Grade (%)										0		
Right Turn Channelized												
Median Type Storage	Left Only											
	9											

Critical and Follow-up Headways

Base Critical Headway (sec)					4.1				7.1		6.2
Critical Headway (sec)					4.13				6.43		6.23
Base Follow-Up Headway (sec)					2.2				3.5		3.3
Follow-Up Headway (sec)					2.23				3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)					28					139	
Capacity, c (veh/h)					1015					556	
v/c Ratio					0.03					0.25	
95% Queue Length, Q ₉₅ (veh)					0.1					1.0	
Control Delay (s/veh)					8.6					13.6	
Level of Service (LOS)					A					B	
Approach Delay (s/veh)					0.6					13.6	
Approach LOS										B	

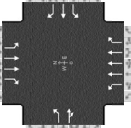
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#10 - 2030 PM NO BUILD.xvw

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency		Analysis Date	5/12/2020	Duration, h	0.250		
Analyst		Time Period	PHF	Area Type	Other		
Jurisdiction		Analysis Year	2020	PHF	0.92		
Urban Street		File Name	2030 AM Build UNSER_xus	Analysis Period	1> 7:00		
Intersection	#1 Unser/Los Volcanes						
Project Description	2030-AM BUILD						

Demand Information				EB				WB				NB				SB			
Approach Movement				L	T	R		L	T	R		L	T	R		L	T	R	
Demand (v), veh/h				300	86	14		136	109	314		37	2059	282		450	1037	142	

Signal Information				EB				WB				NB				SB			
Cycle, s				L	T	R		L	T	R		L	T	R		L	T	R	
120.0	Reference Phase	2																	
118	Reference Point	End																	
Offset, s				Green	2.6	9.0	53.2	10.0	0.9	23.3									
Uncoordinated	No	Simult. Gap E/W	On	Yellow	4.0	3.0	3.0	0.0	0.0	3.5									
Force Mode	Fixed	Simult. Gap N/S	On	Red	0.5	0.5	1.0	0.5	0.0	2.0									

Timer Results				EBL				EBT				WBL				WBT				NBL				NBT				SBL				SBT			
Assigned Phase				7				4				3				8				5				2				1				6			
Case Number				1.1				4.0				4.0				1.1				1.1				3.0				1.1				3.0			
Phase Duration, s				14.4				29.7				13.5				28.8				7.1				57.2				19.6				69.7			
Change Period, ($\gamma + R^c$), s				3.8				5.5				3.5				5.5				4.5				5.5				3.5				5.5			
Max Allow Headway (MAH), s				3.1				3.2				3.1				3.2				3.0				3.0				3.0				3.0			
Queue Clearance Time (g_s), s				12.6				7.5				9.9				22.2				3.5				15.7											
Green Extension Time (g_e), s				0.0				1.1				0.1				1.1				0.0				0.0				0.4				0.0			
Phase Call Probability				1.00				1.00				0.99				1.00				0.74				1.00				1.00				1.00			
Max Out Probability				1.00				0.00				0.00				0.00				0.00				0.00				0.00				0.00			

Movement Group Results				EB				WB				NB				SB			
Approach Movement				L	T	R		L	T	R		L	T	R		L	T	R	
Assigned Movement				7				4				5				2			
Adjusted Flow Rate (v), veh/h				326				148				118				2238			
Adjusted Saturation Flow Rate (s), veh/h/in				1810				1767				1900				1885			
Queue Service Time (g _s), s				10.6				7.9				6.4				20.2			
Cycle Queue Clearance Time (g _c), s				10.6				7.9				6.4				20.2			
Green Ratio (g/c)				0.28				0.28				0.19				0.33			
Capacity (c), veh/h				402				366				369				516			
Volume-to-Capacity Ratio (X)				0.812				0.383				0.321				0.611			
Back of Queue (Q), ft/in (95 th percentile)				225.5				156.9				135.9				312.4			
Back of Queue (Q), veh/in (95 th percentile)				9.0				6.1				5.4				12.2			
Queue Storage Ratio (RQ) (95 th percentile)				1.50				1.05				0.30				2.08			
Uniform Delay (d _r), s/veh				41.3				34.4				41.6				33.9			
Incremental Delay (d _s), s/veh				11.2				0.2				0.2				0.4			
Initial Queue Delay (d _s), s/veh				0.0				0.0				0.0				0.0			
Control Delay (d _s), s/veh				52.5				34.6				41.7				34.3			
Level of Service (LOS)				D				C				B				F			
Approach Delay, s/veh / LOS				49.7				35.9				D				C			
Intersection Delay, s/veh / LOS				33.7															

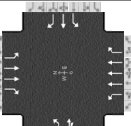
Multimodal Results				EB				WB				NB				SB			
Pedestrian LOS Score / LOS				2.68				C				2.61				B			
Bicycle LOS Score / LOS				1.19				A				1.45				A			

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HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency		Analysis Date	5/12/2020	Duration, h	0.250		
Analyst		Time Period	PHF	Area Type	Other		
Jurisdiction		Analysis Year	2020	PHF	0.92		
Urban Street		File Name	2030 PM Build UNSER_xus	Analysis Period	1> 7:00		
Intersection	#1 Unser/Los Volcanes						
Project Description	2030-PM BUILD						

Demand Information				EB				WB				NB				SB			
Approach Movement				L	T	R		L	T	R		L	T	R		L	T	R	
Demand (v), veh/h				169				54				32				211			

Signal Information				EB				WB				NB				SB			
Cycle, s				L	T	R		L	T	R		L	T	R		L	T	R	
130.0	Reference Phase	2																	
127	Reference Point	End																	
Offset, s				Green	2.1	6.3	58.8	10.5	1.3	26.6									
Uncoordinated	No	Simult. Gap E/W	On	Yellow	4.0	3.0	3.0	0.0	0.0	3.5									
Force Mode	Fixed	Simult. Gap N/S	On	Red	0.5	0.5	1.0	0.8	0.0	2.0									

Timer Results				EBL				EBT				WBL				WBT				NBL				NBT				SBL				SBT			
Assigned Phase				7				4				3				8				5				2				1				6			
Case Number				1.1				4.0				4.0				1.1				1.1				3.0				1.1				3.0			
Phase Duration, s				14.3				35.1				15.6				36.4				6.6				62.8				16.4				72.7			
Change Period, ($Y+R_c$), s				3.8				5.5				3.5				5.5				4.5				5.5				3.5				5.5			
Max.Allow Headway (MAH), s				3.1				3.3				3.1				3.3				3.0				3.0				3.0				3.0			
Queue Clearance Time (g_s), s				12.2				6.7				14.1				29.8				3.2				12.5											
Green Extension Time (g_e), s				0.0				1.3				0.0				1.1				0.0				0.4				0.4				0.0			
Phase Call Probability				1.00				1.00				1.00				1.00				0.65				1.00				1.00				1.00			
Max Out Probability				1.00				0.00				1.00				0.00				0.00				0.00				0.00				0.00			

Movement Group Results				EB			WB			NB			SB			
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R	
Assigned Movement				7	4	14	3	8	18	5	2	12	1	6	16	
Adjusted Flow Rate (v), veh/h				184	82		229	111	384	29	1485	133	262	1533	129	
Adjusted Saturation Flow Rate (s), veh/hln				1810	1809		1767	1900	1572	1810	1685	1572	1767	1766	1610	
Queue Service Time (g_s), s				10.2	4.7		12.1	6.1	27.8	1.2	10.9	1.6	10.5	51.9	6.3	
Cycle Queue Clearance Time (g_c), s				10.2	4.7		12.1	6.1	27.8	1.2	10.9	1.6	10.5	51.9	6.3	
Green Ratio (g/C)				0.31	0.23		0.32	0.24	0.34	0.46	0.44	0.44	0.56	0.52	0.60	
Capacity (c), veh/h				430	412		470	452	530	120	2230	694	357	1826	962	
Volume-to-Capacity Ratio (X)				0.427	0.198		0.488	0.245	0.723	0.246	0.666	0.191	0.735	0.840	0.134	
Back of Queue (Q), ft(ln, 90 th percentile)				179.9	95.6		223	126.5	384.1	21.7	100.2	27.2	138.5	721.1	205.5	
Back of Queue (Q), veh(ln, 90 th percentile)				7.2	3.8		8.7	5.1	15.0	0.9	3.9	1.1	5.4	28.2	8.2	
Queue Storage Ratio (RQ) (90 th percentile)				1.20	0.32		1.49	0.28	2.56	0.04	0.10	0.18	0.24	0.72	1.37	
Uniform Delay (d'), s/veh				34.8	40.6		34.9	40.1	37.8	27.2	4.9	4.4	16.2	37.3	16.8	
Incremental Delay (d_2), s/veh				0.3	0.1		0.3	0.1	1.6	0.4	1.6	0.6	0.6	2.7	0.2	
Initial Queue Delay (d_1), s/veh				0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (d), s/veh				35.0	40.7		35.2	40.2	39.4	27.6	6.5	5.0	16.8	40.0	17.0	
Level of Service (LOS)				D	D		D	D	D	C	A	A	B	D	B	
Approach Delay, s/veh / LOS				36.8	D		38.2	D	D	6.8	A		35.3	D		
Intersection Delay, s/veh / LOS				25.5												C
Intersection Delay, s/veh / LOS																

HCS7 Signalized Intersection Results Summary

General Information			Intersection Information			
Agency		Analysis Date	5/12/2020	Duration, h	0.250	
Analyst		Time Period	PHF	Area Type	Other	
Jurisdiction		Analysis Year	2020	PHF	0.92	
Urban Street	Unser	Analysis Period	1> 7:00			
Intersection	#2 Unser/Bluewater	File Name	2030 AM Build UNSER_xus			
Project Description	2030-AM BUILD					

Demand Information											
Approach Movement		EB	T	R	L	T	R	L	T	R	SB
Demand (v), veh/h		96	42	39	48	21	70	22	1473	113	159 799 86

Signal Information											
Cycle, s	120.0	Reference Phase	2								
Offset, s	100	Reference Point	Begin								
Uncoordinated	No	Simult. Gap E/W	On	Green	2.2	3.9	75.9	8.0	8.0	0.0	
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.0	3.0	4.0	4.0	4.0	0.0	
				Red	0.5	0.5	1.0	0.5	1.5	0.0	

Timer Results											
Assigned Phase		EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT		
Case Number		7	4	8	8	5	2	1	6		
Phase Duration, s		12.5	26.0	5.3	13.5	5.7	80.9	13.1	88.3		
Change Period, (Y+R), s		4.5	5.5	5.5	5.5	3.5	5.5	3.5	5.5		
Max Allow Headway (MAH), s		3.1	3.2	3.2	3.2	3.0	0.0	3.0	0.0		
Queue Clearance Time (g _s), s		8.2	6.5	7.4	7.4	2.9	9.4	9.4	9.4		
Green Extension Time (g _e), s		0.0	0.4	0.4	0.4	0.0	0.0	0.3	0.0		
Phase Call Probability		0.97	1.00	1.00	1.00	0.73		1.00			
Max Out Probability		1.00	0.00		0.00	0.00		0.00			

Movement Group Results											
Approach Movement		L	T	R	L	T	R	L	T	R	SB
Assigned Movement		7	4	14	3	8	18	5	2	12	1
Adjusted Flow Rate (v), veh/h		104	77	52	23	73	39	2610	191	173	868
Adjusted Saturation Flow Rate (s), veh/h/ln		1810	1770	1312	1900	1572	1810	1766	1572	1767	1766
Queue Service Time (g _s), s		6.2	4.5	4.6	1.4	5.4	0.9	75.4	2.1	7.4	0.0
Cycle Queue Clearance Time (g _c), s		6.2	4.5	4.6	1.4	5.4	0.9	75.4	2.1	7.4	0.0
Green Ratio (g/C)		0.15	0.17	0.07	0.07	0.07	0.65	0.63	0.63	0.73	0.69
Capacity (c), veh/h		259	302	147	127	105	500	2220	988	202	2439
Volume-to-Capacity Ratio (X)		0.403	0.255	0.354	0.180	0.695	0.078	1.176	0.194	0.857	0.356
Back of Queue (Q), ft/ln (95 th percentile)		125.8	88.9	70.5	29.3	101.8	14.9	1389.	27	223.2	6.4
Back of Queue (Q), veh/ln (95 th percentile)		5.0	3.6	2.8	1.2	4.0	0.6	54.3	1.1	8.7	0.2
Queue Storage Ratio (RQ) (95 th percentile)		1.26	0.18	0.47	0.06	0.68	0.08	1.39	0.10	1.12	0.01
Uniform Delay (d _r), s/veh		46.1	43.1	54.4	52.9	54.8	7.8	14.7	2.8	39.9	0.0
Incremental Delay (d _z), s/veh		0.4	0.2	0.5	0.3	3.1	0.0	80.1	0.1	4.0	0.4
Initial Queue Delay (d _s), s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d _t), s/veh		46.4	43.3	55.0	53.2	57.9	7.8	94.8	2.9	43.9	0.4
Level of Service (LOS)		D	D	D	D	E	A	F	A	D	A
Approach Delay, s/veh / LOS		45.1	D	D	56.1	E	87.4	F	7.3	A	A
Intersection Delay, s/veh / LOS		64.0									

Multimodal Results											
Pedestrian LOS Score / LOS		EB	WB								SB
Bicycle LOS Score / LOS		2.47	B	2.49	B	2.08	B	1.88	B	1.39	A

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HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency		Analysis Date	5/12/2020	Duration, h	0.250		
Analyst		Time Period	PHF	Area Type	Other		
Jurisdiction		Analysis Year	2020	PHF	0.92		
Urban Street	Unser	Analysis Period	1> 7:00				
Intersection	#2 Unser/Bluewater	File Name	2030 PM Build UNSER.xus				
Project Description	2030- PM BUILD						

Demand Information											
Approach Movement		EB	T	R	L	T	R	L	T	R	SB
Demand (v), veh/h		98	53	41	101	104	179	37	981	99	82 1634 132

Signal Information											
Cycle, s	130.0	Reference Phase	2								
Offset, s	127	Reference Point	Begin								
Uncoordinated	No	Simult. Gap E/W	On	Green	3.6	0.8	81.4	8.2	17.5	0.0	
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.0	0.0	4.0	4.0	4.0	0.0	
				Red	0.5	0.0	1.0	0.5	1.5	0.0	

Timer Results											
Assigned Phase		EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT		
Case Number		7	4	8	8	5	2	1	6		
Phase Duration, s		12.7	35.7	5.3	23.0	7.1	86.4	7.8	87.2		
Change Period, (Y+R), s		4.5	5.5	5.5	5.5	3.5	5.5	3.5	5.5		
Max Allow Headway (MAH), s		3.1	3.2	3.2	3.2	3.0	0.0	3.0	0.0		
Queue Clearance Time (g _s), s		8.4	7.9	16.6	16.6	3.8	4.4	4.4	4.4		
Green Extension Time (g _e), s		0.0	1.0	0.9	0.9	0.1	0.0	0.1	0.0		
Phase Call Probability		0.98	1.00	1.00	1.00	0.92		0.96			
Max Out Probability		1.00	0.00		0.00	0.00		0.00			

Movement Group Results											
Approach Movement		L	T	R	L	T	R	L	T	R	SB
Assigned Movement		7	4	14	3	8	18	5	2	12	1
Adjusted Flow Rate (v), veh/h		107	99	110	113	180	69	1817	182	89	1776
Adjusted Saturation Flow Rate (s), veh/h/ln		1810	1767	1286	1900	1572	1810	1766	1572	1767	1766
Queue Service Time (g _s), s		6.4	5.9	10.5	7.1	14.6	1.8	44.8	3.3	2.4	0.0
Cycle Queue Clearance Time (g _c), s		6.4	5.9	10.5	7.1	14.6	1.8	44.8	3.3	2.4	0.0
Green Ratio (g/C)		0.21	0.23	0.13	0.13	0.13	0.65	0.62	0.62	0.66	0.63
Capacity (c), veh/h		274	411	228	256	212	272	2200	979	185	2220
Volume-to-Capacity Ratio (X)		0.389	0.241	0.480	0.442	0.652	0.252	0.826	0.185	0.481	0.800
Back of Queue (Q), ft/ln (90 th percentile)		125.5	115.5	146.9	143.4	230.9	28.6	428.6	47.9	56.6	44.5
Back of Queue (Q), veh/ln (90 th percentile)		5.0	4.6	5.7	5.7	9.0	1.1	16.7	1.9	2.2	1.7
Queue Storage Ratio (RQ) (90 th percentile)		1.26	0.23	0.98	0.29	1.54	0.16	0.43	0.17	0.28	0.04
Uniform Delay (d _r), s/veh		43.1	40.5	53.2	51.8	55.0	8.1	12.2	4.9	19.7	0.0
Incremental Delay (d _z), s/veh		0.3	0.1	0.6	0.4	3.7	0.1	2.7	0.3	0.7	3.1
Initial Queue Delay (d _s), s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d _t), s/veh		43.4	40.7	53.8	52.2	58.7	8.2	14.9	5.2	20.4	3.1
Level of Service (LOS)		D	D	D	D	E	A	B	A	C	A
Approach Delay, s/veh / LOS		42.1	D	D	55.6	E	13.8	B	4.0	A	A
Intersection Delay, s/veh / LOS		14.5									

Multimodal Results											
Pedestrian LOS Score / LOS		EB	WB								SB
Bicycle LOS Score / LOS		2.46	B	2.49	B	2.10	B	1.89	B	2.13	B

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HCS7 Signalized Intersection Results Summary

General Information		Intersection Information					
Agency		Analysis Date	5/12/2020	Area Type	PHF	Duration, h	0.250
Analyst		Time Period		Other	0.92		
Jurisdiction		Analysis Year	2020	Analysis Period	1> 7:00		
Urban Street		Coors	2030 AM Build COORS.xus				
Intersection		File Name					
Project Description		#3 Coors/Bluewater 2030- AM BUILD					

Demand Information											
Approach Movement											
Demand (v), veh/h		EB		WB		NB		SB			
		L	T	R	L	T	R	L	T	R	L
		344	125	79	37	63	92	95	1286	17	36

Signal Information											
Cycle, s		120.0	Reference Phase	2							
Offset, s		118	Reference Point	End							
Uncoordinated		No	Simult. Gap E/W	On							
Force Mode		Fixed	Simult. Gap N/S	On							

Timer Results											
Assigned Phase		EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT		
Case Number		7	4	3	8	5	2	1	6		
Phase Duration, s		1.0	3.0	3.0	7.3	1.1	4.0	1.1	4.0		
Change Period, (Y+R), s		15.6	55.2	39.6	39.6	15.6	50.4	14.4	49.2		
Max Allow Headway (MAH), s		3.5	5.3	5.3	5.3	3.5	6.0	3.5	6.0		
Queue Clearance Time (g _s), s		3.1	3.1	3.1	3.1	3.0	0.0	3.0	0.0		
Green Extension Time (g _e), s		14.1	7.4	7.4	7.6	5.8	0.0	3.1	0.0		
Green Extension Time (g _e), s		0.0	0.8	0.8	0.8	0.1	0.0	0.0	0.0		
Phase Call Probability		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Max Out Probability		1.00	0.00		0.00	0.01		0.00			

Movement Group Results													
Approach Movement		EB			WB			NB			SB		
Assigned Movement		L	T	R	L	T	R	L	T	R	L	T	R
Adjusted Flow Rate (v), veh/h		7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Saturation Flow Rate (s), veh/h/in		374	136	82	109	97	103	942	489	29	589	277	
Queue Service Time (g_s), s		1810	1900	1610	1636	1572	1810	1856	1846	1767	1856	1729	
Cycle Queue Clearance Time (g_c), s		12.1	5.4	3.1	2.1	4.9	3.8	16.1	16.4	1.1	16.4	16.8	
Green Ratio (g/c)		12.1	5.4	3.1	5.6	4.9	3.8	16.1	16.4	1.1	16.4	16.8	
Capacity (c), veh/h		0.40	0.42	0.52	0.29	0.38	0.46	0.37	0.37	0.45	0.36	0.36	
Volume-to-Capacity Ratio (X)		567	790	832	509	592	385	1373	683	303	1336	622	
Back of Queue (Q), ft/in (90 th percentile)		0.660	0.172	0.098	0.214	0.163	0.268	0.686	0.686	0.097	0.441	0.446	
Back of Queue (Q), veh/in (90 th percentile)		161	111	51.8	112.6	87.3	76.2	178.7	198.9	22.2	294.5	284	
Queue Storage Ratio (RQ) (90 th percentile)		0.80	0.28	0.26	1.13	0.87	0.30	0.18	0.20	0.18	0.19	11.4	
Uniform Delay (d'), s/veh		6.4	4.4	2.1	4.5	3.4	3.0	7.0	7.8	0.8	9.1	11.5	
Incremental Delay (d_z), s/veh		29.8	22.1	14.8	32.5	24.8	19.1	11.9	12.3	19.2	36.3	37.0	
Initial Queue Delay (d_s), s/veh		5.9	0.5	0.2	1.0	0.6	1.7	2.8	5.5	0.6	1.0	2.3	
Control Delay (d), s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Level of Service (LOS)		35.7	22.5	15.0	33.5	25.4	20.8	14.7	17.8	19.8	37.3	39.3	
Approach Delay, s/veh / LOS		D	C	B	C	C	C	C	B	B	B	D	
Intersection Delay, s/veh / LOS		29.8	C	29.7	C	16.1	B	37.3	D	C			
		25.4											

Multimodal Results											
Pedestrian LOS Score / LOS		EB		WB		NB		SB			
Bicycle LOS Score / LOS		2.58	C	2.60	C	1.93	B	2.12	B		
		1.46	A	0.83	A	1.32	A	1.14	A		

HCS7 Signalized Intersection Results Summary

General Information			Intersection Information				
Agency		Analysis Date	5/12/2020	Area Type	PHF	Duration, h	0.250
Analyst		Time Period		Other	0.92		
Jurisdiction		Analysis Year	2020	Analysis Period	1> 7:00		
Urban Street		Coors					
Intersection	#3 Coors/Bluewater	File Name	2030 PM Build COORS.xus				
Project Description	2030 - PM BUILD						

Demand Information											
Approach Movement											
Demand (v), veh/h		EB		WB		NB		SB			
		L	T	R	L	T	R	L	T	R	L
		327	130	117	49	58	76	107	1107	23	111

Signal Information											
Cycle, s		130.0	Reference Phase	2							
Offset, s		68	Reference Point	End							
Uncoordinated		No	Simult. Gap E/W	On							
Force Mode		Fixed	Simult. Gap N/S	On							

Timer Results											
Assigned Phase		EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT		
Case Number		7	4	3	8	5	2	1	6		
Phase Duration, s		1.0	3.0	3.0	7.3	1.1	4.0	1.1	4.0		
Change Period, (Y+R), s		15.6	50.7	35.1	35.1	15.6	63.7	15.6	63.7		
Max Allow Headway (MAH), s		3.5	5.3	5.3	5.3	3.5	6.0	3.5	6.0		
Queue Clearance Time (g _s), s		3.1	3.2	3.2	3.2	3.0	0.0	3.0	0.0		
Green Extension Time (g _e), s		14.1	8.8	9.6	9.6	6.1	0.0	6.8	0.0		
Green Extension Time (g _e), s		0.0	0.9	0.8	0.8	0.1	0.0	0.1	0.0		
Phase Call Probability		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Max Out Probability		1.00	0.00		0.00	0.02		0.06			

Movement Group Results													
Approach Movement		EB			WB			NB			SB		
Assigned Movement		L	T	R	L	T	R	L	T	R	L	T	R
Adjusted Flow Rate (v), veh/h		7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (v), veh/h		355	141	115	116	79	116	818	406	131	1308	618	818
Adjusted Saturation Flow Rate (s), veh/h/in		1810	1900	1610	1574	1572	1810	1856	1839	1767	1856	1744	1744
Queue Service Time (g_s), s		12.1	6.8	5.6	5.2	4.7	4.1	5.8	6.4	4.8	36.8	37.0	37.0
Cycle Queue Clearance Time (g_c), s		12.1	6.8	5.6	7.6	4.7	4.1	5.8	6.4	4.8	36.8	37.0	37.0
Green Ratio (g/C)		0.34	0.35	0.44	0.23	0.32	0.54	0.44	0.44	0.54	0.44	0.44	0.44
Capacity (c), veh/h		456	664	712	401	507	258	1647	816	391	1647	774	774
Volume-to-Capacity Ratio (X)		0.779	0.213	0.162	0.290	0.157	0.451	0.497	0.497	0.334	0.794	0.799	0.799
Back of Queue (Q), ft/in (90 th percentile)		232.4	137.8	98	139.6	85.6	88.7	77	97	93	497.5	481.7	481.7
Back of Queue (Q), veh/in (90 th percentile)		9.3	5.5	3.9	5.6	3.3	3.5	3.0	3.6	1.94	19.3	19.3	19.3
Queue Storage Ratio (RQ) (90 th percentile)		1.16	0.34	0.49	1.40	0.86	0.35	0.08	0.10	0.74	0.50	0.49	0.49
Uniform Delay (d'), s/veh		40.2	29.7	21.8	41.4	31.4	24.0	4.4	5.0	15.1	25.0	24.6	24.6
Incremental Delay (d_s), s/veh		12.3	0.7	0.5	1.8	0.7	5.6	1.1	2.2	2.0	3.5	7.4	7.4
Initial Queue Delay (d_s), s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh		52.5	30.5	22.3	43.2	32.1	29.6	5.5	7.2	17.1	28.6	32.1	32.1
Level of Service (LOS)		D	C	C	D	C	C	A	A	B	C	C	C
Approach Delay, s/veh / LOS		41.7	D	38.7	D	8.1	A	28.9	C				
Intersection Delay, s/veh / LOS		24.6											

Multimodal Results				
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HCS7 Signalized Intersection Results Summary

General Information				Intersection Information		
Agency		Analysis Date	5/12/2020	Duration, h	0.250	
Analyst		Time Period		Area Type	Other	
Jurisdiction		Analysis Year	2020	PHF	0.92	
Urban Street				Analysis Period	1> 7.00	
Intersection	#4 Coors/Los Volcanes	File Name	2030 AM Build COORS.xus			
Project Description	2030-AM BUILD					

Demand Information		WB				NB				SB	
Approach Movement		EB		L		T		R		L	
Demand (v), veh/h		180		54		72		1167		776	

Signal Information		WB				NB				SB	
Cycle, s		120.0		Reference Phase		2		Begin		1	
Offset, s		100		Reference Point		On		Simult. Gap E/W		0.0	
Uncoordinated		No		Simult. Gap E/W		On		Yellow 3.0		4.5	
Force Mode		Fixed		Simult. Gap N/S		On		Red 0.5		1.0	

Timer Results		EBT				WBL				WBT				NBL				NBT				SBL				SBT	
Assigned Phase		4		9.0		13.8		5.5		3.1		7.8		0.5		1.00		0.00								6	
Case Number		9.0		4.0		106.2		5.5		3.0		0.0		3.3		0.97		0.00								8.3	
Phase Duration, s		13.8		6.9		106.2		5.5		3.0		0.0		3.3		0.97		0.00								99.3	
Change Period, (Y+R), s		5.5		3.5		5.5		3.0		0.0		0.0		0.0		0.0		0.0								5.5	
Max Allow Headway (MAH), s		3.1		3.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0								0.0	
Queue Clearance Time (g _s), s		7.8		0.5		0.0		0.0		0.0		0.0		0.0		0.0		0.0								0.0	
Green Extension Time (g _e), s		0.5		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0								0.0	
Phase Call Probability		1.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00								0.00	
Max Out Probability		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00								0.00	

Movement Group Results		EB				WB				NB				SB			
Approach Movement		L		T		R		L		T		R		L		T	
Assigned Movement		7		14		48		109		1759		688		318		16	
Adjusted Flow Rate (v), veh/h		174		1610		1757		1810		1685		1856		1700			
Adjusted Saturation Flow Rate (s), veh/h/in		5.8		3.3		3.3		1.3		6.7		15.3		0.0			
Queue Service Time (g _s), s		5.8		3.3		3.3		1.3		6.7		15.3		0.0			
Cycle Queue Clearance Time (g _c), s		0.07		0.10		0.10		0.83		0.84		0.78		0.78			
Green Ratio (g/c)		243		156		484		4242		2902		1329					
Capacity (c), veh/h		0.717		0.306		0.224		0.415		0.237		0.239					
Volume-to-Capacity Ratio (X)		116		60.1		12.1		42.7		3.6		7.1					
Back of Queue (Q), ft/in (90 th percentile)		4.6		2.4		0.5		1.7		0.1		0.3					
Back of Queue (Q), veh/in (90 th percentile)		0.46		0.20		0.05		0.04		0.00		0.01					
Queue Storage Ratio (RQ) (90 th percentile)		54.7		50.4		3.6		1.3		0.0		0.0					
Uniform Delay (d _r), s/veh		1.5		0.4		0.1		0.2		0.2		0.4					
Incremental Delay (d _s), s/veh		0.0		0.0		0.0		0.0		0.0		0.0					
Initial Queue Delay (d _s), s/veh		0.0		0.0		0.0		0.0		0.0		0.0					
Control Delay (d _s), s/veh		56.2		50.8		3.6		1.5		0.2		0.4					
Level of Service (LOS)		E		D		A		A		A		A					
Approach Delay, s/veh / LOS		55.0		E		0.0		0.0		A		0.3		A			
Intersection Delay, s/veh / LOS				5.0						A							

Multimodal Results		EB				WB				NB				SB	
Pedestrian LOS Score / LOS		2.63		C		2.48		B		0.62		A		2.04	
Bicycle LOS Score / LOS		F								1.23		A		1.04	

HCS7 Signalized Intersection Results Summary

General Information		Intersection Information			
Agency		Duration, h	0.250		Other
Analyst		Analysis Date	5/12/2020		
Jurisdiction		Time Period	PHF		0.92
Urban Street		Analysis Year	2020		t> 7.00
Intersection	#4 Coors/Los Volcanes	File Name	2030 PM Build COORS.xus		
Project Description	2030- PM BUILD				

Demand Information		EB				WB				NB				SB	
Approach Movement		L		T		R		L		T		R		L	
Demand (v), veh/h		202		106		70		1255		1794		173			

Signal Information		WB				NB			
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HCS7 Two-Way Stop-Control Report

General Information

Analyst

AM

Agency/Co.

WHP

Date Performed

5/13/2020

Analysis Year

2030

Time Analyzed

Intersection Orientation

North-South

Project Description

AM BUILD

Site Information

Intersection

DRIVEWAY A

Jurisdiction

DRIVEWAY A

North/South Street

AIRPORT

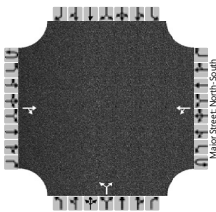
Peak Hour Factor

0.92

Analysis Time Period (hrs)

0.25

Lanes



Vehicle Volumes and Adjustments

Approach Movement	Eastbound			Westbound			Northbound			Southbound			
	U	L	T	U	L	T	U	L	T	U	L	T	
Priority		10	11		7	8	9	1U	1	2	3	4U	4
Number of Lanes		0	1	0	0	0	0	0	0	1	0	0	1
Configuration			LR						LT				TR
Volume (veh/h)		15		25					84	361			231
Percent Heavy Vehicles (%)		3		3					3				21
Proportion Time Blocked													
Percent Grade (%)		0											
Right Turn Channelized													
Median Type Storage	Undivided												

Critical and Follow-up Headways

Base Critical Headway (sec)	7.1	6.2							4.1				
Critical Headway (sec)	6.43	6.23							4.13				
Base Follow-Up Headway (sec)	3.5	3.3							2.2				
Follow-Up Headway (sec)	3.53	3.33							2.23				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)	43								91				
Capacity, c (veh/h)	491								1283				
v/c Ratio	0.09								0.07				
95% Queue Length, Q ₉₅ (veh)	0.3								0.2				
Control Delay (s/veh)	13.1								8.0				
Level of Service (LOS)	B								A				
Approach Delay (s/veh)	13.1								2.1				
Approach LOS	B												

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HCS™ TWSC Version 7.8.5

DRIVEWAY A 2030 AM BUILD.txtw

Generated: 9/4/2020 4:57:21 PM

HCS7 Two-Way Stop-Control Report

General Information

Analyst

AM

Agency/Co.

WHP

Date Performed

5/13/2020

Analysis Year

2030

Time Analyzed

Intersection Orientation

North-South

Project Description

PM BUILD

Site Information

Intersection

DRIVEWAY A

Jurisdiction

East/West Street

North/South Street

AIRPORT

Peak Hour Factor

0.92

Analysis Time Period (hrs)

0.25

Lanes

<

HCS7 Two-Way Stop-Control Report

General Information

Analyst

Agency/Co.

Date Performed

Analysis Year

Time Analyzed

Intersection Orientation

Project Description

AM

WHP

5/13/2020

2030

East-West

AM BUILD

Site Information

Intersection

Jurisdiction

East/West Street

North/South Street

Peak Hour Factor

Analysis Time Period (hrs)

DRIVEWAY D

MERIDIAN

DRIVEWAY D

0.92

0.25

Lanes

Vehicle Volumes and Adjustments

Approach Movement	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6	7	8	9		10	11	12	
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0		0	1	0	
Configuration	LT				TR								LR			
Volume (veh/h)	22 238				257 15								5 9			
Percent Heavy Vehicles (%)	3												3 3			
Proportion Time Blocked																
Percent Grade (%)																
Right Turn Channelized													0			
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)	4.1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			</
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HCS7 Two-Way Stop-Control Report

General Information

Analyst

Agency/Co.

Date Performed

Analysis Year

Time Analyzed

Intersection Orientation

Project Description

AM

WHP

5/13/2020

2030

East-West

PM BUILD

Site Information

Intersection

Jurisdiction

East/West Street

DRIVEWAY D

North/South Street

DRIVEWAY D

Peak Hour Factor

0.92

Analysis Time Period (hrs)

0.25

Lanes

Vehicle Volumes and Adjustments

Approach Movement	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6	7	8	9	10	11	12		
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	
Configuration	LT				TR								LR			
Volume (veh/h)	3	135					352	2					1		2	
Percent Heavy Vehicles (%)	3												3		3	
Proportion Time Blocked																
Percent Grade (%)																
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)	4.1													7.1		6.2
Critical Headway (sec)	4.13													6.43		6.23
Base Follow-Up Headway (sec)	2.2													3.5		3.3
Follow-Up Headway (sec)	2.23													3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)	3															3
Capacity, c (veh/h)	1168															598
v/c Ratio	0.00															0.01
95% Queue Length, Q ₉₅ (veh)	0.0															0.0
Control Delay (s/veh)	8.1															11.1
Level of Service (LOS)	A															B
Approach Delay (s/veh)	0.2															11.1
Approach LOS																B

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DRIVEWAY D 2030 PM BUILD.xtw

APPENDIX E

BEK Study Count Data

Traffic Count Data Sheet

Year Counts Taken: **2018** E-W Street: **Bluewater Rd.** Speed Limit (Bluewater Rd.)= **30** MPH
 Year of Tube Counts: **2015** N-S Street: **Coors Blvd.** Speed Limit (Coors Blvd.)= **40** MPH
 Annual Growth Factor: **0.5%** Signalized **9/11/18**

Begin Time	End Time	Eastbound (Bluewater Rd.)				Westbound (Bluewater Rd.)				Northbound (Coors Blvd.)				Southbound (Coors Blvd.)			
		L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians
7:00 AM	7:15 AM	~~51~~	~~15~~	~~5~~	~~0~~	~~14~~	~~21~~	~~18~~	~~0~~	~~21~~	~~268~~	~~5~~	~~0~~	~~4~~	~~155~~	~~56~~	~~0~~
7:15 AM	7:30 AM	65	17	14	0	5	8	25	0	12	343	4	0	7	200	33	0
7:30 AM	7:45 AM	57	27	18	0	8	11	19	0	16	265	7	0	8	221	30	1
7:45 AM	8:00 AM	49	29	21	0	12	30	20	0	22	345	4	0	6	202	22	0
8:00 AM	8:15 AM	88	24	0	1	10	10	23	0	19	251	1	0	12	217	34	0
8:15 AM	8:30 AM	~~41~~	~~14~~	~~0~~	~~0~~	~~9~~	~~9~~	~~22~~	~~0~~	~~14~~	~~273~~	~~4~~	~~0~~	~~10~~	~~226~~	~~35~~	~~1~~
8:30 AM	8:45 AM	~~34~~	~~9~~	~~0~~	~~0~~	~~12~~	~~12~~	~~21~~	~~0~~	~~8~~	~~246~~	~~1~~	~~0~~	~~14~~	~~233~~	~~28~~	~~0~~
8:45 AM	9:00 AM	~~34~~	~~11~~	~~0~~	~~0~~	~~4~~	~~4~~	~~15~~	~~79~~	~~10~~	~~261~~	~~4~~	~~0~~	~~8~~	~~214~~	~~36~~	~~0~~
AM Peak Hour Volumes		259	97	53	1	35	59	87	0	69	1204	16	0	33	840	119	1
Approach Total			409				181				1289				992		
Upstream TAQA Volume			403				178				1392				1056		
Adjusted TAQA Volume			409				181				1,413				1,072		
Congestion Factor			1.00				1.00				1.10				1.08		
AM Peak Adj. Vol.		259	97	53		35	59	87		76	1,320	18		36	908	129	

		Intersection							
AM Peak Hour Factor		0.91		0.73		0.94		0.87	0.94

Begin Time	End Time	Eastbound (Bluewater Rd.)				Westbound (Bluewater Rd.)				Northbound (Coors Blvd.)				Southbound (Coors Blvd.)			
		L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians
4:00 PM	4:15 PM	80	26	28	0	13	13	17	0	26	261	4	1	27	347	42	1
4:15 PM	4:30 PM	43	25	27	0	10	16	29	1	29	236	5	2	33	326	65	0
4:30 PM	4:45 PM	68	25	16	1	9	14	16	0	24	282	8	0	25	324	35	2
4:45 PM	5:00 PM	61	25	18	0	14	12	10	0	19	260	5	1	17	328	34	1
5:00 PM	5:15 PM	~~67~~	~~23~~	~~13~~	~~0~~	~~11~~	~~8~~	~~21~~	~~1~~	~~19~~	~~248~~	~~4~~	~~3~~	~~22~~	~~341~~	~~27~~	~~0~~
5:15 PM	5:30 PM	~~69~~	~~27~~	~~14~~	~~1~~	~~8~~	~~11~~	~~15~~	~~1~~	~~28~~	~~286~~	~~4~~	~~1~~	~~25~~	~~327~~	~~35~~	~~0~~
5:30 PM	5:45 PM	~~58~~	~~17~~	~~10~~	~~0~~	~~7~~	~~17~~	~~22~~	~~0~~	~~19~~	~~230~~	~~9~~	~~0~~	~~25~~	~~308~~	~~38~~	~~0~~
5:45 PM	6:00 PM	~~53~~	~~19~~	~~13~~	~~0~~	~~14~~	~~10~~	~~14~~	~~0~~	~~18~~	~~298~~	~~1~~	~~1~~	~~17~~	~~314~~	~~34~~	~~1~~
PM Peak Hour Volumes		252	101	89	1	46	55	72	1	98	1039	22	4	102	1325	176	4
Approach Total			442				173				1159				1603		
Upstream TAQA Volume			435				170				1193				1696		
Adjusted TAQA Volume			442				173				1,211				1,721		
Congestion Factor			1.00				1.00				1.04				1.07		
PM Peak Adj. Vol.		252	101	89		46	55	72		102	1,086	23		110	1,423	189	

		Intersection							
PM Peak Hour Factor		0.82		0.79		0.96		0.92	0.95

Traffic Count Data Sheet

Year Counts Taken: 2017

E-W Street:

Los Volcanes Rd.

N-S Street:

Coors Blvd.

Speed Limit (Los Volcanes Rd.)=

25 MPH

Speed Limit (Coors Blvd.)=

45 MPH

Signalized

6/8/17

Begin Time	End Time	Eastbound (Los Volcanes Rd.)				Westbound (Los Volcanes Rd.)				Northbound (Coors Blvd.)				Southbound (Coors Blvd.)			
		L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians
7:00 AM	7:15 AM	25	0	14	0	0	0	0	0	4	217	0	0	0	167	27	0
7:15 AM	7:30 AM	36	0	9	0	0	0	0	0	7	269	0	0	0	143	21	0
7:30 AM	7:45 AM	31	0	11	0	0	0	0	0	16	274	0	0	0	184	32	0
7:45 AM	8:00 AM	36	0	13	0	0	0	0	1	18	268	0	1	0	195	40	1
8:00 AM	8:15 AM	28	0	11	0	0	0	0	0	18	228	0	0	0	170	29	0
8:15 AM	8:30 AM	35	0	18	1	0	0	0	0	8	226	0	0	0	158	18	0
8:30 AM	8:45 AM	29	0	14	0	0	0	0	0	4	248	0	0	0	190	23	0
8:45 AM	9:00 AM	24	0	18	0	0	0	0	0	20	257	0	0	0	189	26	0
AM Peak Hour Volumes		131	0	44	0	0	0	0	1	59	1039	0	1	0	692	122	1
% of Total Traffic		6.3%	0.0%	2.1%		0.0%	0.0%	0.0%		2.8%	49.7%	0.0%		0.0%	33.1%	5.8%	
% Directional			8.4%				0.0%				52.6%				39.0%		
AM Peak Hour Factor			0.89				#DIV/0!		0.92		0.95				0.87		

Begin Time	End Time	Eastbound (Los Volcanes Rd.)				Westbound (Los Volcanes Rd.)				Northbound (Coors Blvd.)				Southbound (Coors Blvd.)			
		L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians
4:00 PM	4:15 PM	36	0	32	1	0	0	0	0	16	217	0	2	0	390	32	1
4:15 PM	4:30 PM	25	0	19	0	0	0	0	0	12	262	0	0	0	409	33	0
4:30 PM	4:45 PM	53	0	25	0	0	0	0	0	21	261	0	0	0	406	35	0
4:45 PM	5:00 PM	33	0	19	0	0	0	0	0	15	277	0	1	0	388	31	1
5:00 PM	5:15 PM	49	0	26	0	0	0	0	0	12	281	0	0	0	387	32	0
5:15 PM	5:30 PM	33	0	15	0	0	0	0	0	21	267	0	0	0	376	34	0
5:30 PM	5:45 PM	28	0	23	0	0	0	0	0	15	243	0	0	0	347	32	0
5:45 PM	6:00 PM	30	0	21	0	0	0	0	0	12	220	0	2	0	385	29	0
PM Peak Hour Volumes		160	0	89	0	0	0	0	0	60	1081	0	1	0	1590	131	1
% of Total Traffic		5.1%	0.0%	2.9%		0.0%	0.0%	0.0%		1.9%	34.7%	0.0%		0.0%	51.1%	4.2%	
% Directional			8.0%				0.0%				36.7%				55.3%		
PM Peak Hour Factor			0.80				#DIV/0!		0.97		0.97				0.97		

Traffic Count Data Sheet

Year Counts Taken: 2018

E-W Street:

Central Av.

Speed Limit (Central Av.)=

55 MPH

N-S Street:

Unser Bd.

Speed Limit (Unser Bd.)=

35 MPH

Signalized

7/12/18

Begin Time	End Time	Eastbound (Central Av.)				Westbound (Central Av.)				Northbound (Unser Bd.)				Southbound (Unser Bd.)			
		L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians
7:00 AM	7:15 AM	64	93	3	4	5	26	14	1	4	253	20	0	14	69	26	1
7:15 AM	7:30 AM	71	104	2	0	4	29	19	1	6	327	31	0	26	92	25	0
7:30 AM	7:45 AM	93	91	7	0	15	27	22	0	2	300	27	0	22	110	16	0
7:45 AM	8:00 AM	48	95	6	0	11	41	16	0	5	303	40	0	39	137	37	0
8:00 AM	8:15 AM	76	94	3	2	13	37	26	1	3	205	22	0	16	104	17	0
8:15 AM	8:30 AM	46	66	3	0	9	41	13	0	2	226	17	0	27	108	23	0
8:30 AM	8:45 AM	56	76	3	0	12	44	21	2	11	192	16	0	25	93	18	0
8:45 AM	9:00 AM	52	78	5	0	8	42	9	0	4	185	48	5	28	103	22	0
AM Peak Hour Volumes		288	384	18	2	43	134	83	2	16	1135	120	0	103	443	95	0
% of Total Traffic		10.1%	13.4%	0.6%		1.5%	4.7%	2.9%		0.6%	39.6%	4.2%		3.6%	15.5%	3.3%	
% Directional			24.1%				9.1%				44.4%				22.4%		
AM Peak Hour Factor			0.90				0.86		0.92		0.87				0.75		

Begin Time	End Time	Eastbound (Central Av.)				Westbound (Central Av.)				Northbound (Unser Bd.)				Southbound (Unser Bd.)			
		L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians
4:00 PM	4:15 PM	44	71	6	0	19	78	13	0	10	141	20	0	47	259	37	0
4:15 PM	4:30 PM	43	79	6	1	36	79	18	0	3	142	25	0	25	271	29	1
4:30 PM	4:45 PM	48	89	5	0	27	88	11	0	9	202	22	0	26	269	27	0
4:45 PM	5:00 PM	38	96	14	2	18	91	13	0	14	220	29	0	35	265	36	0
5:00 PM	5:15 PM	45	94	4	0	23	82	14	0	15	173	21	0	30	263	38	1
5:15 PM	5:30 PM	41	100	11	1	21	81	19	2	14	175	27	0	35	254	40	0
5:30 PM	5:45 PM	57	90	11	1	24	85	14	0	12	201	24	0	24	244	36	0
5:45 PM	6:00 PM	36	103	7	0	24	81	12	0	12	161	23	0	33	272	36	0
PM Peak Hour Volumes		172	379	34	3	89	342	57	2	52	770	99	0	126	1051	141	1
% of Total Traffic		5.2%	11.4%	1.0%		2.7%	10.3%	1.7%		1.6%	23.2%	3.0%		3.8%	31.7%	4.3%	
% Directional			17.6%				14.7%				27.8%				39.7%		
PM Peak Hour Factor			0.96				0.97		0.95		0.88				0.98		

Traffic Count Data Sheet

Year Counts Taken: 2018

E-W Street:

Bluewater Rd.

Speed Limit (Bluewater Rd.)=

25 MPH

N-S Street:

Unser Bd.

Speed Limit (Unser Bd.)=

35 MPH

Signalized

7/12/18

Begin Time	End Time	Eastbound (Bluewater Rd.)				Westbound (Bluewater Rd.)				Northbound (Unser Bd.)				Southbound (Unser Bd.)			
		L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians
7:00 AM	7:15 AM	15	7	6	0	4	2	7	0	10	201	27	0	19	87	19	0
7:15 AM	7:30 AM	18	10	12	0	3	0	12	0	7	388	18	0	31	135	12	0
7:30 AM	7:45 AM	28	13	10	0	6	6	7	0	3	381	32	1	25	174	13	0
7:45 AM	8:00 AM	26	10	7	0	13	5	18	0	6	320	23	0	29	173	8	0
8:00 AM	8:15 AM	18	7	8	0	7	8	11	1	5	286	6	0	20	140	19	0
8:15 AM	8:30 AM	14	4	2	0	6	5	13	0	4	275	8	0	24	156	10	0
8:30 AM	8:45 AM	16	6	9	0	3	7	4	1	5	257	10	0	23	135	6	0
8:45 AM	9:00 AM	23	12	5	0	6	3	9	0	2	236	14	0	22	138	11	0
AM Peak Hour Volumes		90	40	37	0	29	19	48	1	21	1375	79	1	105	622	52	0
% of Total Traffic		3.6%	1.6%	1.5%		1.2%	0.8%	1.9%		0.8%	54.6%	3.1%		4.2%	24.7%	2.1%	
% Directional			6.6%				3.8%				58.6%				30.9%		
AM Peak Hour Factor			0.82				0.67				0.89				0.92		

Begin Time	End Time	Eastbound (Bluewater Rd.)				Westbound (Bluewater Rd.)				Northbound (Unser Bd.)				Southbound (Unser Bd.)			
		L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians
4:00 PM	4:15 PM	23	9	8	0	25	26	40	0	7	180	10	0	19	318	14	0
4:15 PM	4:30 PM	15	6	8	0	15	16	39	0	10	191	13	0	12	331	34	0
4:30 PM	4:45 PM	14	4	9	0	12	27	46	0	7	215	15	0	23	288	32	0
4:45 PM	5:00 PM	26	9	16	0	22	15	36	0	7	211	55	1	12	303	27	0
5:00 PM	5:15 PM	26	19	8	0	22	31	52	0	12	238	8	0	11	349	23	0
5:15 PM	5:30 PM	16	11	8	0	23	24	35	0	7	224	13	0	16	301	38	1
5:30 PM	5:45 PM	24	11	7	0	20	22	33	0	9	245	13	0	22	318	16	0
5:45 PM	6:00 PM	16	6	9	0	25	26	43	0	5	208	10	0	23	335	28	0
PM Peak Hour Volumes		92	50	39	0	87	92	156	0	35	918	89	1	61	1271	104	1
% of Total Traffic		3.1%	1.7%	1.3%		2.9%	3.1%	5.2%		1.2%	30.7%	3.0%		2.0%	42.5%	3.5%	
% Directional			6.0%				11.2%				34.8%				48.0%		
PM Peak Hour Factor			0.85				0.80				0.95				0.94		

Traffic Count Data Sheet

Year Counts Taken: 2018

E-W Street:

Los Volcanes Rd.

Speed Limit (Los Volcanes Rd.)=

25 MPH

N-S Street:

Unser Bd.

Speed Limit (Unser Bd.)=

35 MPH

Signalized

7/12/18

Begin Time	End Time	Eastbound (Los Volcanes Rd.)				Westbound (Los Volcanes Rd.)				Northbound (Unser Bd.)				Southbound (Unser Bd.)			
		L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians
7:00 AM	7:15 AM	111	27	3	1	15	47	61	0	19	659	52	0	103	275	45	0
7:15 AM	7:30 AM	74	32	3	0	28	14	48	0	4	324	90	0	72	169	18	0
7:30 AM	7:45 AM	42	11	1	0	32	9	40	0	5	334	40	0	65	173	24	0
7:45 AM	8:00 AM	56	11	6	0	13	6	44	0	1	289	27	0	45	159	22	0
8:00 AM	8:15 AM	78	12	10	0	10	2	30	1	6	267	21	0	44	164	28	0
8:15 AM	8:30 AM	63	13	10	0	8	2	35	0	4	258	23	0	32	143	18	0
8:30 AM	8:45 AM	39	8	8	0	5	7	25	0	7	237	23	0	43	160	14	0
8:45 AM	9:00 AM	17	3	2	0	8	6	18	0	7	93	13	0	26	66	6	0
AM Peak Hour Volumes		283	81	13	1	88	76	193	0	29	1606	209	0	285	776	109	0
% of Total Traffic		7.6%	2.2%	0.3%		2.3%	2.0%	5.1%		0.8%	42.8%	5.6%		7.6%	20.7%	2.9%	
% Directional			10.1%				9.5%				49.2%				31.2%		
AM Peak Hour Factor			0.67				0.73		Intersection		0.63				0.69		

Begin Time	End Time	Eastbound (Los Volcanes Rd.)				Westbound (Los Volcanes Rd.)				Northbound (Unser Bd.)				Southbound (Unser Bd.)			
		L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians
4:00 PM	4:15 PM	23	10	7	0	30	11	53	0	3	221	21	0	33	305	27	0
4:15 PM	4:30 PM	19	6	6	0	21	10	44	0	4	218	17	0	47	349	22	0
4:30 PM	4:45 PM	48	5	7	0	34	10	64	0	5	234	31	0	43	286	20	0
4:45 PM	5:00 PM	40	14	4	0	23	6	45	0	4	275	25	0	61	313	24	0
5:00 PM	5:15 PM	48	14	16	0	59	33	74	0	7	277	44	0	55	288	22	0
5:15 PM	5:30 PM	39	12	6	0	26	14	55	0	5	256	16	0	40	321	36	0
5:30 PM	5:45 PM	32	11	4	0	24	18	47	0	5	264	29	0	36	309	26	0
5:45 PM	6:00 PM	28	10	4	0	20	6	36	0	4	234	25	0	43	368	39	0
PM Peak Hour Volumes		159	51	30	0	132	71	221	0	21	1072	114	0	192	1231	108	0
% of Total Traffic		4.7%	1.5%	0.9%		3.9%	2.1%	6.5%		0.6%	31.5%	3.4%		5.6%	36.2%	3.2%	
% Directional			7.1%				12.5%				35.5%				45.0%		
PM Peak Hour Factor			0.77				0.64		Intersection		0.92				0.96		

Traffic Count Data Sheet

Year Counts Taken: 2018

E-W Street:

I-40 N. Ramp

N-S Street:

Unser Bd.

Speed Limit (I-40 N. Ramp)=

30 MPH

Speed Limit (Unser Bd.)=

35 MPH

Signalized

7/12/18

Begin Time	End Time	Eastbound (I-40 N. Ramp)				Westbound (I-40 N. Ramp)				Northbound (Unser Bd.)				Southbound (Unser Bd.)			
		L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians
7:00 AM	7:15 AM	0	0	0	0	87	0	0	0	4	400	0	1	0	100	14	0
7:15 AM	7:30 AM	0	0	0	0	81	1	0	0	4	150	0	0	0	441	13	0
7:30 AM	7:45 AM	0	0	0	0	85	0	0	0	3	173	0	0	0	465	23	0
7:45 AM	8:00 AM	0	0	0	0	99	0	0	1	5	191	0	0	0	383	16	0
8:00 AM	8:15 AM	0	0	0	0	71	0	0	0	6	179	0	0	0	367	14	0
8:15 AM	8:30 AM	0	0	0	0	79	0	0	0	11	141	0	0	0	308	20	0
8:30 AM	8:45 AM	0	0	0	0	62	0	0	0	4	134	0	0	0	328	18	0
8:45 AM	9:00 AM	0	0	0	0	76	0	0	0	5	121	0	0	0	281	34	2
AM Peak Hour Volumes		0	0	0	0	336	1	0	1	18	693	0	0	0	1656	66	0
% of Total Traffic		0.0%	0.0%	0.0%		12.1%	0.0%	0.0%		0.6%	25.0%	0.0%		0.0%	59.8%	2.4%	
% Directional			0.0%				12.2%				25.7%				62.1%		
AM Peak Hour Factor		#DIV/0!				0.85				0.92				0.91			
										Intersection							

Begin Time	End Time	Eastbound (I-40 N. Ramp)				Westbound (I-40 N. Ramp)				Northbound (Unser Bd.)				Southbound (Unser Bd.)			
		L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians
4:00 PM	4:15 PM	0	0	0	0	233	0	1	0	6	188	0	0	0	219	16	0
4:15 PM	4:30 PM	0	0	0	0	266	0	0	0	11	175	0	0	0	221	26	0
4:30 PM	4:45 PM	0	0	0	0	254	0	1	0	12	209	0	0	0	208	19	0
4:45 PM	5:00 PM	0	0	0	0	222	0	0	0	6	209	0	0	0	248	15	0
5:00 PM	5:15 PM	0	0	0	0	205	1	0	0	8	270	0	0	0	264	15	0
5:15 PM	5:30 PM	0	0	0	0	237	0	0	0	2	235	0	0	0	238	27	0
5:30 PM	5:45 PM	0	0	0	0	228	0	1	0	8	238	0	0	0	237	16	0
5:45 PM	6:00 PM	0	0	0	0	250	0	0	0	10	167	0	0	0	289	12	0
PM Peak Hour Volumes		0	0	0	0	920	1	1	0	28	910	0	0	0	1028	70	0
% of Total Traffic		0.0%	0.0%	0.0%		31.1%	0.0%	0.0%		0.9%	30.8%	0.0%		0.0%	34.8%	2.4%	
% Directional			0.0%				31.2%				31.7%				37.1%		
PM Peak Hour Factor		#DIV/0!				0.92				0.97				0.84			
										Intersection							

Traffic Count Data Sheet

Year Counts Taken: 2018

E-W Street:

Ladera Dr.

N-S Street:

Unser Bd.

Speed Limit (Ladera Dr.)=

40 MPH

Speed Limit (Unser Bd.)=

35 MPH

Signalized

7/12/18

Begin Time	End Time	Eastbound (Ladera Dr.)				Westbound (Ladera Dr.)				Northbound (Unser Bd.)				Southbound (Unser Bd.)			
		L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians
7:00 AM	7:15 AM	37	40	73	0	66	16	27	0	19	110	31	0	24	236	9	0
7:15 AM	7:30 AM	35	51	106	1	96	12	19	0	18	137	20	0	26	248	4	0
7:30 AM	7:45 AM	49	35	112	0	81	11	41	0	30	133	56	0	34	297	18	0
7:45 AM	8:00 AM	45	42	110	0	75	21	42	1	31	162	37	0	24	285	21	0
8:00 AM	8:15 AM	41	52	78	0	50	24	24	0	27	200	36	0	15	238	7	0
8:15 AM	8:30 AM	53	47	56	0	56	17	25	0	13	169	25	0	38	250	12	0
8:30 AM	8:45 AM	39	43	62	0	74	20	27	0	20	113	31	0	30	206	19	0
8:45 AM	9:00 AM	27	47	66	0	83	19	25	0	17	121	30	0	21	210	8	0
AM Peak Hour Volumes		170	180	406	1	302	68	126	1	106	632	149	0	99	1068	50	0
% of Total Traffic		5.1%	5.4%	12.1%		9.0%	2.0%	3.8%		3.2%	18.8%	4.4%		2.9%	31.8%	1.5%	
% Directional			22.5%				14.8%				26.4%				36.3%		
AM Peak Hour Factor			0.96				0.90				0.84				0.87		

Begin Time	End Time	Eastbound (Ladera Dr.)				Westbound (Ladera Dr.)				Northbound (Unser Bd.)				Southbound (Unser Bd.)			
		L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians
4:00 PM	4:15 PM	26	43	32	0	68	61	55	0	64	272	58	0	46	196	16	0
4:15 PM	4:30 PM	38	53	25	0	82	49	56	0	70	304	55	0	41	156	24	0
4:30 PM	4:45 PM	35	50	39	0	72	74	50	0	75	325	67	0	66	183	29	0
4:45 PM	5:00 PM	16	49	27	0	60	56	38	0	66	309	33	0	40	144	9	0
5:00 PM	5:15 PM	35	43	27	0	68	68	56	0	84	331	56	0	54	218	24	0
5:15 PM	5:30 PM	43	41	45	0	65	71	69	0	97	362	62	0	46	170	30	0
5:30 PM	5:45 PM	58	45	39	0	71	70	60	0	117	341	67	0	59	154	33	0
5:45 PM	6:00 PM	49	54	44	0	80	67	48	0	92	243	56	0	40	205	32	0
PM Peak Hour Volumes		185	183	155	0	284	276	233	0	390	1277	241	0	199	747	119	0
% of Total Traffic		4.3%	4.3%	3.6%		6.6%	6.4%	5.4%		9.1%	29.8%	5.6%		4.6%	17.4%	2.8%	
% Directional			12.2%				18.5%				44.5%				24.8%		
PM Peak Hour Factor			0.89				0.97				0.91				0.90		

Traffic Count Data Sheet

Year Counts Taken: 2018

E-W Street:

I-40 S.Ramp

Speed Limit (I-40 S.Ramp)=

30 MPH

N-S Street:

Unser Bd.

Speed Limit (Unser Bd.)=

35 MPH

Unsignalized

7/12/18

Begin Time	End Time	Eastbound (I-40 S.Ramp)				Westbound (I-40 S.Ramp)				Northbound (Unser Bd.)				Southbound (Unser Bd.)			
		L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians
7:00 AM	7:15 AM	2	1	13	0	0	0	0	0	0	161	226	0	0	130	313	0
7:15 AM	7:30 AM	9	0	10	0	0	0	0	0	0	145	230	0	0	247	322	0
7:30 AM	7:45 AM	12	0	5	0	0	0	0	0	0	197	241	0	0	277	287	0
7:45 AM	8:00 AM	16	0	5	0	0	0	0	0	0	186	151	0	0	251	230	0
8:00 AM	8:15 AM	16	0	9	0	0	0	0	0	0	156	238	0	0	216	234	0
8:15 AM	8:30 AM	13	0	6	1	0	0	0	0	0	127	209	0	0	214	206	0
8:30 AM	8:45 AM	12	0	9	0	0	0	0	0	0	112	186	2	0	206	204	0
8:45 AM	9:00 AM	15	0	14	0	0	0	0	0	0	106	136	0	0	176	161	0
AM Peak Hour Volumes		53	0	29	0	0	0	0	0	0	684	860	0	0	991	1073	0
% of Total Traffic		1.4%	0.0%	0.8%		0.0%	0.0%	0.0%		0.0%	18.5%	23.3%		0.0%	26.9%	29.1%	
% Directional			2.2%				0.0%				41.8%				55.9%		
AM Peak Hour Factor			0.82				#DIV/0!		0.91		0.88				0.91		

Begin Time	End Time	Eastbound (I-40 S.Ramp)				Westbound (I-40 S.Ramp)				Northbound (Unser Bd.)				Southbound (Unser Bd.)			
		L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians
4:00 PM	4:15 PM	15	0	10	0	0	0	0	0	0	192	106	0	0	413	77	0
4:15 PM	4:30 PM	18	0	10	0	0	0	0	0	0	197	84	0	0	376	78	0
4:30 PM	4:45 PM	17	0	9	0	0	0	0	0	0	228	112	8	0	396	81	0
4:45 PM	5:00 PM	13	0	12	0	0	0	0	0	0	213	132	0	0	383	80	0
5:00 PM	5:15 PM	16	0	15	0	0	0	0	0	0	231	98	0	0	386	91	0
5:15 PM	5:30 PM	35	0	13	0	0	0	0	0	0	378	240	0	0	785	161	0
5:30 PM	5:45 PM	13	0	6	0	0	0	0	0	0	179	95	0	0	429	85	0
5:45 PM	6:00 PM	13	0	10	0	0	0	0	0	0	147	120	5	0	342	79	0
PM Peak Hour Volumes		81	0	49	0	0	0	0	0	0	1050	582	8	0	1950	413	0
% of Total Traffic		2.0%	0.0%	1.2%		0.0%	0.0%	0.0%		0.0%	25.5%	14.1%		0.0%	47.3%	10.0%	
% Directional			3.2%				0.0%				39.6%				57.3%		
PM Peak Hour Factor			0.68				#DIV/0!		0.64		0.66				0.62		

Traffic Count Data Sheet

Year Counts Taken: 2018

E-W Street:

Los Volcanes

N-S Street:

Gallatin Pl.

Speed Limit (Los Volcanes)=

30 MPH

Speed Limit (Gallatin Pl.)=

30 MPH

Signalized

9/12/18

Begin Time	End Time	Eastbound (Los Volcanes)				Westbound (Los Volcanes)				Northbound (Gallatin Pl.)				Southbound (Gallatin Pl.)			
		L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians
7:00 AM	7:15 AM	92	38	4	0	5	33	6	0	2	2	1	0	0	0	50	0
7:15 AM	7:30 AM	123	36	6	0	3	60	11	0	2	1	3	0	4	2	99	0
7:30 AM	7:45 AM	28	65	5	0	3	52	2	0	1	1	6	0	0	2	47	0
7:45 AM	8:00 AM	47	98	7	0	6	69	8	0	2	0	65	0	1	1	20	0
8:00 AM	8:15 AM	45	52	4	1	6	45	2	0	4	1	4	1	0	0	28	0
8:15 AM	8:30 AM	33	34	1	0	2	33	6	0	4	2	1	0	0	0	26	0
8:30 AM	8:45 AM	18	47	4	1	1	32	1	0	1	0	1	1	2	1	15	1
8:45 AM	9:00 AM	35	54	5	0	2	39	2	0	7	0	0	0	3	1	6	0
AM Peak Hour Volumes		290	237	22	0	17	214	27	0	7	4	75	0	5	5	216	0
% of Total Traffic		25.9%	21.2%	2.0%		1.5%	19.1%	2.4%		0.6%	0.4%	6.7%		0.4%	0.4%	19.3%	
% Directional			49.1%				23.1%				7.7%				20.2%		
AM Peak Hour Factor			0.83				0.78		0.80		0.32				0.54		

Begin Time	End Time	Eastbound (Los Volcanes)				Westbound (Los Volcanes)				Northbound (Gallatin Pl.)				Southbound (Gallatin Pl.)			
		L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians
4:00 PM	4:15 PM	27	44	8	0	1	51	5	0	7	2	2	0	0	0	28	0
4:15 PM	4:30 PM	28	31	2	0	3	42	3	0	4	1	0	0	0	3	15	0
4:30 PM	4:45 PM	21	41	1	0	1	55	7	1	11	2	2	0	2	1	32	0
4:45 PM	5:00 PM	28	37	6	1	1	55	0	0	8	0	1	0	5	0	34	0
5:00 PM	5:15 PM	51	46	3	0	2	60	11	1	10	0	2	0	3	0	47	0
5:15 PM	5:30 PM	33	37	0	0	0	61	5	0	5	1	1	0	2	0	34	0
5:30 PM	5:45 PM	26	36	1	0	1	43	3	0	5	2	2	0	4	0	38	0
5:45 PM	6:00 PM	30	35	0	0	1	51	7	0	3	1	1	0	3	0	49	0
PM Peak Hour Volumes		133	161	10	1	4	231	23	2	34	3	6	0	12	1	147	0
% of Total Traffic		17.3%	21.0%	1.3%		0.5%	30.1%	3.0%		4.4%	0.4%	0.8%		1.6%	0.1%	19.2%	
% Directional			39.6%				33.6%				5.6%				20.9%		
PM Peak Hour Factor			0.76				0.88		0.81		0.72				0.80		

Terry O. Brown, P.E.

P. O. Box 92015

Albuquerque, NM 87199-2015

(505) 883-8807

Traffic Count Data Sheet

Year Counts Taken: 2018

E-W Street:

Fortuna Rd.

N-S Street:

Gallatin Pl.

Speed Limit (Fortuna Rd.)=

30 MPH

Speed Limit (Gallatin Pl.)=

30 MPH

Signalized

9/12/18

Begin Time	End Time	Eastbound (Fortuna Rd.)				Westbound (Fortuna Rd.)				Northbound (Gallatin Pl.)				Southbound (Gallatin Pl.)			
		L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians
7:00 AM	7:15 AM	0	0	0	0	55	0	3	0	1	0	112	0	1	0	1	0
7:15 AM	7:30 AM	0	1	0	0	111	0	3	0	0	1	118	0	0	0	0	0
7:30 AM	7:45 AM	0	0	0	0	30	0	2	0	0	2	27	0	1	0	0	0
7:45 AM	8:00 AM	0	0	0	0	30	0	4	0	0	2	45	0	1	0	0	0
8:00 AM	8:15 AM	0	0	0	0	26	0	4	0	0	3	48	0	0	0	0	0
8:15 AM	8:30 AM	0	0	0	0	24	0	4	0	0	2	26	0	0	0	0	0
8:30 AM	8:45 AM	0	0	0	0	15	0	3	0	0	1	14	0	0	0	0	0
8:45 AM	9:00 AM	0	0	0	0	9	0	2	0	0	1	26	0	0	0	0	0
AM Peak Hour Volumes		0	1	0	0	226	0	12	0	1	5	302	0	3	0	1	0
% of Total Traffic		0.0%	0.2%	0.0%		41.0%	0.0%	2.2%		0.2%	0.9%	54.8%		0.5%	0.0%	0.2%	
% Directional			0.2%				43.2%					55.9%			0.7%		
AM Peak Hour Factor			0.25				0.52		0.59		0.65				0.50		

Begin Time	End Time	Eastbound (Fortuna Rd.)				Westbound (Fortuna Rd.)				Northbound (Gallatin Pl.)				Southbound (Gallatin Pl.)			
		L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians
4:00 PM	4:15 PM	0	0	0	0	22	0	0	0	0	0	29	0	0	0	0	0
4:15 PM	4:30 PM	0	0	0	0	17	0	0	0	0	0	35	0	0	0	0	0
4:30 PM	4:45 PM	0	0	0	0	22	0	0	0	0	0	26	0	0	0	0	0
4:45 PM	5:00 PM	0	0	0	0	42	0	2	0	0	2	29	0	4	3	0	0
5:00 PM	5:15 PM	0	1	0	0	31	1	0	0	0	3	56	0	4	1	1	0
5:15 PM	5:30 PM	0	1	1	0	32	1	0	0	0	0	28	0	2	3	0	0
5:30 PM	5:45 PM	0	2	0	0	51	1	0	0	0	3	34	0	2	1	1	0
5:45 PM	6:00 PM	0	0	0	0	36	0	0	0	0	0	36	0	0	0	0	0
PM Peak Hour Volumes		0	4	1	0	156	3	2	0	0	8	147	0	12	8	2	0
% of Total Traffic		0.0%	1.2%	0.3%		45.5%	0.9%	0.6%		0.0%	2.3%	42.9%		3.5%	2.3%	0.6%	
% Directional			1.5%				46.9%					45.2%			6.4%		
PM Peak Hour Factor			0.63				0.77		0.88		0.66				0.79		

Terry O. Brown, P.E.

P. O. Box 92015
 Albuquerque, NM 87199-2015
 (505) 883-8807

Traffic Count Data Sheet

Year Counts Taken: **2017**

E-W Street:

Fortuna Rd.

N-S Street:

Coors Blvd.

Speed Limit (Fortuna Rd.)=

25 MPH

Speed Limit (Coors Blvd.)=

45 MPH

Signalized

6/8/17

Begin Time	End Time	Eastbound (Fortuna Rd.)				Westbound (Fortuna Rd.)				Northbound (Coors Blvd.)				Southbound (Coors Blvd.)			
		L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians
7:00 AM	7:15 AM	27	3	2	0	6	3	19	0	6	215	1	0	8	173	9	1
7:15 AM	7:30 AM	17	1	3	0	7	0	25	0	6	288	10	0	1	152	11	0
7:30 AM	7:45 AM	27	3	2	0	7	3	23	1	2	273	7	0	10	198	12	0
7:45 AM	8:00 AM	21	4	5	0	7	2	11	0	14	289	3	0	8	232	20	0
8:00 AM	8:15 AM	26	1	9	0	15	3	23	0	7	224	7	0	7	165	15	0
8:15 AM	8:30 AM	13	1	1	0	5	2	16	0	4	248	5	0	8	173	14	0
8:30 AM	8:45 AM	19	5	6	1	8	2	15	0	10	248	6	1	15	193	14	0
8:45 AM	9:00 AM	16	4	4	1	6	2	11	0	12	272	4	0	16	201	14	0
AM Peak Hour Volumes		91	9	19	0	36	8	82	1	29	1074	27	0	26	747	58	0
% of Total Traffic		4.1%	0.4%	0.9%		1.6%	0.4%	3.7%		1.3%	48.7%	1.2%		1.2%	33.8%	2.6%	
% Directional			5.4%				5.7%				51.2%				37.7%		
AM Peak Hour Factor			0.83				0.77		0.90		0.92				0.80		

Begin Time	End Time	Eastbound (Fortuna Rd.)				Westbound (Fortuna Rd.)				Northbound (Coors Blvd.)				Southbound (Coors Blvd.)			
		L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians
4:00 PM	4:15 PM	20	6	15	0	20	12	8	0	12	234	7	0	29	369	27	0
4:15 PM	4:30 PM	10	4	8	0	18	8	4	0	11	260	8	0	29	396	26	0
4:30 PM	4:45 PM	20	3	6	2	18	9	9	0	11	277	11	0	22	396	31	0
4:45 PM	5:00 PM	18	7	18	0	17	7	8	0	6	281	9	1	25	383	29	0
5:00 PM	5:15 PM	27	8	18	0	17	12	14	0	18	288	8	0	35	366	17	0
5:15 PM	5:30 PM	21	9	12	0	22	12	9	3	10	275	6	0	21	380	30	1
5:30 PM	5:45 PM	19	3	13	0	10	6	12	0	12	237	22	0	27	340	20	0
5:45 PM	6:00 PM	28	7	14	0	19	10	13	0	18	228	2	0	32	388	26	0
PM Peak Hour Volumes		86	27	54	2	74	40	40	3	45	1121	34	1	103	1525	107	1
% of Total Traffic		2.6%	0.8%	1.7%		2.3%	1.2%	1.2%		1.4%	34.4%	1.0%		3.2%	46.8%	3.3%	
% Directional			5.1%				4.7%				36.8%				53.2%		
PM Peak Hour Factor			0.79				0.90		0.98		0.96				0.97		