

# APPENDIX D4.2-A

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## Intersection Data



Draft Intersection LOS Results  
City Center Streetcar Project  
Phase 3 NEPA

ID#	Synchro ID	Major St	Cross St	Traffic Control	2014 Existing		2018 No Build		2018 Build			2035 No Build		2035 Build			to AQ
					LOS	Delay	LOS	Delay	LOS	Delay	Delay Change	LOS	Delay	LOS	Delay	Delay Change	
1	1723	Westlake Ave	6th Ave	Signal	B	18	B	18	A	9	-9	C	22	A	10	-12	
2	1726	Westlake Ave	Stewart St	Signal	B	12	B	15	C	21	6	B	14	C	23	9	
3	1725	5th Ave	Stewart St	Signal	B	12	B	16	B	18	2	B	18	C	20	3	
4	562	5th Ave	Olive Way	Signal	B	11	B	11	B	13	2	B	10	B	11	0	
5	569	4th Ave	Stewart St	Signal	B	12	B	12	B	15	4	B	14	B	15	1	
6	338	3rd Ave	Stewart St	Signal	A	5	A	6	A	4	-2	A	6	A	6	-1	
7	558	2nd Ave	Stewart St	Signal	A	8	B	12	C	22	10	B	12	C	21	9	
8	557	1st Ave	Stewart St	Signal	A	10	B	10	B	15	5	B	11	B	18	7	
9	539	1st Ave	Pine St	Signal	A	7	A	8	C	22	15	B	10	D	44	34	Yes
10	364	1st Ave	Pike St	Signal	B	13	B	10	B	20	10	B	12	B	19	7	
11	56	1st Ave	Union St	Signal	B	10	A	10	B	16	6	B	11	B	18	7	
12	1415	1st Ave	University St	Signal	B	16	B	17	B	19	2	C	21	C	22	1	
13	1419	1st Ave	Seneca St	Signal	B	16	B	18	B	12	-5	B	16	B	18	3	
14	6	1st Ave	Spring St	Signal	C	28	B	10	C	30	20	B	12	D	47	35	Yes
15	355	1st Ave	Madison St	Signal	B	11	B	13	B	20	7	B	11	C	21	10	
16	1426	1st Ave	Marion St	Signal	A	9	B	11	B	14	3	B	13	C	23	10	
17	4	1st Ave	Columbia St	Signal	F	94	A	9	B	18	9	B	14	B	18	4	Yes
18	3	1st Ave	Cherry St	Signal	A	6	B	14	A	7	-7	B	13	A	5	-8	
19	2	1st Ave	Yesler Way	Signal	C	31	C	27	C	29	2	D	40	D	51	11	Yes
20	1505	1st Ave	Washington St	Signal	A	8	B	10	A	7	-3	B	11	A	7	-4	
21	15	1st Ave	Main St	Signal	B	12	B	11	A	8	-3	B	11	A	9	-2	
22	1515	1st Ave	Jackson St	Signal	C	22	B	10	C	33	23	B	14	E	79	66	Yes
23	573	2nd Ave	Jackson St	Signal	B	14	B	11	B	13	1	B	17	B	15	-2	
24	1517	2nd Ave Ext	Jackson St	Signal	B	19	B	18	B	17	-1	C	21	C	22	1	
25	1518	4th Ave	Jackson St	Signal	C	22	C	21	B	18	-3	C	23	C	24	1	
26	1519	5th Ave	Jackson St	Signal	B	13	B	16	B	14	-1	B	19	B	20	1	
27	6642	6th Ave	Jackson St	Signal	B	14	B	14	B	14	0	C	22	C	22	-1	
28	6691	Maynard Ave	Jackson St	Signal	A	7	A	8	A	7	-1	A	7	A	8	0	
29	6609	7th Ave	Jackson St	Signal	A	7	A	10	A	10	0	A	9	A	8	-1	
30	6606	8th Ave	Jackson St	Signal	A	7	B	11	B	14	3	B	11	B	19	8	
31	1221	Westlake Ave	Republican St	Signal	C	30	E	67	F	83	16	F	122	F	151	29	Yes
Adjacent Corridors																	
32	540	2nd Ave	Pine St	Signal	A	8	B	13	B	16	3	B	12	B	15	3	
33	541	3rd Ave	Pine St	Signal	B	14	B	11	B	14	3	A	9	B	11	2	
34	542	4th Ave	Pine St	Signal	A	6	A	5	A	5	0	B	10	A	6	-4	
35	547	5th Ave	Pine St	Signal	B	17	B	14	B	13	-1	B	14	B	13	-2	
36	365	2nd Ave	Pike St	Signal	E	56	C	22	B	14	-8	C	22	B	12	-10	Yes
37	314	3rd Ave	Pike St	Signal	C	22	B	19	A	10	-10	A	10	B	12	2	
38	528	4th Ave	Pike St	Signal	A	9	A	8	B	17	9	B	19	B	20	1	
39	531	5th Ave	Pike St	Signal	B	10	B	12	B	13	1	B	14	B	18	4	
40	7004	1st Ave	Lenora St	Signal	A	9	B	14	C	21	8	C	20	C	25	5	
41	1333	1st Ave	Virginia St	Signal	A	6	B	13	B	10	-3	C	25	B	12	-13	
42	1416	2nd Ave	University St	Signal	C	32	B	12	B	16	4	C	20	B	17	-3	
43	50	4th Ave	University St	Signal	B	15	B	15	C	20	5	B	17	D	38	21	Yes
44	1418	5th Ave	University St	Signal	C	21	C	24	C	25	1	C	23	C	20	-2	
45	1420	2nd Ave	Seneca St	Signal	B	16	C	21	C	28	7	C	23	B	19	-4	
46	1422	4th Ave	Seneca St	Signal	B	18	A	10	B	10	1	B	12	B	13	2	
47	1423	5th Ave	Seneca St	Signal	B	12	B	10	B	11	1	B	11	B	14	2	
48	35	2nd Ave	Spring St	Signal	B	15	B	15	B	20	5	C	22	E	58	37	Yes
49	48	4th Ave	Spring St	Signal	B	17	B	19	C	22	3	C	27	D	36	9	Yes
50	1424	5th Ave	Spring St	Signal	C	23	B	17	B	17	0	B	18	B	18	0	
51	66	Alaskan Way	Madison St	Signal	C	26	A	10	B	10	0	A	9	A	10	1	
52	223	2nd Ave	Madison St	Signal	B	10	B	10	B	11	1	A	10	B	17	7	
53	47	4th Ave	Madison St	Signal	B	15	B	11	B	11	0	B	10	A	7	-3	
54	1425	5th Ave	Madison St	Signal	C	29	B	19	B	14	-5	C	22	C	21	-2	
55	11	2nd Ave	Columbia St	Signal	B	18	C	30	C	34	3	C	32	D	38	6	Yes
56	46	4th Ave	Columbia St	Signal	B	12	A	10	A	10	0	A	8	A	9	0	
57	1430	5th Ave	Columbia St	Signal	B	15	B	13	B	15	2	B	16	A	8	-8	
58	1432	5th Ave	Cherry St	Signal	C	25	B	19	B	20	1	B	17	B	19	1	
59	72	Alaskan Way	Yesler Way	Signal	B	18	C	26	B	18	-8	B	19	C	23	5	
60	1434	2nd Ave	James St	Signal	C	26	B	15	C	24	9	B	16	C	33	17	
61	1436	4th Ave	James St	Signal	B	19	A	9	B	11	2	A	9	A	8	-1	
62	1437	5th Ave	James St	Signal	B	18	B	18	C	21	3	B	19	C	25	6	
63	1524	Alaskan Way	S King St	Signal	B	14	D	45	D	49	4	F	83	F	80	-3	Yes
64	14	1st Ave S	S King St	Signal	B	12	B	17	B	19	1	C	20	C	21	1	
65	13	1st Ave S	Railroad Way S	Signal	B	18	C	20	B	20	0	C	22	C	23	1	
66	70	Alaskan Way	Marion St	Signal	B	20	B	17	C	26	9	C	26	C	32	6	
Average for all Intersections =						17	15		18	2		19	23	5			
											16%					25%	
Along Alignment =						16	15		-10%	18	24%		18	26%	26	40%	
Parallel Corridors =						18	16		-9%	18	9%		19	18%	21	13%	
LOS D						0	1		1	1		1	6				
LOS E						1	1		0	0		0	2				
LOS F						1	0		1	2		2	2				
LOS D, E, F						2	2		2	3		3	10				

# APPENDIX D4.2-B

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## Synchro Data



# HCM Signalized Intersection Capacity Analysis

## 11: Westlake Ave #1 #102 & Republican St

6/8/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Volume (vph)	30	140	50	45	90	55	40	510	20	30	270	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	11	11	12	11	11
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frbp, ped/bikes		0.96			0.92		1.00	0.99		1.00	0.98	
Flpb, ped/bikes		0.98			0.98		0.81	1.00		0.87	1.00	
Frt		0.97			0.96		1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1305			1260		1267	875		1380	2957	
Flt Permitted		0.94			0.89		0.57	1.00		0.44	1.00	
Satd. Flow (perm)		1236			1136		761	2971		634	2957	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	31	143	51	46	92	56	41	520	20	31	276	20
RTOR Reduction (vph)	0	16	0	0	23	0	0	3	0	0	5	0
Lane Group Flow (vph)	0	209	0	0	171	0	41	537	0	31	291	0
Confl. Peds. (#/hr)	202		124	124		202	271		257	257		271
Confl. Bikes (#/hr)			8			17			6			3
Heavy Vehicles (%)	2%	2%	2%	0%	0%	0%	4%	4%	4%	3%	3%	3%
Parking (#/hr)	8	8	8	8	8	8						
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			6	
Permitted Phases	4			4			2			6		
Actuated Green, G (s)		21.4			21.4		49.6	49.6		49.6	49.6	
Effective Green, g (s)		21.9			21.9		50.1	50.1		50.1	50.1	
Actuated g/C Ratio		0.27			0.27		0.63	0.63		0.63	0.63	
Clearance Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		338			310		476	547		397	1851	
v/s Ratio Prot								c0.61			0.10	
v/s Ratio Perm		c0.17			0.15		0.05			0.05		
v/c Ratio		0.62			0.55		0.09	0.98		0.08	0.16	
Uniform Delay, d1		25.4			24.9		5.9	14.5		5.9	6.2	
Progression Factor		1.69			1.00		1.44	1.42		1.84	1.77	
Incremental Delay, d2		3.2			2.1		0.1	15.9		0.3	0.2	
Delay (s)		46.2			27.0		8.6	36.5		11.1	11.1	
Level of Service		D			C		A	D		B	B	
Approach Delay (s)		46.2			27.0			34.5			11.1	
Approach LOS		D			C			C			B	

Intersection Summary		
HCM 2000 Control Delay	29.6	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.87	C
Actuated Cycle Length (s)	80.0	Sum of lost time (s)
Intersection Capacity Utilization	65.4%	8.0
Analysis Period (min)	15	ICU Level of Service
		C

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis  
 1221: Westlake Ave #16 & Republican St

6/15/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	
Volume (vph)	44	184	88	76	124	88	10	536	4	0	468	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		4.5	4.5			4.5	
Lane Util. Factor		1.00			1.00		1.00	0.95			0.95	
Frbp, ped/bikes		0.91			0.89		1.00	0.99			0.96	
Flpb, ped/bikes		0.98			1.00		1.00	1.00			1.00	
Frt		0.96			0.96		1.00	1.00			0.99	
Flt Protected		0.99			0.99		0.95	1.00			1.00	
Satd. Flow (prot)		1369			1343		902	875			3346	
Flt Permitted		0.87			0.67		0.42	1.00			1.00	
Satd. Flow (perm)		1205			913		403	3449			3346	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	48	200	96	83	135	96	11	583	4	0	509	26
RTOR Reduction (vph)	0	9	0	0	10	0	0	0	0	0	2	0
Lane Group Flow (vph)	0	335	0	0	304	0	11	587	0	0	533	0
Confl. Peds. (#/hr)	266		163	163		266			339	339		357
Confl. Bikes (#/hr)			10			22			7			3
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	100%	4%	4%	2%	3%	3%
Parking (#/hr)		8			8							
Turn Type	Perm	NA		Perm	NA		Perm	NA			NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2					
Actuated Green, G (s)		49.5			49.5		101.5	101.5			101.5	
Effective Green, g (s)		49.5			49.5		101.5	101.5			101.5	
Actuated g/C Ratio		0.31			0.31		0.63	0.63			0.63	
Clearance Time (s)		4.5			4.5		4.5	4.5			4.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		372			282		255	555			2122	
v/s Ratio Prot								c0.67			0.16	
v/s Ratio Perm		0.28			c0.33		0.03					
v/c Ratio		0.90			1.08		0.04	1.06			0.25	
Uniform Delay, d1		52.9			55.2		11.0	29.2			12.7	
Progression Factor		1.00			1.00		1.14	1.08			0.26	
Incremental Delay, d2		24.0			76.3		0.3	52.6			0.2	
Delay (s)		76.9			131.5		12.8	84.1			3.5	
Level of Service		E			F		B	F			A	
Approach Delay (s)		76.9			131.5			82.8			3.5	
Approach LOS		E			F			F			A	

Intersection Summary

HCM 2000 Control Delay	66.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

# HCM Signalized Intersection Capacity Analysis

## 1221: Westlake Ave #16 & Republican St

6/15/2015



Movement	EBL2	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR2	SBL	SBT	SBR
Lane Configurations		↶			↷		↶	↷		↶	↷	
Volume (vph)	44	184	88	76	124	88	10	536	4	0	468	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		4.5	4.5			4.5	
Lane Util. Factor		1.00			1.00		1.00	0.95			0.95	
Frbp, ped/bikes		0.91			0.89		1.00	0.99			1.00	
Flpb, ped/bikes		0.98			1.00		1.00	1.00			1.00	
Frt		0.96			0.96		1.00	1.00			0.99	
Flt Protected		0.99			0.99		0.95	1.00			1.00	
Satd. Flow (prot)		1369			1343		902	875			3476	
Flt Permitted		0.87			0.66		0.41	1.00			1.00	
Satd. Flow (perm)		1201			904		393	3449			3476	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	48	200	96	83	135	96	11	583	4	0	509	26
RTOR Reduction (vph)	0	8	0	0	0	0	0	30	0	0	2	0
Lane Group Flow (vph)	0	336	0	0	314	0	11	557	0	0	533	0
Confl. Peds. (#/hr)	266		163	163		266			339	339		
Confl. Bikes (#/hr)			10			22			7			3
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	100%	4%	4%	3%	3%	3%
Parking (#/hr)		8			8							
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		48.5			48.5		92.3	92.3			92.3	
Effective Green, g (s)		48.5			48.5		92.3	92.3			92.3	
Actuated g/C Ratio		0.30			0.30		0.58	0.58			0.58	
Clearance Time (s)		4.5			4.5		4.5	4.5			4.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		364			274		226	504			2005	
v/s Ratio Prot								c0.64			0.15	
v/s Ratio Perm		0.28			c0.35		0.03					
v/c Ratio		0.92			1.15		0.05	1.10			0.27	
Uniform Delay, d1		53.9			55.8		14.7	33.9			16.9	
Progression Factor		1.00			1.00		1.15	1.19			0.29	
Incremental Delay, d2		28.3			99.7		0.4	70.1			0.3	
Delay (s)		82.2			155.4		17.3	110.3			5.1	
Level of Service		F			F		B	F			A	
Approach Delay (s)		82.2			155.4			108.6			5.1	
Approach LOS		F			F			F			A	

### Intersection Summary

HCM 2000 Control Delay	82.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	65.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



HCM Signalized Intersection Capacity Analysis  
 1221: Westlake Ave #16 & Republican St

6/15/2015



Movement	SWL
Lane Configurations	6
Volume (vph)	6
Ideal Flow (vphpl)	1900
Total Lost time (s)	9.0
Lane Util. Factor	1.00
Frbp, ped/bikes	1.00
Flpb, ped/bikes	1.00
Frt	1.00
Flt Protected	0.95
Satd. Flow (prot)	902
Flt Permitted	0.95
Satd. Flow (perm)	902
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	7
RTOR Reduction (vph)	0
Lane Group Flow (vph)	7
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Heavy Vehicles (%)	100%
Parking (#/hr)	
Turn Type	Prot
Protected Phases	9
Permitted Phases	
Actuated Green, G (s)	1.2
Effective Green, g (s)	1.2
Actuated g/C Ratio	0.01
Clearance Time (s)	9.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	6
v/s Ratio Prot	c0.01
v/s Ratio Perm	
v/c Ratio	1.17
Uniform Delay, d1	79.4
Progression Factor	1.00
Incremental Delay, d2	436.1
Delay (s)	515.5
Level of Service	F
Approach Delay (s)	515.5
Approach LOS	F

Intersection Summary

HCM Signalized Intersection Capacity Analysis  
1221: Westlake Ave #16 & Republican St

6/8/2015



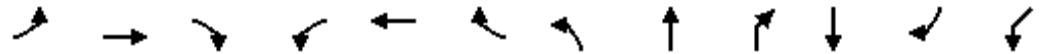
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	
Volume (vph)	55	230	110	95	155	110	13	670	5	0	585	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		4.5	4.5			4.5	
Lane Util. Factor		1.00			1.00		1.00	0.95			0.95	
Frbp, ped/bikes		0.91			0.89		1.00	0.99			0.96	
Flpb, ped/bikes		1.00			1.00		1.00	1.00			1.00	
Frt		0.96			0.96		1.00	1.00			0.99	
Flt Protected		0.99			0.99		0.95	1.00			1.00	
Satd. Flow (prot)		1393			1343		902	875			3344	
Flt Permitted		0.85			0.63		0.36	1.00			1.00	
Satd. Flow (perm)		1192			855		345	3449			3344	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	58	242	116	100	163	116	14	705	5	0	616	32
RTOR Reduction (vph)	0	9	0	0	10	0	0	0	0	0	2	0
Lane Group Flow (vph)	0	407	0	0	369	0	14	710	0	0	646	0
Confl. Peds. (#/hr)	266		163	163		266			339	339		357
Confl. Bikes (#/hr)			10			22			7			3
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	100%	4%	4%	2%	3%	3%
Parking (#/hr)		8			8							
Turn Type	Perm	NA		Perm	NA		Perm	NA			NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2					
Actuated Green, G (s)		53.5			53.5		97.5	97.5			97.5	
Effective Green, g (s)		53.5			53.5		97.5	97.5			97.5	
Actuated g/C Ratio		0.33			0.33		0.61	0.61			0.61	
Clearance Time (s)		4.5			4.5		4.5	4.5			4.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		398			285		210	533			2037	
v/s Ratio Prot								c0.81			0.19	
v/s Ratio Perm		0.34			c0.43		0.04					
v/c Ratio		1.02			1.29		0.07	1.33			0.32	
Uniform Delay, d1		53.2			53.2		12.7	31.2			15.1	
Progression Factor		1.00			1.00		1.22	1.17			0.22	
Incremental Delay, d2		51.2			156.2		0.5	159.3			0.3	
Delay (s)		104.5			209.5		16.0	195.9			3.6	
Level of Service		F			F		B	F			A	
Approach Delay (s)		104.5			209.5			192.4			3.6	
Approach LOS		F			F			F			A	

Intersection Summary

HCM 2000 Control Delay	122.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	63.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis  
 1221: Westlake Ave #16 & Republican St & Republican St (STC Turnaround)

6/8/2015



Movement	EBL2	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR	SWL
Lane Configurations		↕			↕		↗	↕		↕		↗
Volume (vph)	55	230	110	95	155	110	13	670	5	585	30	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		4.5	4.5		4.5		9.0
Lane Util. Factor		1.00			1.00		1.00	0.95		0.95		1.00
Frbp, ped/bikes		0.91			0.89		1.00	0.99		0.96		1.00
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00		1.00
Frt		0.96			0.96		1.00	1.00		0.99		1.00
Flt Protected		0.99			0.99		0.95	1.00		1.00		0.95
Satd. Flow (prot)		1393			1593		902	875		3344		902
Flt Permitted		0.83			0.58		0.36	1.00		1.00		0.95
Satd. Flow (perm)		1166			943		340	3449		3344		902
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92
Adj. Flow (vph)	58	242	116	100	163	116	14	705	5	616	32	7
RTOR Reduction (vph)	0	8	0	0	0	0	0	0	0	2	0	0
Lane Group Flow (vph)	0	408	0	0	379	0	14	710	0	646	0	7
Confl. Peds. (#/hr)	266		163	163		266			339		357	
Confl. Bikes (#/hr)			10			22			7		3	
Heavy Vehicles (%)	2%	2%	2%	0%	0%	0%	100%	4%	4%	3%	3%	100%
Parking (#/hr)		8										
Turn Type	Perm	NA		Perm	NA		Perm	NA		NA		Prot
Protected Phases		4			8			2		6		9
Permitted Phases	4			8			2					
Actuated Green, G (s)		47.5			47.5		93.3	93.3		93.3		1.2
Effective Green, g (s)		47.5			47.5		93.3	93.3		93.3		1.2
Actuated g/C Ratio		0.30			0.30		0.58	0.58		0.58		0.01
Clearance Time (s)		4.5			4.5		4.5	4.5		4.5		9.0
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0		3.0
Lane Grp Cap (vph)		346			279		198	510		1949		6
v/s Ratio Prot								c0.81		0.19		c0.01
v/s Ratio Perm		0.35			c0.40		0.04					
v/c Ratio		1.18			1.36		0.07	1.39		0.33		1.17
Uniform Delay, d1		56.2			56.2		14.5	33.4		17.2		79.4
Progression Factor		1.00			1.00		1.42	1.30		0.27		1.00
Incremental Delay, d2		106.1			182.9		0.6	186.0		0.1		436.1
Delay (s)		162.3			239.1		21.2	229.3		4.7		515.5
Level of Service		F			F		C	F		A		F
Approach Delay (s)		162.3			239.1			225.3		4.7		515.5
Approach LOS		F			F			F		A		F

Intersection Summary

HCM 2000 Control Delay	150.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.38		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	76.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

# HCM Signalized Intersection Capacity Analysis

## 1524: Railroad Way S/Alaskan Way #4a & TTI Driveway/S King St

6/8/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕			↕	
Volume (vph)	5	5	10	20	5	55	5	215	10	75	560	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	10	12	12	12	10	12	12
Total Lost time (s)		4.5	4.5		4.5			4.5			4.5	
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	
Frbp, ped/bikes		1.00	0.98		0.91			0.99			1.00	
Flpb, ped/bikes		0.98	1.00		1.00			1.00			0.98	
Frt		1.00	0.85		0.91			0.99			1.00	
Flt Protected		0.98	1.00		0.99			1.00			0.99	
Satd. Flow (prot)		1631	1418		1295			1613			1585	
Flt Permitted		0.91	1.00		0.92			0.98			0.92	
Satd. Flow (perm)		1516	1418		1208			1590			1465	
Peak-hour factor, PHF	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Adj. Flow (vph)	7	7	13	26	7	72	7	283	13	99	737	7
RTOR Reduction (vph)	0	0	0	0	0	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	14	13	0	105	0	0	302	0	0	843	0
Confl. Peds. (#/hr)	26		2	2		26	19		109	109		19
Confl. Bikes (#/hr)									8			16
Heavy Vehicles (%)	0%	0%	0%	8%	8%	8%	4%	4%	4%	5%	5%	5%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		12.0	12.0		12.0			79.0			79.0	
Effective Green, g (s)		12.0	12.0		12.0			79.0			79.0	
Actuated g/C Ratio		0.12	0.12		0.12			0.79			0.79	
Clearance Time (s)		4.5	4.5		4.5			4.5			4.5	
Vehicle Extension (s)		3.0	3.0		3.0			3.0			3.0	
Lane Grp Cap (vph)		181	170		144			1256			1157	
v/s Ratio Prot												
v/s Ratio Perm		0.01	0.01		0.09			0.19			0.58	
v/c Ratio		0.08	0.08		0.73			0.24			0.73	
Uniform Delay, d1		39.1	39.1		42.4			2.7			5.2	
Progression Factor		1.00	1.00		1.00			1.00			1.48	
Incremental Delay, d2		0.2	0.2		16.8			0.5			3.7	
Delay (s)		39.3	39.3		59.2			3.2			11.4	
Level of Service		D	D		E			A			B	
Approach Delay (s)		39.3			59.2			3.2			11.4	
Approach LOS		D			E			A			B	

### Intersection Summary

HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

# HCM Signalized Intersection Capacity Analysis

1524: SB Bus Lane/NB Bus Lane & Railroad Way S/Alaskan Way #4a & TTI Driveway/S King St



Movement	EBL2	EBT	EBR	WBL2	WBT	WBR	NBL	NBT	NBR	NBR2	SBL	SBT
Lane Configurations		↔			↑	↗	↘	↑↑	↘		↘	↑↑
Volume (vph)	10	10	5	45	10	210	10	1365	40	50	235	1540
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	10	12	10	12	10	12	10	10	10
Total Lost time (s)		4.5			4.5	4.5	4.5	4.5	4.5		4.5	4.5
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00		1.00	0.95
Frbp, ped/bikes		1.00			1.00	0.98	1.00	1.00	0.82		1.00	1.00
Flpb, ped/bikes		0.99			1.00	1.00	1.00	1.00	1.00		1.00	1.00
Frt		0.97			1.00	0.85	1.00	1.00	0.85		1.00	1.00
Flt Protected		0.98			0.96	1.00	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)		1614			1519	1226	1562	2916	815		1444	2888
Flt Permitted		0.92			0.79	1.00	0.09	1.00	1.00		0.08	1.00
Satd. Flow (perm)		1514			1253	1226	144	2916	815		121	2888
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	11	5	49	11	228	11	1484	43	54	255	1674
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	35	0	0	0
Lane Group Flow (vph)	0	27	0	0	60	228	11	1484	62	0	255	1674
Confl. Peds. (#/hr)	28		2	2		28	20			117	117	
Confl. Bikes (#/hr)										8		
Heavy Vehicles (%)	0%	0%	0%	8%	8%	8%	4%	4%	100%	4%	5%	5%
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA	Perm		pm+pt	NA
Protected Phases		4			8	1	5	2			1	6
Permitted Phases	4			8		8	2		2		6	
Actuated Green, G (s)		26.4			26.4	40.8	47.1	45.7	45.7		64.6	58.7
Effective Green, g (s)		26.4			26.4	40.8	47.1	45.7	45.7		64.6	58.7
Actuated g/C Ratio		0.26			0.26	0.41	0.47	0.46	0.46		0.65	0.59
Clearance Time (s)		4.5			4.5	4.5	4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		399			330	555	87	1332	372		268	1695
v/s Ratio Prot						c0.06	0.00	c0.51			c0.14	0.58
v/s Ratio Perm		0.02			0.05	0.13	0.06		0.08		0.48	
v/c Ratio		0.07			0.18	0.41	0.13	1.11	0.17		0.95	0.99
Uniform Delay, d1		27.6			28.5	21.1	16.6	27.1	16.0		31.3	20.3
Progression Factor		1.00			1.00	1.00	0.70	0.52	0.46		1.65	0.70
Incremental Delay, d2		0.1			0.3	0.5	0.4	58.4	0.6		20.7	10.0
Delay (s)		27.6			28.7	21.5	12.0	72.5	7.9		72.4	24.3
Level of Service		C			C	C	B	E	A		E	C
Approach Delay (s)		27.6			23.0			68.1				30.2
Approach LOS		C			C			E				C

## Intersection Summary

HCM 2000 Control Delay	45.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	86.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

# HCM Signalized Intersection Capacity Analysis

1524: SB Bus Lane/NB Bus Lane & Railroad Way S/Alaskan Way #4a & TTI Driveway/S King St



Movement	SBR	SBR2
Lane Configurations	7	7
Volume (vph)	40	5
Ideal Flow (vphpl)	1900	1900
Lane Width	12	12
Total Lost time (s)	4.5	
Lane Util. Factor	1.00	
Frbp, ped/bikes	0.90	
Flpb, ped/bikes	1.00	
Frt	0.85	
Flt Protected	1.00	
Satd. Flow (prot)	688	
Flt Permitted	1.00	
Satd. Flow (perm)	688	
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	43	5
RTOR Reduction (vph)	20	0
Lane Group Flow (vph)	28	0
Confl. Peds. (#/hr)		20
Confl. Bikes (#/hr)		17
Heavy Vehicles (%)	100%	5%
Turn Type	Perm	
Protected Phases		
Permitted Phases	6	
Actuated Green, G (s)	58.7	
Effective Green, g (s)	58.7	
Actuated g/C Ratio	0.59	
Clearance Time (s)	4.5	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	403	
v/s Ratio Prot		
v/s Ratio Perm	0.04	
v/c Ratio	0.07	
Uniform Delay, d1	8.9	
Progression Factor	1.09	
Incremental Delay, d2	0.1	
Delay (s)	9.8	
Level of Service	A	
Approach Delay (s)		
Approach LOS		
<b>Intersection Summary</b>		

# HCM Signalized Intersection Capacity Analysis

1524: SB Bus Lane/NB Bus Lane & Railroad Way S/Alaskan Way #4a & TTI Driveway/S King St



Movement	EBL2	EBT	EBR	WBL2	WBT	WBR	NBL	NBT	NBR	NBR2	SBL	SBT
Lane Configurations		↔			↑	↗	↘	↑↑	↘		↘	↑↑
Volume (vph)	10	15	5	50	15	230	10	1340	40	55	260	1525
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	10	12	10	12	10	12	10	10	10
Total Lost time (s)		4.5			4.5	4.5	4.5	4.5	4.5		4.5	4.5
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00		1.00	0.95
Frbp, ped/bikes		1.00			1.00	0.98	1.00	1.00	0.82		1.00	1.00
Flpb, ped/bikes		0.99			1.00	1.00	1.00	1.00	1.00		1.00	1.00
Frt		0.98			1.00	0.85	1.00	1.00	0.85		1.00	1.00
Flt Protected		0.98			0.96	1.00	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)		1629			1522	1227	1562	2916	829		1444	2888
Flt Permitted		0.93			0.79	1.00	0.09	1.00	1.00		0.08	1.00
Satd. Flow (perm)		1538			1254	1227	151	2916	829		126	2888
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	16	5	54	16	250	11	1457	43	60	283	1658
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	37	0	0	0
Lane Group Flow (vph)	0	32	0	0	70	250	11	1457	66	0	283	1658
Confl. Peds. (#/hr)	28		2	2		28	20			117	117	
Confl. Bikes (#/hr)										8		
Heavy Vehicles (%)	0%	0%	0%	8%	8%	8%	4%	4%	100%	4%	5%	5%
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA	Perm		pm+pt	NA
Protected Phases		4			8	1	5	2			1	6
Permitted Phases	4			8		8	2		2		6	
Actuated Green, G (s)		26.4			26.4	42.8	45.1	43.7	43.7		64.6	58.7
Effective Green, g (s)		26.4			26.4	42.8	45.1	43.7	43.7		64.6	58.7
Actuated g/C Ratio		0.26			0.26	0.43	0.45	0.44	0.44		0.65	0.59
Clearance Time (s)		4.5			4.5	4.5	4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		406			331	580	87	1274	362		297	1695
v/s Ratio Prot						c0.07	0.00	c0.50			c0.16	0.57
v/s Ratio Perm		0.02			0.06	0.13	0.05		0.08		0.46	
v/c Ratio		0.08			0.21	0.43	0.13	1.14	0.18		0.95	0.98
Uniform Delay, d1		27.7			28.7	20.1	17.1	28.1	17.2		31.4	20.0
Progression Factor		1.00			1.00	1.00	0.78	0.58	0.53		1.64	0.68
Incremental Delay, d2		0.1			0.3	0.5	0.4	70.6	0.7		19.7	8.6
Delay (s)		27.7			29.0	20.6	13.7	87.1	9.8		71.2	22.2
Level of Service		C			C	C	B	F	A		E	C
Approach Delay (s)		27.7			22.4			81.5				28.8
Approach LOS		C			C			F				C

## Intersection Summary

HCM 2000 Control Delay	49.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	88.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

# HCM Signalized Intersection Capacity Analysis

1524: SB Bus Lane/NB Bus Lane & Railroad Way S/Alaskan Way #4a & TTI Driveway/S King St



Movement	SBR	SBR2
Lane Configurations	4	2
Volume (vph)	40	10
Ideal Flow (vphpl)	1900	1900
Lane Width	12	12
Total Lost time (s)	4.5	
Lane Util. Factor	1.00	
Frbp, ped/bikes	0.90	
Flpb, ped/bikes	1.00	
Frt	0.85	
Flt Protected	1.00	
Satd. Flow (prot)	724	
Flt Permitted	1.00	
Satd. Flow (perm)	724	
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	43	11
RTOR Reduction (vph)	22	0
Lane Group Flow (vph)	32	0
Confl. Peds. (#/hr)		20
Confl. Bikes (#/hr)		17
Heavy Vehicles (%)	100%	5%
Turn Type	Perm	
Protected Phases		
Permitted Phases	6	
Actuated Green, G (s)	58.7	
Effective Green, g (s)	58.7	
Actuated g/C Ratio	0.59	
Clearance Time (s)	4.5	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	424	
v/s Ratio Prot		
v/s Ratio Perm	0.04	
v/c Ratio	0.07	
Uniform Delay, d1	8.9	
Progression Factor	0.96	
Incremental Delay, d2	0.1	
Delay (s)	8.7	
Level of Service	A	
Approach Delay (s)		
Approach LOS		
<b>Intersection Summary</b>		



# HCM Signalized Intersection Capacity Analysis

1524: SB Bus Lane/NB Bus Lane & Railroad Way S/Alaskan Way #4a & TTI Driveway/S King St



Movement	EBL2	EBT	EBR	WBL2	WBT	WBR	NBL	NBT	NBR	NBR2	SBL	SBT
Lane Configurations		↔			↑	↗	↘	↑↑	↘		↘	↑↑
Volume (vph)	10	10	5	105	10	345	10	1500	40	60	290	1685
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	10	12	10	12	10	12	10	10	10
Total Lost time (s)		4.5			4.5	4.5	4.5	4.5	4.5		4.5	4.5
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00		1.00	0.95
Frbp, ped/bikes		1.00			1.00	0.97	1.00	1.00	0.79		1.00	1.00
Flpb, ped/bikes		0.99			1.00	1.00	1.00	1.00	1.00		1.00	1.00
Frt		0.97			1.00	0.85	1.00	1.00	0.85		1.00	1.00
Flt Protected		0.98			0.96	1.00	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)		1613			1512	1223	1562	2916	802		1444	2888
Flt Permitted		0.91			0.73	1.00	0.10	1.00	1.00		0.09	1.00
Satd. Flow (perm)		1493			1153	1223	157	2916	802		131	2888
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.95
Adj. Flow (vph)	11	11	5	111	11	363	11	1579	43	63	305	1774
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	38	0	0	0
Lane Group Flow (vph)	0	27	0	0	122	363	11	1579	68	0	305	1774
Confl. Peds. (#/hr)	33		2	2		33	24			140	140	
Confl. Bikes (#/hr)										10		
Heavy Vehicles (%)	0%	0%	0%	8%	8%	8%	4%	4%	100%	4%	5%	5%
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA	Perm		pm+pt	NA
Protected Phases		4			8	1	5	2			1	6
Permitted Phases	4			8		8	2		2		6	
Actuated Green, G (s)		28.1			28.1	44.5	43.4	42.0	42.0		62.9	57.0
Effective Green, g (s)		28.1			28.1	44.5	43.4	42.0	42.0		62.9	57.0
Actuated g/C Ratio		0.28			0.28	0.44	0.43	0.42	0.42		0.63	0.57
Clearance Time (s)		4.5			4.5	4.5	4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		419			323	599	87	1224	336		297	1646
v/s Ratio Prot						c0.10	0.00	c0.54			c0.17	0.61
v/s Ratio Perm		0.02			0.11	0.20	0.05		0.09		0.48	
v/c Ratio		0.06			0.38	0.61	0.13	1.29	0.20		1.03	1.08
Uniform Delay, d1		26.3			28.9	21.1	19.8	29.0	18.4		32.1	21.5
Progression Factor		1.00			1.00	1.00	0.33	0.50	0.33		1.66	0.71
Incremental Delay, d2		0.1			0.7	1.7	0.3	133.6	0.7		23.1	36.3
Delay (s)		26.4			29.7	22.8	6.9	148.0	6.8		76.4	51.6
Level of Service		C			C	C	A	F	A		E	D
Approach Delay (s)		26.4			24.5			138.3				53.5
Approach LOS		C			C			F				D

## Intersection Summary

HCM 2000 Control Delay	83.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	98.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

# HCM Signalized Intersection Capacity Analysis

1524: SB Bus Lane/NB Bus Lane & Railroad Way S/Alaskan Way #4a & TTI Driveway/S King St



Movement	SBR	SBR2
Lane Configurations	2	2
Volume (vph)	40	40
Ideal Flow (vphpl)	1900	1900
Lane Width	12	12
Total Lost time (s)	4.5	
Lane Util. Factor	1.00	
Frpb, ped/bikes	0.88	
Flpb, ped/bikes	1.00	
Frt	0.85	
Flt Protected	1.00	
Satd. Flow (prot)	840	
Flt Permitted	1.00	
Satd. Flow (perm)	840	
Peak-hour factor, PHF	0.92	0.95
Adj. Flow (vph)	43	42
RTOR Reduction (vph)	28	0
Lane Group Flow (vph)	57	0
Confl. Peds. (#/hr)		24
Confl. Bikes (#/hr)		20
Heavy Vehicles (%)	100%	5%
Turn Type	Perm	
Protected Phases		
Permitted Phases	6	
Actuated Green, G (s)	57.0	
Effective Green, g (s)	57.0	
Actuated g/C Ratio	0.57	
Clearance Time (s)	4.5	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	478	
v/s Ratio Prot		
v/s Ratio Perm	0.07	
v/c Ratio	0.12	
Uniform Delay, d1	9.9	
Progression Factor	0.96	
Incremental Delay, d2	0.0	
Delay (s)	9.6	
Level of Service	A	
Approach Delay (s)		
Approach LOS		
<b>Intersection Summary</b>		

# HCM Signalized Intersection Capacity Analysis

1524: SB Bus Lane/NB Bus Lane & Railroad Way S/Alaskan Way #4a & TTI Driveway/S King St



Movement	EBL2	EBT	EBR	WBL2	WBT	WBR	NBL	NBT	NBR	NBR2	SBL	SBT
Lane Configurations		↻			↑	↗	↘	↑↑	↘		↘	↑↑
Volume (vph)	10	15	5	105	10	345	10	1500	40	60	290	1685
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	10	12	10	12	10	12	10	10	10
Total Lost time (s)		4.5			4.5	4.5	4.5	4.5	4.5		4.5	4.5
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00		1.00	0.95
Frbp, ped/bikes		1.00			1.00	0.97	1.00	1.00	0.79		1.00	1.00
Flpb, ped/bikes		0.99			1.00	1.00	1.00	1.00	1.00		1.00	1.00
Frt		0.98			1.00	0.85	1.00	1.00	0.85		1.00	1.00
Flt Protected		0.98			0.96	1.00	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)		1628			1512	1223	1562	2916	802		1444	2888
Flt Permitted		0.92			0.73	1.00	0.09	1.00	1.00		0.08	1.00
Satd. Flow (perm)		1522			1148	1223	153	2916	802		128	2888
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.95
Adj. Flow (vph)	11	16	5	111	11	363	11	1579	43	63	305	1774
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	37	0	0	0
Lane Group Flow (vph)	0	32	0	0	122	363	11	1579	69	0	305	1774
Confl. Peds. (#/hr)	33		2	2		33	24			140	140	
Confl. Bikes (#/hr)										10		
Heavy Vehicles (%)	0%	0%	0%	8%	8%	8%	4%	4%	100%	4%	5%	5%
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA	Perm		pm+pt	NA
Protected Phases		4			8	1	5	2			1	6
Permitted Phases	4			8		8	2		2		6	
Actuated Green, G (s)		28.1			28.1	43.5	44.4	43.0	43.0		62.9	57.0
Effective Green, g (s)		28.1			28.1	43.5	44.4	43.0	43.0		62.9	57.0
Actuated g/C Ratio		0.28			0.28	0.44	0.44	0.43	0.43		0.63	0.57
Clearance Time (s)		4.5			4.5	4.5	4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		427			322	587	87	1253	344		283	1646
v/s Ratio Prot						c0.10	0.00	c0.54			c0.17	0.61
v/s Ratio Perm		0.02			0.11	0.20	0.05		0.09		0.51	
v/c Ratio		0.07			0.38	0.62	0.13	1.26	0.20		1.08	1.08
Uniform Delay, d1		26.4			28.9	21.8	19.5	28.5	17.8		32.2	21.5
Progression Factor		1.00			1.00	1.00	0.55	0.55	0.35		1.66	0.72
Incremental Delay, d2		0.1			0.7	1.9	0.3	120.6	0.7		41.6	36.3
Delay (s)		26.5			29.7	23.8	11.1	136.3	6.9		95.2	51.7
Level of Service		C			C	C	B	F	A		F	D
Approach Delay (s)		26.5			25.3			127.4				56.2
Approach LOS		C			C			F				E

## Intersection Summary

HCM 2000 Control Delay	80.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	98.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

# HCM Signalized Intersection Capacity Analysis

1524: SB Bus Lane/NB Bus Lane & Railroad Way S/Alaskan Way #4a & TTI Driveway/S King St



Movement	SBR	SBR2
Lane Configurations	2	2
Volume (vph)	40	40
Ideal Flow (vphpl)	1900	1900
Lane Width	12	12
Total Lost time (s)	4.5	
Lane Util. Factor	1.00	
Frbp, ped/bikes	0.88	
Flpb, ped/bikes	1.00	
Frt	0.85	
Flt Protected	1.00	
Satd. Flow (prot)	840	
Flt Permitted	1.00	
Satd. Flow (perm)	840	
Peak-hour factor, PHF	0.92	0.95
Adj. Flow (vph)	43	42
RTOR Reduction (vph)	28	0
Lane Group Flow (vph)	57	0
Confl. Peds. (#/hr)		24
Confl. Bikes (#/hr)		20
Heavy Vehicles (%)	100%	5%
Turn Type	Perm	
Protected Phases		
Permitted Phases	6	
Actuated Green, G (s)	57.0	
Effective Green, g (s)	57.0	
Actuated g/C Ratio	0.57	
Clearance Time (s)	4.5	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	478	
v/s Ratio Prot		
v/s Ratio Perm	0.07	
v/c Ratio	0.12	
Uniform Delay, d1	9.9	
Progression Factor	0.96	
Incremental Delay, d2	0.0	
Delay (s)	9.6	
Level of Service	A	
Approach Delay (s)		
Approach LOS		
<b>Intersection Summary</b>		

HCM Signalized Intersection Capacity Analysis  
 1515: 1st Ave S /1st Ave #101N #101S & S Jackson St

6/8/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	50	20	50	90	90	10	405	40	100	390	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	10	10	11	10	10	10	12	10	10	10
Total Lost time (s)	4.5	4.5			4.5			4.5			4.5	
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Frbp, ped/bikes	1.00	0.95			0.93			0.98			0.99	
Flpb, ped/bikes	0.92	1.00			0.97			1.00			0.98	
Frt	1.00	0.96			0.95			0.99			0.99	
Flt Protected	0.95	1.00			0.99			1.00			0.99	
Satd. Flow (prot)	1413	1224			1321			1513			1505	
Flt Permitted	0.58	1.00			0.93			0.99			0.82	
Satd. Flow (perm)	861	1224			1240			1498			1240	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	16	52	21	52	94	94	10	422	42	104	406	21
RTOR Reduction (vph)	0	12	0	0	29	0	0	4	0	0	2	0
Lane Group Flow (vph)	16	61	0	0	211	0	0	470	0	0	529	0
Confl. Peds. (#/hr)	101		104	104		101	159		179	179		159
Confl. Bikes (#/hr)			15			51			13			2
Heavy Vehicles (%)	2%	2%	2%	6%	6%	6%	2%	2%	2%	2%	2%	2%
Parking (#/hr)		20	20									
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Actuated Green, G (s)	32.5	32.5			32.5			38.5			38.5	
Effective Green, g (s)	32.5	32.5			32.5			38.5			38.5	
Actuated g/C Ratio	0.41	0.41			0.41			0.48			0.48	
Clearance Time (s)	4.5	4.5			4.5			4.5			4.5	
Lane Grp Cap (vph)	349	497			503			720			596	
v/s Ratio Prot		0.05										
v/s Ratio Perm	0.02				c0.17			0.31			c0.43	
v/c Ratio	0.05	0.12			0.42			0.65			0.89	
Uniform Delay, d1	14.4	14.8			17.0			15.7			18.8	
Progression Factor	1.00	1.00			1.13			0.70			0.71	
Incremental Delay, d2	0.2	0.5			2.5			4.2			16.3	
Delay (s)	14.6	15.3			21.8			15.1			29.6	
Level of Service	B	B			C			B			C	
Approach Delay (s)		15.2			21.8			15.1			29.6	
Approach LOS		B			C			B			C	

Intersection Summary

HCM 2000 Control Delay	22.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	101.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis  
 1515: 1st Ave S /1st Ave #101N #101S & S Jackson St

6/8/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	40	20	20	170	60	40	450	35	115	390	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	10	10	11	10	10	10	12	10	10	10
Total Lost time (s)	4.5	4.5			4.5	4.5	4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	0.90			1.00	0.66	1.00	0.96		1.00	0.89	
Flpb, ped/bikes	0.81	1.00			0.97	1.00	0.83	1.00		0.82	1.00	
Frt	1.00	0.95			1.00	0.85	1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1248	1142			1509	842	1228	1489		1213	1350	
Flt Permitted	0.55	1.00			0.97	1.00	0.40	1.00		0.41	1.00	
Satd. Flow (perm)	726	1142			1472	842	517	1489		519	1350	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	26	42	21	21	177	62	42	469	36	120	406	109
RTOR Reduction (vph)	0	15	0	0	0	45	0	3	0	0	12	0
Lane Group Flow (vph)	26	48	0	0	198	17	42	502	0	120	503	0
Confl. Peds. (#/hr)	109		112	112		109	171		193	193		171
Confl. Bikes (#/hr)			16			55			14			2
Heavy Vehicles (%)	2%	2%	2%	6%	6%	6%	2%	2%	2%	2%	2%	2%
Parking (#/hr)		20	20									
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			2			1			1	
Permitted Phases	2			2		2	1			1		
Actuated Green, G (s)	21.5	21.5			21.5	21.5	49.5	49.5		49.5	49.5	
Effective Green, g (s)	21.5	21.5			21.5	21.5	49.5	49.5		49.5	49.5	
Actuated g/C Ratio	0.27	0.27			0.27	0.27	0.62	0.62		0.62	0.62	
Clearance Time (s)	4.5	4.5			4.5	4.5	4.5	4.5		4.5	4.5	
Lane Grp Cap (vph)	195	306			395	226	319	921		321	835	
v/s Ratio Prot		0.04						0.34				c0.37
v/s Ratio Perm	0.04				c0.13	0.02	0.08			0.23		
v/c Ratio	0.13	0.16			0.50	0.07	0.13	0.54		0.37	0.60	
Uniform Delay, d1	22.2	22.3			24.7	21.8	6.3	8.8		7.6	9.3	
Progression Factor	1.00	1.00			0.54	0.49	0.97	0.73		0.62	0.55	
Incremental Delay, d2	1.4	1.1			4.3	0.6	0.7	1.8		2.9	2.8	
Delay (s)	23.6	23.4			17.6	11.3	6.8	8.2		7.6	7.9	
Level of Service	C	C			B	B	A	A		A	A	
Approach Delay (s)		23.5			16.1			8.1			7.9	
Approach LOS		C			B			A			A	

Intersection Summary

HCM 2000 Control Delay	10.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	76.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

# HCM Signalized Intersection Capacity Analysis

## 1515: 1st Ave S /1st Ave #101N #101S & STC Phase & S Jackson St

6/8/2015



Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	SBL2	SBL	SBT
Lane Configurations		↕			↕		↕	↕		↕	↕	↕
Volume (vph)	35	50	30	25	175	55	40	430	35	110	12	375
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	10	10	11	10	10	11	10	10	11	10
Total Lost time (s)		4.5			4.5		4.5	4.5		4.5	9.0	4.5
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frbp, ped/bikes		0.92			0.93		1.00	0.96		1.00	1.00	0.91
Flpb, ped/bikes		0.96			0.98		0.86	1.00		1.00	1.00	1.00
Frt		0.96			0.97		1.00	0.99		1.00	1.00	0.97
Flt Protected		0.99			1.00		0.95	1.00		0.95	0.95	1.00
Satd. Flow (prot)		1128			1374		1277	1540		1486	785	1375
Flt Permitted		0.85			0.96		0.28	1.00		0.95	0.95	1.00
Satd. Flow (perm)		968			1332		375	1540		1486	785	1375
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.92	0.96
Adj. Flow (vph)	36	52	31	26	182	57	42	448	36	115	13	391
RTOR Reduction (vph)	0	89	0	0	0	0	0	0	0	0	0	11
Lane Group Flow (vph)	0	30	0	0	265	0	42	484	0	115	13	484
Confl. Peds. (#/hr)	109		125	125		109	171		217	217		
Confl. Bikes (#/hr)			16			55			14			
Heavy Vehicles (%)	2%	2%	2%	6%	6%	6%	2%	2%	2%	2%	100%	2%
Parking (#/hr)		20										
Turn Type	Perm	NA		Perm	NA		Perm	NA		Prot	Prot	NA
Protected Phases		4			4			6		5	3	2
Permitted Phases	4			4			6					
Actuated Green, G (s)		20.5			20.5		26.1	26.1		8.5	2.4	39.1
Effective Green, g (s)		20.5			20.5		26.1	26.1		8.5	2.4	39.1
Actuated g/C Ratio		0.26			0.26		0.33	0.33		0.11	0.03	0.49
Clearance Time (s)		4.5			4.5		4.5	4.5		4.5	9.0	4.5
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		248			341		122	502		157	23	672
v/s Ratio Prot								c0.31		0.08	0.02	c0.35
v/s Ratio Perm		0.03			c0.20		0.11					
v/c Ratio		0.12			0.78		0.34	0.96		0.73	0.57	0.72
Uniform Delay, d1		22.8			27.6		20.5	26.5		34.6	38.3	16.1
Progression Factor		1.00			0.75		0.88	0.78		0.78	0.76	0.70
Incremental Delay, d2		0.2			10.5		6.1	28.2		14.9	26.0	6.0
Delay (s)		23.1			31.3		24.1	48.8		41.9	55.1	17.3
Level of Service		C			C		C	D		D	E	B
Approach Delay (s)		23.1			31.3			46.9				22.6
Approach LOS		C			C			D				C

### Intersection Summary

HCM 2000 Control Delay	32.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	22.5
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis  
 1515: 1st Ave S /1st Ave #101N #101S & STC Phase & S Jackson St

6/8/2015



Movement	SBR	NWR
Lane Configurations		
Volume (vph)	100	12
Ideal Flow (vphpl)	1900	1900
Lane Width	10	12
Total Lost time (s)		9.0
Lane Util. Factor		1.00
Frbp, ped/bikes		1.00
Flpb, ped/bikes		1.00
Frt		0.86
Flt Protected		1.00
Satd. Flow (prot)		740
Flt Permitted		1.00
Satd. Flow (perm)		740
Peak-hour factor, PHF	0.96	0.92
Adj. Flow (vph)	104	13
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	13
Confl. Peds. (#/hr)	171	
Confl. Bikes (#/hr)	2	
Heavy Vehicles (%)	2%	100%
Parking (#/hr)		
Turn Type		Over
Protected Phases		3
Permitted Phases		
Actuated Green, G (s)		2.4
Effective Green, g (s)		2.4
Actuated g/C Ratio		0.03
Clearance Time (s)		9.0
Vehicle Extension (s)		3.0
Lane Grp Cap (vph)		22
v/s Ratio Prot		c0.02
v/s Ratio Perm		
v/c Ratio		0.59
Uniform Delay, d1		38.3
Progression Factor		1.00
Incremental Delay, d2		36.0
Delay (s)		74.3
Level of Service		E
Approach Delay (s)		
Approach LOS		
<b>Intersection Summary</b>		



HCM Signalized Intersection Capacity Analysis  
 1515: 1st Ave S /1st Ave #101N #101S & S Jackson St

6/8/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖	↗	↖	↗		↖	↗	
Volume (vph)	25	45	25	35	250	80	45	485	30	130	445	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	10	10	11	10	10	10	12	10	10	10
Total Lost time (s)	4.5	4.5			4.5	4.5	4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.87			1.00	0.61	1.00	0.97		1.00	0.91	
Flpb, ped/bikes	0.83	1.00			0.96	1.00	0.86	1.00		0.84	1.00	
Frt	1.00	0.95			1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1272	1105			1493	781	1274	1501		1253	1395	
Flt Permitted	0.44	1.00			0.96	1.00	0.35	1.00		0.36	1.00	
Satd. Flow (perm)	586	1105			1443	781	468	1501		476	1395	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	26	47	26	36	260	83	47	505	31	135	464	89
RTOR Reduction (vph)	0	18	0	0	0	57	0	3	0	0	9	0
Lane Group Flow (vph)	26	55	0	0	296	26	47	533	0	135	544	0
Confl. Peds. (#/hr)	130		134	134		130	205		231	231		205
Confl. Bikes (#/hr)			19			65			16			2
Heavy Vehicles (%)	2%	2%	2%	6%	6%	6%	2%	2%	2%	2%	2%	2%
Parking (#/hr)		20	20									
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			2			1			1	
Permitted Phases	2			2		2	1			1		
Actuated Green, G (s)	25.5	25.5			25.5	25.5	45.5	45.5		45.5	45.5	
Effective Green, g (s)	25.5	25.5			25.5	25.5	45.5	45.5		45.5	45.5	
Actuated g/C Ratio	0.32	0.32			0.32	0.32	0.57	0.57		0.57	0.57	
Clearance Time (s)	4.5	4.5			4.5	4.5	4.5	4.5		4.5	4.5	
Lane Grp Cap (vph)	186	352			459	248	266	853		270	793	
v/s Ratio Prot		0.05						0.36				c0.39
v/s Ratio Perm	0.04				c0.21	0.03	0.10			0.28		
v/c Ratio	0.14	0.16			0.64	0.11	0.18	0.63		0.50	0.69	
Uniform Delay, d1	19.4	19.5			23.4	19.2	8.3	11.5		10.4	12.2	
Progression Factor	1.00	1.00			0.49	0.49	1.10	0.81		0.79	0.72	
Incremental Delay, d2	1.6	1.0			6.6	0.8	1.0	2.5		5.5	4.1	
Delay (s)	21.0	20.5			18.1	10.3	10.1	11.8		13.7	12.8	
Level of Service	C	C			B	B	B	B		B	B	
Approach Delay (s)		20.6			16.4			11.7			13.0	
Approach LOS		C			B			B			B	

Intersection Summary

HCM 2000 Control Delay	13.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	78.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis  
 1515: 1st Ave S /1st Ave #101N #101S & STC Phase & S Jackson St

6/8/2015



Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	SBL2	SBL	SBT
Lane Configurations		↕			↕		↕	↕		↕	↕	↕
Volume (vph)	20	45	25	35	250	80	45	480	30	130	12	435
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	10	10	11	10	10	12	10	10	11	10
Total Lost time (s)		4.5			4.5		4.5	4.5		4.5	9.0	4.5
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frbp, ped/bikes		0.90			0.92		1.00	0.97		1.00	1.00	0.92
Flpb, ped/bikes		0.97			0.97		1.00	1.00		1.00	1.00	1.00
Frt		0.96			0.97		1.00	0.99		1.00	1.00	0.98
Flt Protected		0.99			1.00		0.95	1.00		0.95	0.95	1.00
Satd. Flow (prot)		1113			1350		1486	1609		1486	785	1398
Flt Permitted		0.89			0.97		0.19	1.00		0.95	0.95	1.00
Satd. Flow (perm)		1003			1312		297	1609		1486	785	1398
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	21	47	26	36	260	83	47	500	31	135	12	453
RTOR Reduction (vph)	0	62	0	0	0	0	0	0	0	0	0	10
Lane Group Flow (vph)	0	32	0	0	379	0	47	531	0	135	12	532
Confl. Peds. (#/hr)	130		159	159		130	205		256	256		
Confl. Bikes (#/hr)			19			65			16			
Heavy Vehicles (%)	2%	2%	2%	6%	6%	6%	2%	2%	2%	2%	100%	2%
Parking (#/hr)		20										
Turn Type	Perm	NA		Perm	NA		Perm	NA		Prot	Prot	NA
Protected Phases		4			4			6		5	3	2
Permitted Phases	4			4			6					
Actuated Green, G (s)		27.5			27.5		21.1	21.1		6.5	2.4	32.1
Effective Green, g (s)		27.5			27.5		21.1	21.1		6.5	2.4	32.1
Actuated g/C Ratio		0.34			0.34		0.26	0.26		0.08	0.03	0.40
Clearance Time (s)		4.5			4.5		4.5	4.5		4.5	9.0	4.5
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		344			451		78	424		120	23	560
v/s Ratio Prot								c0.33		0.09	0.02	c0.38
v/s Ratio Perm		0.03			c0.29		0.16					
v/c Ratio		0.09			0.84		0.60	1.25		1.12	0.52	0.95
Uniform Delay, d1		17.8			24.2		25.8	29.4		36.8	38.2	23.2
Progression Factor		1.00			0.52		0.82	0.76		0.94	0.84	0.89
Incremental Delay, d2		0.1			12.9		22.8	127.4		114.6	17.5	25.3
Delay (s)		17.9			25.4		43.9	149.6		149.1	49.7	45.9
Level of Service		B			C		D	F		F	D	D
Approach Delay (s)		17.9			25.4			141.0				66.2
Approach LOS		B			C			F				E

Intersection Summary

HCM 2000 Control Delay	79.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	22.5
Intersection Capacity Utilization	88.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis  
 1515: 1st Ave S /1st Ave #101N #101S & STC Phase & S Jackson St

6/8/2015



Movement	SBR	NWR
Lane Configurations		
Volume (vph)	85	12
Ideal Flow (vphpl)	1900	1900
Lane Width	10	12
Total Lost time (s)		9.0
Lane Util. Factor		1.00
Frbp, ped/bikes		1.00
Flpb, ped/bikes		1.00
Frt		0.86
Flt Protected		1.00
Satd. Flow (prot)		740
Flt Permitted		1.00
Satd. Flow (perm)		740
Peak-hour factor, PHF	0.96	0.96
Adj. Flow (vph)	89	12
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	12
Confl. Peds. (#/hr)	205	
Confl. Bikes (#/hr)	2	
Heavy Vehicles (%)	2%	100%
Parking (#/hr)		
Turn Type		Over
Protected Phases		3
Permitted Phases		
Actuated Green, G (s)		2.4
Effective Green, g (s)		2.4
Actuated g/C Ratio		0.03
Clearance Time (s)		9.0
Vehicle Extension (s)		3.0
Lane Grp Cap (vph)		22
v/s Ratio Prot		c0.02
v/s Ratio Perm		
v/c Ratio		0.55
Uniform Delay, d1		38.3
Progression Factor		1.00
Incremental Delay, d2		24.9
Delay (s)		63.1
Level of Service		E
Approach Delay (s)		
Approach LOS		
<b>Intersection Summary</b>		



# APPENDIX D4.2-C

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CAL3QHC Data



**CAL3QHC Output: 1st Avenue and South Jackson Street Intersection Existing Scenario**

♀

JOB: 1st Ave S/S Jackson St

RUN: Existing2014

DATE : 6/16/15

TIME : 17:43:14

The MODE flag has been set to C for calculating CO averages.

## SITE &amp; METEOROLOGICAL VARIABLES

VS = 0.0 CM/S      VD = 0.0 CM/S      ZO = 321. CM  
U = 1.0 M/S      CLAS = 5 (E)      ATIM = 60. MINUTES      MIXH = 1000. M      AMB = 0.0 PPM      BRG = 0. DEGREES

## LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)		(G/MI)	(FT)	(FT)		(VEH)	
1. EBL	*	-12.0	-6.0	-15.9	-6.0	*	4.	270.	AG	40.	100.0	0.0	12.0	0.05	0.2
2. EBT	*	-12.0	-18.0	-30.4	-18.0	*	18.	270.	AG	40.	100.0	0.0	12.0	0.16	0.9
3. WBT	*	12.0	6.0	72.4	6.0	*	60.	90.	AG	40.	100.0	0.0	12.0	0.53	3.1
4. NBT	*	6.0	-24.0	6.0	-128.5	*	104.	180.	AG	35.	100.0	0.0	12.0	0.72	5.3
5. SBT	*	-6.0	12.0	-6.0	189.3	*	177.	360.	AG	35.	100.0	0.0	12.0	0.97	9.0
6. EBA	*	-1000.0	-18.0	0.0	-18.0	*	1000.	90.	AG	85.	4.7	0.0	32.0		
7. EBD	*	0.0	-18.0	1000.0	-18.0	*	1000.	90.	AG	190.	4.7	0.0	32.0		
8. WBA	*	1000.0	6.0	0.0	6.0	*	1000.	270.	AG	230.	4.7	0.0	32.0		
9. WBD	*	0.0	6.0	-1000.0	6.0	*	1000.	270.	AG	120.	4.7	0.0	32.0		
10. NBA	*	6.0	-1000.0	6.0	0.0	*	1000.	360.	AG	455.	4.7	0.0	32.0		
11. NBD	*	6.0	0.0	6.0	1000.0	*	1000.	360.	AG	510.	4.7	0.0	32.0		
12. SBA	*	-6.0	1000.0	-6.0	0.0	*	1000.	180.	AG	510.	4.7	0.0	32.0		
13. SBD	*	-6.0	0.0	-6.0	-1000.0	*	1000.	180.	AG	460.	4.7	0.0	32.0		

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JOB: 1st Ave S/S Jackson St

RUN: Existing2014

DATE : 6/16/15

TIME : 17:43:14

## ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE	RED	CLEARANCE	APPROACH	SATURATI ON	I DLE	SIGNAL	ARRI VAL
	*	LENGTH	TIME	LOST TIME	VOL	FLOW RATE	EM FAC	TYPE	RATE
	*	(SEC)	(SEC)	(SEC)	(VPH)	(VPH)	(gm/hr)		
1. EBL	*	80	48	2.0	15	861	25.12	2	3
2. EBT	*	80	48	2.0	70	1224	25.12	2	3
3. WBT	*	80	48	2.0	230	1240	25.12	2	3
4. NBT	*	80	42	2.0	455	1498	25.12	2	3
5. SBT	*	80	42	2.0	510	1240	25.12	2	3

## RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (FT)			*
	*	X	Y	Z	*
1. R1	*	22.0	22.0	5.9	*
2. R2	*	104.0	22.0	5.9	*
3. R3	*	186.0	22.0	5.9	*

Page 1

♀



				exi sti ng. out		
4.	R4	*	22.0	104.0	5.9	*
5.	R5	*	22.0	186.0	5.9	*
6.	R6	*	-22.0	22.0	5.9	*
7.	R7	*	-104.0	22.0	5.9	*
8.	R8	*	-186.0	22.0	5.9	*
9.	R9	*	-22.0	104.0	5.9	*
10.	R10	*	-22.0	186.0	5.9	*
11.	R11	*	-22.0	-34.0	5.9	*
12.	R12	*	-104.0	-34.0	5.9	*
13.	R13	*	-186.0	-34.0	5.9	*
14.	R14	*	-22.0	-116.0	5.9	*
15.	R15	*	-22.0	-198.0	5.9	*
16.	R16	*	22.0	-34.0	5.9	*
17.	R17	*	104.0	-34.0	5.9	*
18.	R18	*	186.0	-34.0	5.9	*
19.	R19	*	22.0	-116.0	5.9	*
20.	R20	*	22.0	-198.0	5.9	*

♀

JOB: 1st Ave S/S Jackson St

RUN: Exi sti ng2014

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MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0. -350.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	*	0.3	0.0	0.0	0.3	0.3	0.4	0.0	0.0	0.3	0.3	0.4	0.0	0.0	0.3	0.3	0.3	0.0	0.0	0.4	0.3
10.	*	0.1	0.0	0.0	0.1	0.1	0.4	0.0	0.0	0.4	0.3	0.5	0.0	0.0	0.3	0.3	0.2	0.0	0.0	0.0	0.1
20.	*	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.4	0.3	0.5	0.0	0.0	0.3	0.2	0.1	0.0	0.0	0.0	0.0
30.	*	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.2	0.3	0.0	0.0	0.3	0.2	0.1	0.0	0.0	0.0	0.0
40.	*	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.2	0.1	0.0	0.0	0.3	0.2	0.1	0.0	0.0	0.0	0.0
50.	*	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.2	0.3	0.0	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0
60.	*	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.2	0.3	0.0	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0
70.	*	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.2	0.2	0.0	0.0	0.3	0.2	0.1	0.1	0.1	0.0	0.0
80.	*	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.3	0.4	0.0	0.0	0.3	0.2	0.1	0.1	0.1	0.0	0.0
90.	*	0.1	0.1	0.1	0.0	0.0	0.4	0.0	0.0	0.3	0.3	0.4	0.0	0.0	0.3	0.2	0.1	0.1	0.1	0.0	0.0
100.	*	0.2	0.1	0.1	0.0	0.0	0.5	0.0	0.0	0.3	0.3	0.3	0.0	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0
110.	*	0.2	0.1	0.1	0.0	0.0	0.4	0.0	0.0	0.3	0.3	0.3	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0
120.	*	0.2	0.1	0.1	0.0	0.0	0.3	0.0	0.0	0.3	0.3	0.3	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0
130.	*	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.3	0.3	0.3	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0
140.	*	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.3	0.3	0.3	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0
150.	*	0.1	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.3	0.3	0.3	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0
160.	*	0.1	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.3	0.3	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0
170.	*	0.2	0.0	0.0	0.0	0.1	0.3	0.0	0.0	0.4	0.3	0.3	0.0	0.0	0.3	0.3	0.1	0.0	0.0	0.1	0.1
180.	*	0.4	0.0	0.0	0.3	0.1	0.2	0.0	0.0	0.4	0.2	0.2	0.0	0.0	0.2	0.2	0.3	0.0	0.0	0.2	0.2
190.	*	0.4	0.0	0.0	0.3	0.3	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.4	0.0	0.0	0.3	0.3
200.	*	0.4	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.2	0.2
210.	*	0.4	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.2	0.2
220.	*	0.2	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.2	0.2
230.	*	0.1	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.2

	exi sti ng. out																				
240.	*	0.1	0.2	0.1	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.2
250.	*	0.2	0.2	0.1	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.2
260.	*	0.3	0.2	0.1	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.2
270.	*	0.3	0.0	0.1	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.2
280.	*	0.3	0.0	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.1	0.3	0.2
290.	*	0.3	0.0	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.1	0.3	0.2
300.	*	0.3	0.0	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.3	0.2
310.	*	0.3	0.0	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.3	0.2
320.	*	0.3	0.0	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.3	0.2
330.	*	0.3	0.0	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2
340.	*	0.4	0.0	0.0	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.3	0.2
350.	*	0.4	0.0	0.0	0.3	0.3	0.1	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.0	0.1	0.4	0.0	0.0	0.4	0.3

THE HIGHEST CONCENTRATION OF 0.50 PPM OCCURRED AT RECEPTOR REC11.

JOB: 1st Ave S/S Jackson St

RUN: Exi sti ng2014

DATE : 6/16/15  
TIME : 17:43:14

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

LINK #	CO/LINK (PPM) ANGLE (DEGREES)																				
	REC1 180	REC2 240	REC3 90	REC4 340	REC5 0	REC6 100	REC7 0	REC8 0	REC9 10	REC10 0	REC11 10	REC12 0	REC13 0	REC14 0	REC15 0	REC16 190	REC17 70	REC18 70	REC19 0	REC20 0	
1	*	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	0.0	0.0	0.0	0.0	0.0	0.0
2	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	*	0.1	0.1	0.0	0.0	0.0	0.1	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
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	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0
5	*	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	*	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	0.0	0.0	0.0	0.0	0.0	0.0
7	*	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	0.0	0.1	0.1	0.0	0.0	0.0
8	*	0.0	0.1	0.1	0.0	0.0	0.1	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
9	*	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	0.0	0.0	0.0	0.0	0.0	0.0
10	*	0.1	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	0.2	0.0	0.0	0.1	0.1	0.1
11	*	0.0	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1
12	*	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1
13	*	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0

**CAL3QHC Output: 1st Avenue and South Jackson Street Intersection Build 2018 Scenario**

JOB: 1st Ave S/S Jackson St

RUN: Build2018

DATE : 6/16/15

TIME : 17:43:21

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S ZO = 321. CM  
 U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM BRG = 0. DEGREES

LINK VARIABLES

LINK DESCRIPTION	* X1	Y1	X2	Y2	* LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. EBT	* -30.0	-6.0	-67.7	-6.0	* 38.	270.	AG	25.	100.0	0.0	12.0	0.60	1.9
2. WBT	* 30.0	6.0	156.0	6.0	* 126.	90.	AG	25.	100.0	0.0	12.0	0.96	6.4
3. NBL	* 0.0	-12.0	0.0	-23.8	* 12.	180.	AG	23.	100.0	0.0	12.0	0.39	0.6
4. NBT	* 18.0	-12.0	18.0	-348.5	* 336.	180.	AG	45.	100.0	0.0	24.0	1.10	17.1
5. SBL	* -6.0	12.0	-6.0	117.4	* 105.	360.	AG	61.	100.0	0.0	24.0	1.09	5.4
6. SBT	* -24.0	12.0	-24.0	121.2	* 109.	360.	AG	17.	100.0	0.0	12.0	0.53	5.5
7. EBA	* -1000.0	-6.0	0.0	-6.0	* 1000.	90.	AG	115.	3.4	0.0	32.0		
8. EBD	* 0.0	-6.0	1000.0	-6.0	* 1000.	90.	AG	207.	3.4	0.0	32.0		
9. WBA	* 1000.0	6.0	0.0	6.0	* 1000.	270.	AG	255.	3.4	0.0	32.0		
10. WBD	* 0.0	6.0	-1000.0	6.0	* 1000.	270.	AG	315.	3.4	0.0	32.0		
11. NBA	* 18.0	-1000.0	18.0	0.0	* 1000.	360.	AG	505.	3.4	0.0	44.0		
12. NBD	* 18.0	0.0	18.0	1000.0	* 1000.	360.	AG	520.	3.4	0.0	44.0		
13. SBA	* -24.0	1000.0	-24.0	0.0	* 1000.	180.	AG	609.	3.4	0.0	32.0		
14. SBD	* -24.0	0.0	-24.0	-1000.0	* 1000.	180.	AG	442.	3.4	0.0	32.0		

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JOB: 1st Ave S/S Jackson St

RUN: Build2018

DATE : 6/16/15

TIME : 17:43:21

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	* CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
1. EBT	* 80	60	2.0	115	968	12.56	2	3
2. WBT	* 80	60	2.0	255	1332	12.56	2	3
3. NBL	* 80	54	2.0	40	375	12.56	2	3
4. NBT	* 80	54	2.0	465	770	12.56	2	3
5. SBL	* 80	72	2.0	122	1136	12.56	2	3
6. SBT	* 80	41	2.0	487	2115	12.56	2	3

RECEPTOR LOCATIONS

RECEPTOR	* X	Y	Z
1. R1	* 40.0	22.0	5.9

2018bui l d. out

2.	R2	*	122.0	22.0	5.9	*
3.	R3	*	204.0	22.0	5.9	*
4.	R4	*	40.0	104.0	5.9	*
5.	R5	*	40.0	186.0	5.9	*
6.	R6	*	-40.0	22.0	5.9	*
7.	R7	*	-122.0	22.0	5.9	*
8.	R8	*	-204.0	22.0	5.9	*
9.	R9	*	-40.0	104.0	5.9	*
10.	R10	*	-40.0	186.0	5.9	*
11.	R11	*	-40.0	-22.0	5.9	*
12.	R12	*	-122.0	-22.0	5.9	*
13.	R13	*	-204.0	-22.0	5.9	*
14.	R14	*	-40.0	-104.0	5.9	*
15.	R15	*	-40.0	-186.0	5.9	*
16.	R16	*	40.0	-22.0	5.9	*
17.	R17	*	122.0	-22.0	5.9	*
18.	R18	*	204.0	-22.0	5.9	*
19.	R19	*	40.0	-104.0	5.9	*
20.	R20	*	40.0	-186.0	5.9	*

♀

JOB: 1st Ave S/S Jackson St

RUN: Bui l d2018

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MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0. -350.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	*	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.2	0.1	0.1	0.1	0.0	0.3	0.2
10.	*	0.1	0.0	0.0	0.1	0.1	0.4	0.0	0.0	0.3	0.3	0.4	0.0	0.0	0.4	0.1	0.1	0.1	0.0	0.0	0.0
20.	*	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.2	0.2	0.4	0.0	0.0	0.2	0.2	0.1	0.1	0.0	0.0	0.0
30.	*	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.1	0.2	0.1	0.1	0.0	0.0	0.0
40.	*	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0
50.	*	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0
60.	*	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0
70.	*	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0
80.	*	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.2	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0
90.	*	0.1	0.1	0.1	0.0	0.0	0.2	0.0	0.1	0.2	0.1	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0
100.	*	0.2	0.1	0.1	0.0	0.0	0.2	0.1	0.1	0.2	0.1	0.2	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
110.	*	0.2	0.1	0.1	0.0	0.0	0.2	0.1	0.1	0.2	0.1	0.2	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
120.	*	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.4	0.1	0.2	0.1	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0
130.	*	0.1	0.1	0.0	0.0	0.0	0.2	0.1	0.0	0.4	0.1	0.2	0.1	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0
140.	*	0.1	0.1	0.0	0.0	0.0	0.2	0.1	0.0	0.4	0.1	0.2	0.1	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0
150.	*	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.4	0.2	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0
160.	*	0.1	0.1	0.0	0.0	0.0	0.3	0.0	0.0	0.4	0.2	0.3	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0
170.	*	0.2	0.1	0.0	0.0	0.0	0.3	0.0	0.0	0.4	0.3	0.3	0.0	0.0	0.3	0.2	0.2	0.0	0.0	0.1	0.1
180.	*	0.3	0.1	0.0	0.3	0.2	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.2	0.2
190.	*	0.4	0.1	0.0	0.3	0.3	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.3	0.0	0.0	0.3	0.3
200.	*	0.4	0.2	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.3	0.3
210.	*	0.2	0.2	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.3	0.3

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220.	*	0.1	0.2	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.3	0.3
230.	*	0.0	0.2	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.3	0.3
240.	*	0.0	0.1	0.0	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.2	0.2
250.	*	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.2	0.2
260.	*	0.3	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.2	0.2
270.	*	0.3	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.2
280.	*	0.2	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.2	0.0	0.0	0.2	0.2
290.	*	0.2	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.2	0.2
300.	*	0.2	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.2	0.2	0.2
310.	*	0.2	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.3	0.3
320.	*	0.2	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.3	0.3
330.	*	0.3	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.3	0.3
340.	*	0.3	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.4	0.3
350.	*	0.2	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.5	0.3

THE HIGHEST CONCENTRATION OF 0.50 PPM OCCURRED AT RECEPTOR REC19.

JOB: 1st Ave S/S Jackson St

RUN: Bui l d2018

DATE : 6/16/15  
TIME : 17:43:21

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

LINK #	* * *	CO/LINK (PPM) ANGLE (DEGREES)																			
		REC1 190	REC2 200	REC3 260	REC4 180	REC5 190	REC6 10	REC7 60	REC8 90	REC9 120	REC10 10	REC11 10	REC12 50	REC13 280	REC14 10	REC15 160	REC16 190	REC17 300	REC18 80	REC19 350	REC20 190
1	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	*	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
3	*	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	0.0	0.0	0.0	0.0	0.0	0.0
4	*	0.2	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.1	0.2	0.0
5	*	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.2	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0
6	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	*	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	0.0	0.0	0.0	0.0	0.0	0.0
8	*	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	0.0	0.0	0.0	0.1	0.0	0.0
9	*	0.0	0.0	0.1	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	0.0	0.0	0.0
10	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	*	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.0
12	*	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0
13	*	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0
14	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0

**CAL3QHC Output: 1st Avenue and South Jackson Street Intersection NoBuild 2018 Scenario**

JOB: 1st Ave S/S Jackson St

RUN: NoBui I d2018

DATE : 6/16/15

TIME : 17:43:23

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S ZO = 321. CM  
 U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM BRG = 0. DEGREES

LINK VARIABLES

LINK DESCRIPTION	* X1	LINK COORDINATES (FT) Y1	X2	Y2	* LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)		
1. EBL	*	-18.0	-6.0	-26.1	-6.0	*	8.	270. AG	25.	100.0	0.0	12.0	0.16	0.4
2. EBT	*	-18.0	-18.0	-37.4	-18.0	*	19.	270. AG	25.	100.0	0.0	12.0	0.25	1.0
3. WBT	*	18.0	6.0	79.9	6.0	*	62.	90. AG	25.	100.0	0.0	12.0	0.62	3.1
4. WBR	*	18.0	18.0	37.4	18.0	*	19.	90. AG	25.	100.0	0.0	12.0	0.34	1.0
5. NBL	*	0.0	-24.0	0.0	-30.8	*	7.	180. AG	13.	100.0	0.0	12.0	0.14	0.3
6. NBT	*	12.0	-24.0	12.0	-106.2	*	82.	180. AG	13.	100.0	0.0	12.0	0.58	4.2
7. SBL	*	0.0	12.0	0.0	31.5	*	19.	360. AG	13.	100.0	0.0	12.0	0.40	1.0
8. SBT	*	-12.0	12.0	-12.0	95.9	*	84.	360. AG	13.	100.0	0.0	12.0	0.65	4.3
9. EBA	*	-1000.0	-18.0	0.0	-18.0	*	1000.	90. AG	85.	3.4	0.0	32.0		
10. EBD	*	0.0	-18.0	1000.0	-18.0	*	1000.	90. AG	190.	3.4	0.0	32.0		
11. WBA	*	1000.0	6.0	0.0	6.0	*	1000.	270. AG	252.	3.4	0.0	32.0		
12. WBD	*	0.0	6.0	-1000.0	6.0	*	1000.	270. AG	317.	3.4	0.0	32.0		
13. NBA	*	12.0	-1000.0	12.0	0.0	*	1000.	360. AG	525.	3.4	0.0	32.0		
14. NBD	*	12.0	0.0	12.0	1000.0	*	1000.	360. AG	535.	3.4	0.0	32.0		
15. SBA	*	-12.0	1000.0	-12.0	0.0	*	1000.	180. AG	610.	3.4	0.0	32.0		
16. SBD	*	-12.0	0.0	-12.0	-1000.0	*	1000.	180. AG	430.	3.4	0.0	32.0		

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JOB: 1st Ave S/S Jackson St

RUN: NoBui I d2018

DATE : 6/16/15

TIME : 17:43:23

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	* CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
1. EBL	*	80	59	2.0	25	726	12.56	2 3
2. EBT	*	80	59	2.0	60	1142	12.56	2 3
3. WBT	*	80	59	2.0	192	1472	12.56	2 3
4. WBR	*	80	59	2.0	60	842	12.56	2 3
5. NBL	*	80	31	2.0	40	517	12.56	2 3
6. NBT	*	80	31	2.0	485	1489	12.56	2 3
7. SBL	*	80	31	2.0	115	519	12.56	2 3
8. SBT	*	80	31	2.0	495	1350	12.56	2 3

RECEPTOR LOCATIONS



RECEPTOR	X	Y	Z
1. R1	28.0	34.0	5.9
2. R2	110.0	34.0	5.9
3. R3	192.0	34.0	5.9
4. R4	28.0	116.0	5.9
5. R5	28.0	198.0	5.9
6. R6	-28.0	22.0	5.9
7. R7	-110.0	22.0	5.9
8. R8	-192.0	22.0	5.9
9. R9	-28.0	104.0	5.9
10. R10	-28.0	186.0	5.9
11. R11	-28.0	-34.0	5.9
12. R12	-110.0	-34.0	5.9
13. R13	-192.0	-34.0	5.9
14. R14	-28.0	-116.0	5.9
15. R15	-28.0	-198.0	5.9
16. R16	28.0	-34.0	5.9
17. R17	110.0	-34.0	5.9
18. R18	192.0	-34.0	5.9
19. R19	28.0	-116.0	5.9
20. R20	28.0	-198.0	5.9

JOB: 1st Ave S/S Jackson St

RUN: NoBui I d2018

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0. -350.

WIND ANGLE (DEGR)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20	
0.	0.2	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.2	0.1	0.2	0.0	0.0	0.0	0.2	0.1
10.	0.1	0.0	0.0	0.1	0.1	0.3	0.0	0.0	0.3	0.3	0.3	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
20.	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.2	0.3	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0
30.	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0
40.	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0
50.	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
60.	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
70.	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80.	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
90.	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
100.	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110.	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120.	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
130.	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
140.	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.2	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
150.	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.2	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
160.	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.2	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
170.	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.1	0.2	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.1

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180.	*	0.2	0.0	0.0	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1
190.	*	0.3	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.2	0.2
200.	*	0.4	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2	0.2
210.	*	0.1	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	
220.	*	0.1	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	
230.	*	0.1	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	
240.	*	0.1	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	
250.	*	0.1	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	
260.	*	0.2	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	
270.	*	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	
280.	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	
290.	*	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	
300.	*	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	
310.	*	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	
320.	*	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	
330.	*	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.1	0.1	
340.	*	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.1	0.1	0.1	
350.	*	0.2	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.1

THE HIGHEST CONCENTRATION OF 0.40 PPM OCCURRED AT RECEPTOR REC1 .

JOB: 1st Ave S/S Jackson St

RUN: NoBui l d2018

DATE : 6/16/15  
TIME : 17:43:23

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

LINK #	*	CO/LINK (PPM)																			
		REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
	*	200	0	0	0	0	10	100	90	10	10	10	0	0	10	20	340	80	0	0	190
1	*	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	0.0	0.0	0.0	0.0	0.0	0.0
2	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	*	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	0.0	0.0	0.0	0.0	0.0	0.0
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	*	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	0.0	0.0	0.0	0.0	0.0	0.0
6	*	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	0.0	0.0	0.0	0.0	0.0	0.0
7	*	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	0.0	0.0	0.0	0.0	0.0	0.0
8	*	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	0.0	0.0	0.0	0.0	0.0	0.0
9	*	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	0.0	0.0	0.0	0.0	0.0	0.0
10	*	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	0.0	0.0	0.1	0.0	0.0	0.0
11	*	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	0.0	0.0	0.0	0.0	0.0	0.0
12	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	*	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1
14	*	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.0
15	*	0.0	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0
16	*	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1

**CAL3QHC Output: 1st Avenue and South Jackson Street Intersection Build 2040 Scenario**

JOB: 1st Ave S/S Jackson St

RUN: Build2040

DATE : 6/16/15

TIME : 17:43:19

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S ZO = 321. CM  
 U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM BRG = 0. DEGREES

LINK VARIABLES

LINK DESCRIPTION	* X1	Y1	X2	Y2	* LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. EBT	* -30.0	-6.0	-47.3	-6.0	* 17.	270.	AG	2.	100.0	0.0	12.0	0.25	0.9
2. WBT	* 30.0	6.0	101.3	6.0	* 71.	90.	AG	2.	100.0	0.0	12.0	0.77	3.6
3. NBL	* 0.0	-12.0	0.0	-22.4	* 10.	180.	AG	2.	100.0	0.0	12.0	0.57	0.5
4. NBT	* 18.0	-12.0	18.0	-83.3	* 71.	180.	AG	4.	100.0	0.0	24.0	0.83	3.6
5. SBL	* -6.0	12.0	-6.0	457.9	* 446.	360.	AG	6.	100.0	0.0	24.0	2.03	22.7
6. SBT	* -24.0	12.0	-24.0	108.1	* 96.	360.	AG	1.	100.0	0.0	12.0	0.85	4.9
7. EBA	* -1000.0	-6.0	0.0	-6.0	* 1000.	90.	AG	96.	0.8	0.0	32.0		
8. EBD	* 0.0	-6.0	1000.0	-6.0	* 1000.	90.	AG	230.	0.8	0.0	32.0		
9. WBA	* 1000.0	6.0	0.0	6.0	* 1000.	270.	AG	387.	0.8	0.0	32.0		
10. WBD	* 0.0	6.0	-1000.0	6.0	* 1000.	270.	AG	403.	0.8	0.0	32.0		
11. NBA	* 18.0	-1000.0	18.0	0.0	* 1000.	360.	AG	602.	0.8	0.0	44.0		
12. NBD	* 18.0	0.0	18.0	1000.0	* 1000.	360.	AG	628.	0.8	0.0	44.0		
13. SBA	* -24.0	1000.0	-24.0	0.0	* 1000.	180.	AG	703.	0.8	0.0	32.0		
14. SBD	* -24.0	0.0	-24.0	-1000.0	* 1000.	180.	AG	525.	0.8	0.0	32.0		

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JOB: 1st Ave S/S Jackson St

RUN: Build2040

DATE : 6/16/15

TIME : 17:43:19

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	* CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
1. EBT	* 60	33	2.0	96	1003	1.16	2	3
2. WBT	* 60	33	2.0	387	1312	1.16	2	3
3. NBL	* 60	39	2.0	48	297	1.16	2	3
4. NBT	* 60	39	2.0	554	1175	1.16	2	3
5. SBL	* 60	54	2.0	151	1136	1.16	2	3
6. SBT	* 60	28	2.0	552	1398	1.16	2	3

RECEPTOR LOCATIONS

RECEPTOR	* X	Y	Z
1. R1	* 40.0	22.0	5.9

2040bui l d. out

2.	R2	*	122.0	22.0	5.9	*
3.	R3	*	204.0	22.0	5.9	*
4.	R4	*	40.0	104.0	5.9	*
5.	R5	*	40.0	186.0	5.9	*
6.	R6	*	-40.0	22.0	5.9	*
7.	R7	*	-122.0	22.0	5.9	*
8.	R8	*	-204.0	22.0	5.9	*
9.	R9	*	-40.0	104.0	5.9	*
10.	R10	*	-40.0	186.0	5.9	*
11.	R11	*	-40.0	-22.0	5.9	*
12.	R12	*	-122.0	-22.0	5.9	*
13.	R13	*	-204.0	-22.0	5.9	*
14.	R14	*	-40.0	-104.0	5.9	*
15.	R15	*	-40.0	-186.0	5.9	*
16.	R16	*	40.0	-22.0	5.9	*
17.	R17	*	122.0	-22.0	5.9	*
18.	R18	*	204.0	-22.0	5.9	*
19.	R19	*	40.0	-104.0	5.9	*
20.	R20	*	40.0	-186.0	5.9	*

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JOB: 1st Ave S/S Jackson St

RUN: Bui l d2040

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MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0. -350.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
20.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
30.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
40.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
50.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
60.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
70.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
80.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
90.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
100.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
110.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
120.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
130.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
140.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
150.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
160.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
170.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
180.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
190.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
200.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
210.	*	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	0.0	0.0	0.0	0.0	0.0	0.0

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220.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
230.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
240.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
250.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
260.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
270.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
280.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
290.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
300.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
310.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
320.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
330.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
340.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
350.	*	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	0.0	0.0	0.0	0.0	0.0	0.0

**CAL3QHC Output: 1st Avenue and South Jackson Street Intersection NoBuild 2040 Scenario**

♀

JOB: 1st Ave S/S Jackson St

RUN: NoBui l d2040

DATE : 6/16/15  
 TIME : 17:43:17

The MODE flag has been set to C for calculating CO averages.

## SITE &amp; METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S ZO = 321. CM  
 U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM BRG = 0. DEGREES

## LINK VARIABLES

LINK DESCRIPTION	*	X1	Y1	X2	Y2	*	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. EBL	*	-18.0	-6.0	-26.1	-6.0	*	8.	270. AG	2.	100.0	0.0	12.0	0.18	0.4
2. EBT	*	-18.0	-18.0	-40.3	-18.0	*	22.	270. AG	2.	100.0	0.0	12.0	0.26	1.1
3. WBT	*	18.0	6.0	113.4	6.0	*	95.	90. AG	2.	100.0	0.0	12.0	0.80	4.8
4. WBR	*	18.0	18.0	43.6	18.0	*	26.	90. AG	2.	100.0	0.0	12.0	0.41	1.3
5. NBL	*	0.0	-24.0	0.0	-33.2	*	9.	180. AG	1.	100.0	0.0	12.0	0.20	0.5
6. NBT	*	12.0	-24.0	12.0	-128.7	*	105.	180. AG	1.	100.0	0.0	12.0	0.71	5.3
7. SBL	*	0.0	12.0	0.0	38.4	*	26.	360. AG	1.	100.0	0.0	12.0	0.57	1.3
8. SBT	*	-12.0	12.0	-12.0	119.7	*	108.	360. AG	1.	100.0	0.0	12.0	0.79	5.5
9. EBA	*	-1000.0	-18.0	0.0	-18.0	*	1000.	90. AG	101.	0.8	0.0	32.0		
10. EBD	*	0.0	-18.0	1000.0	-18.0	*	1000.	90. AG	218.	0.8	0.0	32.0		
11. WBA	*	1000.0	6.0	0.0	6.0	*	1000.	270. AG	387.	0.8	0.0	32.0		
12. WBD	*	0.0	6.0	-1000.0	6.0	*	1000.	270. AG	403.	0.8	0.0	32.0		
13. NBA	*	12.0	-1000.0	12.0	0.0	*	1000.	360. AG	594.	0.8	0.0	32.0		
14. NBD	*	12.0	0.0	12.0	1000.0	*	1000.	360. AG	626.	0.8	0.0	32.0		
15. SBA	*	-12.0	1000.0	-12.0	0.0	*	1000.	180. AG	701.	0.8	0.0	32.0		
16. SBD	*	-12.0	0.0	-12.0	-1000.0	*	1000.	180. AG	536.	0.8	0.0	32.0		

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JOB: 1st Ave S/S Jackson St

RUN: NoBui l d2040

DATE : 6/16/15  
 TIME : 17:43:17

## ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATI ON FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRI VAL RATE
1. EBL	*	80	55	2.0	27	586	1.16	2	3
2. EBT	*	80	55	2.0	74	1105	1.16	2	3
3. WBT	*	80	55	2.0	303	1443	1.16	2	3
4. WBR	*	80	55	2.0	85	781	1.16	2	3
5. NBL	*	80	35	2.0	48	468	1.16	2	3
6. NBT	*	80	35	2.0	547	1501	1.16	2	3
7. SBL	*	80	35	2.0	138	476	1.16	2	3
8. SBT	*	80	35	2.0	563	1395	1.16	2	3

## RECEPTOR LOCATIONS

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RECEPTOR	X	Y	Z
1. R1	28.0	34.0	5.9
2. R2	110.0	34.0	5.9
3. R3	192.0	34.0	5.9
4. R4	28.0	116.0	5.9
5. R5	28.0	198.0	5.9
6. R6	-28.0	22.0	5.9
7. R7	-110.0	22.0	5.9
8. R8	-192.0	22.0	5.9
9. R9	-28.0	104.0	5.9
10. R10	-28.0	186.0	5.9
11. R11	-28.0	-34.0	5.9
12. R12	-110.0	-34.0	5.9
13. R13	-192.0	-34.0	5.9
14. R14	-28.0	-116.0	5.9
15. R15	-28.0	-198.0	5.9
16. R16	28.0	-34.0	5.9
17. R17	110.0	-34.0	5.9
18. R18	192.0	-34.0	5.9
19. R19	28.0	-116.0	5.9
20. R20	28.0	-198.0	5.9

JOB: 1st Ave S/S Jackson St

RUN: NoBui | d2040

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0. -350.

WIND ANGLE (DEGR)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10.	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	0.0	0.0	0.0	0.0	0.0	0.0
20.	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	0.0	0.0	0.0	0.0	0.0	0.0
30.	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	0.0	0.0	0.0	0.0	0.0	0.0
40.	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	0.0	0.0	0.0	0.0	0.0	0.0
50.	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	0.0	0.0	0.0	0.0	0.0	0.0
60.	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	0.0	0.0	0.0	0.0	0.0	0.0
70.	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	0.0	0.0	0.0	0.0	0.0	0.0
80.	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	0.0	0.0	0.0	0.0	0.0	0.0
90.	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	0.0	0.0	0.0	0.0	0.0	0.0
100.	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	0.0	0.0	0.0	0.0	0.0	0.0
110.	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	0.0	0.0	0.0	0.0	0.0	0.0
120.	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	0.0	0.0	0.0	0.0	0.0	0.0
130.	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	0.0	0.0	0.0	0.0	0.0	0.0
140.	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	0.0	0.0	0.0	0.0	0.0	0.0
150.	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	0.0	0.0	0.0	0.0	0.0	0.0
160.	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	0.0	0.0	0.0	0.0	0.0	0.0
170.	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	0.0	0.0	0.0	0.0	0.0	0.0



**CAL3QHC Output: Alaskan Way and South King Street Intersection Existing Scenario**

JOB: Alaskan Way/ S King St

RUN: Existing2014

DATE : 6/16/15  
 TIME : 14: 5:49

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S ZO = 321. CM  
 U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM BRG = 0. DEGREES

LINK VARIABLES

LINK DESCRIPTION	* X1	Y1	X2	Y2	* LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. EBT	* -12.0	-6.0	-16.8	-6.0	* 5.	270.	AG	59.	100.0	0.0	12.0	0.08	0.2
2. EBR	* -12.0	-18.0	-16.8	-18.0	* 5.	270.	AG	59.	100.0	0.0	12.0	0.09	0.2
3. WBT	* 12.0	6.0	61.1	6.0	* 49.	90.	AG	59.	100.0	0.0	12.0	0.83	2.5
4. NBT	* 6.0	-12.0	6.0	-38.4	* 26.	180.	AG	14.	100.0	0.0	12.0	0.19	1.3
5. SBT	* -6.0	12.0	-6.0	85.5	* 73.	360.	AG	14.	100.0	0.0	12.0	0.58	3.7
6. EBA	* -1000.0	-6.0	0.0	-6.0	* 1000.	90.	AG	20.	4.7	0.0	32.0		
7. EBD	* 0.0	-6.0	1000.0	-6.0	* 1000.	90.	AG	90.	4.7	0.0	32.0		
8. WBA	* 1000.0	6.0	0.0	6.0	* 1000.	270.	AG	80.	4.7	0.0	32.0		
9. WBD	* 0.0	6.0	-1000.0	6.0	* 1000.	270.	AG	15.	4.7	0.0	32.0		
10. NBA	* 6.0	-1000.0	6.0	0.0	* 1000.	360.	AG	230.	4.7	0.0	32.0		
11. NBD	* 6.0	0.0	6.0	1000.0	* 1000.	360.	AG	275.	4.7	0.0	32.0		
12. SBA	* -6.0	1000.0	-6.0	0.0	* 1000.	180.	AG	640.	4.7	0.0	32.0		
13. SBD	* -6.0	0.0	-6.0	-1000.0	* 1000.	180.	AG	590.	4.7	0.0	32.0		

PAGE 2

JOB: Alaskan Way/ S King St

RUN: Existing2014

DATE : 6/16/15  
 TIME : 14: 5:49

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	* CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
1. EBT	* 100	88	2.0	10	1516	25.12	2	3
2. EBR	* 100	88	2.0	10	1418	25.12	2	3
3. WBT	* 100	88	2.0	80	1208	25.12	2	3
4. NBT	* 100	21	2.0	230	1590	25.12	2	3
5. SBT	* 100	21	2.0	640	1465	25.12	2	3

RECEPTOR LOCATIONS

RECEPTOR	* X	Y	Z	*
1. R1	* 22.0	22.0	5.9	*
2. R2	* 104.0	22.0	5.9	*
3. R3	* 186.0	22.0	5.9	*

				existing.out	
4.	R4	*	22.0	104.0	5.9 *
5.	R5	*	22.0	186.0	5.9 *
6.	R6	*	-22.0	22.0	5.9 *
7.	R7	*	-104.0	22.0	5.9 *
8.	R8	*	-186.0	22.0	5.9 *
9.	R9	*	-22.0	104.0	5.9 *
10.	R10	*	-22.0	186.0	5.9 *
11.	R11	*	-22.0	-34.0	5.9 *
12.	R12	*	-104.0	-34.0	5.9 *
13.	R13	*	-186.0	-34.0	5.9 *
14.	R14	*	-22.0	-116.0	5.9 *
15.	R15	*	-22.0	-198.0	5.9 *
16.	R16	*	22.0	-22.0	5.9 *
17.	R17	*	104.0	-22.0	5.9 *
18.	R18	*	186.0	-22.0	5.9 *
19.	R19	*	22.0	-104.0	5.9 *
20.	R20	*	22.0	-186.0	5.9 *

♀

JOB: Alaskan Way/ S King St

RUN: Existing2014

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0. -350.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	*	0.2	0.0	0.0	0.2	0.2	0.2	0.0	0.0	0.2	0.2	0.3	0.0	0.0	0.2	0.2	0.3	0.0	0.0	0.1	0.2
10.	*	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.3	0.3	0.4	0.1	0.0	0.2	0.3	0.1	0.0	0.0	0.0	0.0
20.	*	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.3	0.3	0.2	0.1	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0
30.	*	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.3	0.3	0.2	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0
40.	*	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0
50.	*	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0
60.	*	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0
70.	*	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
80.	*	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
90.	*	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
100.	*	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
110.	*	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
120.	*	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
130.	*	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
140.	*	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
150.	*	0.2	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.1	0.3	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
160.	*	0.2	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.2	0.3	0.3	0.1	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0
170.	*	0.2	0.0	0.0	0.0	0.0	0.4	0.1	0.0	0.2	0.3	0.3	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0
180.	*	0.4	0.0	0.0	0.1	0.3	0.2	0.0	0.0	0.2	0.2	0.2	0.0	0.0	0.2	0.2	0.2	0.0	0.0	0.2	0.2
190.	*	0.3	0.0	0.0	0.3	0.3	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.2	0.2
200.	*	0.2	0.1	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.2	0.2
210.	*	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.2
220.	*	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1
230.	*	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1

	exi sti ng. out																				
240.	*	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1
250.	*	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1
260.	*	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1
270.	*	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1
280.	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	
290.	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	
300.	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	
310.	*	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	
320.	*	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	
330.	*	0.2	0.1	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.2	0.2	
340.	*	0.2	0.1	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.3	0.2	
350.	*	0.3	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.3	0.0	0.0	0.3	0.3

THE HIGHEST CONCENTRATION OF 0.40 PPM OCCURRED AT RECEPTOR REC11.

JOB: Alaskan Way/ S King St

RUN: Exi sti ng2014

DATE : 6/16/15

TIME : 14: 5:49

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

LINK #	CO/LINK (PPM)																			
	ANGLE (DEGREES)																			
	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
	180	200	0	190	180	170	10	0	10	10	10	10	0	160	10	0	200	0	340	350
1	*	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	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	*	0.2	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	0.1	0.0	0.0	0.0	0.0
4	*	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	0.0	0.0	0.0	0.0	0.0
5	*	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	0.0	0.0	0.0	0.0	0.0
6	*	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	0.0	0.0	0.0	0.0	0.0
7	*	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	0.0	0.0	0.0	0.0	0.0
8	*	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	0.0	0.0	0.0	0.0	0.0
9	*	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	0.0	0.0	0.0	0.0	0.0
10	*	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1
11	*	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
12	*	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.2	0.2	0.2	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.1
13	*	0.1	0.1	0.0	0.1	0.1	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.1

**CAL3QHC Output: Alaskan Way and South King Street Intersection Build 2018 Scenario**

JOB: Alaskan Way/ S King St

RUN: Build2018

DATE : 6/16/15

TIME : 14: 4: 32

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S ZO = 321. CM  
 U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM BRG = 0. DEGREES

LINK VARIABLES

LINK DESCRIPTION	* X1	LINK COORDINATES (FT) Y1	X2	Y2	* LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. EBT	* -30.0	-6.0	-42.3	-6.0	* 12.	270. AG	25.	100.0	0.0	12.0	0.09	0.6
2. WBT	* 30.0	6.0	56.3	6.0	* 26.	90. AG	25.	100.0	0.0	12.0	0.24	1.3
3. WBR	* 30.0	18.0	101.7	18.0	* 72.	90. AG	19.	100.0	0.0	12.0	0.48	3.6
4. NBL	* 0.0	-12.0	0.0	-15.0	* 3.	180. AG	19.	100.0	0.0	12.0	0.16	0.2
5. NBT	* 18.0	-12.0	18.0	-1224.5	* 1213.	180. AG	38.	100.0	0.0	24.0	1.16	61.6
6. NBR	* 36.0	-12.0	36.0	-41.1	* 29.	180. AG	19.	100.0	0.0	12.0	0.29	1.5
7. SBL	* 0.0	12.0	0.0	1993.5	* 1981.	360. AG	12.	100.0	0.0	12.0	3.42	100.7
8. SBT	* -18.0	12.0	-18.0	241.9	* 230.	360. AG	28.	100.0	0.0	24.0	0.96	11.7
9. SBR	* -36.0	12.0	-36.0	23.2	* 11.	360. AG	14.	100.0	0.0	12.0	0.13	0.6
10. EBA	* -1000.0	-6.0	0.0	-6.0	* 1000.	90. AG	30.	3.4	0.0	32.0		
11. EBD	* 0.0	-6.0	1000.0	-6.0	* 1000.	90. AG	370.	3.4	0.0	32.0		
12. WBA	* 1000.0	6.0	0.0	6.0	* 1000.	270. AG	295.	3.4	0.0	32.0		
13. WBD	* 0.0	6.0	-1000.0	6.0	* 1000.	270. AG	75.	3.4	0.0	32.0		
14. NBA	* 18.0	-1000.0	18.0	0.0	* 1000.	360. AG	1455.	3.4	0.0	44.0		
15. NBD	* 18.0	0.0	18.0	1000.0	* 1000.	360. AG	1590.	3.4	0.0	44.0		
16. SBA	* -18.0	1000.0	-18.0	0.0	* 1000.	180. AG	1835.	3.4	0.0	44.0		
17. SBD	* -18.0	0.0	-18.0	-1000.0	* 1000.	180. AG	1580.	3.4	0.0	44.0		

PAGE 2

JOB: Alaskan Way/ S King St

RUN: Build2018

DATE : 6/16/15

TIME : 14: 4: 32

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	* CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
1. EBT	* 100	75	2.0	30	1538	12.56	2	3
2. WBT	* 100	74	2.0	65	1254	12.56	2	3
3. WBR	* 100	57	2.0	230	1227	12.56	2	3
4. NBL	* 100	55	2.0	10	151	12.56	2	3
5. NBT	* 100	56	2.0	1350	1458	12.56	2	3
6. NBR	* 100	56	2.0	95	829	12.56	2	3
7. SBL	* 100	35	2.0	260	126	12.56	2	3
8. SBT	* 100	41	2.0	1525	1444	12.56	2	3
9. SBR	* 100	41	2.0	50	724	12.56	2	3



RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1. R1	40.0	34.0	5.9
2. R2	122.0	34.0	5.9
3. R3	204.0	34.0	5.9
4. R4	40.0	116.0	5.9
5. R5	40.0	198.0	5.9
6. R6	-52.0	22.0	5.9
7. R7	-134.0	22.0	5.9
8. R8	-216.0	22.0	5.9
9. R9	-52.0	104.0	5.9
10. R10	-52.0	186.0	5.9
11. R11	-40.0	-22.0	5.9
12. R12	-122.0	-22.0	5.9
13. R13	-204.0	-22.0	5.9
14. R14	-40.0	-104.0	5.9
15. R15	-40.0	-186.0	5.9
16. R16	52.0	-22.0	5.9
17. R17	134.0	-22.0	5.9
18. R18	216.0	-22.0	5.9
19. R19	52.0	-104.0	5.9
20. R20	52.0	-186.0	5.9

JOB: Alaskan Way/ S King St

RUN: Bui l d2018

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0. -350.

WIND ANGLE (DEGR)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	0.4	0.0	0.0	0.4	0.4	0.3	0.0	0.0	0.3	0.3	0.6	0.1	0.0	0.5	0.4	0.3	0.0	0.0	0.3	0.3
10.	0.2	0.0	0.0	0.2	0.2	0.5	0.2	0.0	0.4	0.4	0.9	0.2	0.1	0.6	0.6	0.1	0.0	0.0	0.1	0.0
20.	0.1	0.0	0.0	0.1	0.1	0.6	0.2	0.2	0.5	0.4	0.7	0.2	0.2	0.4	0.6	0.0	0.0	0.0	0.0	0.0
30.	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.2	0.4	0.3	0.6	0.2	0.2	0.4	0.5	0.0	0.0	0.0	0.0	0.0
40.	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.2	0.4	0.4	0.3	0.2	0.2	0.4	0.4	0.1	0.1	0.1	0.0	0.0
50.	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.2	0.4	0.4	0.3	0.2	0.2	0.4	0.4	0.1	0.1	0.1	0.0	0.0
60.	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.2	0.4	0.4	0.3	0.2	0.2	0.4	0.4	0.1	0.1	0.1	0.0	0.0
70.	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.1	0.4	0.4	0.4	0.2	0.1	0.4	0.4	0.1	0.1	0.1	0.0	0.0
80.	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.1	0.4	0.4	0.4	0.0	0.0	0.4	0.4	0.2	0.1	0.1	0.0	0.0
90.	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.0	0.4	0.4	0.5	0.1	0.0	0.4	0.4	0.1	0.1	0.1	0.0	0.0
100.	0.1	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.4	0.4	0.4	0.2	0.1	0.4	0.4	0.0	0.0	0.0	0.0	0.0
110.	0.1	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.4	0.4	0.4	0.2	0.1	0.4	0.4	0.0	0.0	0.0	0.0	0.0
120.	0.1	0.0	0.0	0.0	0.0	0.3	0.2	0.1	0.4	0.4	0.4	0.2	0.1	0.4	0.4	0.0	0.0	0.0	0.0	0.0
130.	0.1	0.0	0.0	0.0	0.0	0.4	0.2	0.1	0.4	0.4	0.4	0.2	0.2	0.4	0.4	0.0	0.0	0.0	0.0	0.0
140.	0.1	0.0	0.0	0.0	0.0	0.4	0.2	0.2	0.4	0.4	0.4	0.2	0.2	0.4	0.4	0.0	0.0	0.0	0.0	0.0
150.	0.1	0.0	0.0	0.0	0.0	0.4	0.3	0.2	0.5	0.4	0.5	0.3	0.2	0.5	0.5	0.0	0.0	0.0	0.0	0.0

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160.	*	0.1	0.0	0.0	0.0	0.0	0.4	0.3	0.2	0.6	0.6	0.6	0.3	0.2	0.6	0.6	0.0	0.0	0.0	0.0	0.0
170.	*	0.3	0.0	0.0	0.2	0.2	0.5	0.2	0.0	0.5	0.6	0.7	0.2	0.0	0.7	0.6	0.1	0.0	0.0	0.1	0.1
180.	*	0.7	0.0	0.0	0.6	0.5	0.4	0.0	0.0	0.4	0.4	0.5	0.0	0.0	0.5	0.5	0.4	0.0	0.0	0.4	0.4
190.	*	0.8	0.3	0.0	0.6	0.7	0.1	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.2	0.2	0.5	0.3	0.0	0.5	0.5
200.	*	0.6	0.3	0.2	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.5	0.3	0.2	0.4	0.4
210.	*	0.4	0.3	0.2	0.4	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.2	0.4	0.4
220.	*	0.4	0.3	0.2	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.2	0.4	0.4
230.	*	0.3	0.2	0.2	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.2	0.4	0.4
240.	*	0.4	0.2	0.2	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.2	0.3	0.3
250.	*	0.3	0.1	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.0	0.3	0.3
260.	*	0.3	0.1	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.0	0.3	0.3
270.	*	0.3	0.2	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.1	0.3	0.3
280.	*	0.3	0.2	0.2	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.1	0.3	0.3
290.	*	0.3	0.2	0.2	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.2	0.3	0.3
300.	*	0.4	0.2	0.2	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.3	0.3	0.3
310.	*	0.4	0.2	0.2	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.3	0.4	0.4
320.	*	0.5	0.2	0.2	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.3	0.4	0.4
330.	*	0.6	0.2	0.2	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.2	0.5	0.4
340.	*	0.5	0.2	0.2	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.2	0.4	0.6
350.	*	0.6	0.2	0.0	0.6	0.6	0.1	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.2	0.2	0.5	0.2	0.0	0.5	0.4

THE HIGHEST CONCENTRATION OF 0.90 PPM OCCURRED AT RECEPTOR REC11.

JOB: Alaskan Way/ S King St

RUN: Bui l d2018

DATE : 6/16/15

TIME : 14: 4: 32

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

LINK #	*	CO/LINK (PPM)																			
		REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
		190	190	200	180	190	20	150	20	160	160	10	150	20	170	10	190	190	300	190	340
1	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	*	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	0.0	0.0	0.0	0.0	0.0	0.0
4	*	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	0.0	0.0	0.0	0.0	0.0	0.0
5	*	0.2	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.2	0.1	0.0	0.2	0.1
6	*	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	0.0	0.0	0.0	0.0	0.0	0.0
7	*	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	0.0	0.0	0.0	0.0	0.0	0.0
8	*	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	*	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	0.0	0.0	0.0	0.0	0.0	0.0
10	*	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	0.0	0.0	0.0	0.0	0.0	0.0
11	*	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	0.0	0.0	0.0	0.1	0.0	0.0
12	*	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	0.0	0.0	0.0	0.0	0.0	0.0
13	*	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	0.0	0.0	0.0	0.0	0.0	0.0
14	*	0.3	0.1	0.1	0.2	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.2	0.1	0.2	0.1	0.0	0.2	0.2
15	*	0.1	0.0	0.0	0.2	0.3	0.2	0.0	0.1	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.1
16	*	0.0	0.0	0.0	0.0	0.1	0.3	0.0	0.1	0.2	0.2	0.4	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.1
17	*	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.4	0.3	0.1	0.1	0.0	0.1	0.1

**CAL3QHC Output: Alaskan Way and South King Street Intersection No Build 2018 Scenario**

JOB: Alaskan Way/ S King St

RUN: NoBui I d2018

DATE : 6/16/15

TIME : 14: 4:27

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S ZO = 321. CM  
 U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM BRG = 0. DEGREES

LINK VARIABLES

LINK DESCRIPTION	* X1	* Y1	* X2	* Y2	* LENGTH (FT)	* BRG (DEG)	* TYPE	* VPH	* EF (G/MI)	* H (FT)	* W (FT)	* V/C	* QUEUE (VEH)
1. EBT	-30.0	-6.0	-40.1	-6.0	10.	270.	AG	25.	100.0	0.0	12.0	0.08	0.5
2. WBT	30.0	6.0	52.3	6.0	22.	90.	AG	25.	100.0	0.0	12.0	0.20	1.1
3. WBR	30.0	18.0	97.7	18.0	68.	90.	AG	20.	100.0	0.0	12.0	0.46	3.4
4. NBL	0.0	-12.0	0.0	-14.9	3.	180.	AG	18.	100.0	0.0	12.0	0.16	0.1
5. NBT	18.0	-12.0	18.0	-1001.5	989.	180.	AG	36.	100.0	0.0	24.0	1.11	50.3
6. NBR	36.0	-12.0	36.0	-38.6	27.	180.	AG	18.	100.0	0.0	12.0	0.26	1.4
7. SBL	0.0	12.0	0.0	1762.9	1751.	360.	AG	12.	100.0	0.0	12.0	3.22	88.9
8. SBT	-18.0	12.0	-18.0	253.2	241.	360.	AG	28.	100.0	0.0	24.0	0.97	12.3
9. SBR	-36.0	12.0	-36.0	22.1	10.	360.	AG	14.	100.0	0.0	12.0	0.12	0.5
10. EBA	-1000.0	-6.0	0.0	-6.0	1000.	90.	AG	25.	3.4	0.0	32.0		
11. EBD	0.0	-6.0	1000.0	-6.0	1000.	90.	AG	335.	3.4	0.0	32.0		
12. WBA	1000.0	6.0	0.0	6.0	1000.	270.	AG	265.	3.4	0.0	32.0		
13. WBD	0.0	6.0	-1000.0	6.0	1000.	270.	AG	65.	3.4	0.0	32.0		
14. NBA	18.0	-1000.0	18.0	0.0	1000.	360.	AG	1465.	3.4	0.0	44.0		
15. NBD	18.0	0.0	18.0	1000.0	1000.	360.	AG	1585.	3.4	0.0	44.0		
16. SBA	-18.0	1000.0	-18.0	0.0	1000.	180.	AG	1820.	3.4	0.0	44.0		
17. SBD	-18.0	0.0	-18.0	-1000.0	1000.	180.	AG	1590.	3.4	0.0	44.0		

PAGE 2

JOB: Alaskan Way/ S King St

RUN: NoBui I d2018

DATE : 6/16/15

TIME : 14: 4:27

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	* CYCLE LENGTH (SEC)	* RED TIME (SEC)	* CLEARANCE LOST TIME (SEC)	* APPROACH VOL (VPH)	* SATURATION FLOW RATE (VPH)	* I DLE EM FAC (gm/hr)	* SIGNAL TYPE	* ARRIVAL RATE
1. EBT	100	74	2.0	25	1514	12.56	2	3
2. WBT	100	74	2.0	55	1253	12.56	2	3
3. WBR	100	59	2.0	210	1226	12.56	2	3
4. NBL	100	53	2.0	10	144	12.56	2	3
5. NBT	100	54	2.0	1365	1458	12.56	2	3
6. NBR	100	54	2.0	90	815	12.56	2	3
7. SBL	100	35	2.0	235	121	12.56	2	3
8. SBT	100	41	2.0	1540	1444	12.56	2	3
9. SBR	100	41	2.0	45	688	12.56	2	3

RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1. R1	40.0	34.0	5.9
2. R2	122.0	34.0	5.9
3. R3	204.0	34.0	5.9
4. R4	40.0	116.0	5.9
5. R5	40.0	198.0	5.9
6. R6	-52.0	22.0	5.9
7. R7	-134.0	22.0	5.9
8. R8	-216.0	22.0	5.9
9. R9	-52.0	104.0	5.9
10. R10	-52.0	186.0	5.9
11. R11	-40.0	-22.0	5.9
12. R12	-122.0	-22.0	5.9
13. R13	-204.0	-22.0	5.9
14. R14	-40.0	-104.0	5.9
15. R15	-40.0	-186.0	5.9
16. R16	52.0	-22.0	5.9
17. R17	134.0	-22.0	5.9
18. R18	216.0	-22.0	5.9
19. R19	52.0	-104.0	5.9
20. R20	52.0	-186.0	5.9

JOB: Alaskan Way/ S King St

RUN: NoBui I d2018

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0. -350.

WIND ANGLE (DEGR)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	0.4	0.0	0.0	0.4	0.4	0.3	0.0	0.0	0.3	0.3	0.6	0.1	0.0	0.5	0.4	0.3	0.0	0.0	0.3	0.3
10.	0.2	0.0	0.0	0.2	0.2	0.5	0.2	0.0	0.4	0.4	0.8	0.2	0.1	0.6	0.6	0.1	0.0	0.0	0.1	0.0
20.	0.1	0.0	0.0	0.1	0.1	0.6	0.2	0.2	0.5	0.4	0.7	0.2	0.2	0.4	0.6	0.0	0.0	0.0	0.0	0.0
30.	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.2	0.4	0.4	0.5	0.2	0.2	0.4	0.5	0.0	0.0	0.0	0.0	0.0
40.	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.2	0.4	0.4	0.3	0.2	0.2	0.4	0.4	0.0	0.0	0.0	0.0	0.0
50.	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.2	0.4	0.4	0.3	0.2	0.2	0.4	0.4	0.1	0.1	0.1	0.0	0.0
60.	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.2	0.4	0.4	0.3	0.2	0.2	0.4	0.4	0.1	0.1	0.1	0.0	0.0
70.	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.1	0.4	0.4	0.4	0.2	0.1	0.4	0.4	0.1	0.1	0.1	0.0	0.0
80.	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.1	0.4	0.4	0.4	0.0	0.0	0.4	0.4	0.1	0.1	0.1	0.0	0.0
90.	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.0	0.4	0.4	0.4	0.1	0.0	0.4	0.4	0.1	0.1	0.1	0.0	0.0
100.	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.4	0.4	0.4	0.2	0.1	0.4	0.4	0.0	0.0	0.0	0.0	0.0
110.	0.1	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.4	0.4	0.4	0.2	0.1	0.4	0.4	0.0	0.0	0.0	0.0	0.0
120.	0.1	0.0	0.0	0.0	0.0	0.3	0.2	0.1	0.4	0.4	0.4	0.2	0.1	0.4	0.4	0.0	0.0	0.0	0.0	0.0
130.	0.1	0.0	0.0	0.0	0.0	0.4	0.2	0.1	0.4	0.4	0.4	0.2	0.2	0.4	0.4	0.0	0.0	0.0	0.0	0.0
140.	0.1	0.0	0.0	0.0	0.0	0.4	0.2	0.2	0.4	0.4	0.4	0.2	0.2	0.4	0.4	0.0	0.0	0.0	0.0	0.0
150.	0.1	0.0	0.0	0.0	0.0	0.4	0.2	0.2	0.5	0.4	0.5	0.3	0.2	0.5	0.5	0.0	0.0	0.0	0.0	0.0

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160.	*	0.1	0.0	0.0	0.0	0.0	0.4	0.3	0.2	0.6	0.6	0.6	0.3	0.2	0.6	0.6	0.0	0.0	0.0	0.0	0.0
170.	*	0.3	0.0	0.0	0.2	0.2	0.5	0.2	0.0	0.5	0.6	0.7	0.2	0.0	0.7	0.6	0.1	0.0	0.0	0.1	0.1
180.	*	0.6	0.0	0.0	0.6	0.5	0.3	0.0	0.0	0.4	0.3	0.5	0.0	0.0	0.5	0.5	0.4	0.0	0.0	0.4	0.4
190.	*	0.8	0.3	0.0	0.6	0.7	0.1	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.2	0.2	0.4	0.3	0.0	0.4	0.4
200.	*	0.6	0.3	0.2	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.5	0.3	0.2	0.4	0.4
210.	*	0.4	0.3	0.2	0.4	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.2	0.4	0.4
220.	*	0.4	0.3	0.2	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.2	0.4	0.4
230.	*	0.3	0.2	0.2	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.2	0.4	0.4
240.	*	0.4	0.2	0.2	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.2	0.3	0.3
250.	*	0.3	0.1	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.0	0.3	0.3
260.	*	0.3	0.1	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.0	0.3	0.3
270.	*	0.3	0.2	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.1	0.3	0.3
280.	*	0.3	0.2	0.2	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.1	0.3	0.3
290.	*	0.3	0.2	0.2	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.2	0.3	0.3
300.	*	0.4	0.2	0.2	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.3
310.	*	0.4	0.2	0.2	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.4	0.4
320.	*	0.5	0.2	0.2	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.2	0.4	0.4
330.	*	0.6	0.2	0.2	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.2	0.5	0.4
340.	*	0.6	0.2	0.2	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.2	0.4	0.6
350.	*	0.6	0.2	0.0	0.6	0.6	0.1	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.2	0.2	0.5	0.2	0.0	0.5	0.4

THE HIGHEST CONCENTRATION OF 0.80 PPM OCCURRED AT RECEPTOR REC11.

JOB: Alaskan Way/ S King St

RUN: NoBui l d2018

DATE : 6/16/15

TIME : 14: 4:27

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

LINK #	*	CO/LINK (PPM)																			
		REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
		190	190	200	180	190	20	160	20	160	160	10	150	20	170	10	200	190	300	330	340
1	*	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	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	*	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	0.0	0.0	0.0	0.0	0.0	0.0
4	*	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	0.0	0.0	0.0	0.0	0.0	0.0
5	*	0.2	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.1
6	*	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	0.0	0.0	0.0	0.0	0.0	0.0
7	*	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	0.0	0.0	0.0	0.0	0.0	0.0
8	*	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	*	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	0.0	0.0	0.0	0.0	0.0	0.0
10	*	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	0.0	0.0	0.0	0.0	0.0	0.0
11	*	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	0.0	0.0	0.0	0.1	0.0	0.0
12	*	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	0.0	0.0	0.0	0.0	0.0	0.0
13	*	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	0.0	0.0	0.0	0.0	0.0	0.0
14	*	0.3	0.1	0.1	0.2	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.2	0.1	0.2	0.1	0.0	0.2	0.2
15	*	0.1	0.0	0.0	0.2	0.3	0.2	0.0	0.1	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.1
16	*	0.0	0.0	0.0	0.0	0.1	0.3	0.0	0.1	0.2	0.2	0.4	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.1
17	*	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.4	0.3	0.2	0.1	0.0	0.1	0.1

**CAL3QHC Output: Alaskan Way and South King Street Intersection Build 2040 Scenario**

JOB: Alaskan Way/ S King St

RUN: Build2040

DATE : 6/16/15

TIME : 14: 4: 34

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S ZO = 321. CM  
 U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM BRG = 0. DEGREES

LINK VARIABLES

LINK DESCRIPTION	* X1	* Y1	* X2	* Y2	* LENGTH (FT)	* BRG (DEG)	* TYPE	* VPH	* EF (G/MI)	* H (FT)	* W (FT)	* V/C	* QUEUE (VEH)
1. EBT	-30.0	-6.0	-42.6	-6.0	13.	270.	AG	2.	100.0	0.0	12.0	0.09	0.6
2. WBT	30.0	6.0	78.0	6.0	48.	90.	AG	2.	100.0	0.0	12.0	0.44	2.4
3. WBR	30.0	18.0	144.1	18.0	114.	90.	AG	2.	100.0	0.0	12.0	0.77	5.8
4. NBL	0.0	-12.0	0.0	-15.4	3.	180.	AG	2.	100.0	0.0	12.0	0.18	0.2
5. NBT	18.0	-12.0	18.0	-2624.0	2612.	180.	AG	4.	100.0	0.0	24.0	1.40	132.7
6. NBR	36.0	-12.0	36.0	-25.1	13.	180.	AG	2.	100.0	0.0	12.0	0.13	0.7
7. SBL	0.0	12.0	0.0	2511.3	2499.	360.	AG	1.	100.0	0.0	12.0	4.11	127.0
8. SBT	-18.0	12.0	-18.0	1610.2	1598.	360.	AG	3.	100.0	0.0	24.0	1.17	81.2
9. SBR	-36.0	12.0	-36.0	32.0	20.	360.	AG	1.	100.0	0.0	12.0	0.19	1.0
10. EBA	-1000.0	-6.0	0.0	-6.0	1000.	90.	AG	32.	0.8	0.0	32.0		
11. EBD	0.0	-6.0	1000.0	-6.0	1000.	90.	AG	366.	0.8	0.0	32.0		
12. WBA	1000.0	6.0	0.0	6.0	1000.	270.	AG	488.	0.8	0.0	32.0		
13. WBD	0.0	6.0	-1000.0	6.0	1000.	270.	AG	106.	0.8	0.0	32.0		
14. NBA	18.0	-1000.0	18.0	0.0	1000.	360.	AG	1645.	0.8	0.0	44.0		
15. NBD	18.0	0.0	18.0	1000.0	1000.	360.	AG	1969.	0.8	0.0	44.0		
16. SBA	-18.0	1000.0	-18.0	0.0	1000.	180.	AG	2181.	0.8	0.0	44.0		
17. SBD	-18.0	0.0	-18.0	-1000.0	1000.	180.	AG	1905.	0.8	0.0	44.0		

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JOB: Alaskan Way/ S King St

RUN: Build2040

DATE : 6/16/15

TIME : 14: 4: 34

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	* CYCLE LENGTH (SEC)	* RED TIME (SEC)	* CLEARANCE LOST TIME (SEC)	* APPROACH VOL (VPH)	* SATURATION FLOW RATE (VPH)	* I DLE EM FAC (gm/hr)	* SIGNAL TYPE	* ARRIVAL RATE
1. EBT	100	72	2.0	32	1522	1.16	2	3
2. WBT	100	72	2.0	122	1148	1.16	2	3
3. WBR	100	57	2.0	366	1223	1.16	2	3
4. NBL	100	56	2.0	11	153	1.16	2	3
5. NBT	100	57	2.0	1592	1458	1.16	2	3
6. NBR	100	57	2.0	42	802	1.16	2	3
7. SBL	100	37	2.0	308	128	1.16	2	3
8. SBT	100	43	2.0	1789	1444	1.16	2	3
9. SBR	100	43	2.0	85	840	1.16	2	3



RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1. R1	40.0	34.0	5.9
2. R2	122.0	34.0	5.9
3. R3	204.0	34.0	5.9
4. R4	40.0	116.0	5.9
5. R5	40.0	198.0	5.9
6. R6	-52.0	22.0	5.9
7. R7	-134.0	22.0	5.9
8. R8	-216.0	22.0	5.9
9. R9	-52.0	104.0	5.9
10. R10	-52.0	186.0	5.9
11. R11	-40.0	-22.0	5.9
12. R12	-122.0	-22.0	5.9
13. R13	-204.0	-22.0	5.9
14. R14	-40.0	-104.0	5.9
15. R15	-40.0	-186.0	5.9
16. R16	52.0	-22.0	5.9
17. R17	134.0	-22.0	5.9
18. R18	216.0	-22.0	5.9
19. R19	52.0	-104.0	5.9
20. R20	52.0	-186.0	5.9

JOB: Alaskan Way/ S King St

RUN: Bui l d2040

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0. -350.

WIND ANGLE (DEGR)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0
10.	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0
20.	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
30.	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
40.	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
50.	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
60.	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70.	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	0.0	0.0	0.0	0.0	0.0	0.0
80.	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	0.0	0.0	0.0	0.0	0.0	0.0
90.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
100.	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	0.0	0.0	0.0	0.0	0.0	0.0
110.	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	0.0	0.0	0.0	0.0	0.0	0.0
120.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
140.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
150.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0

2040bui l d. out

160.	*	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
170.	*	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
180.	*	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
190.	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1
200.	*	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1
210.	*	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1
220.	*	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
230.	*	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
240.	*	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
250.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
260.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
270.	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
280.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
290.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
300.	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
310.	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320.	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
330.	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
340.	*	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
350.	*	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0

THE HIGHEST CONCENTRATION OF 0.20 PPM OCCURRED AT RECEPTOR REC14.

JOB: Alaskan Way/ S King St

RUN: Bui l d2040

DATE : 6/16/15  
TIME : 14: 4: 34

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

LINK #	*	CO/LINK (PPM)																			
		REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
		340	0	0	340	340	0	0	0	0	0	0	0	0	10	0	0	0	0	190	190
1	*	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	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	*	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	0.0	0.0	0.0	0.0	0.0	0.0
4	*	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	0.0	0.0	0.0	0.0	0.0	0.0
5	*	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	0.0	0.0	0.0	0.0	0.0	0.0
6	*	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	0.0	0.0	0.0	0.0	0.0	0.0
7	*	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	0.0	0.0	0.0	0.0	0.0	0.0
8	*	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	0.0	0.0	0.0	0.0	0.0	0.0
9	*	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	0.0	0.0	0.0	0.0	0.0	0.0
10	*	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	0.0	0.0	0.0	0.0	0.0	0.0
11	*	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	0.0	0.0	0.0	0.0	0.0	0.0
12	*	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	0.0	0.0	0.0	0.0	0.0	0.0
13	*	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	0.0	0.0	0.0	0.0	0.0	0.0
14	*	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	0.0	0.0	0.0	0.0	0.1	0.1
15	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
16	*	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
17	*	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	0.1	0.1	0.0	0.0	0.0	0.0	0.0

**CAL3QHC Output: Alaskan Way and South King Street Intersection No Build 2040 Scenario**

JOB: Alaskan Way/ S King St

RUN: NoBui l.d2040

DATE : 6/16/15  
TIME : 14: 4: 36

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S ZO = 321. CM  
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM BRG = 0. DEGREES

LINK VARIABLES

LINK DESCRIPTION	* X1	* Y1	* X2	* Y2	* LENGTH (FT)	* BRG (DEG)	* TYPE	* VPH	* EF (G/MI)	* H (FT)	* W (FT)	* V/C	* QUEUE (VEH)
1. EBT	-30.0	-6.0	-40.6	-6.0	11.	270.	AG	2.	100.0	0.0	12.0	0.08	0.5
2. WBT	30.0	6.0	78.0	6.0	48.	90.	AG	2.	100.0	0.0	12.0	0.44	2.4
3. WBR	30.0	18.0	142.1	18.0	112.	90.	AG	2.	100.0	0.0	12.0	0.75	5.7
4. NBL	0.0	-12.0	0.0	-15.4	3.	180.	AG	2.	100.0	0.0	12.0	0.18	0.2
5. NBT	18.0	-12.0	18.0	-2767.5	2756.	180.	AG	4.	100.0	0.0	24.0	1.44	140.0
6. NBR	36.0	-12.0	36.0	-45.6	34.	180.	AG	2.	100.0	0.0	12.0	0.35	1.7
7. SBL	0.0	12.0	0.0	2489.7	2478.	360.	AG	1.	100.0	0.0	12.0	4.00	125.9
8. SBT	-18.0	12.0	-18.0	1610.2	1598.	360.	AG	3.	100.0	0.0	24.0	1.17	81.2
9. SBR	-36.0	12.0	-36.0	32.0	20.	360.	AG	1.	100.0	0.0	12.0	0.19	1.0
10. EBA	-1000.0	-6.0	0.0	-6.0	1000.	90.	AG	27.	0.8	0.0	32.0		
11. EBD	0.0	-6.0	1000.0	-6.0	1000.	90.	AG	425.	0.8	0.0	32.0		
12. WBA	1000.0	6.0	0.0	6.0	1000.	270.	AG	488.	0.8	0.0	32.0		
13. WBD	0.0	6.0	-1000.0	6.0	1000.	270.	AG	106.	0.8	0.0	32.0		
14. NBA	18.0	-1000.0	18.0	0.0	1000.	360.	AG	1709.	0.8	0.0	44.0		
15. NBD	18.0	0.0	18.0	1000.0	1000.	360.	AG	1969.	0.8	0.0	44.0		
16. SBA	-18.0	1000.0	-18.0	0.0	1000.	180.	AG	2181.	0.8	0.0	44.0		
17. SBD	-18.0	0.0	-18.0	-1000.0	1000.	180.	AG	1905.	0.8	0.0	44.0		

PAGE 2

JOB: Alaskan Way/ S King St

RUN: NoBui l.d2040

DATE : 6/16/15  
TIME : 14: 4: 36

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	* CYCLE LENGTH (SEC)	* RED TIME (SEC)	* CLEARANCE LOST TIME (SEC)	* APPROACH VOL (VPH)	* SATURATION FLOW RATE (VPH)	* I DLE EM FAC (gm/hr)	* SIGNAL TYPE	* ARRIVAL RATE
1. EBT	100	72	2.0	27	1493	1.16	2	3
2. WBT	100	72	2.0	122	1153	1.16	2	3
3. WBR	100	56	2.0	366	1223	1.16	2	3
4. NBL	100	57	2.0	11	157	1.16	2	3
5. NBT	100	58	2.0	1592	1458	1.16	2	3
6. NBR	100	58	2.0	106	802	1.16	2	3
7. SBL	100	37	2.0	308	131	1.16	2	3
8. SBT	100	43	2.0	1789	1444	1.16	2	3
9. SBR	100	43	2.0	85	840	1.16	2	3

RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1. R1	40.0	34.0	5.9
2. R2	122.0	34.0	5.9
3. R3	204.0	34.0	5.9
4. R4	40.0	116.0	5.9
5. R5	40.0	198.0	5.9
6. R6	-52.0	22.0	5.9
7. R7	-134.0	22.0	5.9
8. R8	-216.0	22.0	5.9
9. R9	-52.0	104.0	5.9
10. R10	-52.0	186.0	5.9
11. R11	-40.0	-22.0	5.9
12. R12	-122.0	-22.0	5.9
13. R13	-204.0	-22.0	5.9
14. R14	-40.0	-104.0	5.9
15. R15	-40.0	-186.0	5.9
16. R16	52.0	-22.0	5.9
17. R17	134.0	-22.0	5.9
18. R18	216.0	-22.0	5.9
19. R19	52.0	-104.0	5.9
20. R20	52.0	-186.0	5.9

JOB: Alaskan Way/ S King St

RUN: NoBui l d2040

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0. -350.

WIND ANGLE (DEGR)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0
10.	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0
20.	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
30.	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
40.	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
50.	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
60.	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70.	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	0.0	0.0	0.0	0.0	0.0	0.0
80.	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	0.0	0.0	0.0	0.0	0.0	0.0
90.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
100.	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	0.0	0.0	0.0	0.0	0.0	0.0
110.	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	0.0	0.0	0.0	0.0	0.0	0.0
120.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
140.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
150.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0

2040nobui l d. out

160.	*	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170.	*	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
180.	*	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
190.	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1
200.	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1
210.	*	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1
220.	*	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
230.	*	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
240.	*	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
250.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
260.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
270.	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
280.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
290.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
300.	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
310.	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320.	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
330.	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
340.	*	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
350.	*	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0

THE HIGHEST CONCENTRATION OF 0.20 PPM OCCURRED AT RECEPTOR REC14.

JOB: Alaskan Way/ S King St

RUN: NoBui l d2040

DATE : 6/16/15

TIME : 14: 4: 36

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

LINK #	*	CO/LINK (PPM)																			
		REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
	*	340	0	0	340	340	0	0	0	0	0	0	0	0	10	0	0	0	0	190	190
1	*	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	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	*	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	0.0	0.0	0.0	0.0	0.0	0.0
4	*	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	0.0	0.0	0.0	0.0	0.0	0.0
5	*	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	0.0	0.0	0.0	0.0	0.0	0.0
6	*	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	0.0	0.0	0.0	0.0	0.0	0.0
7	*	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	0.0	0.0	0.0	0.0	0.0	0.0
8	*	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	0.0	0.0	0.0	0.0	0.0	0.0
9	*	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	0.0	0.0	0.0	0.0	0.0	0.0
10	*	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	0.0	0.0	0.0	0.0	0.0	0.0
11	*	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	0.0	0.0	0.0	0.0	0.0	0.0
12	*	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	0.0	0.0	0.0	0.0	0.0	0.0
13	*	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	0.0	0.0	0.0	0.0	0.0	0.0
14	*	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	0.0	0.0	0.0	0.0	0.1	0.1
15	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
16	*	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
17	*	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	0.1	0.1	0.0	0.0	0.0	0.0	0.0

**CAL3QHC Output: Westlake Avenue and Republican Street Intersection Existing Scenario**

JOB: Westlake Ave/Republican St

RUN: Existing2014

DATE : 6/16/15  
TIME : 15:11:49

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S ZO = 321. CM  
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM BRG = 0. DEGREES

LINK VARIABLES

LINK DESCRIPTION	* X1	Y1	X2	Y2	* LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. EBT	* -30.0	-6.0	-112.7	-6.0	* 83.	270.	AG	50.	100.0	0.0	12.0	0.84	4.2
2. WBT	* 30.0	6.0	96.9	6.0	* 67.	90.	AG	50.	100.0	0.0	12.0	0.79	3.4
3. NBL	* 0.0	-12.0	0.0	-18.6	* 7.	180.	AG	25.	100.0	0.0	12.0	0.09	0.3
4. NBT	* 18.0	-12.0	18.0	-55.5	* 43.	180.	AG	51.	100.0	0.0	24.0	0.31	2.2
5. SBL	* 0.0	12.0	0.0	16.9	* 5.	360.	AG	25.	100.0	0.0	12.0	0.08	0.2
6. SBT	* -18.0	12.0	-18.0	35.8	* 24.	360.	AG	51.	100.0	0.0	24.0	0.17	1.2
7. EBA	* -1000.0	-6.0	0.0	-6.0	* 1000.	90.	AG	220.	4.7	0.0	32.0		
8. EBD	* 0.0	-6.0	1000.0	-6.0	* 1000.	90.	AG	190.	4.7	0.0	32.0		
9. WBA	* 1000.0	6.0	0.0	6.0	* 1000.	270.	AG	190.	4.7	0.0	32.0		
10. WBD	* 0.0	6.0	-1000.0	6.0	* 1000.	270.	AG	150.	4.7	0.0	32.0		
11. NBA	* 18.0	-1000.0	18.0	0.0	* 1000.	360.	AG	570.	4.7	0.0	44.0		
12. NBD	* 18.0	0.0	18.0	1000.0	* 1000.	360.	AG	595.	4.7	0.0	44.0		
13. SBA	* -18.0	1000.0	-18.0	0.0	* 1000.	180.	AG	320.	4.7	0.0	44.0		
14. SBD	* -18.0	0.0	-18.0	-1000.0	* 1000.	180.	AG	365.	4.7	0.0	44.0		

JOB: Westlake Ave/Republican St

RUN: Existing2014

DATE : 6/16/15  
TIME : 15:11:49

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	* CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
1. EBT	* 80	59	2.0	220	1236	25.12	2	3
2. WBT	* 80	59	2.0	190	1136	25.12	2	3
3. NBL	* 80	30	2.0	40	761	25.12	2	3
4. NBT	* 80	30	2.0	530	1486	25.12	2	3
5. SBL	* 80	30	2.0	30	634	25.12	2	3
6. SBT	* 80	30	2.0	290	1479	25.12	2	3

RECEPTOR LOCATIONS

RECEPTOR	* X	Y	Z
1. R1	* 40.0	22.0	5.9



				exi sti ng. out		
2.	R2	*	122.0	22.0	5.9	*
3.	R3	*	204.0	22.0	5.9	*
4.	R4	*	40.0	104.0	5.9	*
5.	R5	*	40.0	186.0	5.9	*
6.	R6	*	-40.0	22.0	5.9	*
7.	R7	*	-122.0	22.0	5.9	*
8.	R8	*	-204.0	22.0	5.9	*
9.	R9	*	-40.0	104.0	5.9	*
10.	R10	*	-40.0	186.0	5.9	*
11.	R11	*	-40.0	-22.0	5.9	*
12.	R12	*	-122.0	-22.0	5.9	*
13.	R13	*	-204.0	-22.0	5.9	*
14.	R14	*	-40.0	-104.0	5.9	*
15.	R15	*	-40.0	-186.0	5.9	*
16.	R16	*	40.0	-22.0	5.9	*
17.	R17	*	122.0	-22.0	5.9	*
18.	R18	*	204.0	-22.0	5.9	*
19.	R19	*	40.0	-104.0	5.9	*
20.	R20	*	40.0	-186.0	5.9	*

♀

JOB: Westlake Ave/Republican St

RUN: Exi sti ng2014

PAGE 3

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0. -350.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	*	0.2	0.0	0.0	0.2	0.2	0.2	0.0	0.0	0.2	0.1	0.3	0.0	0.0	0.2	0.1	0.2	0.0	0.0	0.2	0.2
10.	*	0.1	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.2	0.2	0.3	0.0	0.0	0.2	0.2	0.2	0.0	0.0	0.0	0.1
20.	*	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.2	0.4	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0
30.	*	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.2	0.3	0.1	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0
40.	*	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.2	0.2	0.1	0.0	0.3	0.2	0.1	0.0	0.0	0.0	0.0
50.	*	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.2	0.2	0.1	0.1	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0
60.	*	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.2	0.2	0.0	0.3	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.0
70.	*	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.1	0.2	0.3	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.0
80.	*	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0
90.	*	0.1	0.1	0.1	0.0	0.0	0.3	0.0	0.0	0.2	0.2	0.3	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.0
100.	*	0.2	0.1	0.1	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.3	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0
110.	*	0.2	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.3	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0
120.	*	0.2	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0
130.	*	0.2	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.2	0.2	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0
140.	*	0.1	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.2	0.2	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0
150.	*	0.1	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.1	0.2	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0
160.	*	0.1	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.2	0.2	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0
170.	*	0.2	0.0	0.0	0.0	0.1	0.3	0.0	0.0	0.3	0.2	0.2	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.1	0.1
180.	*	0.2	0.0	0.0	0.2	0.2	0.3	0.0	0.0	0.2	0.1	0.2	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.2	0.2
190.	*	0.5	0.1	0.0	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.3	0.0	0.0	0.3	0.3
200.	*	0.4	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.0	0.3	0.3
210.	*	0.3	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.1	0.1

	exi sti ng.out																			
220.	*	0.4	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
230.	*	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
240.	*	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.1
250.	*	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1
260.	*	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1
270.	*	0.2	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.0	0.0	0.4	0.0	0.1
280.	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.0	0.0	0.4	0.1	0.1
290.	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.1	0.0	0.0	0.2	0.1	0.1
300.	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.1	0.0	0.0	0.2	0.1	0.1
310.	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.1	0.1	0.1
320.	*	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.2	0.1
330.	*	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1
340.	*	0.2	0.1	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.1	0.1
350.	*	0.2	0.1	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.1	0.1

THE HIGHEST CONCENTRATION OF 0.50 PPM OCCURRED AT RECEPTOR REC1 .

JOB: Westlake Ave/Republican St

RUN: Exi sti ng2014

DATE : 6/16/15  
TIME : 15:11:49

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

LINK #	*	CO/LINK (PPM)																			
		ANGLE (DEGREES)																			
		REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
		190	90	90	190	0	50	260	260	170	10	20	60	80	40	10	200	320	70	190	190
1	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	*	0.1	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	0.0	0.1	0.0	0.0	0.0
3	*	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	0.0	0.0	0.0	0.0	0.0	0.0
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	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0
5	*	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	0.0	0.0	0.0	0.0	0.0	0.0
6	*	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	*	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	0.0	0.0	0.0	0.1	0.0	0.0
9	*	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	*	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.2	0.2
12	*	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0
13	*	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	*	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1

**CAL3QHC Output: Westlake Avenue and Republican Street Intersection Build 2018 Scenario**

JOB: Westlake Ave/Republican St

RUN: Build2018

DATE : 6/16/15

TIME : 15:25:28

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S ZO = 321. CM  
 U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM BRG = 0. DEGREES

LINK VARIABLES

LINK DESCRIPTION	* X1	Y1	X2	Y2	* LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. EBT	* -36.0	-6.0	-266.2	-6.0	* 230.	270.	AG	24.	100.0	0.0	12.0	0.96	11.7
2. WBT	* 36.0	6.0	668.4	6.0	* 632.	90.	AG	24.	100.0	0.0	12.0	1.16	32.1
3. NBL	* 6.0	-12.0	6.0	-15.7	* 4.	180.	AG	14.	100.0	0.0	12.0	0.05	0.2
4. NBT	* 24.0	-12.0	24.0	-112.4	* 100.	180.	AG	29.	100.0	0.0	24.0	0.28	5.1
5. SBT	* -18.0	12.0	-18.0	73.7	* 62.	360.	AG	43.	100.0	0.0	36.0	0.21	3.1
6. EBA	* -1000.0	-6.0	0.0	-6.0	* 1000.	90.	AG	316.	3.4	0.0	32.0		
7. EBD	* 0.0	-6.0	1000.0	-6.0	* 1000.	90.	AG	188.	3.4	0.0	32.0		
8. WBA	* 1000.0	6.0	0.0	6.0	* 1000.	270.	AG	288.	3.4	0.0	32.0		
9. WBD	* 0.0	6.0	-1000.0	6.0	* 1000.	270.	AG	158.	3.4	0.0	32.0		
10. NBA	* 24.0	-1000.0	24.0	0.0	* 1000.	360.	AG	550.	3.4	0.0	44.0		
11. NBD	* 24.0	0.0	24.0	1000.0	* 1000.	360.	AG	668.	3.4	0.0	44.0		
12. SBA	* -18.0	1000.0	-18.0	0.0	* 1000.	180.	AG	498.	3.4	0.0	56.0		
13. SBD	* -18.0	0.0	-18.0	-1000.0	* 1000.	180.	AG	638.	3.4	0.0	56.0		

PAGE 2

JOB: Westlake Ave/Republican St

RUN: Build2018

DATE : 6/16/15

TIME : 15:25:28

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	* CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
1. EBT	* 160	112	2.0	316	1201	12.56	2	3
2. WBT	* 160	112	2.0	288	904	12.56	2	3
3. NBL	* 160	68	2.0	10	393	12.56	2	3
4. NBT	* 160	68	2.0	540	1725	12.56	2	3
5. SBT	* 160	68	2.0	498	1459	12.56	2	3

RECEPTOR LOCATIONS

RECEPTOR	* X	Y	Z	* 5.9
1. R1	* 46.0	22.0	5.9	*
2. R2	* 128.0	22.0	5.9	*
3. R3	* 210.0	22.0	5.9	*

2018bui l d. out

4.	R4	*	46.0	104.0	5.9	*
5.	R5	*	46.0	186.0	5.9	*
6.	R6	*	-46.0	22.0	5.9	*
7.	R7	*	-128.0	22.0	5.9	*
8.	R8	*	-210.0	22.0	5.9	*
9.	R9	*	-46.0	104.0	5.9	*
10.	R10	*	-46.0	186.0	5.9	*
11.	R11	*	-46.0	-22.0	5.9	*
12.	R12	*	-128.0	-22.0	5.9	*
13.	R13	*	-210.0	-22.0	5.9	*
14.	R14	*	-46.0	-104.0	5.9	*
15.	R15	*	-46.0	-186.0	5.9	*
16.	R16	*	46.0	-22.0	5.9	*
17.	R17	*	128.0	-22.0	5.9	*
18.	R18	*	210.0	-22.0	5.9	*
19.	R19	*	46.0	-104.0	5.9	*
20.	R20	*	46.0	-186.0	5.9	*

♀

JOB: Westlake Ave/Republican St

RUN: Bui l d2018

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0. -350.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	*	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.2	0.2
10.	*	0.1	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.2	0.2	0.4	0.1	0.1	0.3	0.2	0.1	0.0	0.0	0.0	0.0
20.	*	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.2	0.2	0.3	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0
30.	*	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.2	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
40.	*	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
50.	*	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
60.	*	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.1	0.0	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0
70.	*	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0
80.	*	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0
90.	*	0.2	0.2	0.2	0.0	0.0	0.3	0.0	0.0	0.1	0.1	0.2	0.0	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0
100.	*	0.2	0.2	0.2	0.0	0.0	0.3	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
110.	*	0.2	0.2	0.2	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
120.	*	0.2	0.2	0.2	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
130.	*	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
140.	*	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
150.	*	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
160.	*	0.1	0.1	0.1	0.0	0.0	0.2	0.0	0.0	0.2	0.1	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0
170.	*	0.1	0.1	0.1	0.0	0.0	0.2	0.0	0.0	0.3	0.1	0.2	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1
180.	*	0.2	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1
190.	*	0.4	0.1	0.1	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.3	0.0	0.0	0.2	0.2
200.	*	0.3	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.2	0.2
210.	*	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.2	0.2
220.	*	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.2	0.2
230.	*	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.2	0.2

2018bui l d. out																					
240.	*	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.1
250.	*	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.1
260.	*	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.1
270.	*	0.2	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.0	0.0	0.3	0.0	0.0	0.2	0.1
280.	*	0.2	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.3	0.0	0.0	0.2	0.1
290.	*	0.2	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.0	0.0	0.2	0.0	0.1	0.2	0.1
300.	*	0.2	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.0	0.0	0.1	0.1	0.1	0.2	0.1
310.	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.1
320.	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.2	0.1	0.1	0.2	0.2
330.	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.2
340.	*	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.2	0.0	0.0	0.2	0.1
350.	*	0.3	0.0	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.2	0.0	0.0	0.3	0.1

THE HIGHEST CONCENTRATION OF 0.40 PPM OCCURRED AT RECEPTOR REC11.

JOB: Westlake Ave/Republican St

RUN: Bui l d2018

DATE : 6/16/15

TIME : 15:25:28

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

LINK #	*	CO/LINK (PPM)																			
		ANGLE (DEGREES)																			
		REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
*	190	90	90	190	190	20	250	110	170	10	10	60	60	10	10	190	30	30	350	0	
1	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	
2	*	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	
3	*	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	0.0	0.0	0.0	0.0	0.0	
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	0.0	0.0	0.0	0.1	0.0	0.0	0.1	
5	*	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
6	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
7	*	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	0.0	0.0	0.0	0.0	0.0	
8	*	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
9	*	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	0.0	0.0	0.0	0.0	0.0	
10	*	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	
11	*	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	
12	*	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	
13	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	

**CAL3QHC Output: Westlake Avenue and Republican Street Intersection No Build 2018 Scenario**

JOB: Westlake Ave/Republican St

RUN: NoBui l.d2018

DATE : 6/16/15  
TIME : 15:25:31

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S ZO = 321. CM  
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM BRG = 0. DEGREES

LINK VARIABLES

LINK DESCRIPTION	* X1	Y1	X2	Y2	* LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. EBT	* -24.0	-6.0	-188.2	-6.0	* 164.	270.	AG	20.	100.0	0.0	12.0	0.69	8.3
2. WBT	* 36.0	6.0	185.6	6.0	* 150.	90.	AG	20.	100.0	0.0	12.0	0.83	7.6
3. NBL	* 6.0	-12.0	6.0	-15.2	* 3.	180.	AG	12.	100.0	0.0	12.0	0.04	0.2
4. NBT	* 24.0	-12.0	24.0	-99.1	* 87.	180.	AG	25.	100.0	0.0	24.0	0.26	4.4
5. SBT	* -12.0	12.0	-12.0	91.4	* 79.	360.	AG	25.	100.0	0.0	24.0	0.24	4.0
6. EBA	* -1000.0	-6.0	0.0	-6.0	* 1000.	90.	AG	316.	3.4	0.0	32.0		
7. EBD	* 0.0	-6.0	1000.0	-6.0	* 1000.	90.	AG	188.	3.4	0.0	32.0		
8. WBA	* 1000.0	6.0	0.0	6.0	* 1000.	270.	AG	288.	3.4	0.0	32.0		
9. WBD	* 0.0	6.0	-1000.0	6.0	* 1000.	270.	AG	158.	3.4	0.0	32.0		
10. NBA	* 24.0	-1000.0	24.0	0.0	* 1000.	360.	AG	550.	3.4	0.0	44.0		
11. NBD	* 24.0	0.0	24.0	1000.0	* 1000.	360.	AG	668.	3.4	0.0	44.0		
12. SBA	* -12.0	1000.0	-12.0	0.0	* 1000.	180.	AG	492.	3.4	0.0	44.0		
13. SBD	* -12.0	0.0	-12.0	-1000.0	* 1000.	180.	AG	632.	3.4	0.0	44.0		

PAGE 2

JOB: Westlake Ave/Republican St

RUN: NoBui l.d2018

DATE : 6/16/15  
TIME : 15:25:31

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	* CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
1. EBT	* 160	95	2.0	316	1205	12.56	2	3
2. WBT	* 160	95	2.0	288	913	12.56	2	3
3. NBL	* 160	59	2.0	10	403	12.56	2	3
4. NBT	* 160	59	2.0	540	1725	12.56	2	3
5. SBT	* 160	59	2.0	492	1673	12.56	2	3

RECEPTOR LOCATIONS

RECEPTOR	* X	Y	Z	*
1. R1	* 46.0	22.0	5.9	*
2. R2	* 128.0	22.0	5.9	*
3. R3	* 210.0	22.0	5.9	*



4.	R4	*	46.0	104.0	5.9	*
5.	R5	*	46.0	186.0	5.9	*
6.	R6	*	-34.0	22.0	5.9	*
7.	R7	*	-116.0	22.0	5.9	*
8.	R8	*	-198.0	22.0	5.9	*
9.	R9	*	-34.0	104.0	5.9	*
10.	R10	*	-34.0	186.0	5.9	*
11.	R11	*	-34.0	-22.0	5.9	*
12.	R12	*	-116.0	-22.0	5.9	*
13.	R13	*	-198.0	-22.0	5.9	*
14.	R14	*	-34.0	-104.0	5.9	*
15.	R15	*	-34.0	-186.0	5.9	*
16.	R16	*	46.0	-22.0	5.9	*
17.	R17	*	128.0	-22.0	5.9	*
18.	R18	*	210.0	-22.0	5.9	*
19.	R19	*	46.0	-104.0	5.9	*
20.	R20	*	46.0	-186.0	5.9	*

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JOB: Westlake Ave/Republican St

RUN: NoBui l d2018

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0. -350.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20	
0.	*	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.1	0.0	0.2	0.1	0.1	0.0	0.0	0.0	0.2	0.2
10.	*	0.1	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.2	0.2	0.3	0.1	0.0	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0
20.	*	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.2	0.2	0.3	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
30.	*	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.2	0.2	0.2	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
40.	*	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.2	0.2	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
50.	*	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
60.	*	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
70.	*	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
80.	*	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
90.	*	0.1	0.1	0.1	0.0	0.0	0.2	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
100.	*	0.2	0.1	0.1	0.0	0.0	0.3	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
110.	*	0.2	0.2	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
120.	*	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
130.	*	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.2	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
140.	*	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
150.	*	0.1	0.1	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.2	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
160.	*	0.1	0.1	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.1	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
170.	*	0.1	0.1	0.0	0.0	0.0	0.2	0.0	0.0	0.4	0.1	0.3	0.0	0.0	0.3	0.3	0.1	0.0	0.0	0.1	0.1	0.1
180.	*	0.2	0.1	0.0	0.2	0.1	0.1	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1
190.	*	0.3	0.1	0.0	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.2	0.2	0.2
200.	*	0.3	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.2	0.2	0.2
210.	*	0.3	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.2	0.2	0.2
220.	*	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.2	0.2	0.2
230.	*	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.1	0.1

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240.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
250.	*	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
260.	*	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
270.	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1
280.	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1
290.	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1
300.	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.0	0.2	0.1
310.	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1
320.	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.2
330.	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.2
340.	*	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.1
350.	*	0.3	0.0	0.0	0.3	0.3	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.3	0.1

THE HIGHEST CONCENTRATION OF 0.40 PPM OCCURRED AT RECEPTOR REC9 .

JOB: Westlake Ave/Republican St

RUN: NoBui l d2018

DATE : 6/16/15

TIME : 15:25:31

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

LINK #	*	CO/LINK (PPM)																			
		REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
		190	110	250	190	350	20	250	110	170	10	10	60	60	10	170	200	0	290	350	0
1	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	*	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3	*	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	0.0	0.0	0.0	0.0	0.0	0.0
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	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0
5	*	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	*	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	0.0	0.0	0.0	0.0	0.0	0.0
8	*	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	*	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	0.0	0.0	0.0	0.0	0.0	0.0
10	*	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1
11	*	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1
12	*	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
13	*	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0

**CAL3QHC Output: Westlake Avenue and Republican Street Intersection Build 2040 Scenario**

JOB: Westlake Ave/Republican St

RUN: Build2040

DATE : 6/16/15

TIME : 15:25:25

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S ZO = 321. CM  
 U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM BRG = 0. DEGREES

LINK VARIABLES

LINK DESCRIPTION	* X1	Y1	X2	Y2	* LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. EBT	* -30.0	-6.0	-280.1	-6.0	* 250.	270.	AG	2.	100.0	0.0	12.0	0.94	12.7
2. WBT	* 30.0	6.0	523.2	6.0	* 493.	90.	AG	2.	100.0	0.0	12.0	1.06	25.1
3. NBL	* 0.0	-12.0	0.0	-17.1	* 5.	180.	AG	1.	100.0	0.0	12.0	0.07	0.3
4. NBT	* 18.0	-12.0	18.0	-143.2	* 131.	180.	AG	3.	100.0	0.0	24.0	0.37	6.7
5. SBT	* -18.0	12.0	-18.0	92.2	* 80.	360.	AG	4.	100.0	0.0	36.0	0.28	4.1
6. EBA	* -1000.0	-6.0	0.0	-6.0	* 1000.	90.	AG	419.	0.8	0.0	32.0		
7. EBD	* 0.0	-6.0	1000.0	-6.0	* 1000.	90.	AG	249.	0.8	0.0	32.0		
8. WBA	* 1000.0	6.0	0.0	6.0	* 1000.	270.	AG	382.	0.8	0.0	32.0		
9. WBD	* 0.0	6.0	-1000.0	6.0	* 1000.	270.	AG	210.	0.8	0.0	32.0		
10. NBA	* 18.0	-1000.0	18.0	0.0	* 1000.	360.	AG	730.	0.8	0.0	44.0		
11. NBD	* 18.0	0.0	18.0	1000.0	* 1000.	360.	AG	886.	0.8	0.0	44.0		
12. SBA	* -18.0	1000.0	-18.0	0.0	* 1000.	180.	AG	659.	0.8	0.0	56.0		
13. SBD	* -18.0	0.0	-18.0	-1000.0	* 1000.	180.	AG	845.	0.8	0.0	56.0		

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JOB: Westlake Ave/Republican St

RUN: Build2040

DATE : 6/16/15

TIME : 15:25:25

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	* CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
1. EBT	* 160	95	2.0	419	1166	1.16	2	3
2. WBT	* 160	95	2.0	382	943	1.16	2	3
3. NBL	* 160	67	2.0	14	340	1.16	2	3
4. NBT	* 160	67	2.0	716	1725	1.16	2	3
5. SBT	* 160	67	2.0	659	1415	1.16	2	3

RECEPTOR LOCATIONS

RECEPTOR	* X	Y	Z	*
1. R1	* 40.0	22.0	5.9	*
2. R2	* 122.0	22.0	5.9	*
3. R3	* 204.0	22.0	5.9	*

				2040bui l d. out	
4.	R4	*	40.0	104.0	5.9 *
5.	R5	*	40.0	186.0	5.9 *
6.	R6	*	-46.0	22.0	5.9 *
7.	R7	*	-128.0	22.0	5.9 *
8.	R8	*	-210.0	22.0	5.9 *
9.	R9	*	-46.0	104.0	5.9 *
10.	R10	*	-46.0	186.0	5.9 *
11.	R11	*	-46.0	-22.0	5.9 *
12.	R12	*	-128.0	-22.0	5.9 *
13.	R13	*	-210.0	-22.0	5.9 *
14.	R14	*	-46.0	-104.0	5.9 *
15.	R15	*	-46.0	-186.0	5.9 *
16.	R16	*	40.0	-22.0	5.9 *
17.	R17	*	122.0	-22.0	5.9 *
18.	R18	*	204.0	-22.0	5.9 *
19.	R19	*	40.0	-104.0	5.9 *
20.	R20	*	40.0	-186.0	5.9 *

♀

JOB: Westlake Ave/Republican St

RUN: Bui l d2040

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MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0. -350.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
20.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
30.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
40.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
50.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
60.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
70.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
80.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
90.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
100.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
110.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
120.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
130.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
140.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
150.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
160.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
170.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
180.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
190.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
200.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
210.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
220.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
230.	*	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	0.0	0.0	0.0	0.0	0.0	0.0

		2040bui l d. out																			
240.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
250.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
260.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
270.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
280.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
290.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
300.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
310.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
320.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
330.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
340.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
350.	*	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	0.0	0.0	0.0	0.0	0.0	0.0

**CAL3QHC Output: Westlake Avenue and Republican Street Intersection No Build 2040 Scenario**

JOB: Westlake Ave/Republican St

RUN: NoBui l d2040

DATE : 6/16/15

TIME : 15:20:50

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S ZO = 321. CM  
 U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM BRG = 0. DEGREES

LINK VARIABLES

LINK DESCRIPTION	* X1	Y1	X2	Y2	* LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. EBT	* -24.0	-6.0	-264.1	-6.0	* 240.	270.	AG	2.	100.0	0.0	12.0	0.92	12.2
2. WBT	* 36.0	6.0	868.2	6.0	* 832.	90.	AG	2.	100.0	0.0	12.0	1.18	42.3
3. NBL	* 6.0	-12.0	6.0	-16.8	* 5.	180.	AG	1.	100.0	0.0	12.0	0.07	0.2
4. NBT	* 24.0	-12.0	24.0	-135.3	* 123.	180.	AG	2.	100.0	0.0	24.0	0.36	6.3
5. SBT	* -12.0	12.0	-12.0	124.3	* 112.	360.	AG	2.	100.0	0.0	24.0	0.34	5.7
6. EBA	* -1000.0	-6.0	0.0	-6.0	* 1000.	90.	AG	419.	0.8	0.0	32.0		
7. EBD	* 0.0	-6.0	1000.0	-6.0	* 1000.	90.	AG	249.	0.8	0.0	32.0		
8. WBA	* 1000.0	6.0	0.0	6.0	* 1000.	270.	AG	382.	0.8	0.0	32.0		
9. WBD	* 0.0	6.0	-1000.0	6.0	* 1000.	270.	AG	210.	0.8	0.0	32.0		
10. NBA	* 24.0	-1000.0	24.0	0.0	* 1000.	360.	AG	730.	0.8	0.0	44.0		
11. NBD	* 24.0	0.0	24.0	1000.0	* 1000.	360.	AG	886.	0.8	0.0	44.0		
12. SBA	* -12.0	1000.0	-12.0	0.0	* 1000.	180.	AG	653.	0.8	0.0	44.0		
13. SBD	* -12.0	0.0	-12.0	-1000.0	* 1000.	180.	AG	839.	0.8	0.0	44.0		

PAGE 2

JOB: Westlake Ave/Republican St

RUN: NoBui l d2040

DATE : 6/16/15

TIME : 15:20:50

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	* CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
1. EBT	* 160	95	2.0	419	1192	1.16	2	3
2. WBT	* 160	95	2.0	382	855	1.16	2	3
3. NBL	* 160	63	2.0	14	345	1.16	2	3
4. NBT	* 160	63	2.0	716	1725	1.16	2	3
5. SBT	* 160	63	2.0	653	1672	1.16	2	3

RECEPTOR LOCATIONS

RECEPTOR	* X	Y	Z	*
1. R1	* 46.0	22.0	5.9	*
2. R2	* 128.0	22.0	5.9	*
3. R3	* 210.0	22.0	5.9	*



4.	R4	*	46.0	104.0	5.9	*
5.	R5	*	46.0	186.0	5.9	*
6.	R6	*	-34.0	22.0	5.9	*
7.	R7	*	-116.0	22.0	5.9	*
8.	R8	*	-198.0	22.0	5.9	*
9.	R9	*	-34.0	104.0	5.9	*
10.	R10	*	-34.0	186.0	5.9	*
11.	R11	*	-34.0	-22.0	5.9	*
12.	R12	*	-116.0	-22.0	5.9	*
13.	R13	*	-198.0	-22.0	5.9	*
14.	R14	*	-34.0	-104.0	5.9	*
15.	R15	*	-34.0	-186.0	5.9	*
16.	R16	*	46.0	-22.0	5.9	*
17.	R17	*	128.0	-22.0	5.9	*
18.	R18	*	210.0	-22.0	5.9	*
19.	R19	*	46.0	-104.0	5.9	*
20.	R20	*	46.0	-186.0	5.9	*

♀

JOB: Westlake Ave/Republican St

RUN: NoBui l d2040

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0. -350.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
20.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
30.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
40.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
50.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
60.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
70.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
80.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
90.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
100.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
110.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
120.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
130.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
140.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
150.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
160.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
170.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
180.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
190.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
200.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
210.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
220.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
230.	*	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	0.0	0.0	0.0	0.0	0.0	0.0

		2040nobui l d. out																			
240.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
250.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
260.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
270.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
280.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
290.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
300.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
310.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
320.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
330.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
340.	*	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	0.0	0.0	0.0	0.0	0.0	0.0
350.	*	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	0.0	0.0	0.0	0.0	0.0	0.0