

## Appendix H

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### Alternatives Operational Analysis



## Operational Conditions with Alternatives

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Each of the alternatives was tested to determine potential impacts to vehicle travel speeds on Skyway using the SIMTRAFFIC software application. SIMTRAFFIC is an extension of SYNCHRO that creates simulations representing the traffic network including interactions among numerous signalized and unsignalized intersections. SIMTRAFFIC has the capability to simulate the time required for drivers to travel along a corridor, taking factors such as signal timing, distances between intersections, turn lane storage lengths, and queue blockages between intersections into account. The application also includes adjustment factors for lane widths and the presence of adjacent parking activity. Because each SIMTRAFFIC run randomly “seeds” the roadway network with different vehicle positions and driver types, five separate runs were conducted when determining travel times for each corridor to obtain an average running speed. All scenarios assume that the traffic signal at Wagstaff Road is operational.

It is important to distinguish that the average “running speeds” produced by the program include the delays experienced while drivers are stopped at traffic signals; therefore, while examination of midblock speeds may suggest that drivers are proceeding at 35 to 40 miles per hour, the average speed on the segment including delays may in actuality be closer to 20 mph. The *Highway Capacity Manual* includes criteria for establishing a Level of Service (LOS) based on average travel speeds. Applying the “Class III Arterial” criteria to Skyway would be appropriate given the Town’s desire to achieve typical free-flow travel speeds of approximately 35 mph. A summary of the LOS thresholds by speed is shown in Table H-1.

**Table H-1**  
**Arterial Class III Level of Service Criteria**

Level of Service	Average Travel Speed (mph)
A	≥ 30
B	≥ 24
C	≥ 18
D	≥ 14
E	≥ 10
F	< 10

Reference: *Highway Capacity Manual*, Transportation Research Board, 2000

Many communities including Paradise strive for LOS D or better operation on the vehicle travel network. Some communities have begun to reconsider their vehicular LOS criteria in their downtown areas, recognizing that vehicle throughput and higher speeds can actually be detrimental to a downtown’s vitality and higher emphasis on pedestrian circulation. The many competing circulation needs in a downtown can often be balanced with LOS D operation, but can sometimes still work effectively with vehicle circulation operating at LOS E. LOS F operation is generally undesirable given the potential for “gridlock” to develop and side impacts to other transportation modes as well as emergency response providers.

All four segments of Skyway are currently operating with average speeds in the 20 to 30 mph range, which translates to LOS C or better operation. With future traffic volumes and no changes to the roadway network, average travel speeds are shown to generally drop slightly, but still remain in the LOS C or better

range. The projected average vehicle speeds by corridor segment are summarized in Table H-2 for existing and future conditions with no changes to the corridor.

**Table H-2  
Skyway Corridor Average Vehicle Speeds with No Project**

	Existing Conditions		Future 2035 (No Project)	
	NB	SB	NB	SB
Segment 1 – Neal to Pearson				
AM Peak Hour	28	31	27	30
PM Peak Hour	26	31	24	30
Segment 2 – Pearson to Elliott				
AM Peak Hour	23	24	23	24
PM Peak Hour	21	26	20	24
Segment 3 – Elliott to Bille				
AM Peak Hour	25	26	24	26
PM Peak Hour	22	25	22	24
Segment 4 – Bille to Wagstaff				
AM Peak Hour	29	26	28	25
PM Peak Hour	28	27	28	27

Notes: NB = Northbound, SB = Southbound, Results are expressed in miles per hour (mph)

Each of the three alternatives would result in notable drops to average travel speeds, with Alternatives 1 and 2 operating near the LOS D/E threshold in various segments of the corridor. With Alternative 1, the northbound corridor segment between Neal and Pearson is projected to have a 15 mph average speed during the p.m. peak hour. With the addition of traffic signals at Black Olive Drive and Fir Street to Alternative 1 (referred to as Alternative 1A), the 15 mph average speed on segment 1 would improve to 18 mph, and all segments would operate at LOS D or better. The two new signals would be coordinated with existing signals at Pearson and Elliott, and would help regulate traffic progression through downtown. As with many coordinated signal systems, however, delays would increase over “no project” levels where drivers encounter the first signal in the coordinated series.

In Alternative 2, the northbound segment of Skyway between Neal and Pearson is projected to have a 15 mph average speed during the p.m. peak hour. Southbound traffic on the downtown segment between Pearson and Elliott would also be expected to operate at an average speed of 15 mph during the p.m. peak hour. Average travel speeds on segments 3 and 4 between Elliott and Wagstaff are also expected to decrease somewhat though would remain within the LOS C range.

As would be expected, Alternative 3, which reconfigured the downtown Skyway segment to include one travel lane in the southbound direction and two travel lanes in the northbound direction, would result in lower southbound speeds through downtown. Average southbound speeds would drop by approximately 3 mph during the a.m. peak hour and 8 mph during the p.m. peak hour, though would still remain in the LOS

D range. Changes to average speeds on the remaining three segments are projected to drop modestly by 1 to 3 mph during both peak hours.

The projected year 2035 average vehicle speeds for each alternative are summarized in Table H-3.

**Table H-3  
Skyway Corridor Average Vehicle Speeds**

	Future (No change)		Future + Alt 1		Future + Alt 1A		Future + Alt 2		Future + Alt 3	
	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
Segment 1 – Neal to Pearson										
AM Peak Hour	27	30	23	30	24	28	24	30	26	30
PM Peak Hour	24	30	15	31	18	30	15	32	24	31
Segment 2 – Pearson to Elliott										
AM Peak Hour	23	24	21	20	19	20	22	18	21	21
PM Peak Hour	20	24	19	23	17	18	17	15	17	16
Segment 3 – Elliott to Bille										
AM Peak Hour	24	26	24	24	25	24	23	22	23	22
PM Peak Hour	22	24	22	25	23	25	22	24	21	22
Segment 4 – Bille to Wagstaff										
AM Peak Hour	28	25	28	25	30	25	31	24	29	22
PM Peak Hour	28	27	28	26	27	26	28	26	28	25

Notes: NB = Northbound, SB = Southbound, Results are expressed in miles per hour (mph)  
 Shaded results represent operation near the LOS D/E threshold

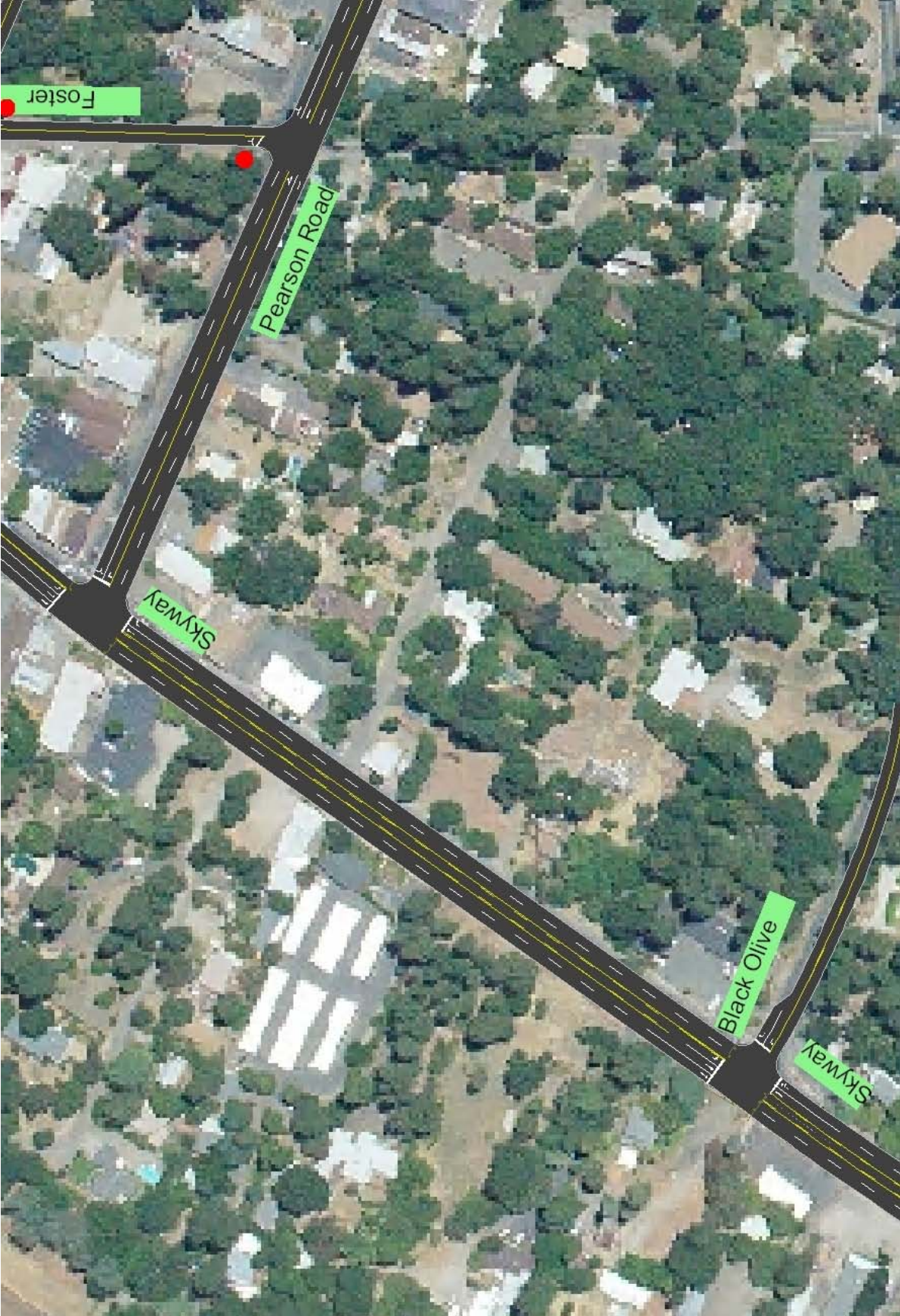
In order to gauge the differences to average travel times among alternatives, the relative changes between Future “no change” conditions were compared to each of the alternatives. The results are summarized in Table H-4.

**Table H-4  
Changes to Average Vehicle Speeds by Alternative**

	Future + Alt 1		Future + Alt 1A		Future + Alt 2		Future + Alt 3	
	NB	SB	NB	SB	NB	SB	NB	SB
Segment 1 – Neal to Pearson								
AM Peak Hour	-4	0	-3	-2	-3	0	-1	0
PM Peak Hour	-9	1	-6	0	-9	2	0	1
Segment 2 – Pearson to Elliott								
AM Peak Hour	-2	-4	-4	-4	-1	-6	-2	-3
PM Peak Hour	-1	-1	-3	-6	-3	-9	-3	-8
Segment 3 – Elliott to Bille								
AM Peak Hour	0	-2	1	-2	-1	-4	-1	-4
PM Peak Hour	0	1	1	1	0	-1	-1	-2
Segment 4 – Bille to Wagstaff								
AM Peak Hour	0	0	2	0	3	-1	1	-3
PM Peak Hour	0	-1	-1	-1	0	-1	0	-2

Notes: NB = Northbound, SB = Southbound, Results are expressed in miles per hour (mph)

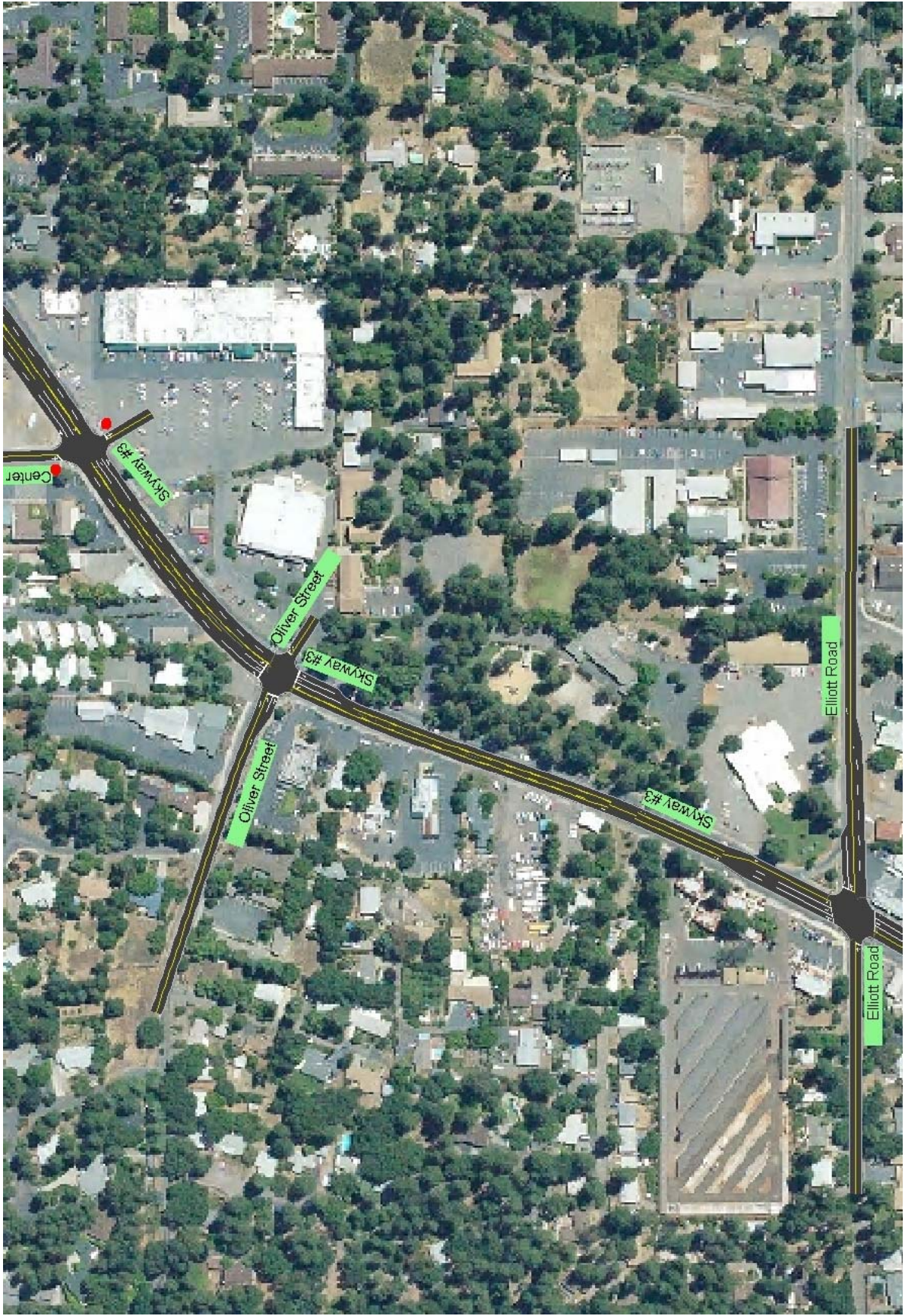


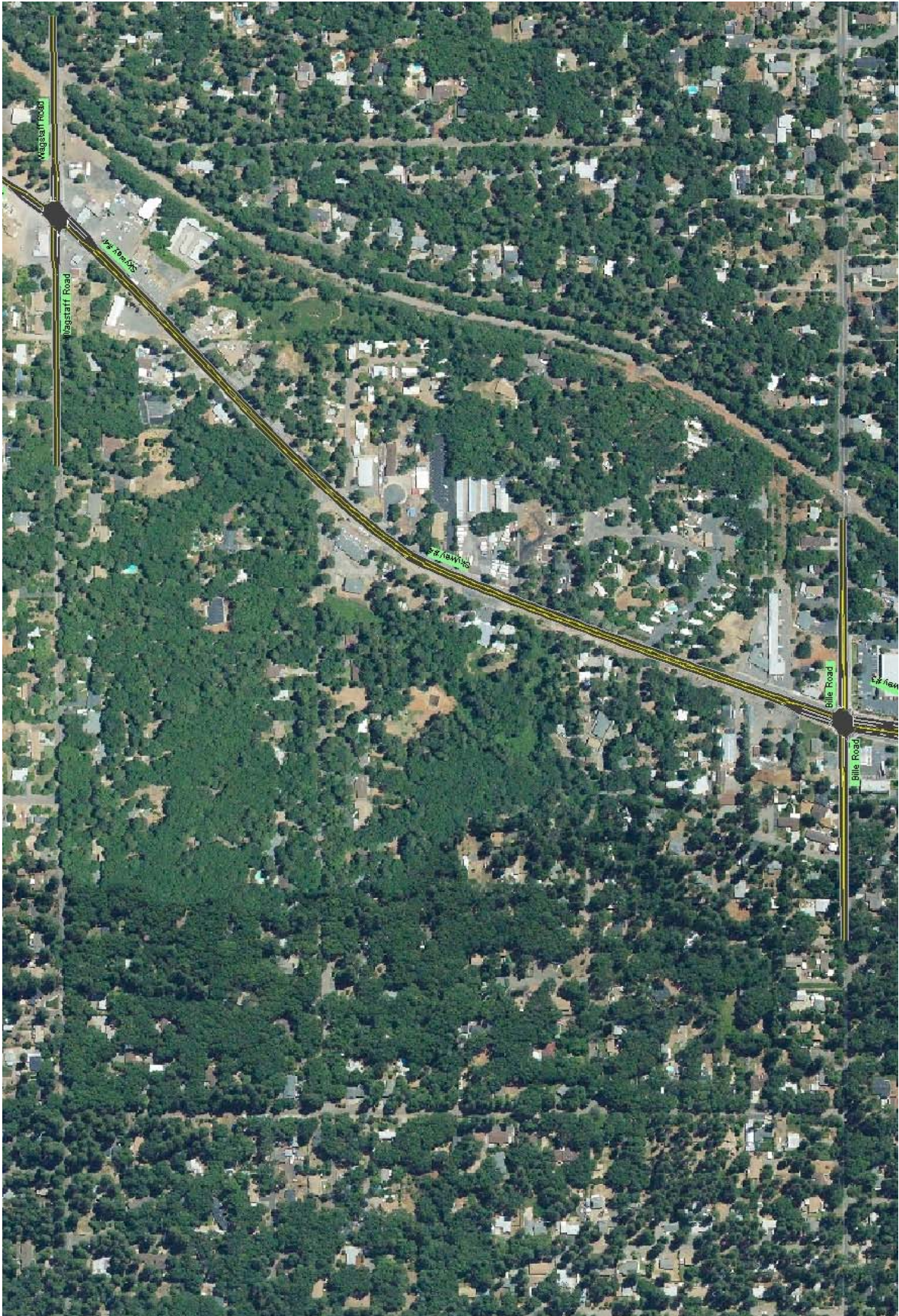












Arterial Level of Service  
 AM Peak Hour - Future (no change)

9/10/2008

Arterial Level of Service: NB Skyway #2

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed	Run 1 Speed	Run 1 Delay
	36	2.2	12.0	0.1	24	23	2.4
Honey Run	35	0.3	2.1	0.0	28	27	0.4
Foster Street	26	0.4	8.5	0.1	33	32	0.5
Fir Street	18	0.4	8.3	0.1	27	26	0.6
	2	0.2	7.8	0.1	29	28	0.3
	3	0.8	16.0	0.1	28	28	0.9
Elliott Road	1	13.9	21.3	0.1	10	7	22.2
Total		18.4	76.0	0.5	23	21	27.3

Arterial Level of Service: NB Skyway #2

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
	24	1.9	24	2.0	23	2.3	24
Honey Run	27	0.2	29	0.2	28	0.4	28
Foster Street	33	0.3	34	0.3	34	0.4	33
Fir Street	27	0.4	28	0.3	27	0.2	27
	29	0.3	29	0.2	29	0.2	29
	28	1.0	29	0.5	29	0.5	28
Elliott Road	14	8.9	10	14.1	12	10.5	9
Total	25	13.0	23	17.7	24	14.6	22

Arterial Level of Service: NB Skyway #2

Cross Street	Run 5 Delay	Run Speed	Run Delay
	1.9	23	2.7
Honey Run	0.2	28	0.5
Foster Street	0.5	32	0.6
Fir Street	0.4	27	0.5
	0.2	29	0.3
	0.9	28	0.9
Elliott Road	15.7	11	12.1
Total	19.8	23	17.5

Arterial Level of Service  
 AM Peak Hour - Future (no change)

9/10/2008

Arterial Level of Service: SB Skyway #2

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed	Run 1 Speed	Run 1 Delay
	3	1.3	8.6	0.1	26	25	1.5
	2	1.0	16.4	0.1	28	27	1.2
Fir Street	18	1.1	8.8	0.1	25	26	1.2
Foster Street	26	2.0	9.4	0.1	24	25	1.6
Honey Run	35	0.8	9.6	0.1	29	30	0.8
	36	0.3	2.1	0.0	25	26	0.2
Pearson Road	20	10.2	19.1	0.1	15	14	11.8
Total		16.6	74.0	0.5	24	23	18.1

Arterial Level of Service: SB Skyway #2

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
	25	1.6	26	1.3	26	1.2	27
	27	1.0	28	0.9	27	1.1	28
Fir Street	25	1.0	25	1.4	25	1.2	26
Foster Street	23	2.1	22	2.7	23	2.0	25
Honey Run	30	0.7	29	0.9	30	0.8	29
	26	0.2	26	0.3	25	0.3	25
Pearson Road	20	5.0	17	7.9	15	9.7	13
Total	25	11.6	24	15.3	24	16.4	23

Arterial Level of Service: SB Skyway #2

Cross Street	Run 5 Delay	Run Speed	Run Delay
	1.1	26	1.3
	0.9	28	0.9
Fir Street	0.8	25	1.0
Foster Street	1.3	23	2.1
Honey Run	0.9	30	0.7
	0.3	25	0.3
Pearson Road	12.9	12	13.8
Total	18.2	22	20.1

Arterial Level of Service  
 AM Peak Hour - Future (no change)

9/10/2008

Arterial Level of Service: NB Skyway #3

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed	Run 1 Speed	Run 1 Delay
	41	2.1	11.3	0.1	28	26	2.6
Oliver Street	15	2.3	16.5	0.1	32	34	1.3
	42	1.0	12.5	0.1	32	33	0.6
	14	0.5	18.8	0.2	34	33	0.5
Maxwell Drive	7	20.4	45.3	0.3	21	22	18.6
	47	2.4	13.7	0.1	24	25	2.2
Bille Road	10	18.7	39.8	0.2	16	20	10.7
Total		47.3	157.9	1.0	24	26	36.5

Arterial Level of Service: NB Skyway #3

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
	28	1.9	27	2.5	29	1.5	28
Oliver Street	33	1.5	32	2.6	36	1.7	30
	33	0.7	32	0.9	33	1.1	32
	34	0.3	34	0.3	34	0.2	33
Maxwell Drive	21	18.1	20	20.8	21	21.0	21
	24	2.4	25	1.9	26	2.0	23
Bille Road	14	22.6	16	19.5	19	11.0	14
Total	24	47.6	24	48.5	26	38.5	23

Arterial Level of Service: NB Skyway #3

Cross Street	Run 5 Delay	Run Speed	Run Delay
	1.9	27	2.2
Oliver Street	2.6	29	3.8
	1.0	31	1.5
	0.4	33	0.9
Maxwell Drive	19.1	18	25.3
	3.0	24	2.9
Bille Road	23.4	15	19.8
Total	51.4	22	56.4

Arterial Level of Service  
 AM Peak Hour - Future (no change)

9/10/2008

Arterial Level of Service: SB Skyway #3

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed	Run 1 Speed	Run 1 Delay
	47	3.1	21.9	0.2	29	29	2.9
Maxwell Drive	7	2.8	12.3	0.1	27	30	1.6
	14	2.2	29.3	0.3	32	31	1.6
Center	42	1.3	18.9	0.2	33	34	1.1
Oliver Street	15	13.5	25.1	0.1	16	16	13.3
	41	4.0	19.4	0.1	27	28	3.6
Elliott Road	1	9.2	19.8	0.1	16	15	10.1
Total		36.2	146.6	1.0	26	26	34.1

Arterial Level of Service: SB Skyway #3

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
	29	3.0	29	3.2	28	3.4	29
Maxwell Drive	28	2.4	26	3.3	26	3.5	26
	31	2.2	32	2.2	32	2.5	32
Center	33	1.4	34	1.2	33	1.6	33
Oliver Street	16	13.1	18	10.5	16	13.3	14
	28	3.5	28	3.0	27	4.5	27
Elliott Road	17	7.5	19	6.1	18	7.1	11
Total	26	33.2	27	29.6	26	35.8	24

Arterial Level of Service: SB Skyway #3

Cross Street	Run 5 Delay	Run Speed	Run Delay
	3.0	29	3.2
Maxwell Drive	3.1	26	3.1
	2.5	32	2.1
Center	1.4	33	1.3
Oliver Street	17.3	16	13.2
	5.1	27	4.3
Elliott Road	17.2	17	7.9
Total	49.6	26	35.1



Arterial Level of Service  
 AM Peak Hour - Future (no change)

9/10/2008

Arterial Level of Service: NE Skyway #4

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed	Run 1 Speed	Run 1 Delay
	40	1.6	5.5	0.0	23	25	1.1
	11	1.6	28.9	0.3	33	33	1.4
	48	3.5	34.9	0.3	31	32	2.8
Wagstaff Road	17	9.4	12.1	0.0	8	8	9.8
Total		16.1	81.4	0.6	28	28	15.1

Arterial Level of Service: NE Skyway #4

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
	23	1.6	22	1.8	26	1.0	22
	33	1.3	33	2.0	32	1.7	34
	32	3.0	31	4.0	31	3.6	31
Wagstaff Road	11	6.1	8	10.4	6	15.0	9
Total	29	12.1	27	18.1	26	21.3	28

Arterial Level of Service: NE Skyway #4

Cross Street	Run 5 Delay	Run Speed	Run Delay
	1.8	21	2.0
	1.4	33	2.2
	2.7	30	4.9
Wagstaff Road	8.5	8	9.4
Total	14.4	27	18.6

Arterial Level of Service  
 AM Peak Hour - Future (no change)

9/10/2008

Arterial Level of Service: SB Skyway #4

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed	Run 1 Speed	Run 1 Delay
	48	1.4	5.0	0.0	21	21	1.2
	11	2.0	33.9	0.3	32	32	1.8
	40	5.0	32.7	0.3	29	30	3.5
Bille Road	10	15.9	19.3	0.0	7	7	14.0
Total		24.2	91.0	0.6	25	26	20.4

Arterial Level of Service: SB Skyway #4

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
	19	1.7	20	1.4	20	1.4	22
	32	2.1	32	1.7	32	2.3	32
	25	9.7	31	3.9	30	4.7	30
Bille Road	5	23.2	6	16.2	6	16.3	7
Total	22	36.8	25	23.2	25	24.6	26

Arterial Level of Service: SB Skyway #4

Cross Street	Run 5 Delay	Run Speed	Run Delay
	1.0	20	1.5
	1.7	32	2.0
	3.8	30	3.8
Bille Road	15.3	9	10.4
Total	21.7	27	17.7

Arterial Level of Service  
 AM Peak Hour - Future (no change)

9/10/2008

Arterial Level of Service: NE Skyway #1

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed	Run 1 Speed	Run 1 Delay
	38	2.5	45.4	0.4	33	32	3.2
Black Olive	31	1.2	16.1	0.1	33	33	1.4
Pearson Road	20	19.2	38.5	0.2	18	16	22.3
Total		22.9	100.0	0.7	27	26	26.8

Arterial Level of Service: NE Skyway #1

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
	32	3.1	32	1.8	35	2.4	33
Black Olive	32	1.5	33	1.1	34	0.9	33
Pearson Road	20	14.4	16	21.2	16	21.1	18
Total	28	19.0	26	24.2	27	24.4	27

Arterial Level of Service: NE Skyway #1

Cross Street	Run 5 Delay	Run Speed	Run Delay
	2.0	32	2.6
Black Olive	1.1	33	1.2
Pearson Road	17.5	17	20.2
Total	20.7	27	23.9

Arterial Level of Service  
 AM Peak Hour - Future (no change)

9/10/2008

Arterial Level of Service: WB Skyway #1

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed	Run 1 Speed	Run 1 Delay
Black Olive	31	3.1	22.7	0.2	30	31	2.8
	38	1.1	16.0	0.1	33	33	1.1
Schmale Lane	22	10.0	51.2	0.4	29	30	9.7
Total		14.2	89.8	0.7	30	31	13.6

Arterial Level of Service: WB Skyway #1

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
Black Olive	32	2.1	31	2.7	30	3.2	29
	33	1.1	33	1.1	32	1.4	34
Schmale Lane	29	10.1	30	9.2	29	10.4	29
Total	30	13.2	31	13.0	30	14.9	30

Arterial Level of Service: WB Skyway #1

Cross Street	Run 5 Delay	Run Speed	Run Delay
Black Olive	4.8	30	3.1
	0.9	34	0.8
Schmale Lane	9.2	28	11.6
Total	14.9	30	15.5

Arterial Level of Service  
 PM Peak Hour - Future (no change)

9/10/2008

Arterial Level of Service: NB Skyway #2

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed	Run 1 Speed	Run 1 Delay
	36	3.0	12.9	0.1	22	22	2.8
Honey Run	35	0.3	2.1	0.0	26	25	0.3
Foster Street	26	1.0	9.3	0.1	30	31	0.9
Fir Street	18	1.2	9.1	0.1	24	25	1.1
	2	0.4	7.9	0.1	28	28	0.5
	3	1.5	16.8	0.1	27	27	1.8
Elliott Road	1	19.7	27.2	0.1	8	7	22.4
Total		27.2	85.3	0.5	20	20	29.7

Arterial Level of Service: NB Skyway #2

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
	22	2.8	20	4.4	22	2.9	24
Honey Run	25	0.3	24	0.5	27	0.2	26
Foster Street	31	0.9	30	1.2	30	1.1	31
Fir Street	25	1.1	24	1.3	25	1.2	24
	28	0.4	28	0.5	29	0.3	28
	26	1.9	27	1.7	28	1.1	27
Elliott Road	7	23.3	8	20.6	8	19.2	8
Total	20	30.8	20	30.1	21	26.0	21

Arterial Level of Service: NB Skyway #2

Cross Street	Run 5 Delay	Run Speed	Run Delay
	2.1	22	2.7
Honey Run	0.3	26	0.2
Foster Street	0.9	30	1.1
Fir Street	1.2	23	1.5
	0.5	29	0.3
	1.6	28	1.1
Elliott Road	19.3	11	13.0
Total	25.8	22	20.0

Arterial Level of Service  
 PM Peak Hour - Future (no change)

9/10/2008

Arterial Level of Service: SB Skyway #2

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed	Run 1 Speed	Run 1 Delay
	3	1.2	8.4	0.1	26	25	1.5
	2	0.8	16.0	0.1	28	28	0.8
Fir Street	18	1.4	8.9	0.1	25	26	1.3
Foster Street	26	2.5	9.9	0.1	22	22	2.5
Honey Run	35	1.3	10.2	0.1	28	29	0.8
	36	0.5	2.3	0.0	23	26	0.2
Pearson Road	20	7.8	16.9	0.1	17	17	7.2
Total		15.5	72.6	0.5	24	24	14.2

Arterial Level of Service: SB Skyway #2

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
	26	1.2	27	1.2	26	1.3	27
	28	0.7	29	0.6	28	0.9	29
Fir Street	28	0.5	22	2.3	26	1.2	24
Foster Street	23	2.3	22	2.4	18	4.7	25
Honey Run	26	1.8	27	1.6	26	1.9	30
	24	0.5	18	1.1	20	0.9	26
Pearson Road	16	8.7	15	9.6	19	5.4	15
Total	24	15.7	23	18.8	24	16.3	24

Arterial Level of Service: SB Skyway #2

Cross Street	Run 5 Delay	Run Speed	Run Delay
	1.0	26	1.3
	0.9	29	0.8
Fir Street	2.1	27	0.9
Foster Street	1.5	25	1.4
Honey Run	0.7	29	0.9
	0.2	25	0.3
Pearson Road	9.6	18	6.3
Total	16.1	25	11.9

Arterial Level of Service  
 PM Peak Hour - Future (no change)

9/10/2008

Arterial Level of Service: NB Skyway #3

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed	Run 1 Speed	Run 1 Delay
	41	3.9	13.2	0.1	24	24	3.9
	32	5.2	16.8	0.1	24	23	5.6
Oliver Street	15	3.3	6.9	0.0	19	15	4.9
	42	2.1	13.7	0.1	29	29	2.3
	14	1.0	19.7	0.2	32	32	1.0
Maxwell Drive	7	17.9	43.7	0.3	21	23	15.1
	47	1.8	5.9	0.0	21	21	1.7
Bille Road	10	23.7	51.6	0.2	16	17	21.2
Total		58.9	171.5	1.0	22	22	55.8

Arterial Level of Service: NB Skyway #3

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
	24	3.7	23	4.1	24	3.8	24
	24	4.9	24	5.1	24	4.8	25
Oliver Street	19	3.4	20	2.9	22	2.4	21
	29	2.0	29	1.8	31	1.4	29
	32	0.9	33	0.7	32	0.9	32
Maxwell Drive	20	21.0	22	16.6	23	15.1	20
	21	1.8	21	1.7	21	1.9	21
Bille Road	16	24.8	17	22.8	18	17.8	19
Total	22	62.4	23	55.7	24	48.2	23

Arterial Level of Service: NB Skyway #3

Cross Street	Run 5 Delay	Run Speed	Run Delay
	3.5	23	4.1
	4.8	23	5.9
Oliver Street	2.7	18	3.5
	2.2	28	2.6
	0.9	31	1.5
Maxwell Drive	19.4	20	20.0
	1.8	21	1.9
Bille Road	16.7	13	37.9
Total	52.0	20	77.4

Arterial Level of Service  
 PM Peak Hour - Future (no change)

9/10/2008

Arterial Level of Service: SB Skyway #3

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed	Run 1 Speed	Run 1 Delay
	47	5.2	28.9	0.2	29	29	5.6
Maxwell Drive	7	1.8	5.1	0.0	25	24	1.8
	14	1.5	28.9	0.3	32	32	1.6
Center	42	0.9	18.5	0.2	34	34	0.8
Oliver Street	15	21.0	33.1	0.1	12	12	21.4
	32	2.2	6.3	0.0	21	21	2.1
	41	1.3	12.9	0.1	31	31	0.9
Elliott Road	1	14.8	25.4	0.1	12	12	14.9
Total		48.5	159.1	1.0	24	24	49.1

Arterial Level of Service: SB Skyway #3

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
	29	5.4	29	4.5	28	6.0	29
Maxwell Drive	25	1.6	27	1.3	24	2.0	21
	32	1.4	32	1.3	33	1.6	32
Center	34	0.9	34	0.7	35	0.9	35
Oliver Street	12	21.7	12	21.8	11	24.0	13
	20	2.4	20	2.2	21	2.2	21
	31	1.3	30	1.5	30	1.4	31
Elliott Road	11	17.2	10	20.2	14	11.8	12
Total	23	51.8	23	53.6	24	49.9	24

Arterial Level of Service: SB Skyway #3

Cross Street	Run 5 Delay	Run Speed	Run Delay
	4.2	29	5.4
Maxwell Drive	2.7	27	1.5
	1.6	32	1.8
Center	0.8	35	1.0
Oliver Street	17.9	13	18.6
	2.2	21	2.0
	1.4	32	1.2
Elliott Road	15.6	15	10.4
Total	46.4	25	41.9



Arterial Level of Service  
 PM Peak Hour - Future (no change)

9/10/2008

Arterial Level of Service: NE Skyway #4

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed	Run 1 Speed	Run 1 Delay
	40	1.7	5.6	0.0	23	22	1.7
	11	2.2	29.5	0.3	32	33	2.0
	48	6.1	37.2	0.3	29	28	5.7
Wagstaff Road	17	6.8	9.5	0.0	11	11	6.4
Total		16.7	81.8	0.6	28	28	15.8

Arterial Level of Service: NE Skyway #4

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
	22	1.8	23	1.6	22	1.9	25
	32	2.1	32	2.2	31	2.4	32
	26	9.0	29	7.1	30	4.7	31
Wagstaff Road	9	8.1	10	7.3	12	5.8	11
Total	26	21.0	27	18.1	28	14.7	29

Arterial Level of Service: NE Skyway #4

Cross Street	Run 5 Delay	Run Speed	Run Delay
	1.1	22	1.9
	1.9	32	2.5
	4.1	29	5.7
Wagstaff Road	6.4	11	6.5
Total	13.5	28	16.6

Arterial Level of Service  
 PM Peak Hour - Future (no change)

9/10/2008

Arterial Level of Service: SB Skyway #4

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed	Run 1 Speed	Run 1 Delay
	48	1.0	4.7	0.0	22	23	0.9
	11	1.2	32.4	0.3	33	33	1.6
	40	2.6	30.3	0.3	31	30	3.7
Bille Road	10	14.5	17.9	0.0	7	7	14.4
Total		19.4	85.3	0.6	27	26	20.6

Arterial Level of Service: SB Skyway #4

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
	19	1.6	23	0.9	24	0.7	21
	33	1.4	33	0.9	34	0.9	34
	32	2.4	32	1.9	32	2.3	32
Bille Road	7	14.9	7	15.1	7	14.5	8
Total	26	20.3	27	18.9	27	18.5	28

Arterial Level of Service: SB Skyway #4

Cross Street	Run 5 Delay	Run Speed	Run Delay
	1.2	23	1.0
	0.8	33	1.5
	1.9	32	3.2
Bille Road	12.3	7	15.9
Total	16.2	26	21.6

Arterial Level of Service  
 PM Peak Hour - Future (no change)

9/10/2008

Arterial Level of Service: NE Skyway #1

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed	Run 1 Speed	Run 1 Delay
	38	7.0	49.9	0.4	30	30	6.5
Black Olive	31	4.5	19.6	0.1	27	27	4.4
Pearson Road	20	22.3	41.3	0.2	17	16	24.0
Total		33.8	110.7	0.7	24	24	34.9

Arterial Level of Service: NE Skyway #1

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
	30	6.6	28	9.3	30	7.2	30
Black Olive	27	4.8	26	4.9	27	4.6	27
Pearson Road	17	20.4	14	31.3	17	21.7	19
Total	25	31.9	22	45.5	25	33.4	25

Arterial Level of Service: NE Skyway #1

Cross Street	Run 5 Delay	Run Speed	Run Delay
	6.8	31	5.7
Black Olive	4.2	28	3.8
Pearson Road	16.9	18	18.1
Total	27.9	26	27.6

Arterial Level of Service  
 PM Peak Hour - Future (no change)

9/10/2008

Arterial Level of Service: WB Skyway #1

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed	Run 1 Speed	Run 1 Delay
Black Olive	31	7.3	26.7	0.2	26	28	5.0
	38	1.0	15.9	0.1	33	33	1.2
Schmale Lane	22	8.7	49.1	0.4	30	30	9.5
Total		17.0	91.7	0.7	29	30	15.7

Arterial Level of Service: WB Skyway #1

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
Black Olive	22	11.4	23	9.3	28	4.2	26
	33	1.1	33	1.1	33	0.9	34
Schmale Lane	31	8.4	29	9.9	30	9.0	31
Total	28	21.0	28	20.3	30	14.2	30

Arterial Level of Service: WB Skyway #1

Cross Street	Run 5 Delay	Run Speed	Run Delay
Black Olive	8.1	27	6.0
	0.9	34	0.8
Schmale Lane	7.0	31	8.4
Total	16.1	30	15.1

Arterial Level of Service: NE Skyway #2

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	33	1.0	6.0	0.0	23
	36	1.3	6.3	0.0	24
Honey Run	35	0.7	2.4	0.0	26
Foster St.	26	2.1	11.3	0.1	27
Total		5.1	26.0	0.2	25

Arterial Level of Service: SW Skyway #2

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Honey Run	35	5.3	15.1	0.1	20
	36	0.8	2.5	0.0	22
	33	1.8	6.8	0.0	21
Pearson Road	20	7.0	11.4	0.0	12
Total		15.0	35.8	0.2	18

Arterial Level of Service: NB Skyway #3

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	39	1.4	7.1	0.0	25
	3	0.3	5.1	0.0	33
Oliver Street	15	2.8	15.9	0.1	31
	42	0.7	12.4	0.1	32
	14	0.4	19.0	0.2	33
Maxwell Drive	7	24.2	49.5	0.3	19
Bille Road	10	17.7	48.7	0.3	20
Total		47.5	157.8	1.0	24

Arterial Level of Service: WB Skyway #3

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Maxwell Drive	7	7.1	34.5	0.3	28
	14	3.0	30.2	0.3	31
Center	42	5.0	22.6	0.2	28
Oliver Street	15	25.9	37.4	0.1	11
	3	5.3	22.4	0.1	22
	39	3.3	8.9	0.0	19
Elliott Road	1	8.6	14.4	0.0	13
Total		58.3	170.4	1.0	22

Arterial Level of Service: NE Skyway #4

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	40	1.5	5.4	0.0	24
	11	1.2	29.2	0.3	33
	48	2.7	33.8	0.3	32
Wagstaff Road	17	6.8	9.5	0.0	11
Total		12.2	77.8	0.6	29

Arterial Level of Service: SB Skyway #4

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	48	1.2	4.8	0.0	21
	11	2.0	33.5	0.3	32
	40	6.4	34.3	0.3	28
Bille Road	10	17.6	21.0	0.0	6
Total		27.2	93.7	0.6	24

Arterial Level of Service: NE Skyway #1

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	38	2.5	45.2	0.4	33
Black Olive	31	6.2	21.1	0.1	25
Pearson Road	20	20.7	40.4	0.2	17
Total		29.4	106.7	0.7	25

Arterial Level of Service: WB Skyway #1

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Black Olive	31	6.3	25.2	0.2	27
	38	2.6	17.9	0.1	30
Schmale Lane	22	12.9	54.2	0.4	27
Total		21.9	97.2	0.7	28

Arterial Level of Service: NE Skyway #2

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Pearson Road	20	38.5	58.0	0.2	12
	33	2.3	7.4	0.0	19
	36	2.9	8.1	0.0	18
Honey Run	35	1.0	2.8	0.0	19
Foster St.	26	11.6	21.2	0.1	14
Fir Street	18	12.5	19.5	0.1	10
	2	2.0	9.5	0.1	23
	32	14.4	31.2	0.1	16
<b>Total</b>		<b>85.3</b>	<b>157.7</b>	<b>0.6</b>	<b>14</b>

Arterial Level of Service: SW Skyway #2

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	2	7.5	24.3	0.1	21
Fir Street	18	19.5	26.7	0.1	11
Foster St.	26	5.5	12.4	0.1	16
Honey Run	35	13.7	23.6	0.1	13
	36	1.3	2.9	0.0	18
	33	2.3	7.3	0.0	19
Pearson Road	20	3.5	8.0	0.0	17
Black Olive	31	4.3	22.6	0.2	30
<b>Total</b>		<b>57.6</b>	<b>127.8</b>	<b>0.6</b>	<b>19</b>

Arterial Level of Service: NB Skyway #3

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	39	1.5	7.2	0.0	25
	3	0.6	5.4	0.0	31
Oliver Street	15	7.7	21.8	0.1	23
	42	1.2	12.8	0.1	31
	14	0.7	19.2	0.2	33
Maxwell Drive	7	15.6	41.7	0.3	22
Bille Road	10	26.7	59.4	0.3	16
<b>Total</b>		<b>53.9</b>	<b>167.6</b>	<b>1.0</b>	<b>22</b>

Arterial Level of Service: WB Skyway #3

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Maxwell Drive	7	5.5	30.9	0.3	31
	14	2.5	30.2	0.3	31
Center	42	4.0	22.1	0.2	29
Oliver Street	15	34.3	46.0	0.1	9
	3	5.0	21.9	0.1	23
	39	4.0	9.6	0.0	17
Elliott Road	1	11.3	17.1	0.0	11
Total		66.6	177.8	1.0	21

Arterial Level of Service: NE Skyway #4

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	40	1.6	5.5	0.0	23
	11	2.0	29.3	0.3	33
	48	4.1	35.3	0.3	31
Wagstaff Road	17	5.9	8.7	0.0	12
Total		13.6	78.8	0.6	29

Arterial Level of Service: SB Skyway #4

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	48	1.1	4.7	0.0	22
	11	1.5	33.5	0.3	32
	40	2.8	30.5	0.3	31
Bille Road	10	13.2	16.7	0.0	8
Total		18.6	85.4	0.6	27

Arterial Level of Service: NE Skyway #1

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	38	7.5	50.2	0.4	30
Black Olive	31	16.0	31.5	0.1	17
Total		23.5	81.7	0.6	25



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Arterial Level of Service: WB Skyway #1

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Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	38	1.4	16.6	0.1	32
Schmale Lane	22	7.5	47.6	0.4	31
Total		8.9	64.2	0.6	31

