

APPENDIX B

Synopsis of Pilot Testing Scenario

Submit this worksheet by September 28, 2007 for each performance measure your institution plans to pilot test.

Organization: Maricopa Association of Governments

Description of transportation network managed by the volunteer organization:

The MAG modeling area developed for the purposes of regional planning covers more than 4,500 square miles, includes nearly 2000 traffic zones, and more than 15,000 lane miles of road network. The network includes close to a hundred transit lines, including different types of bus service and LRT lines in the future years. MAG maintains extensive modeling networks for a number of horizon years. The networks serve as a major tool for the purposes of regional planning and travel forecasting. The base year network geographical coverage includes all of Maricopa County as well as substantial parts of Pinal County. The networks include road and transit facilities of regional significance, with detailed representation of all freeways and major arterial roads within modeling area.

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Indicate the performance measure your organization plans to pilot test:

- | | |
|--|---|
| <input type="checkbox"/> Recurring Delay | <input type="checkbox"/> Non-Recurring Delay |
| <input checked="" type="checkbox"/> Extent of Congestion - Spatial | <input checked="" type="checkbox"/> Extent of Congestion – Temporal |
| <input checked="" type="checkbox"/> Travel Time - Facility | <input type="checkbox"/> Travel Time – Trip |
| <input type="checkbox"/> Travel Time – Trip | <input checked="" type="checkbox"/> Speed |
| <input type="checkbox"/> Incident Duration | <input type="checkbox"/> Customer Satisfaction |
| <input checked="" type="checkbox"/> Throughput - Vehicle | <input checked="" type="checkbox"/> Throughput - Person |

Provide a brief description of the pilot test.

This pilot test includes 2006 data sets collected by 26 detectors located on major commute freeway corridors instrumented as part of the ADOT Freeway Management System FMS. This system collects 24-hour freeway data 7 days a week for approximately 50% of the MAG urbanized regional freeway system. A selected set of approximately 58 detectors have been determined to have consistent volume and speed data appropriate for analytical and archival purposes. Data from these FMS detectors has been collected since January 2000. Performance indicators such as volume, speed, VMT, and delay are have been calculated and reported as part of the MAG Performance Monitoring initial efforts.

APPENDIX C

Description of Reporting Requirements Common to all Performance Measures

For each performance measure report on the following:

Study Area - Describe the extents of the study area. Provide a description of the types of facilities (i.e. roadway types and modes of transit) within the transportation network. Attach diagrams and maps as appropriate.

Study Period - Describe the period over which the performance measure is assessed (i.e. yearly survey or quarterly commuting trends). Also include any time specific aspects (such as peak hour, peak period, etc.) and how these were defined and/or determined.

Sample Size - Report the sample size of the data used to calculate the performance measure and its resulting level of confidence.

Deviations or Exceptions - If data collection or processing methods deviated from that contained in the definitions, explain the circumstances and reasoning for using alternative methods.

Cost Estimate - Provide an itemized estimate of the cost of compiling the performance measure. This includes the cost of data collection, labor hours, equipment, and any consulting resources used in the process. If the base level data or data collection mechanism is used for purposes other than performance measures, provide a synopsis of all programs over which the cost of the data collection is justified.

Utility of Performance Measures - If the performance measure is incorporated into operations, planning, traveler information, or other agency programs, report on its use. Include a description of the application, method and frequency of reporting, extent of distribution, and target audience.

APPENDIX D
Worksheets for Submitting Performance Measure Data
and Reporting Experience

Worksheets Include:

Throughput – Person & Vehicle

Speed

Extent of Congestion – Spatial & Temporal

Travel Time – Facility

Travel Time Data Collection

Throughput - Person & Throughput - Vehicle

Indicate the performance measure tested -> Throughput - Vehicle Throughput - Person

Study Area – 26 locations on 6 selected corridors, see map for details.

Study Period – Average 24-hour vehicle throughput volume and person throughput, during the following non-holiday weekdays: Tuesday, Wednesday, and Thursday, including HOV and GP lanes.

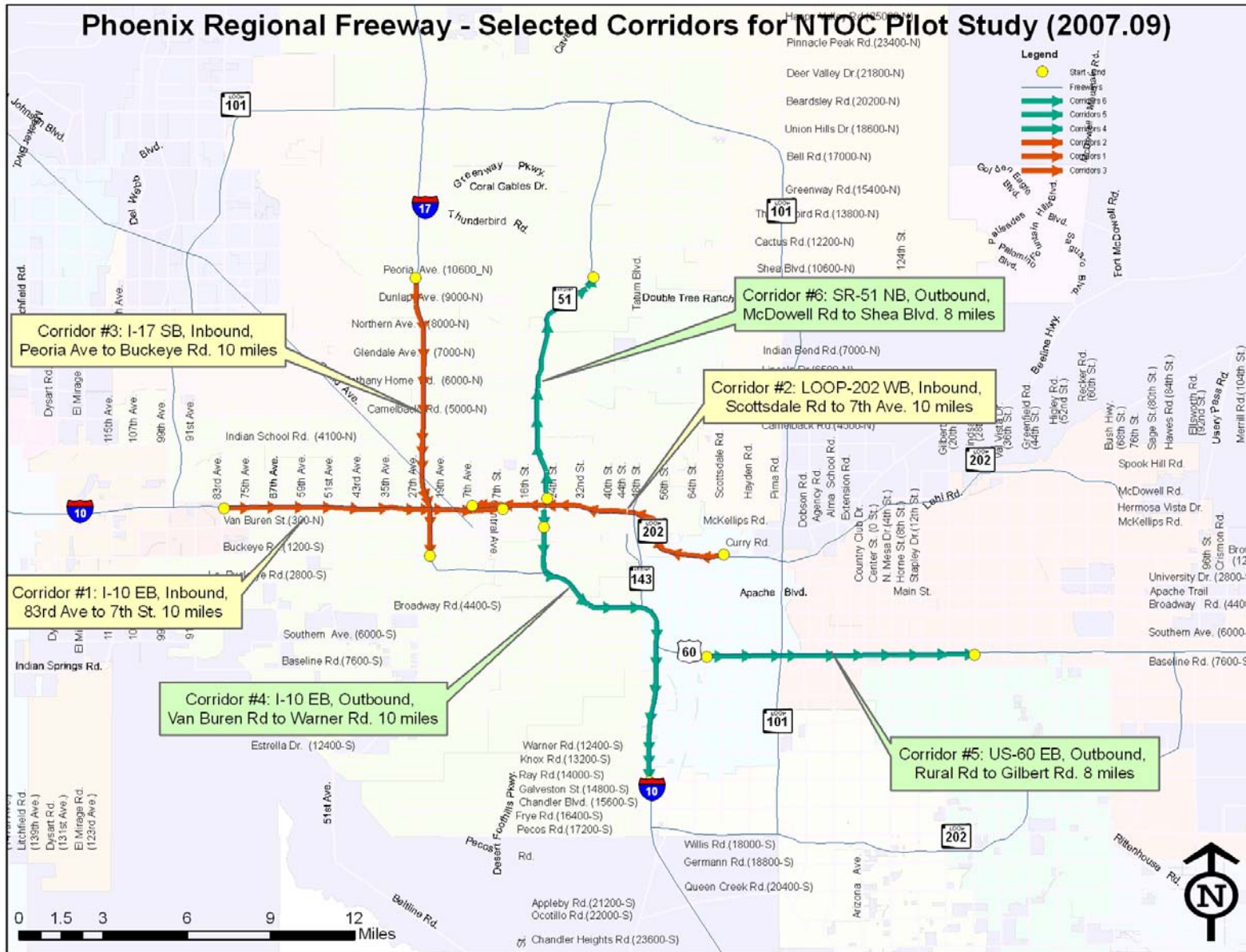
Sample Size – Tuesday, Wednesday, and Thursday for 2006. A total of 155 days are defined as core weekdays. Note that there is no data on some specific days or some specific time periods.

Deviations or exceptions – Person throughput data is obtained by multiplying vehicle throughput number by average vehicle occupancy. MAG manually collected vehicle occupancy data on each freeway detector location in 2006 - 2007. Method used here is consistent to pilot study's definition.

Cost Estimates – N/A

Utility of Performance Measure – Data has been reported on the MAG annual freeway mobility report, MAG regional traffic counts database and HPMS database. This data has also been used in validating the MAG regional travel demand forecasting model.

Attach a copy of the data collected, and calculated performance metrics.



Throughput Vehicle/Person, Corridors # 1, 2, 3, AM Peak, 5-10 am, Inbound Traffic

Corridor # 1		I-10 EB, Inbound, 83rd Ave to 7th St, 10 miles, 2006														
Peak Period: 5-10 am		STN 002, I-10 EB/83rd Ave			STN 020, I-10 EB/59th Ave			STN 068, I-10 EB/35th Ave			STN 075, I-10 EB/19th Ave			STN 085, I-10 EB/7th St		
		Daily Throughput Vehicle (Veh)	Daily Throughput Person (person)	Throughput Vehicle in Peak Period (Veh)	Daily Throughput Vehicle (Veh)	Daily Throughput Person (person)	Throughput Vehicle in Peak Period (Veh)	Daily Throughput Vehicle (Veh)	Daily Throughput Person (person)	Throughput Vehicle in Peak Period (Veh)	Daily Throughput Vehicle (Veh)	Daily Throughput Person (person)	Throughput Vehicle in Peak Period (Veh)	Daily Throughput Vehicle (Veh)	Daily Throughput Person (person)	Throughput Vehicle in Peak Period (Veh)
		2006 Throughput	Annual Daily Average	82,335	115,306	35,391	68,123	94,010	26,400	113,490	145,268	46,165	123,533	163,064	58,047	138,152
MAX Throughput	90,234		126,368	40,245	81,321	112,223	34,923	124,884	159,852	50,717	135,874	179,353	62,384	152,787	201,679	58,803
MIN Throughput	74,000		103,633	12,548	45,590	62,914	11,095	105,126	134,561	28,395	112,084	147,951	42,447	120,928	159,625	41,859
Median Throughput	82,316		115,279	35,709	70,000	96,600	27,078	113,490	145,267	46,421	123,494	163,011	58,827	138,280	182,530	56,210
95 Percentile	87,022		121,869	39,756	79,219	109,322	32,701	118,451	151,617	49,973	129,497	170,937	61,490	143,744	189,742	58,060
	Coefficient of Variation	3%	3%	11%	12%	12%	19%	3%	3%	7%	3%	3%	6%	3%	3%	6%
Monthly Average Throughput	January	80,411	112,611	34,676	68,664	94,757	28,571	111,221	142,363	46,545	122,174	161,270	58,284	135,465	178,814	53,892
	February	79,847	111,821	32,391	73,459	101,373	27,133	112,206	143,624	45,184	124,206	163,952	58,658	138,785	183,196	57,461
	March	82,560	115,621	33,341	60,148	83,004	21,987	114,207	146,185	44,415	125,593	165,783	57,488	139,621	184,300	56,140
	April	83,074	116,340	35,568	50,162	69,224	17,955	113,187	144,879	44,784	124,996	164,995	58,428	138,529	182,859	55,429
	May	84,089	117,763	39,030	65,852	90,876	28,144	115,037	147,247	49,189	125,867	166,145	60,091	136,729	180,482	55,536
	June	84,908	118,909	37,396	74,717	103,109	32,528	116,372	148,957	49,866	125,735	165,970	59,636	139,028	183,517	55,675
	July	83,554	117,013	38,047	72,490	100,037	29,879	114,380	146,406	46,639	120,750	159,390	55,994	138,155	182,365	53,804
	August	82,564	115,626	35,884	72,699	100,324	29,536	114,256	146,247	46,736	121,380	160,222	57,662	138,766	183,171	55,456
	September	79,984	112,013	33,116	69,204	95,501	26,600	111,159	144,284	44,769	120,891	159,577	57,355	136,116	179,674	55,258
	October	82,556	115,615	34,371	70,382	97,127	24,950	112,519	144,024	44,416	123,550	163,086	57,503	139,028	183,517	55,477
	November	84,034	117,685	36,048	70,304	97,020	25,234	113,304	145,029	45,645	124,033	163,724	58,356	139,745	184,463	57,152
	December	79,304	111,062	34,222	71,079	98,089	25,925	113,121	144,795	45,324	122,656	161,906	56,650	136,853	180,645	54,694
Corridor # 2		Loop 202 WB, Inbound, Scottsdale Rd to 7th Ave, 10 miles, 2006														
Peak Period: 5-10 am		STN 278, L202 WB/Socttsdale			STN 223, L202 WB /38th St			STN 139, I-10 WB/16th St			STN 078, I-10 WB/7th Ave					
		Daily Throughput Vehicle (Veh)	Daily Throughput Person (person)	Throughput Vehicle in Peak Period (Veh)	Daily Throughput Vehicle (Veh)	Daily Throughput Person (person)	Throughput Vehicle in Peak Period (Veh)	Daily Throughput Vehicle (Veh)	Daily Throughput Person (person)	Throughput Vehicle in Peak Period (Veh)	Daily Throughput Vehicle (Veh)	Daily Throughput Person (person)	Throughput Vehicle in Peak Period (Veh)			
		2006 Throughput	Annual Daily Average	89,394	122,470	49,294	92,464	130,374	39,176	143,220	247,770	63,475	99,356	142,080	33,053	
MAX Throughput	95,508		130,845	53,297	98,479	138,855	41,806	154,323	266,979	67,477	111,266	159,110	35,326			
MIN Throughput	73,801		101,108	33,178	72,594	102,357	25,759	128,369	222,078	45,448	92,198	131,843	26,550			
Median Throughput	89,083		122,044	49,516	92,687	130,689	39,583	143,075	247,520	63,842	99,294	141,990	33,244			
95 Percentile	93,937		128,694	51,995	96,623	136,239	40,901	148,462	256,839	66,010	103,271	147,678	34,428			
	Coefficient of Variation	3%	3%	5%	3%	3%	5%	2%	2%	4%	3%	3%	3%			
Monthly Average Throughput	January	90,575	124,087	50,472	93,645	132,039	39,482	140,673	243,364	62,818	97,021	138,741	32,570			
	February	91,242	125,002	49,606	94,130	132,723	39,331	140,290	242,701	63,144	96,326	137,746	33,050			
	March	93,313	127,839	50,541	94,088	132,665	40,245	145,350	251,456	64,320	100,791	144,130	33,770			
	April	91,880	125,875	52,020	92,922	131,020	40,545	144,110	249,311	65,137	99,538	142,339	33,935			
	May	88,278	120,941	49,594	91,803	129,443	39,598	142,429	246,402	63,135	98,487	140,836	32,708			
	June	88,495	121,238	48,568	92,414	130,304	39,036	143,156	247,660	62,003	99,174	141,819	31,828			
	July	87,298	119,598	47,936	90,936	128,220	37,990	141,567	244,912	61,109	98,240	140,484	31,465			
	August	88,293	120,961	48,993	93,078	131,240	39,369	144,471	249,936	63,849	99,997	142,996	33,064			
	September	87,262	119,549	48,381	92,798	130,845	38,560	144,693	250,318	65,200	100,382	143,546	33,805			
	October	90,082	123,412	50,868	92,857	130,929	39,910	144,704	250,338	65,119	100,796	144,139	33,893			
	November	90,821	124,425	50,253	91,747	129,363	39,447	144,871	250,627	65,325	100,600	143,857	34,163			
	December	86,868	119,009	46,616	88,726	125,103	36,514	141,846	245,394	60,630	100,647	143,926	32,415			
Corridor # 3		I-17 SB, Inbound, Peoria Rd to Buckeye Rd, 10 miles, 2006														
Peak Period: 5-10 am		STN 358, I-17 SB/PeoriaAve			STN 367, I-17 SB/Glendale Ave			STN 367, I-17 SB/Indian School			STN 118, I-17 SB/Buckeye Rd					
		Daily Throughput Vehicle (Veh)	Daily Throughput Person (person)	Throughput Vehicle in Peak Period (Veh)	Daily Throughput Vehicle (Veh)	Daily Throughput Person (person)	Throughput Vehicle in Peak Period (Veh)	Daily Throughput Vehicle (Veh)	Daily Throughput Person (person)	Throughput Vehicle in Peak Period (Veh)	Daily Throughput Vehicle (Veh)	Daily Throughput Person (person)	Throughput Vehicle in Peak Period (Veh)			
		2006 Throughput	Annual Daily Average	86,748	118,845	34,308	63,875	88,147	23,124	93,088	134,977	38,357	62,694	71,472	20,461	
MAX Throughput	93,011		127,425	38,624	78,791	108,732	29,091	100,468	145,679	41,584	67,804	77,297	24,640			
MIN Throughput	72,214		98,933	16,432	49,624	68,481	16,454	83,975	121,764	31,365	55,377	63,130	15,430			
Median Throughput	86,747		118,843	34,585	61,727	85,183	22,378	93,266	135,236	38,611	62,935	71,746	21,063			
95 Percentile	89,983		123,277	36,410	75,836	104,654	28,014	96,952	140,581	40,918	65,746	74,951	22,221			
	Coefficient of Variation	3%	3%	6%	13%	13%	14%	3%	3%	5%	4%	4%	9%			
Monthly Average Throughput	January	84,636	115,951	33,261	61,050	84,249	19,984	91,706	132,974	38,083	63,982	72,940	22,153			
	February	85,163	116,673	33,909	58,273	80,417	20,402	92,490	134,111	37,102	61,621	70,247	19,620			
	March	88,709	121,531	35,806	57,473	79,312	21,816	94,175	136,554	38,045	61,685	70,321	18,774			
	April	89,502	122,617	36,598	56,370	77,790	21,623	95,100	137,896	38,974	63,847	72,785	20,651			
	May	87,018	119,215	34,906	54,817	75,647	21,810	N/A	N/A	N/A	64,516	73,548	21,651			
	June	87,628	120,050	34,530	53,542	73,887	20,384	97,429	141,272	40,768	64,523	73,556	21,583			
	July	86,672	118,741	34,258	65,021	89,729	23,416	94,385	136,858	39,677	63,522	72,415	21,178			
	August	86,586	118,623	34,436	66,306	91,502	23,872	93,593	135,709	39,236	62,978	71,795	21,177			
	September	84,833	116,221	32,998	65,725	90,701	23,746	92,559	134,211	39,549	61,606	70,231	19,724			
	October	87,724	120,182	34,335	74,532	102,854	26,800	94,028	136,340	38,963	62,190	70,896	19,725			
	November	87,234	119,510	33,996	73,571	101,528	26,063	93,075	134,958	37,432	61,606	70,231	19,835			
	December	86,406	118,376	33,566	73,642	101,626	26,271	90,505	131,232	36,837	60,375	68,827	19,199			

Throughput Vehicle/Traveler, Corridors # 4, 5, 6, PM Peak, 2-7 am, Outbound Traffic

Corridor # 4		I-10 EB, Inbound, Van Buren Rd to Warner Rd, 10 miles, 2006														
Peak Period: 2-7 pm		STN 149, I-10 EB/Van Buren			STN 040, I-10 EB/24th St			STN 064, I-10 EB/Broadway			STN 401, I-10 EB/Elliott Rd			STN 406, I-10 EB/Warner Rd		
		Daily Throughput Vehicle (Veh)	Daily Throughput Person (person)	Throughput Vehicle in Peak Period (Veh)	Daily Throughput Vehicle (Veh)	Daily Throughput Person (person)	Throughput Vehicle in Peak Period (Veh)	Daily Throughput Vehicle (Veh)	Daily Throughput Person (person)	Throughput Vehicle in Peak Period (Veh)	Daily Throughput Vehicle (Veh)	Daily Throughput Person (person)	Throughput Vehicle in Peak Period (Veh)	Daily Throughput Vehicle (Veh)	Daily Throughput Person (person)	Throughput Vehicle in Peak Period (Veh)
		2006 Throughput	Annual Daily Average	81,139	125,765	34,241	121,086	156,201	41,939	138,323	193,652	65,109	118,227	153,695	52,305	90,567
MAX Throughput	91,825		142,328	39,212	137,169	176,948	48,411	148,560	207,984	68,329	128,710	167,323	54,820	99,365	136,130	45,441
MIN Throughput	55,228		85,603	19,738	101,575	131,032	33,945	119,417	167,184	48,144	101,738	132,259	46,566	82,060	112,423	37,759
Median Throughput	82,961		128,590	35,039	118,489	152,851	41,389	138,319	193,646	65,631	118,159	153,607	52,331	90,457	123,926	43,359
95 Percentile	89,298		138,411	37,936	134,459	173,452	46,873	143,942	201,518	68,096	122,913	159,787	54,584	94,433	129,373	45,003
	Coefficient of Variation	9%	9%	9%	7%	7%	7%	3%	3%	5%	3%	3%	3%	3%	3%	4%
Monthly Average Throughput	January	75,287	116,695	31,463	110,110	142,042	39,930	N/A	N/A	N/A	116,456	151,392	53,087	88,744	121,579	43,625
	February	81,996	127,093	34,538	119,723	154,442	42,192	N/A	N/A	N/A	119,967	155,957	53,857	91,638	125,544	44,237
	March	85,702	132,838	35,462	113,737	146,721	39,401	N/A	N/A	N/A	120,975	157,268	53,249	93,262	127,768	44,482
	April	84,330	130,711	35,502	117,821	151,990	41,084	N/A	N/A	N/A	120,684	156,890	53,506	92,433	126,633	43,977
	May	84,510	130,990	34,858	117,656	151,776	40,216	N/A	N/A	N/A	118,262	153,741	52,279	90,828	124,435	43,404
	June	77,692	120,423	32,530	121,147	156,280	39,344	N/A	N/A	N/A	118,319	153,815	51,794	91,172	124,906	42,934
	July	84,216	130,535	35,938	N/A	N/A	N/A	N/A	N/A	N/A	115,713	150,427	51,317	89,333	122,386	42,687
	August	75,610	117,196	32,957	N/A	N/A	N/A	N/A	N/A	N/A	123,688	160,794	54,643	91,353	125,153	44,575
	September	77,814	120,612	33,478	131,956	170,224	45,663	138,296	193,614	65,903	115,840	150,592	52,301	89,309	122,353	42,685
	October	82,992	128,638	35,827	132,484	170,904	46,494	138,501	193,901	66,381	117,274	152,456	51,786	89,052	122,001	41,624
	November	87,134	135,057	36,157	131,238	169,297	43,422	139,520	195,328	64,139	117,597	152,876	50,644	89,598	122,749	40,522
	December	78,853	122,222	33,185	127,752	164,800	44,115	136,575	191,205	63,969	117,943	153,325	51,254	90,555	124,060	41,181
Corridor # 5		US-60 EB, Outbound, Rural Rd to Gilbert Rd, 8 miles, 2006														
Peak Period: 2-7 pm		STN 435, US-60 EB/Rural Rd			STN 444, US-60 EB/Dobson			STN 453, US-60 EB/Mesa Dr			STN 459, US-60 EB/Gilbert Rd					
		Daily Throughput Vehicle (Veh)	Daily Throughput Person (person)	Throughput Vehicle in Peak Period (Veh)	Daily Throughput Vehicle (Veh)	Daily Throughput Person (person)	Throughput Vehicle in Peak Period (Veh)	Daily Throughput Vehicle (Veh)	Daily Throughput Person (person)	Throughput Vehicle in Peak Period (Veh)	Daily Throughput Vehicle (Veh)	Daily Throughput Person (person)	Throughput Vehicle in Peak Period (Veh)			
		2006 Throughput	Annual Daily Average	75,545	102,741	31,681	121,444	156,663	55,291	113,168	144,856	51,579	87,815	99,230	32,158	
MAX Throughput	83,029		112,919	35,773	129,690	167,300	58,482	143,335	183,468	60,408	93,870	106,073	35,250			
MIN Throughput	56,316		76,590	16,803	100,318	129,411	41,176	99,244	127,032	42,687	77,155	87,185	27,574			
Median Throughput	79,041		107,495	33,335	121,052	156,157	55,275	113,582	145,384	52,055	88,824	100,371	32,325			
95 Percentile	81,546		110,903	35,055	128,453	165,704	57,966	124,321	159,131	57,652	92,402	104,414	34,877			
	Coefficient of Variation	11%	11%	13%	4%	4%	4%	7%	7%	6%	4%	4%	5%			
Monthly Average Throughput	January	57,645	78,397	23,602	123,842	159,757	57,622	113,318	145,047	53,624	88,763	100,302	32,747			
	February	62,467	84,955	25,249	126,703	163,447	57,255	117,502	150,403	53,736	90,373	102,121	32,103			
	March	79,679	108,363	32,598	127,039	163,880	56,371	117,652	150,594	53,563	91,569	103,473	32,857			
	April	80,261	109,155	32,956	126,717	163,465	56,937	116,355	148,934	53,031	90,318	102,059	32,868			
	May	79,358	107,927	32,279	124,636	160,780	56,131	112,981	144,615	52,088	88,844	100,394	32,283			
	June	79,750	108,461	33,656	121,029	156,127	54,663	108,381	138,727	49,916	84,240	95,191	31,785			
	July	77,276	105,096	33,904	116,586	150,396	53,666	103,228	132,132	48,439	81,880	92,524	30,857			
	August	79,034	107,486	34,926	116,641	150,466	53,796	103,103	131,971	48,435	N/A	N/A	N/A			
	September	N/A	N/A	N/A	117,761	151,912	54,141	105,178	134,627	49,294	N/A	N/A	N/A			
	October	77,986	106,061	33,918	118,786	153,234	55,058	112,873	144,477	51,131	N/A	N/A	N/A			
	November	78,859	107,248	32,807	118,867	153,339	53,844	116,935	149,677	47,399	N/A	N/A	N/A			
	December	77,302	105,131	34,190	115,710	149,266	53,795	136,782	175,081	58,481	N/A	N/A	N/A			
Corridor # 6		SR-51 NB, Outbound, I-10 to Shea Blvd, 8 miles, 2006														
Peak Period: 2-7 pm		STN 203, SR-51 NB/McDowell			STN 209, SR-51 NB/Indian Schod			STN 313, SR-51 NB/Glendale			STN 325, SR-51 NB/Shea Blvd					
		Daily Throughput Vehicle (Veh)	Daily Throughput Person (person)	Throughput Vehicle in Peak Period (Veh)	Daily Throughput Vehicle (Veh)	Daily Throughput Person (person)	Throughput Vehicle in Peak Period (Veh)	Daily Throughput Vehicle (Veh)	Daily Throughput Person (person)	Throughput Vehicle in Peak Period (Veh)	Daily Throughput Vehicle (Veh)	Daily Throughput Person (person)	Throughput Vehicle in Peak Period (Veh)			
		2006 Throughput	Annual Daily Average	79,841	102,196	30,480	77,433	106,858	36,406	71,970	98,599	38,107	69,342	94,998	38,923	
MAX Throughput	85,952		110,019	39,248	81,944	113,082	39,033	77,132	105,670	41,723	74,656	102,279	43,244			
MIN Throughput	67,231		86,056	26,084	63,185	87,195	30,468	56,990	78,077	29,568	53,766	73,659	29,140			
Median Throughput	79,927		102,307	30,444	77,554	107,024	36,634	72,367	99,143	38,354	69,771	95,586	39,284			
95 Percentile	83,307		106,633	33,531	80,631	111,270	38,059	74,878	102,583	39,776	71,799	98,364	40,228			
	Coefficient of Variation	3%	3%	7%	3%	3%	4%	3%	3%	4%	3%	3%	4%			
Monthly Average Throughput	January	78,118	99,991	30,115	75,728	104,505	36,336	70,852	97,067	38,170	68,392	93,697	39,302			
	February	79,365	101,587	29,963	77,307	106,684	36,152	72,499	99,323	38,132	69,969	95,857	39,109			
	March	80,326	102,817	30,610	78,210	107,929	36,735	73,337	100,472	38,739	70,329	96,351	39,164			
	April	80,921	103,579	30,369	78,468	108,285	36,202	73,501	100,697	38,465	70,869	97,091	39,456			
	May	81,115	103,827	30,866	78,626	108,504	36,687	72,573	99,425	37,969	69,914	95,782	38,919			
	June	81,398	104,190	31,246	77,972	107,601	36,416	71,570	98,051	37,568	69,001	94,532	38,300			
	July	81,022	103,709	33,679	75,957	104,821	36,448	69,464	95,166	37,248	66,716	91,401	37,572			
	August	79,658	101,963	31,059	76,833	106,029	36,281	70,714	96,879	37,615	69,316	94,963	39,434			
	September	78,876	100,961	29,732	77,086	106,379	36,578	72,275	99,017	38,724	69,867	95,718	39,758			
	October	79,388	101,617	29,782	77,443	106,871	36,431	71,896	98,498	38,641	68,831	94,298	39,135			
	November	80,500	102,465	29,217	79,247	109,361	36,700	73,517	100,718	38,732	70,389	96,433	39,238			
	December	78,285	100,205	30,149	75,727	104,503	35,745	70,431	96,490	37,313	67,266	92,155	37,440			

Speed

Study Area – 26 locations on 6 selected corridors, see map for details.

Study Period – 5:00 a.m. to 10:00 a.m. for inbound traffic and 2:00 p.m. to 7:00 p.m. for outbound traffic for core weekdays. HOV lanes are excluded.

Sample Size – Tuesday, Wednesday, and Thursday for 2006. A total of 155 days are defined as core weekdays. Note that there is no data on some specific days or some specific time periods.

Deviations or exceptions – Time-mean speeds are measured by dual-loop detectors or passive acoustic detectors. Average speed on each location is weighted by volume per lane, HOV lanes are excluded.

Cost Estimates – N/A

Utility of Performance Measure - Data has been used on ADOT 511 Freeway Management System Real-time Speed Map (<http://www.az511.com/RoadwayConditions/index.php>). Data is also archived into MAG annual freeway mobility report. This data has also been used in validating and calibrating regional travel demand forecasting model.

Complete a TRAVEL TIME DATA COLLECTION WORKSHEET for the base level travel time data.

Attach a copy of the data collected, and calculated performance metrics.

**Speed, Corridor # 1, AM Peak, 5-10 am, Inbound Traffic
I-10, 83rd Ave – 7th St, EB**

		STN 002, I-10 EB at 83rd Ave, Inbound																			
AM Peak		5:15	5:30	5:45	6:00	6:15	6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15	9:30	9:45	10:00
2006 Speed (mph)	Annual Average Spd	60.6	59.6	53.3	52.1	51.5	48.7	43.2	40.2	35.5	29.5	28.4	32.6	39.3	45.2	49.6	54.1	58.2	60.7	61.2	61.0
	MAX Spd	64.0	79.0	64.0	64.0	63.0	64.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	64.0	65.0	64.0	64.0	65.0	65.0	64.0
	MIN Spd	40.0	33.0	13.0	11.0	13.0	11.0	9.0	9.0	9.0	8.0	8.0	9.0	9.0	12.0	16.0	21.0	23.0	48.0	56.0	56.0
	Median Spd	61.0	61.0	58.0	57.0	57.0	55.0	46.0	40.5	33.5	21.0	19.5	26.5	36.0	48.0	56.0	60.0	61.0	61.0	61.0	61.0
	95 Percentile Spd	63.0	63.0	63.0	63.0	63.0	62.0	62.0	62.0	62.0	61.0	61.0	61.0	61.0	62.0	63.0	62.0	62.3	63.0	63.0	63.0
	Coefficient of Variation	4%	7%	22%	25%	26%	29%	38%	44%	52%	63%	63%	56%	45%	35%	28%	21%	13%	4%	3%	3%
		STN 020, I-10 EB at 59th Ave, Inbound																			
AM Peak		5:15	5:30	5:45	6:00	6:15	6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15	9:30	9:45	10:00
2006 Speed (mph)	Annual Average Spd	65.2	59.8	54.2	53.1	53.1	49.4	46.4	45.2	45.3	43.9	42.7	43.8	46.5	50.2	53.0	56.7	61.5	64.3	65.7	66.5
	MAX Spd	72.0	72.0	71.0	72.0	72.0	71.0	72.0	72.0	71.0	71.0	72.0	72.0	74.0	73.0	74.0	73.0	73.0	74.0	73.0	74.0
	MIN Spd	45.0	13.0	11.0	10.0	16.0	10.0	8.0	8.0	7.0	8.0	8.0	14.0	12.0	15.0	11.0	18.0	23.0	22.0	32.0	36.0
	Median Spd	68.5	60.0	56.0	54.0	54.0	50.5	49.5	47.5	49.0	47.0	45.0	47.0	48.5	52.0	53.5	60.0	66.0	69.5	70.0	70.0
	95 Percentile Spd	72.0	71.0	70.0	71.0	71.3	70.0	68.0	68.0	69.0	67.0	65.3	64.3	69.0	71.0	71.0	72.0	72.0	72.0	72.0	73.0
	Coefficient of Variation	9%	16%	23%	27%	29%	34%	37%	39%	40%	39%	39%	35%	35%	30%	27%	24%	19%	15%	11%	10%
		STN 068, I-10 EB at 35th Ave, Inbound																			
AM Peak		5:15	5:30	5:45	6:00	6:15	6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15	9:30	9:45	10:00
2006 Speed (mph)	Annual Average Spd	54.5	52.0	47.0	44.6	42.8	42.0	38.6	36.9	38.2	37.8	37.9	37.5	40.4	42.8	46.2	49.2	52.3	54.9	55.5	56.1
	MAX Spd	57.0	57.0	56.0	58.0	56.0	57.0	55.0	56.0	56.0	57.0	57.0	56.0	56.0	56.0	57.0	57.0	59.0	73.0	58.0	75.0
	MIN Spd	12.0	12.0	9.0	11.0	9.0	8.0	9.0	8.0	8.0	7.0	8.0	8.0	8.0	18.0	16.0	17.0	18.0	16.0	25.0	19.0
	Median Spd	55.0	54.0	50.0	48.5	45.5	44.5	39.0	38.0	41.0	37.5	38.0	37.0	40.0	43.0	47.5	51.5	55.0	56.0	56.0	56.0
	95 Percentile Spd	57.0	56.0	56.0	55.3	55.3	55.0	54.0	54.3	54.0	54.0	53.0	52.3	54.0	55.0	55.3	55.0	57.0	57.0	57.0	57.3
	Coefficient of Variation	8%	12%	20%	24%	27%	28%	34%	37%	35%	33%	29%	27%	23%	21%	18%	14%	14%	9%	6%	5%
		STN 075, I-10 EB at 19th Ave, Inbound																			
AM Peak		5:15	5:30	5:45	6:00	6:15	6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15	9:30	9:45	10:00
2006 Speed (mph)	Annual Average Spd	62.2	59.4	54.6	50.7	49.7	45.5	39.6	38.8	40.6	39.7	37.6	37.6	40.9	44.6	48.9	53.2	57.8	60.5	61.5	61.9
	MAX Spd	66.0	66.0	66.0	65.0	66.0	66.0	66.0	66.0	66.0	65.0	65.0	65.0	65.0	64.0	64.0	64.0	64.0	65.0	65.0	65.0
	MIN Spd	12.0	20.0	11.0	10.0	11.0	7.0	7.0	9.0	8.0	10.0	10.0	15.0	19.0	19.0	17.0	18.0	17.0	27.0	42.0	43.0
	Median Spd	63.0	61.0	59.0	57.0	56.0	48.0	35.5	34.0	36.0	35.5	34.0	34.0	36.0	41.5	51.0	58.0	61.0	62.0	62.0	62.0
	95 Percentile Spd	64.0	63.0	62.0	62.0	62.3	61.0	60.0	60.0	60.3	59.0	57.3	56.3	60.3	61.0	62.0	62.0	63.0	63.0	63.0	63.0
	Coefficient of Variation	9%	12%	19%	25%	27%	32%	37%	36%	35%	33%	28%	26%	27%	25%	23%	20%	15%	8%	5%	3%
		STN 085, I-10 EB at 7th St, Inbound																			
AM Peak		5:15	5:30	5:45	6:00	6:15	6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15	9:30	9:45	10:00
2006 Speed (mph)	Annual Average Spd	60.4	56.5	53.0	52.1	52.3	50.0	48.2	47.5	48.6	47.6	46.7	46.2	47.3	47.9	48.2	50.1	54.7	56.9	57.4	58.4
	MAX Spd	64.0	64.0	68.0	64.0	66.0	64.0	64.0	65.0	66.0	65.0	65.0	65.0	65.0	64.0	63.0	71.0	64.0	64.0	64.0	72.0
	MIN Spd	40.0	41.0	39.0	36.0	11.0	9.0	11.0	20.0	34.0	29.0	35.0	24.0	30.0	32.0	34.0	36.0	20.0	17.0	16.0	19.0
	Median Spd	61.0	57.0	54.0	53.0	54.0	50.0	47.0	46.0	47.0	46.5	46.0	45.0	46.0	46.0	46.0	48.0	56.0	58.0	58.0	59.0
	95 Percentile Spd	64.0	61.0	59.3	59.0	59.0	57.0	56.0	56.0	57.0	56.3	54.3	54.3	56.0	57.3	57.0	59.0	60.0	60.0	60.0	60.0
	Coefficient of Variation	5%	7%	10%	11%	12%	13%	13%	12%	12%	11%	11%	11%	12%	12%	12%	13%	10%	9%	9%	7%

**Speed, Corridor # 2, AM Peak, 5-10 am, Inbound Traffic
Loop 202, Scottsdale Rd – 7th Ave, WB**

		STN 278, Loop 202 WB at Scottsdale Rd, Inbound																				
AM Peak		5:15	5:30	5:45	6:00	6:15	6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15	9:30	9:45	10:00	
2006 Speed (mph)	Annual Average Spd	65.8	65.5	64.9	65.0	62.6	59.9	55.2	46.2	42.8	40.6	38.5	37.1	40.7	43.1	48.1	52.0	60.3	63.5	63.7	64.6	
	MAX Spd	68.0	67.0	67.0	79.0	67.0	67.0	79.0	75.0	69.0	77.0	69.0	74.0	76.0	78.0	68.0	78.0	68.0	78.0	67.0	79.0	
	MIN Spd	52.0	51.0	51.0	50.0	22.0	21.0	26.0	19.0	19.0	18.0	23.0	19.0	22.0	23.0	25.0	11.0	16.0	9.0	12.0	10.0	
	Median Spd	66.0	66.0	65.0	65.0	63.0	61.0	55.0	45.0	38.0	34.5	33.0	32.0	35.0	39.0	47.0	57.0	63.0	64.0	65.0	65.0	
	95 Percentile Spd	67.0	67.0	66.0	67.0	65.0	63.0	63.3	63.3	62.3	61.5	64.0	64.0	63.3	64.0	64.0	65.0	66.0	66.0	66.0	67.0	
	Coefficient of Variation	3%	3%	3%	5%	6%	8%	12%	23%	27%	31%	31%	32%	29%	28%	24%	25%	14%	11%	8%	7%	
		STN 223, Loop 202 WB at 38th St, Inbound																				
AM Peak		5:15	5:30	5:45	6:00	6:15	6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15	9:30	9:45	10:00	
2006 Speed (mph)	Annual Average Spd	68.1	68.0	67.4	67.5	65.6	63.4	58.6	56.7	58.2	52.7	44.3	36.8	41.3	41.4	41.9	45.2	59.5	63.8	64.8	65.3	
	MAX Spd	70.0	70.0	69.0	70.0	69.0	69.0	69.0	70.0	69.0	70.0	69.0	71.0	69.0	70.0	76.0	70.0	70.0	70.0	70.0	70.0	
	MIN Spd	64.0	66.0	65.0	62.0	63.0	56.0	32.0	20.0	18.0	19.0	18.0	20.0	19.0	20.0	17.0	20.0	14.0	13.0	18.0	23.0	
	Median Spd	68.0	68.0	67.5	67.0	66.0	64.0	62.0	62.0	62.0	59.0	40.5	31.0	34.0	35.0	37.0	42.0	65.0	66.0	66.0	66.0	
	95 Percentile Spd	69.0	69.0	69.0	69.0	67.0	66.0	65.0	65.0	64.0	63.0	62.0	63.0	63.0	64.0	64.0	65.0	67.0	67.0	67.0	67.3	
	Coefficient of Variation	1%	1%	1%	2%	2%	3%	14%	20%	17%	22%	28%	33%	33%	32%	32%	29%	18%	12%	9%	9%	
		STN 139, I-10 WB at 16th St, Inbound																				
AM Peak		5:15	5:30	5:45	6:00	6:15	6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15	9:30	9:45	10:00	
2006 Speed (mph)	Annual Average Spd	64.2	63.8	63.0	62.5	61.8	59.4	57.7	57.3	57.7	56.4	55.1	54.7	55.1	54.9	54.4	55.3	57.1	59.0	59.4	60.3	
	MAX Spd	65.0	65.0	77.0	66.0	77.0	65.0	71.0	66.0	66.0	66.0	67.0	67.0	67.0	66.0	67.0	67.0	67.0	67.0	66.0	73.0	
	MIN Spd	62.0	61.0	61.0	60.0	59.0	36.0	26.0	44.0	53.0	52.0	51.0	50.0	42.0	42.0	42.0	50.0	9.0	26.0	23.0	25.0	
	Median Spd	64.0	64.0	63.0	63.0	62.0	60.0	58.0	58.0	58.0	56.0	55.0	54.0	55.0	54.0	55.0	58.0	60.0	60.0	60.0	61.0	
	95 Percentile Spd	65.0	65.0	64.0	64.0	63.3	61.3	60.3	60.0	60.0	58.3	58.0	58.0	59.0	59.0	58.3	59.0	61.0	61.0	62.0	62.0	
	Coefficient of Variation	1%	1%	2%	2%	3%	4%	6%	4%	4%	3%	4%	4%	5%	5%	5%	5%	9%	7%	6%	6%	
		STN 078, I-10 WB at 7th Ave, Inbound																				
AM Peak		5:15	5:30	5:45	6:00	6:15	6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15	9:30	9:45	10:00	
2006 Speed (mph)	Annual Average Spd	64.1	63.6	62.8	62.4	61.9	60.6	59.8	59.8	60.4	60.3	60.1	60.5	60.8	60.8	60.4	60.5	60.8	61.0	61.1	61.3	
	MAX Spd	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	78.0	66.0	66.0	67.0	66.0	66.0	66.0	78.0	66.0	66.0	65.0	
	MIN Spd	61.0	61.0	60.0	50.0	41.0	56.0	43.0	30.0	43.0	55.0	49.0	56.0	52.0	54.0	56.0	56.0	52.0	57.0	54.0	57.0	
	Median Spd	64.0	64.0	63.0	63.0	62.0	61.0	60.0	60.0	60.0	60.0	60.0	61.0	61.0	61.0	61.0	60.5	61.0	61.0	61.0	61.0	
	95 Percentile Spd	65.0	65.0	64.0	63.3	63.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	63.0	63.0	62.3	63.0
	Coefficient of Variation	1%	1%	1%	2%	3%	2%	4%	5%	3%	3%	3%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%

**Speed, Corridor # 3, AM Peak, 5-10 am, Inbound Traffic
I-17, Peoria Rd – Buckeye Rd, SB**

		STN 358, I-17 SB at Peoria Ave, Inbound																			
AM Peak		5:15	5:30	5:45	6:00	6:15	6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15	9:30	9:45	10:00
2006 Speed (mph)	Annual Average Spd	56.9	57.9	58.7	58.4	56.6	53.4	48.6	47.7	45.6	40.7	38.8	44.4	45.7	44.0	47.0	50.2	55.8	57.8	58.1	58.5
	MAX Spd	60.0	78.0	79.0	61.0	59.0	70.0	72.0	60.0	70.0	77.0	68.0	74.0	78.0	75.0	67.0	78.0	78.0	79.0	78.0	79.0
	MIN Spd	52.0	54.0	53.0	53.0	52.0	30.0	18.0	15.0	20.0	9.0	9.0	16.0	11.0	12.0	13.0	14.0	11.0	27.0	42.0	42.0
	Median Spd	57.0	58.0	59.0	59.0	57.0	55.0	48.0	48.0	46.0	41.0	38.0	44.0	46.0	42.5	48.0	52.5	58.0	58.0	58.0	58.0
	95 Percentile Spd	58.3	59.0	60.0	60.0	58.0	57.0	57.0	57.0	57.0	57.3	57.3	58.3	58.0	58.0	58.0	58.0	59.0	59.0	59.0	59.3
	Coefficient of Variation	2%	3%	4%	2%	2%	9%	14%	15%	19%	29%	30%	23%	24%	26%	21%	18%	15%	7%	5%	6%
		STN 367, I-17 SB at Glendale Ave, Inbound																			
AM Peak		5:15	5:30	5:45	6:00	6:15	6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15	9:30	9:45	10:00
2006 Speed (mph)	Annual Average Spd	56.8	55.7	51.4	48.4	50.2	45.9	40.5	38.8	37.8	38.0	35.7	33.3	34.8	38.6	41.8	46.3	52.7	55.0	55.2	55.9
	MAX Spd	61.0	61.0	75.0	72.0	68.0	69.0	78.0	58.0	58.0	72.0	71.0	74.0	78.0	77.0	59.0	59.0	72.0	74.0	59.0	60.0
	MIN Spd	53.0	36.0	9.0	6.0	8.0	8.0	8.0	15.0	11.0	15.0	12.0	12.0	17.0	12.0	12.0	15.0	19.0	27.0	32.0	47.0
	Median Spd	56.0	55.5	54.5	54.0	53.0	48.0	41.0	39.0	37.5	37.5	34.0	31.0	33.0	36.5	41.0	47.0	54.0	55.0	55.0	55.0
	95 Percentile Spd	60.0	59.0	59.0	59.0	58.0	56.0	52.0	52.3	53.0	52.0	52.5	52.0	57.0	57.3	57.0	58.0	59.0	59.0	59.0	59.0
	Coefficient of Variation	3%	5%	17%	23%	19%	19%	22%	24%	27%	23%	25%	29%	29%	26%	21%	18%	12%	8%	7%	4%
		STN 376, I-17 SB at Indian School Rd, Inbound																			
AM Peak		5:15	5:30	5:45	6:00	6:15	6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15	9:30	9:45	10:00
2006 Speed (mph)	Annual Average Spd	57.7	55.6	47.2	42.6	47.6	46.8	43.3	42.8	46.5	46.9	42.0	43.0	45.5	49.3	52.0	55.7	57.0	57.5	58.6	58.7
	MAX Spd	79.0	78.0	72.0	77.0	71.0	76.0	76.0	77.0	70.0	79.0	64.0	79.0	77.0	64.0	61.0	77.0	74.0	78.0	79.0	79.0
	MIN Spd	47.0	7.0	23.0	10.0	18.0	17.0	8.0	8.0	11.0	18.0	15.0	21.0	24.0	22.0	14.0	31.0	23.0	32.0	23.0	49.0
	Median Spd	59.0	57.0	45.0	38.0	46.0	44.0	41.0	40.0	46.0	45.0	41.0	39.0	43.0	49.0	53.0	56.0	58.0	58.0	58.0	59.0
	95 Percentile Spd	60.0	60.0	59.0	59.0	59.0	58.0	57.0	57.0	57.0	61.5	56.0	60.0	57.0	58.0	58.0	59.0	60.0	60.0	60.0	60.0
	Coefficient of Variation	5%	14%	20%	26%	18%	20%	26%	28%	21%	21%	22%	26%	19%	14%	13%	8%	9%	8%	8%	4%
		STN 118, I-17 SB at Buckeye Rd, Inbound																			
AM Peak		5:15	5:30	5:45	6:00	6:15	6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15	9:30	9:45	10:00
2006 Speed (mph)	Annual Average Spd	56.6	53.6	48.9	45.2	45.9	45.2	42.6	43.4	46.3	47.1	47.7	49.4	52.2	53.7	55.1	56.4	57.4	57.9	58.3	58.6
	MAX Spd	63.0	62.0	62.0	61.0	61.0	59.0	61.0	62.0	61.0	63.0	63.0	64.0	63.0	64.0	63.0	64.0	63.0	63.0	63.0	63.0
	MIN Spd	25.0	15.0	13.0	11.0	10.0	8.0	7.0	9.0	8.0	8.0	9.0	9.0	9.0	10.0	16.0	17.0	12.0	20.0	14.0	17.0
	Median Spd	57.0	55.0	51.0	49.0	49.0	52.0	52.0	54.0	55.0	56.0	56.0	58.0	58.0	58.0	58.0	59.0	59.0	59.0	59.0	60.0
	95 Percentile Spd	61.0	58.0	56.0	55.0	58.0	57.0	57.0	58.0	59.0	59.0	59.0	59.0	59.0	59.0	59.3	60.0	60.0	61.0	61.0	61.0
	Coefficient of Variation	9%	10%	14%	22%	26%	29%	38%	39%	36%	36%	34%	32%	25%	20%	15%	12%	11%	10%	9%	9%

**Speed, Corridor # 4, PM Peak, 2-7 pm, Outbound Traffic
I-10, Van Buren Rd to Warner Rd, SB**

		STN 149, I-10 EB at Van Buren Rd, Outbound																			
PM Peak		14:15	14:30	14:45	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	18:30	18:45	19:00
2006 Speed (mph)	Annual Average Spd	52.1	50.1	37.9	29.9	30.2	29.2	35.7	33.9	33.6	28.9	24.6	22.8	22.0	21.7	21.2	25.1	31.0	34.3	36.0	36.7
	MAX Spd	64.0	63.0	63.0	63.0	62.0	63.0	65.0	65.0	66.0	64.0	63.0	59.0	62.0	61.0	64.0	63.0	65.0	67.0	72.0	67.0
	MIN Spd	50.0	48.0	33.0	24.0	24.0	22.0	8.0	10.0	9.0	8.0	7.0	7.0	6.0	5.0	6.0	7.0	8.0	9.0	12.0	11.0
	Median Spd	50.0	48.0	33.0	24.0	24.0	23.0	31.0	27.5	28.0	26.0	23.0	21.0	17.0	18.0	16.5	24.5	27.0	29.0	33.5	34.0
	95 Percentile Spd	62.0	60.0	61.3	59.5	59.3	60.0	61.0	60.0	60.3	54.3	47.0	47.0	45.0	46.0	47.3	52.0	59.0	61.0	61.3	62.0
	Coefficient of Variation	9%	9%	28%	43%	45%	48%	41%	39%	39%	43%	49%	51%	54%	56%	60%	54%	47%	40%	38%	36%
		STN 040, I-10 EB at 24th St, Outbound																			
PM Peak		14:15	14:30	14:45	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	18:30	18:45	19:00
2006 Speed (mph)	Annual Average Spd	52.9	52.5	51.6	50.0	44.7	35.9	30.4	24.3	21.5	16.0	14.9	13.0	13.0	11.1	12.1	13.7	18.6	24.9	37.5	49.4
	MAX Spd	67.0	67.0	67.0	67.0	66.0	67.0	66.0	67.0	67.0	66.0	67.0	67.0	66.0	66.0	65.0	65.0	64.0	63.0	63.0	72.0
	MIN Spd	44.0	40.0	23.0	12.0	7.0	9.0	10.0	9.0	9.0	8.0	7.0	8.0	7.0	7.0	8.0	8.0	8.0	6.0	6.0	7.0
	Median Spd	51.0	51.0	51.0	50.0	45.0	30.0	26.0	21.0	18.0	14.0	13.0	11.0	11.0	9.0	10.0	11.0	14.0	18.0	34.0	50.0
	95 Percentile Spd	63.0	62.0	61.0	61.0	60.0	51.3	49.3	41.3	43.0	22.3	19.0	17.0	17.5	14.0	16.5	22.3	50.3	53.0	54.0	62.0
	Coefficient of Variation	8%	8%	9%	15%	20%	28%	29%	34%	40%	46%	47%	58%	63%	70%	66%	66%	63%	58%	32%	17%
		STN 064, I-10 EB at Broadway Rd, Outbound																			
PM Peak		14:15	14:30	14:45	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	18:30	18:45	19:00
2006 Speed (mph)	Annual Average Spd	59.2	58.3	53.3	43.6	39.2	35.3	33.4	33.2	31.9	30.5	30.7	29.3	29.0	28.3	28.8	27.3	28.2	29.2	31.2	34.0
	MAX Spd	73.0	79.0	77.0	76.0	75.0	68.0	63.0	70.0	64.0	65.0	74.0	64.0	64.0	57.0	64.0	67.0	67.0	72.0	79.0	62.0
	MIN Spd	36.0	31.0	13.0	11.0	31.0	12.0	25.0	13.0	24.0	13.0	24.0	18.0	14.0	20.0	21.0	21.0	21.0	18.0	19.0	23.0
	Median Spd	59.0	58.0	52.0	41.0	36.0	33.0	32.0	31.0	30.0	29.0	29.0	28.0	28.0	27.0	26.0	25.0	26.0	27.0	29.0	32.0
	95 Percentile Spd	61.0	60.0	59.3	60.3	59.0	51.0	48.3	57.8	47.3	47.5	48.0	48.0	48.0	43.3	51.0	46.8	48.0	49.0	48.3	52.5
	Coefficient of Variation	4%	6%	10%	18%	22%	21%	17%	25%	20%	21%	22%	22%	25%	20%	29%	29%	28%	27%	25%	21%
		STN 401, I-10 EB at Elliot Rd, Outbound																			
PM Peak		14:15	14:30	14:45	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	18:30	18:45	19:00
2006 Speed (mph)	Annual Average Spd	63.2	62.7	62.6	61.9	61.5	60.2	58.9	57.1	55.4	52.4	50.2	48.8	47.5	45.7	45.6	46.3	49.2	49.4	52.6	56.5
	MAX Spd	67.0	67.0	66.0	66.0	66.0	65.0	67.0	67.0	67.0	67.0	67.0	68.0	66.0	67.0	67.0	67.0	66.0	67.0	66.0	66.0
	MIN Spd	58.0	51.0	56.0	14.0	14.0	18.0	27.0	32.0	32.0	31.0	33.0	31.0	31.0	31.0	27.0	27.0	28.0	24.0	24.0	22.0
	Median Spd	63.0	63.0	63.0	62.0	62.0	61.0	60.0	59.0	58.0	55.0	51.5	50.0	46.0	45.0	45.0	45.0	50.5	49.5	55.0	58.0
	95 Percentile Spd	64.0	64.0	64.0	64.0	64.0	63.0	62.0	62.0	62.0	61.0	60.0	59.3	59.0	58.0	58.0	58.0	59.0	60.3	62.0	64.0
	Coefficient of Variation	1%	2%	2%	7%	7%	7%	9%	10%	12%	16%	16%	17%	19%	19%	19%	19%	17%	17%	15%	13%
		STN 406, I-10 EB at Warner Rd, Outbound																			
PM Peak		14:15	14:30	14:45	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	18:30	18:45	19:00
2006 Speed (mph)	Annual Average Spd	64.9	64.4	64.0	62.9	61.4	59.3	58.2	55.6	54.5	51.5	50.0	49.1	48.1	46.6	46.5	46.8	48.5	48.9	51.0	54.6
	MAX Spd	70.0	69.0	68.0	68.0	69.0	67.0	68.0	69.0	69.0	69.0	70.0	69.0	69.0	70.0	69.0	68.0	69.0	69.0	69.0	68.0
	MIN Spd	57.0	53.0	50.0	46.0	41.0	35.0	30.0	30.0	31.0	29.0	32.0	30.0	30.0	29.0	29.0	29.0	24.0	20.0	21.0	19.0
	Median Spd	65.0	65.0	64.0	64.0	62.0	61.0	60.0	58.0	56.0	54.0	52.0	51.0	51.0	49.0	49.0	49.0	50.0	50.0	52.0	56.0
	95 Percentile Spd	66.0	66.0	66.0	65.0	65.0	64.0	63.0	62.0	61.3	60.0	59.0	58.3	58.0	57.3	56.3	56.3	58.0	58.3	62.0	64.0
	Coefficient of Variation	2%	3%	3%	5%	6%	8%	9%	11%	12%	15%	16%	16%	17%	18%	17%	16%	15%	15%	16%	15%

**Speed, Corridor # 5, PM Peak, 2-7 pm, Outbound Traffic
US-60, Rural Rd to Gilbert Rd, EB**

		STN 435, US-60 EB at Rural Rd, Outbound																			
PM Peak		14:15	14:30	14:45	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	18:30	18:45	19:00
2006 Speed (mph)	Annual Average Spd	57.4	56.6	56.7	53.0	51.3	49.0	48.8	47.9	47.9	47.9	47.0	47.1	47.4	47.4	47.1	48.4	50.6	51.2	51.9	53.5
	MAX Spd	61.0	61.0	79.0	77.0	60.0	59.0	60.0	59.0	59.0	59.0	60.0	60.0	62.0	59.0	59.0	59.0	60.0	60.0	60.0	61.0
	MIN Spd	41.0	39.0	26.0	26.0	30.0	28.0	28.0	27.0	25.0	28.0	28.0	27.0	26.0	27.0	24.0	24.0	28.0	24.0	21.0	26.0
	Median Spd	58.0	58.0	57.0	53.0	51.5	48.0	48.0	47.0	46.5	47.0	46.0	46.0	46.0	46.0	46.0	47.0	50.0	50.0	51.0	54.0
	95 Percentile Spd	60.0	60.0	60.0	60.0	58.0	58.0	58.0	57.3	58.0	56.0	56.0	57.3	57.0	56.3	57.0	58.0	59.0	59.0	59.0	59.0
	Coefficient of Variation	7%	7%	9%	11%	12%	12%	13%	13%	13%	11%	12%	12%	13%	12%	13%	13%	13%	13%	13%	11%
		STN 444, US-60 EB at Dobson Rd, Outbound																			
PM Peak		14:15	14:30	14:45	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	18:30	18:45	19:00
2006 Speed (mph)	Annual Average Spd	58.4	59.0	58.1	58.0	56.7	56.7	56.2	56.2	56.8	56.6	56.8	56.9	57.0	56.8	56.8	56.9	56.8	56.7	56.6	56.3
	MAX Spd	72.0	74.0	73.0	79.0	59.0	59.0	59.0	59.0	78.0	59.0	59.0	59.0	60.0	59.0	59.0	59.0	59.0	59.0	59.0	59.0
	MIN Spd	53.0	52.0	43.0	25.0	37.0	37.0	23.0	12.0	27.0	30.0	45.0	51.0	50.0	45.0	33.0	49.0	55.0	51.0	54.0	54.0
	Median Spd	58.0	58.0	58.0	58.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	56.0	56.0
	95 Percentile Spd	59.0	71.0	59.0	61.5	58.0	58.0	58.0	58.0	58.0	58.0	58.0	58.0	58.0	58.0	58.0	58.0	58.0	58.0	58.0	58.0
	Coefficient of Variation	5%	7%	5%	7%	4%	4%	7%	8%	5%	5%	2%	2%	2%	3%	4%	2%	2%	2%	2%	2%
		STN 453, US-60 EB at Mesa Dr, Outbound																			
PM Peak		14:15	14:30	14:45	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	18:30	18:45	19:00
2006 Speed (mph)	Annual Average Spd	63.8	63.9	64.5	64.3	63.1	62.5	62.7	62.4	62.8	62.5	62.3	62.2	61.8	61.2	60.8	61.0	62.1	62.5	62.3	62.4
	MAX Spd	79.0	78.0	79.0	78.0	67.0	68.0	73.0	68.0	68.0	68.0	68.0	67.0	68.0	68.0	67.0	67.0	67.0	67.0	67.0	67.0
	MIN Spd	54.0	19.0	39.0	42.0	50.0	23.0	33.0	38.0	52.0	45.0	40.0	38.0	36.0	33.0	32.0	25.0	36.0	57.0	54.0	59.0
	Median Spd	64.0	64.0	64.0	64.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	62.0	63.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0
	95 Percentile Spd	66.0	66.0	67.3	67.0	66.0	66.0	66.0	67.0	67.0	67.0	67.0	67.0	66.0	66.0	65.0	65.3	66.0	65.3	65.0	65.3
	Coefficient of Variation	3%	6%	6%	5%	3%	7%	5%	6%	3%	5%	6%	6%	7%	9%	10%	9%	5%	2%	3%	2%
		STN 459, US-60 EB at Gilbert Rd, Outbound																			
PM Peak		14:15	14:30	14:45	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	18:30	18:45	19:00
2006 Speed (mph)	Annual Average Spd	54.3	54.6	53.9	54.0	46.3	43.5	41.4	44.3	42.0	38.9	37.7	35.9	35.4	33.8	32.1	36.2	41.7	51.4	53.1	52.7
	MAX Spd	57.0	57.0	57.0	73.0	67.0	74.0	57.0	57.0	56.0	77.0	64.0	60.0	77.0	56.0	74.0	56.0	75.0	75.0	56.0	56.0
	MIN Spd	15.0	47.0	25.0	27.0	23.0	26.0	16.0	19.0	24.0	23.0	20.0	22.0	20.0	26.0	21.0	23.0	21.0	22.0	11.0	12.0
	Median Spd	54.0	54.0	53.0	53.0	42.0	40.0	37.0	43.0	40.0	35.0	33.0	32.0	31.0	30.0	29.0	32.0	39.0	53.0	54.0	53.0
	95 Percentile Spd	56.0	56.0	56.0	56.0	56.0	56.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	54.0	55.0	55.0	55.0	56.0	56.0	55.3
	Coefficient of Variation	6%	2%	6%	8%	16%	19%	22%	18%	20%	23%	27%	26%	27%	26%	27%	27%	27%	21%	15%	11%

**Speed, Corridor # 6, PM Peak, 2-7 pm, Outbound Traffic
SR-51 McDowell Rd to Shea Blvd, NB**

		STN 203, SR-51 NB at McDowell Rd, Outbound																				
PM Peak		14:15	14:30	14:45	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	18:30	18:45	19:00	
2006 Speed (mph)	Annual Average Spd	64.0	63.9	64.0	63.8	63.7	63.5	63.0	60.6	59.8	52.3	48.8	46.5	45.4	43.5	41.9	47.9	58.6	61.5	62.7	63.0	
	MAX Spd	66.0	66.0	66.0	66.0	66.0	65.0	65.0	65.0	65.0	79.0	65.0	65.0	65.0	79.0	65.0	69.0	66.0	66.0	66.0	65.0	
	MIN Spd	62.0	62.0	62.0	62.0	62.0	60.0	48.0	34.0	25.0	24.0	30.0	24.0	30.0	24.0	23.0	23.0	28.0	36.0	32.0	35.0	
	Median Spd	64.0	64.0	64.0	64.0	64.0	64.0	63.0	63.0	62.0	53.0	46.0	43.0	40.0	39.0	37.0	48.0	62.0	63.0	63.0	63.0	
	95 Percentile Spd	65.0	65.0	65.0	65.0	65.0	65.0	65.0	64.3	64.0	63.0	64.0	63.0	64.0	63.0	64.0	63.0	64.0	65.0	65.0	65.0	
	Coefficient of Variation	1%	1%	1%	1%	1%	1%	3%	10%	11%	17%	20%	21%	24%	24%	27%	26%	14%	9%	5%	4%	
		STN 209, SR-51 NB at Indian School Rd, Outbound																				
PM Peak		14:15	14:30	14:45	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	18:30	18:45	19:00	
2006 Speed (mph)	Annual Average Spd	65.5	65.7	65.8	65.8	64.9	64.5	64.3	63.0	62.1	58.8	55.1	52.7	50.9	46.7	45.2	49.2	56.5	61.9	63.6	64.3	
	MAX Spd	67.0	67.0	67.0	68.0	67.0	67.0	67.0	67.0	66.0	66.0	66.0	79.0	66.0	65.0	74.0	70.0	67.0	68.0	68.0	67.0	
	MIN Spd	64.0	64.0	63.0	64.0	50.0	46.0	56.0	50.0	36.0	32.0	22.0	26.0	23.0	26.0	28.0	27.0	25.0	21.0	23.0	27.0	
	Median Spd	66.0	66.0	66.0	66.0	65.0	65.0	64.0	64.0	63.0	60.0	55.0	52.0	51.0	47.0	44.5	49.0	60.0	64.0	65.0	65.0	
	95 Percentile Spd	67.0	67.0	67.0	67.0	66.0	66.0	66.0	65.0	65.0	64.0	64.0	63.0	63.3	61.0	63.3	64.3	65.0	66.0	66.0	66.0	
	Coefficient of Variation	1%	1%	1%	1%	2%	3%	2%	4%	7%	9%	12%	13%	14%	16%	17%	16%	15%	10%	8%	6%	
		STN 313, SR-51 NB at Glendale Rd, Outbound																				
PM Peak		14:15	14:30	14:45	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	18:30	18:45	19:00	
2006 Speed (mph)	Annual Average Spd	67.8	67.8	67.9	68.1	68.1	68.1	67.9	67.6	67.1	66.4	66.0	65.5	65.1	63.6	62.9	63.6	65.2	66.4	67.0	67.2	
	MAX Spd	70.0	71.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	69.0	69.0	69.0	70.0	70.0	69.0	71.0	69.0	69.0	71.0	71.0	
	MIN Spd	58.0	54.0	60.0	66.0	65.0	65.0	61.0	56.0	23.0	21.0	21.0	28.0	28.0	26.0	51.0	39.0	29.0	30.0	40.0	52.0	
	Median Spd	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0	67.0	67.0	67.0	67.0	66.0	65.0	66.0	67.0	67.0	68.0	67.0	
	95 Percentile Spd	69.0	69.0	69.0	69.0	69.0	69.0	69.0	69.0	69.0	69.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.3	69.0	68.0
	Coefficient of Variation	2%	2%	1%	1%	1%	1%	1%	2%	6%	7%	9%	7%	7%	9%	8%	8%	7%	7%	5%	2%	
		STN 325, SR-51 NB at Shea Blvd, Outbound																				
PM Peak		14:15	14:30	14:45	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	18:30	18:45	19:00	
2006 Speed (mph)	Annual Average Spd	69.7	69.1	68.9	67.6	67.6	65.7	65.6	63.4	62.6	56.7	54.2	51.1	50.2	48.3	48.0	48.1	50.9	57.0	64.7	68.2	
	MAX Spd	73.0	74.0	73.0	73.0	74.0	73.0	74.0	73.0	73.0	74.0	73.0	73.0	73.0	72.0	72.0	73.0	72.0	72.0	73.0	73.0	
	MIN Spd	50.0	66.0	63.0	37.0	38.0	42.0	13.0	13.0	31.0	35.0	36.0	36.0	27.0	32.0	33.0	29.0	33.0	33.0	30.0	49.0	
	Median Spd	70.0	69.0	69.0	68.0	68.0	66.0	66.0	65.0	64.0	58.5	51.0	49.0	48.0	47.0	47.0	47.0	48.0	57.0	67.0	69.0	
	95 Percentile Spd	71.0	70.0	70.0	70.0	69.0	69.0	68.0	67.3	68.0	65.3	65.0	63.0	63.3	62.0	59.0	60.3	66.3	68.0	70.0	71.0	
	Coefficient of Variation	3%	1%	2%	4%	5%	6%	8%	10%	10%	13%	14%	13%	14%	13%	11%	12%	16%	15%	10%	5%	

Extent of Congestion – Spatial and Temporal

Performance measure tested -> Extent of Congestion - Spatial Temporal

Study Area – In-bound corridors: 1. I-10 EB from 83rd Ave to 7^h St;
2. Loop 202 WB & I-10 WB from Scottsdale Rd to 7th Ave;
3. I-17 SB from Peoria Ave to Buckeye Rd.
Out-bound corridors: 4. I-10 WB from Van Buren Rd to Warner Rd;
5. US-60 EB from Rural Rd to Gilbert Rd;
6. SR-51 NB from McDowell Rd to Shea Blvd.

Study Period – Inbound Corridors: 5:00 -10:00 a.m.; Outbound Corridors: 2:00 -7:00 p.m. Core weekdays.

Sample Size – Tuesday, Wednesday, and Thursday for 2006. A total of 155 days are defined as core weekdays.

Deviations or exceptions –Link travel times were first obtained by spot-measure speeds, then the free flow travel time is estimated at 85 percentile of off-peak travel time. Congestion thresholds were set at 1.3 x “free flow travel times”. Spatial Congestion is estimated using corridor length under congested conditions for every 15 minutes during peak periods. Temporal Congestion is estimated using percentage of congested time periods out of the entire peak period.

Cost Estimates – N/A

Utility of Performance Measure – Results have been used in the MAG annual freeway mobility report. However, the previous congestion definition was based on speeds, using “speed \leq 35 mph and speed \leq 50 mph” as the thresholds for severe congestion and congestion respectively.

Complete a TRAVEL TIME DATA COLLECTION WORKSHEET for the base level travel time data.
How was unconstrained travel time determined?

Attach a copy of the data collected, and calculated performance metrics.

Extent of Congestion – Spatial, AM Peak, 5-10 am, Inbound Traffic
 Spatial Congestion: miles of congested freeway

		I-10 EB, Inbound, 83rd Ave to 7th St, 10 miles, 2006																				
		Corridor #1: AM Peak																				
		5:15	5:30	5:45	6:00	6:15	6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15	9:30	9:45	10:00	
Average Annual Extent of Congestion - Average (Miles)	Average	0	0	2	2	3	3	4	5	5	5	6	6	5	4	3	2	1	0	0	0	
	MAX	5	8	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	5	3	3
	MIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Median	0	0	0	1	2	3	5	6	5	6	6	6	5	4	2	1	0	0	0	0	0
	95 Percentile	0	3	7	9	9	9	10	10	10	10	10	10	10	10	10	8	6	5	3	1	0
Monthly % of Congestion Freeway	January	0%	0%	0%	0%	0%	28%	65%	80%	74%	85%	87%	81%	76%	61%	40%	21%	7%	6%	2%	2%	2%
	February	0%	0%	3%	16%	40%	77%	98%	100%	96%	100%	98%	97%	89%	79%	78%	48%	13%	5%	0%	0%	0%
	March	0%	1%	21%	60%	81%	90%	88%	93%	86%	88%	86%	73%	65%	45%	21%	11%	4%	0%	0%	0%	0%
	April	1%	23%	54%	63%	52%	57%	64%	57%	50%	61%	59%	64%	49%	47%	33%	21%	11%	5%	0%	0%	0%
	May	0%	2%	8%	6%	0%	2%	7%	13%	11%	14%	26%	24%	19%	19%	11%	6%	3%	3%	3%	1%	1%
	June	1%	1%	1%	1%	1%	0%	1%	4%	3%	14%	19%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%
	July	3%	3%	5%	4%	3%	2%	5%	10%	10%	12%	29%	25%	25%	15%	9%	6%	3%	4%	4%	2%	2%
	August	5%	7%	7%	15%	15%	6%	11%	21%	20%	26%	38%	41%	34%	30%	24%	23%	10%	4%	2%	0%	0%
	September	2%	8%	41%	40%	36%	38%	51%	51%	51%	50%	53%	57%	45%	48%	25%	18%	9%	2%	0%	0%	0%
	October	0%	4%	43%	49%	42%	36%	52%	57%	60%	62%	66%	65%	48%	38%	27%	13%	6%	4%	2%	2%	2%
	November	0%	0%	7%	32%	43%	44%	51%	61%	45%	54%	58%	59%	51%	36%	28%	15%	6%	0%	0%	0%	0%
	December	0%	0%	0%	4%	23%	34%	54%	58%	63%	59%	59%	59%	59%	45%	28%	18%	5%	0%	1%	3%	3%

		Loop 202 WB, Inbound, Scottsdale Rd to 7th Ave, 10 miles, 2006																				
		Corridor #2: AM Peak																				
		5:15	5:30	5:45	6:00	6:15	6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15	9:30	9:45	10:00	
Average Annual Extent of Congestion - Average (Miles)	Average	0	0	0	0	0	0	1	2	2	3	5	5	5	5	4	3	1	0	0	0	
	MAX	0	0	0	0	3	3	8	9	8	7	7	9	9	7	7	7	7	7	7	7	7
	MIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Median	0	0	0	0	0	0	0	3	3	3	7	7	7	7	4	4	0	0	0	0	0
	95 Percentile	0	0	0	0	0	0	4	7	7	7	7	7	7	7	7	7	7	7	4	0	0
Monthly % of Congestion Freeway	January	0%	0%	0%	0%	0%	2%	34%	53%	42%	43%	57%	59%	58%	49%	43%	31%	16%	5%	2%	2%	2%
	February	0%	0%	0%	0%	0%	0%	38%	58%	41%	48%	52%	55%	48%	45%	44%	39%	11%	3%	0%	2%	2%
	March	0%	0%	0%	0%	0%	4%	13%	29%	30%	40%	45%	58%	43%	49%	34%	35%	5%	3%	3%	3%	3%
	April	0%	0%	0%	0%	0%	0%	8%	18%	20%	55%	59%	51%	45%	47%	21%	8%	0%	0%	0%	0%	0%
	May	0%	0%	0%	0%	0%	0%	5%	11%	11%	21%	38%	51%	34%	40%	46%	33%	8%	8%	5%	5%	5%
	June	0%	0%	0%	0%	0%	0%	4%	17%	17%	15%	29%	46%	36%	52%	46%	28%	3%	0%	0%	0%	0%
	July	0%	0%	0%	0%	2%	2%	10%	15%	15%	25%	40%	39%	33%	26%	34%	18%	5%	3%	3%	3%	3%
	August	0%	0%	0%	0%	2%	2%	5%	8%	15%	23%	39%	57%	57%	56%	50%	34%	16%	5%	0%	0%	0%
	September	0%	0%	0%	0%	3%	2%	2%	14%	13%	42%	58%	60%	52%	53%	49%	45%	15%	0%	0%	0%	0%
	October	0%	0%	0%	0%	0%	0%	9%	29%	21%	30%	56%	59%	57%	50%	42%	32%	3%	2%	0%	3%	3%
	November	0%	0%	0%	0%	0%	0%	6%	21%	25%	36%	52%	56%	50%	43%	40%	37%	9%	5%	0%	0%	0%
	December	0%	0%	0%	0%	0%	0%	14%	36%	31%	37%	43%	41%	36%	34%	28%	30%	12%	5%	2%	0%	0%

		I-17 SB, Inbound, Peoria Rd to Buckeye Rd, 10 miles, 2006																				
		Corridor #3: AM Peak																				
		5:15	5:30	5:45	6:00	6:15	6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15	9:30	9:45	10:00	
Average Annual Extent of Congestion - Average (Miles)	Average	0	0	1	3	2	2	3	5	3	4	5	6	4	3	2	1	1	0	0	0	0
	MAX	2	6	9	9	9	10	10	10	10	10	10	10	10	10	10	8	10	8	8	3	2
	MIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Median	0	0	0	4	0	0	0	3	5	3	5	7	3	3	3	0	0	0	0	0	0
	95 Percentile	0	2	6	9	6	9	9	9	10	10	10	10	10	8	8	7	5	4	2	2	0
Monthly % of Congestion Freeway	January	9%	9%	9%	17%	12%	29%	72%	77%	62%	53%	65%	66%	58%	38%	24%	18%	14%	10%	9%	9%	9%
	February	0%	0%	3%	36%	27%	64%	80%	68%	64%	72%	78%	73%	59%	48%	34%	12%	7%	3%	0%	0%	0%
	March	0%	0%	16%	60%	58%	61%	65%	52%	49%	49%	62%	56%	43%	33%	19%	17%	3%	1%	1%	1%	1%
	April	0%	3%	34%	59%	26%	13%	13%	41%	10%	21%	24%	51%	28%	24%	20%	13%	4%	3%	3%	0%	0%
	May	0%	1%	5%	40%	1%	1%	12%	49%	6%	23%	34%	66%	30%	29%	20%	10%	5%	0%	0%	0%	0%
	June	0%	0%	0%	32%	0%	0%	21%	58%	18%	33%	38%	66%	31%	30%	25%	5%	0%	0%	0%	0%	0%
	July	0%	0%	0%	3%	0%	0%	0%	8%	5%	17%	18%	27%	18%	11%	4%	4%	5%	3%	0%	0%	0%
	August	1%	6%	7%	17%	6%	7%	19%	27%	19%	24%	28%	35%	35%	29%	24%	11%	3%	2%	0%	0%	0%
	September	0%	9%	41%	45%	18%	18%	24%	28%	26%	30%	44%	50%	49%	39%	40%	6%	7%	3%	0%	0%	0%
	October	0%	3%	34%	43%	28%	23%	31%	42%	52%	43%	55%	67%	49%	32%	26%	6%	0%	0%	0%	0%	0%
	November	0%	0%	20%	39%	29%	24%	40%	45%	49%	55%	63%	53%	50%	38%	23%	15%	9%	6%	2%	0%	0%
	December	0%	0%	0%	8%	3%	10%	41%	53%	49%	54%	62%	55%	41%	37%	15%	6%	3%	0%	3%	0%	0%

Extent of Congestion – Spatial, PM Peak, 2-7 am, Outbound Traffic

Spatial Congestion: miles of congested freeway

		I-10 EB, Outbound, Van Buren Rd to Warner Rd, 10 miles, 2006																			
		Corridor #4: PM Peak																			
		14:15	14:30	14:45	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	18:30	18:45	19:00
Average Annual Extent of Congestion - Average (Miles)	Average	0	0	1	3	5	6	6	6	7	7	8	8	8	8	8	8	8	7	6	5
	MAX	3	6	7	9	9	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	MIN	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0
	Median	0	0	1	4	4	7	7	7	7	7	8	8	8	8	9	9	9	8	8	7
	95 Percentile	0	1	4	7	7	8	8	9	10	10	10	10	10	10	10	10	10	10	10	8
Monthly % of Congestion Freeway	January	0%	0%	0%	30%	34%	44%	56%	57%	58%	62%	70%	67%	68%	74%	77%	77%	68%	71%	63%	48%
	February	0%	0%	0%	30%	36%	51%	55%	64%	64%	65%	69%	69%	77%	79%	77%	71%	68%	71%	63%	50%
	March	2%	4%	12%	48%	55%	64%	67%	66%	69%	73%	76%	76%	83%	84%	79%	73%	70%	61%	45%	45%
	April	0%	0%	10%	42%	48%	61%	65%	63%	65%	68%	71%	67%	78%	84%	81%	78%	67%	57%	47%	42%
	May	0%	0%	12%	44%	45%	58%	59%	63%	61%	64%	63%	66%	69%	81%	78%	78%	72%	53%	46%	44%
	June	0%	0%	10%	40%	65%	65%	64%	67%	68%	68%	72%	77%	81%	81%	84%	81%	75%	73%	69%	39%
	July	0%	0%	10%	40%	65%	65%	64%	65%	65%	66%	80%	80%	81%	84%	85%	82%	85%	82%	66%	40%
	August	0%	0%	10%	38%	65%	65%	64%	64%	62%	64%	87%	90%	87%	89%	90%	87%	83%	83%	64%	37%
	September	0%	0%	10%	26%	36%	60%	58%	61%	63%	67%	82%	85%	86%	85%	88%	91%	74%	73%	69%	36%
	October	8%	8%	18%	20%	40%	53%	65%	67%	72%	84%	92%	92%	95%	97%	90%	91%	98%	91%	83%	67%
	November	2%	6%	16%	33%	42%	52%	63%	73%	85%	88%	87%	89%	83%	90%	82%	91%	87%	88%	81%	69%
	December	0%	0%	13%	24%	44%	55%	60%	63%	69%	86%	83%	83%	83%	90%	78%	81%	75%	74%	62%	49%

		US-60 EB, Outbound, Rural Rd to Gilbert Rd, 8 miles, 2006																			
		Corridor #5: PM Peak																			
		14:15	14:30	14:45	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	18:30	18:45	19:00
Average Annual Extent of Congestion - Average (Miles)	Average	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	
	MAX	1	3	4	3	3	3	6	6	3	5	4	4	4	4	7	4	4	3	2	3
	MIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Median	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0
	95 Percentile	0	0	0	2	2	2	2	3	2	2	2	3	3	2	3	3	2	2	1	1
Monthly % of Congestion Freeway	January	0%	0%	0%	0%	0%	6%	5%	4%	5%	8%	9%	10%	10%	10%	11%	7%	2%	1%	1%	1%
	February	0%	2%	0%	6%	7%	13%	13%	16%	15%	14%	15%	15%	18%	12%	17%	13%	11%	7%	4%	3%
	March	0%	3%	2%	8%	10%	14%	15%	14%	9%	17%	16%	18%	17%	19%	21%	20%	9%	9%	7%	8%
	April	0%	0%	0%	0%	1%	2%	4%	8%	5%	4%	5%	6%	5%	8%	13%	7%	4%	2%	0%	0%
	May	0%	0%	0%	0%	0%	1%	5%	5%	4%	10%	6%	7%	6%	11%	12%	9%	6%	4%	1%	1%
	June	1%	2%	3%	1%	0%	0%	0%	0%	1%	1%	1%	2%	2%	5%	7%	5%	6%	1%	1%	1%
	July	0%	0%	0%	0%	0%	0%	1%	1%	0%	8%	9%	7%	7%	8%	7%	8%	2%	2%	0%	0%
	August	0%	0%	0%	0%	0%	0%	0%	0%	0%	13%	13%	13%	15%	13%	13%	13%	13%	0%	0%	0%
	September	0%	0%	0%	0%	0%	6%	0%	3%	0%	13%	15%	13%	13%	13%	15%	15%	0%	0%	0%	0%
	October	0%	0%	0%	3%	3%	0%	0%	0%	0%	13%	13%	13%	13%	13%	13%	13%	0%	0%	0%	0%
	November	0%	0%	0%	0%	0%	0%	0%	0%	0%	13%	14%	16%	13%	13%	13%	13%	0%	0%	0%	0%
	December	0%	0%	0%	0%	0%	3%	6%	6%	0%	13%	13%	15%	15%	15%	20%	15%	0%	0%	0%	0%

		SR-51 NB, Outbound, I-10 to Shea Blvd, 8 miles, 2006																			
		Corridor #6: PM Peak																			
		14:15	14:30	14:45	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	18:30	18:45	19:00
Average Annual Extent of Congestion - Average (Miles)	Average	0	0	0	0	0	0	0	0	0	1	1	2	2	3	4	3	1	1	0	0
	MAX	2	0	0	2	2	2	2	2	3	7	7	8	7	7	5	5	7	5	6	4
	MIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Median	0	0	0	0	0	0	0	0	0	0	2	2	3	3	4	3	2	0	0	0
	95 Percentile	0	0	0	0	0	0	0	1	2	3	3	4	5	5	5	5	4	3	2	0
Monthly % of Congestion Freeway	January	0%	0%	0%	0%	0%	0%	0%	0%	0%	7%	19%	30%	33%	45%	49%	48%	22%	17%	3%	0%
	February	0%	0%	0%	2%	2%	2%	2%	3%	4%	14%	25%	26%	35%	41%	55%	34%	24%	14%	7%	6%
	March	0%	0%	0%	0%	1%	1%	1%	4%	6%	8%	21%	26%	34%	36%	45%	29%	17%	12%	1%	0%
	April	0%	0%	0%	0%	0%	0%	0%	0%	3%	14%	20%	23%	30%	38%	40%	25%	20%	3%	0%	0%
	May	1%	0%	0%	0%	0%	0%	0%	3%	1%	8%	13%	17%	21%	30%	38%	26%	13%	3%	1%	0%
	June	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	4%	15%	20%	30%	39%	29%	11%	4%	1%	0%
	July	0%	0%	0%	0%	0%	0%	0%	2%	2%	2%	5%	7%	20%	23%	14%	5%	2%	0%	0%	0%
	August	0%	0%	0%	0%	0%	0%	0%	0%	3%	10%	14%	21%	23%	40%	42%	31%	12%	5%	0%	0%
	September	0%	0%	0%	0%	0%	2%	0%	2%	1%	9%	19%	31%	30%	41%	56%	43%	23%	16%	2%	0%
	October	0%	0%	0%	0%	3%	1%	3%	2%	14%	25%	29%	39%	47%	53%	40%	28%	14%	2%	1%	1%
	November	0%	0%	0%	0%	0%	0%	2%	16%	28%	26%	35%	39%	43%	43%	33%	27%	17%	7%	4%	4%
	December	0%	0%	0%	0%	0%	0%	1%	4%	16%	22%	30%	37%	42%	42%	35%	17%	7%	6%	0%	0%

Congestion – Temporal, AM/PM Peaks, All Corridors

	Percentage of time the Corridor is in Congested Condition					
	Corridor #1	Corridor #2	Corridor #3	Corridor #4	Corridor #5	Corridor #6
	I-10 EB, Inbound, 83rd Ave to 7th St, 10 miles	Loop 202 WB, Inbound, Scottsdale Rd to 7th Ave, 10 miles	I-17 SB, Inbound, Peoria Rd to Buckeye Rd, 10 miles	I-10 EB, Outbound, Van Buren Rd to Warner Rd, 10 miles	US-60 EB, Outbound, Rural Rd to Gilbert Rd, 8 miles	SR-51 NB, Outbound, I-10 to Shea Blvd, 8 miles
	AM Peak, 5-10 am, 2006			PM Peak, 2-7 pm, 2006		
January	42%	37%	38%	76%	0%	5%
February	58%	37%	45%	76%	0%	4%
March	58%	31%	42%	84%	1%	3%
April	51%	24%	20%	85%	0%	2%
May	9%	25%	12%	85%	1%	2%
June	1%	25%	10%	85%	1%	3%
July	11%	22%	4%	85%	0%	1%
August	21%	28%	12%	85%	0%	4%
September	45%	35%	26%	79%	0%	5%
October	51%	30%	36%	80%	0%	8%
November	44%	32%	32%	78%	0%	7%
December	38%	25%	24%	72%	2%	7%

Travel Time – Facility

Study Area – In-bound corridors: 1. I-10 EB from 83rd Ave to 7^h St;
2. Loop 202 WB & I-10 WB from Scottsdale Rd to 7th Ave;
3. I-17 SB from Peoria Ave to Buckeye Rd.
Out-bound corridors: 4. I-10 WB from Van Buren Rd to Warner Rd;
5. US-60 EB from Rural Rd to Gilbert Rd;
6. SR-51 NB from McDowell Rd to Shea Blvd.

Study Period – Inbound Corridors: 5:00 -10:00 a.m.; Outbound Corridors: 2:00 -7:00 p.m. Core weekdays.

Sample Size – Tuesday, Wednesday, and Thursday for 2006. A total of 155 days are defined as core weekdays.

Deviations or exceptions – Travel time is estimated from spot-measure time-mean speed collected by loop and PAD detectors. Once the speed data has passed the screening test, it is applied to each link and assumed as representative space-mean speed for the link. The arithmetic summation of travel time for every link is used to represent corridor travel time. The travel time is refreshed every 15-min. Travel Time Index (TTI) and Planning Time Index (PTI) are also calculated based on methods defined by Texas Trans Inst. $TTI = \text{Actual TT}/\text{free flow TT}$, $PTI = 95\% \text{ TT}/\text{free-flow TT}$; free-flow TT defined as TT at 60mph speed on freeway.

Cost Estimates – N/A

Utility of Performance Measure –Travel time results for past years will be incorporated into a historical database, and data will be used for travel time reliability analysis.

Complete a TRAVEL TIME DATA COLLECTION WORKSHEET for the base level travel time data.

Attach a copy of the data collected, and calculated performance metrics.

2006 Travel Time (TT), AM Peak, 5-10 am, Inbound Traffic

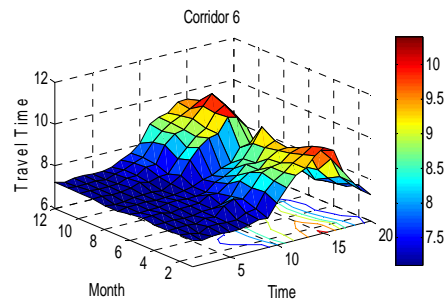
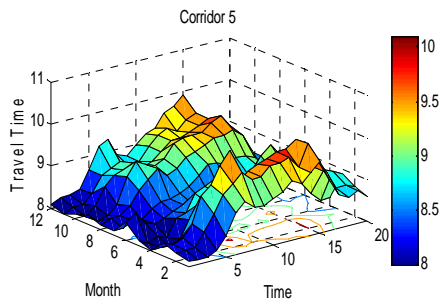
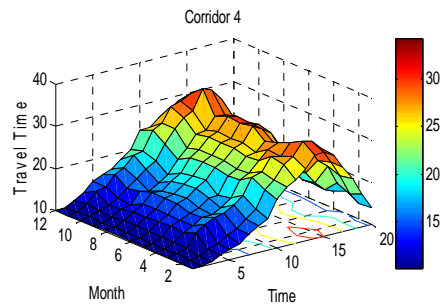
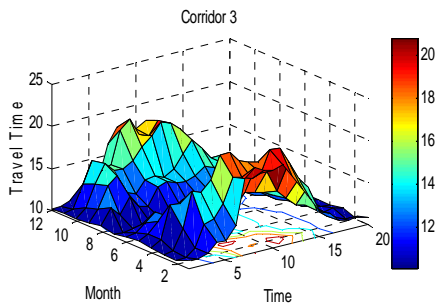
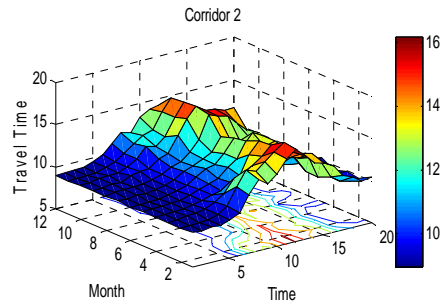
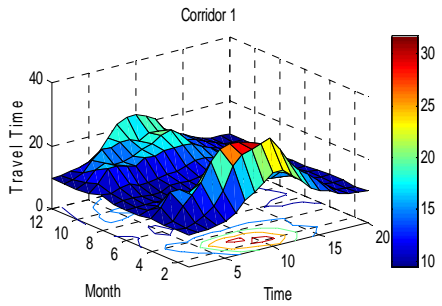
Free-flow TT: 10.65 min		I-10 EB, Inbound, 83rd Ave to 7th St, Length = 10 miles, 2006																			
Corridor #1: AM Peak		5:15	5:30	5:45	6:00	6:15	6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15	9:30	9:45	10:00
2006 TT (Minutes)	Annual Average TT	10.1	10.8	12.5	13.3	13.7	15.0	16.9	17.9	18.3	19.2	19.4	18.0	16.0	14.3	13.1	12.0	10.9	10.2	10.0	9.9
	MAX TT	28.1	25.3	38.7	39.7	37.5	58.3	68.2	65.8	62.4	57.1	46.8	39.1	36.1	31.3	29.3	23.7	22.1	15.4	15.3	12.5
	MIN TT	9.4	9.6	9.6	9.6	9.5	9.7	9.7	9.6	9.8	9.9	9.8	9.7	9.7	9.7	9.5	9.4	9.4	9.0	9.4	9.4
	Median TT	9.8	10.2	11.1	11.8	12.5	13.5	15.5	16.1	16.2	17.7	18.0	17.1	15.2	13.6	12.1	11.0	10.3	9.9	9.8	9.7
	95% TT	10.56	13.2	19.6	19.8	21.3	26.6	29.4	32.1	32.7	33.2	32.9	28.1	25.7	20.2	18.4	17.0	14.7	12.4	11.0	10.4
	Planning Time Index PTI	1.06	1.32	1.96	1.98	2.13	2.66	2.94	3.21	3.27	3.32	3.29	2.81	2.57	2.02	1.84	1.70	1.47	1.24	1.10	1.04
	Travel Time Index TTI	1.01	1.08	1.25	1.33	1.37	1.50	1.69	1.79	1.83	1.92	1.94	1.80	1.60	1.43	1.31	1.20	1.09	1.02	1.00	1.00
Coefficient of Variation	15%	17%	32%	33%	34%	42%	44%	45%	46%	42%	39%	33%	30%	27%	26%	22%	18%	10%	7%	4%	
Monthly Avg TT (Minutes)	January	10.2	10.2	10.5	11.0	11.6	13.4	16.5	18.7	20.9	23.3	23.2	20.8	18.5	15.4	13.7	12.9	11.6	10.7	10.3	10.3
	February	10.2	10.2	11.2	12.4	14.8	18.9	26.1	28.9	29.9	30.9	31.7	27.6	22.9	19.6	17.4	15.0	12.3	10.6	10.1	10.0
	March	10.1	10.7	14.7	17.4	20.5	26.4	29.3	30.5	30.1	29.6	27.2	23.4	20.5	16.7	14.4	13.2	11.5	10.6	10.3	10.2
	April	10.4	13.3	17.2	17.5	15.8	17.7	17.9	18.0	17.7	18.6	18.8	17.4	16.4	15.9	15.2	12.8	11.4	10.7	10.4	10.3
	May	9.9	10.5	11.2	10.8	10.2	10.5	11.0	11.2	11.1	12.0	12.7	12.9	12.5	12.0	11.2	10.7	10.5	10.4	10.2	9.9
	June	9.7	9.9	10.2	10.0	9.8	10.0	10.4	10.8	10.9	11.5	12.2	12.1	11.2	10.5	10.2	9.9	9.7	9.6	9.7	9.6
	July	10.0	10.2	10.7	10.2	9.9	10.2	11.4	11.6	11.5	11.8	13.1	13.2	12.5	11.6	11.2	10.8	10.3	10.2	10.1	9.7
	August	11.1	11.1	12.0	12.5	11.4	11.3	11.9	12.5	12.6	13.9	14.8	15.0	14.1	13.8	12.8	12.0	10.9	10.2	9.7	9.5
	September	10.1	12.2	16.2	16.5	15.6	15.0	16.9	16.7	17.4	17.9	18.0	17.7	16.0	14.8	12.9	11.4	10.7	9.9	9.7	9.7
	October	9.8	11.3	14.4	15.6	14.6	14.7	15.5	17.1	18.2	20.0	21.0	19.1	15.5	13.5	12.4	11.6	10.6	9.9	9.8	9.7
	November	9.7	10.3	11.9	14.9	17.6	17.2	18.3	18.4	17.4	19.2	19.1	17.7	15.5	14.2	13.1	12.0	10.9	9.9	9.7	9.7
	December	9.7	9.9	10.5	11.0	12.1	14.4	17.8	21.6	23.1	23.0	22.2	20.3	16.8	14.4	13.3	11.9	10.7	10.0	10.0	9.9
Free-flow TT: 9.50 min		Loop 202 WB, Inbound, Scottsdale Rd to 7th Ave, Mileage = 10 miles, 2006																			
Corridor #2: AM Peak		5:15	5:30	5:45	6:00	6:15	6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15	9:30	9:45	10:00
2006 TT (Minutes)	Annual Average TT	9.1	9.1	9.2	9.2	9.5	9.8	10.6	11.6	11.7	12.5	13.8	15.2	14.1	13.9	13.4	12.7	10.6	9.9	9.7	9.6
	MAX TT	9.7	9.9	9.9	9.9	13.8	14.3	14.7	19.9	21.7	20.5	23.0	21.8	20.4	21.0	21.7	21.6	23.8	24.3	19.8	22.2
	MIN TT	8.9	8.9	8.8	8.8	8.9	9.0	9.0	8.9	8.8	8.8	8.8	8.7	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.9
	Median TT	9.0	9.1	9.2	9.2	9.5	9.8	10.2	11.0	11.5	12.4	13.8	15.6	14.2	14.1	13.6	12.6	9.8	9.5	9.5	9.4
	95% TT	9.2	9.2	9.3	9.5	9.7	10.4	12.7	14.8	14.9	16.0	17.0	17.6	17.1	17.0	16.8	16.7	14.3	12.3	10.2	10.0
	Planning Time Index PTI	1.00	1.00	1.00	1.00	1.00	1.04	1.27	1.48	1.49	1.60	1.70	1.76	1.71	1.70	1.68	1.67	1.43	1.23	1.02	1.00
	Travel Time Index TTI	1.00	1.00	1.00	1.00	1.00	1.00	1.06	1.16	1.17	1.25	1.38	1.52	1.41	1.39	1.34	1.27	1.06	1.00	1.00	1.00
Coefficient of Variation	1%	1%	1%	2%	4%	5%	10%	15%	15%	16%	15%	14%	15%	16%	17%	18%	20%	19%	15%	15%	
Monthly Avg TT (Minutes)	January	9.1	9.1	9.2	9.2	9.5	10.1	12.0	13.4	12.6	13.6	15.0	16.0	14.8	13.8	13.5	12.9	11.4	11.0	10.3	10.4
	February	9.1	9.1	9.2	9.2	9.6	10.2	12.3	14.0	13.6	14.4	15.2	16.2	14.7	14.2	14.0	12.8	10.7	9.8	9.6	9.6
	March	9.1	9.1	9.3	9.3	9.6	10.1	10.8	12.3	12.6	13.3	14.1	15.2	13.8	13.2	12.8	12.6	10.1	9.9	9.9	9.8
	April	9.1	9.1	9.2	9.2	9.4	9.7	10.0	10.2	10.9	11.5	13.7	15.1	14.1	13.9	13.3	11.8	10.1	9.6	9.5	9.4
	May	9.1	9.1	9.2	9.2	9.4	9.7	10.1	10.5	10.8	11.8	12.5	14.4	13.0	13.2	13.6	12.4	11.2	10.1	10.2	10.2
	June	9.0	9.0	9.1	9.1	9.3	9.5	9.9	10.6	11.3	11.5	12.6	14.1	12.8	14.2	13.6	12.0	9.6	9.4	9.4	9.4
	July	9.2	9.1	9.2	9.1	9.3	9.6	9.9	10.7	11.1	11.6	12.1	13.7	12.9	12.6	12.7	13.0	11.5	10.8	10.3	9.5
	August	9.1	9.2	9.3	9.3	9.4	9.7	10.0	10.5	10.9	11.8	12.9	15.6	15.2	15.0	13.9	12.8	10.6	9.7	9.6	9.4
	September	9.1	9.2	9.3	9.3	9.8	10.0	10.0	10.9	11.3	13.1	14.8	16.0	15.3	15.1	14.6	14.7	10.9	9.6	9.5	9.4
	October	9.1	9.1	9.3	9.4	9.5	9.8	10.5	11.8	11.5	12.4	14.4	15.8	14.4	14.1	13.1	12.3	9.8	9.6	9.5	9.6
	November	9.0	9.1	9.1	9.2	9.5	9.8	10.6	11.5	12.1	12.6	14.3	15.7	14.7	14.0	13.5	12.7	10.9	10.0	9.5	9.3
	December	9.0	9.0	9.1	9.2	9.5	10.0	11.1	12.2	11.8	13.3	14.0	14.3	13.4	12.9	12.0	11.8	10.1	9.5	9.5	9.4
Free-flow TT: 11.09 min		I-17 SB, Inbound, Peoria Rd to Buckeye Rd, Mileage = 10 miles, 2006																			
Corridor #3: AM Peak		5:15	5:30	5:45	6:00	6:15	6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15	9:30	9:45	10:00
2006 TT (Minutes)	Annual Average TT	10.6	11.1	12.5	13.9	13.0	13.7	15.8	16.3	15.7	15.9	16.7	16.5	15.2	14.1	13.1	12.0	11.1	10.7	10.6	10.4
	MAX TT	13.5	38.8	28.4	37.3	30.5	30.7	49.8	49.0	38.0	32.8	35.9	33.7	30.1	32.5	29.3	24.7	22.0	17.1	17.1	15.4
	MIN TT	9.5	9.5	9.9	10.0	10.4	10.5	10.3	10.4	10.4	10.4	10.2	10.3	10.2	10.1	10.1	10.1	10.0	9.5	9.3	9.4
	Median TT	10.4	10.7	11.9	13.0	11.8	12.6	13.8	14.1	13.7	14.0	15.1	15.0	14.4	13.4	12.4	11.5	10.6	10.5	10.4	10.4
	95% TT	11.3	12.3	16.0	19.6	19.0	19.9	26.2	25.1	27.2	26.1	26.3	26.3	22.2	18.8	17.1	16.4	13.8	12.2	11.4	10.9
	Planning Time Index PTI	1.13	1.23	1.60	1.96	1.90	1.99	2.62	2.51	2.72	2.61	2.63	2.63	2.22	1.88	1.71	1.64	1.38	1.22	1.14	1.09
	Travel Time Index TTI	1.06	1.11	1.25	1.39	1.30	1.37	1.58	1.63	1.57	1.59	1.67	1.65	1.52	1.41	1.31	1.20	1.11	1.07	1.06	1.04
Coefficient of Variation	4%	22%	18%	26%	24%	23%	35%	36%	33%	30%	28%	27%	23%	22%	21%	16%	15%	8%	8%	5%	
Monthly Avg TT (Minutes)	January	11.0	10.9	11.3	12.3	12.2	13.8	19.0	20.0	19.4	19.2	19.6	18.0	16.2	14.7	12.9	12.4	11.3	11.1	11.3	10.9
	February	10.4	10.5	11.4	13.8	14.2	15.8	18.6	18.3	17.8	18.3	20.8	20.6	18.7	16.5	15.2	12.2	11.2	10.8	10.4	10.3
	March	10.4	10.6	13.1	17.2	16.7	17.9	20.5	20.7	19.4	18.9	18.7	17.2	14.6	13.5	12.4	12.2	11.8	10.8	11.0	10.7
	April	10.6	11.3	15.2	15.0	13.3	14.3	14.7	14.5	14.0	13.2	14.5	14.1	13.9	13.2	13.3	12.4	11.1	10.9	10.6	10.5
	May	10.8	11.4	12.6	12.9	11.9	12.5	13.5	13.5	13.0	13.8	14.6	14.7	14.1	13.4	12.9	12.2	11.1	10.6	10.6	10.5
	June	10.8	10.9	11.8	12.8	11.7	12.4	13.4	13.8	13.1	13.7	14.6	15.8	14.0	13.0	12.3	11.5	10.7	10.6	10.5	10.5
	July	10.4	10.3	10.6	10.7	10.5	10.8	11.6	11.9	11.8	12.4	12.8	12.8	12.6	11.6	11.4	10.9	10.8	10.6	10.4	10.3
	August	10.7	12.7	11.5	13.4	11.9	11.7	13.7	14.0	13.6	13.5	13.9	14.7	14.3	14.5	13.5	12.4	11.1	10.6	10.5	10.4
	September	10.5	11.8	14.3	15.2	12.9	12.6	13.9	14.1	13.7	14.3	15.9	17.2	15.9	14.6	14.6	12.3	11.7	10.6	10.5	10.4
	October	10.4	11.3	13.9	16.0	15.0	14.9	15.6	16.9	17.9	19.3	18.9	17.9	16.2	14.2	12.7	11.4	10.4	10.3	10.2	10.2
	November	10.3	10.6	13.2	15.7	14.4	14.7	18.5	19.6	17.4	17.1	18.5	17.1	16.0	15.0	13.5	12.4	11.4	10.7	10.4	10.1
	December	10.2	10.3	10.7	11.4	11.2	12.6	16.3	18.0	17.1	17.2	18.0	17.7	16.5	14						

2006 Travel Time (TT), PM Peak, 2-7 pm, Outbound Traffic

Free-flow TT: 9.63 min		I-10 EB, Outbound, Van Buren Rd to Warner Rd, Mileage = 10 miles, 2006																			
Corridor #4: PM Peak		14:15	14:30	14:45	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	18:30	18:45	19:00
2006 TT (Minutes)	Annual Average TT	10.4	10.5	11.4	13.1	14.1	15.7	16.4	18.1	19.4	22.9	24.3	26.8	27.6	30.3	29.2	27.5	23.5	20.6	16.7	14.4
	MAX TT	12.0	14.3	25.5	32.1	32.2	37.7	31.6	40.0	32.8	42.3	37.2	38.4	43.6	40.2	39.6	36.0	34.0	40.4	39.6	36.3
	MIN TT	9.4	9.3	10.1	10.7	10.7	10.9	10.3	10.4	10.3	10.5	10.4	10.3	10.5	11.3	10.6	10.6	10.7	10.8	10.1	10.4
	Median TT	10.4	10.6	11.5	13.2	14.0	15.8	16.2	18.0	19.6	22.7	24.1	26.6	27.4	30.3	29.1	27.7	23.8	20.7	16.0	14.0
	95% TT	10.6	10.9	11.8	14.4	15.5	18.4	19.5	22.5	24.0	29.1	29.4	33.1	34.8	36.2	35.8	33.3	30.4	27.8	23.2	18.2
	Planning Time Index PTI	1.06	1.09	1.18	1.44	1.55	1.84	1.95	2.25	2.40	2.91	2.94	3.31	3.48	3.62	3.58	3.33	3.04	2.78	2.32	1.82
	Travel Time Index TTI	1.04	1.05	1.14	1.31	1.41	1.57	1.64	1.81	1.94	2.29	2.43	2.68	2.76	3.03	2.92	2.75	2.35	2.06	1.67	1.44
Coefficient of Variation	3%	4%	11%	17%	17%	17%	14%	16%	14%	15%	14%	14%	16%	14%	15%	16%	18%	20%	19%	17%	
Monthly Avg TT (Minutes)	January	10.2	10.3	10.7	11.7	12.4	13.3	14.9	16.4	17.5	21.4	23.8	25.0	27.0	29.7	30.0	28.8	25.0	21.9	17.8	14.1
	February	10.2	10.3	10.7	11.7	12.5	13.9	15.0	16.9	18.6	22.4	24.2	27.2	28.9	31.8	31.3	29.1	25.1	21.5	16.5	13.8
	March	10.4	10.6	11.6	14.5	16.0	17.1	17.3	18.8	20.4	24.4	25.1	28.2	27.5	30.3	29.0	27.8	24.4	22.3	17.9	15.5
	April	10.4	10.5	11.5	13.2	14.2	15.7	15.8	16.8	18.7	22.3	23.3	25.9	27.8	28.8	27.7	25.5	20.2	17.2	15.1	14.2
	May	10.4	10.6	11.6	13.7	14.3	15.4	16.2	17.8	18.2	22.1	23.2	25.6	25.9	28.2	26.8	24.3	19.6	16.8	15.5	14.3
	June	10.5	10.6	11.6	13.3	14.5	16.4	17.3	18.9	20.3	22.9	23.8	26.4	26.9	30.5	29.2	27.6	23.8	21.0	16.5	14.1
	July	10.5	10.6	11.6	13.2	14.5	16.5	17.1	18.8	20.2	23.0	24.0	26.3	26.8	29.9	29.1	28.2	24.4	21.5	16.6	14.3
	August	10.5	10.6	11.6	13.1	14.6	16.5	16.4	18.0	19.6	22.5	24.0	26.5	27.0	30.3	29.5	27.6	23.3	20.8	16.0	13.7
	September	10.3	10.5	11.1	12.7	12.9	15.6	15.3	16.6	18.0	21.1	23.1	25.7	26.3	28.9	28.6	27.6	23.2	20.3	15.6	13.5
	October	10.5	10.7	11.4	12.4	13.3	15.1	16.8	18.6	20.1	23.5	26.3	28.6	29.6	34.3	33.2	30.4	26.2	21.4	17.3	15.2
	November	10.2	10.5	12.0	14.3	14.8	17.1	18.1	20.7	20.9	25.3	26.5	29.9	30.5	31.8	30.4	29.3	25.3	23.3	19.2	16.0
	December	10.1	10.2	11.3	12.7	14.9	16.0	16.6	18.3	20.2	24.1	24.1	26.1	26.8	28.8	25.2	23.3	21.1	19.3	15.7	13.8
Free-flow TT: 9.27 min		US-60 EB, Outbound, Rural Rd to Gilbert Rd, Mileage = 8 miles, 2006																			
Corridor #5: PM Peak		14:15	14:30	14:45	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	18:30	18:45	19:00
2006 TT (Minutes)	Annual Average TT	8.1	8.1	8.2	8.3	8.7	8.9	9.0	9.0	9.0	9.1	9.2	9.3	9.3	9.4	9.6	9.3	8.9	8.6	8.5	8.5
	MAX TT	11.4	13.7	10.9	12.7	10.6	13.1	14.2	21.6	12.1	12.5	10.8	11.0	11.7	12.5	13.5	11.8	11.3	11.5	12.4	12.1
	MIN TT	7.5	7.4	7.5	7.5	8.1	8.1	8.2	8.2	8.1	8.2	8.1	8.0	8.1	8.2	8.1	8.1	8.1	7.9	7.7	7.9
	Median TT	8.1	8.1	8.1	8.3	8.6	8.8	8.9	8.8	8.9	9.1	9.3	9.3	9.4	9.5	9.6	9.3	8.9	8.5	8.5	8.4
	95% TT	8.6	8.6	8.5	9.0	9.6	9.9	10.1	10.1	9.8	9.9	10.0	10.3	10.4	10.3	10.8	10.4	9.8	9.6	9.2	8.7
	Planning Time Index PTI	1.07	1.08	1.07	1.13	1.20	1.24	1.26	1.26	1.22	1.24	1.25	1.29	1.31	1.29	1.35	1.30	1.22	1.20	1.15	1.21
	Travel Time Index TTI	1.02	1.02	1.02	1.04	1.08	1.11	1.13	1.13	1.12	1.14	1.15	1.16	1.17	1.18	1.20	1.16	1.11	1.07	1.07	1.06
Coefficient of Variation	4%	6%	4%	6%	5%	7%	8%	13%	6%	6%	5%	5%	6%	6%	7%	7%	6%	6%	6%	6%	
Monthly Avg TT (Minutes)	January	8.1	8.1	8.1	8.2	8.5	9.0	9.2	9.0	9.0	9.1	9.2	9.4	9.3	9.5	9.7	9.2	8.8	8.7	8.8	8.6
	February	8.2	8.2	8.2	8.5	8.9	9.3	9.5	9.7	9.5	9.5	9.7	9.7	9.8	9.5	10.0	9.6	9.2	8.8	8.8	8.7
	March	8.3	8.2	8.3	8.6	9.2	9.4	9.8	10.1	9.3	9.5	9.6	9.7	9.8	9.8	10.0	9.8	9.2	9.1	9.0	8.9
	April	8.0	8.0	8.0	8.1	8.5	8.8	8.8	9.0	8.9	8.9	8.9	9.1	8.9	9.1	9.3	9.0	8.7	8.4	8.2	8.2
	May	8.1	8.0	8.1	8.0	8.4	8.5	8.9	9.0	9.1	9.2	9.1	9.0	9.1	9.4	9.6	9.3	9.1	8.7	8.5	8.4
	June	8.4	8.6	8.3	8.2	8.3	8.4	8.5	8.5	8.5	8.5	8.6	8.6	8.7	8.8	9.0	8.9	8.7	8.4	8.5	8.5
	July	8.1	8.1	8.2	8.2	8.4	8.5	8.5	8.6	8.7	8.9	9.1	9.1	9.0	9.1	9.1	9.0	8.6	8.5	8.3	8.3
	August	8.1	8.2	8.2	8.4	8.7	8.9	9.1	8.9	9.0	9.2	9.3	9.4	9.5	9.5	9.6	9.4	9.0	8.5	8.5	8.5
	September	8.2	8.0	8.1	8.3	8.9	9.2	9.1	9.0	9.1	9.4	9.5	9.5	9.5	9.7	9.8	9.5	9.0	8.6	8.5	8.5
	October	8.1	8.0	8.2	8.6	8.8	8.9	9.0	8.8	8.9	9.1	9.3	9.3	9.4	9.5	9.6	9.3	8.9	8.4	8.5	8.5
	November	8.0	8.1	8.1	8.3	8.7	8.8	8.9	8.7	8.8	9.1	9.3	9.4	9.3	9.5	9.6	9.3	8.9	8.4	8.4	8.4
	December	8.1	8.2	8.2	8.3	8.7	9.2	9.3	8.9	8.8	9.0	9.2	9.3	9.6	9.7	9.9	9.4	8.9	8.5	8.4	8.4
Free-flow TT: 7.87 min		SR-51 NB, Outbound, I-10 to Shea Blvd, Mileage = 8 miles, 2006																			
Corridor #6: PM Peak		14:15	14:30	14:45	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	18:30	18:45	19:00
2006 TT (Minutes)	Annual Average TT	7.2	7.2	7.2	7.2	7.2	7.3	7.3	7.5	7.6	8.1	8.5	8.8	9.0	9.5	9.7	9.2	8.4	7.8	7.5	7.3
	MAX TT	7.7	7.9	7.6	8.3	8.3	8.3	12.8	12.8	12.4	15.3	18.6	16.0	15.8	16.5	12.5	12.0	13.8	14.0	13.0	11.3
	MIN TT	7.0	7.0	7.1	7.1	7.1	7.1	7.1	7.1	7.2	7.2	7.1	7.2	7.2	7.3	7.2	7.2	7.1	7.1	7.0	7.1
	Median TT	7.2	7.2	7.2	7.2	7.2	7.3	7.3	7.4	7.5	8.0	8.4	8.8	9.0	9.5	9.8	9.1	8.2	7.6	7.3	7.3
	95% TT	7.3	7.3	7.3	7.3	7.3	7.4	7.5	8.1	8.4	9.2	9.6	9.8	10.4	10.9	11.1	11.0	10.2	9.1	8.3	7.4
	Planning Time Index PTI	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.01	1.06	1.15	1.20	1.22	1.30	1.37	1.39	1.38	1.28	1.14	1.03	1.00
	Travel Time Index TTI	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.01	1.07	1.10	1.13	1.19	1.21	1.15	1.05	1.00	1.00	1.00
Coefficient of Variation	1%	1%	1%	2%	2%	2%	6%	7%	7%	10%	14%	11%	11%	11%	10%	11%	12%	10%	9%	5%	
Monthly Avg TT (Minutes)	January	7.2	7.1	7.2	7.2	7.2	7.2	7.3	7.4	7.4	8.0	8.6	9.1	9.3	9.8	10.1	9.8	8.7	8.1	7.6	7.3
	February	7.2	7.2	7.1	7.3	7.3	7.3	7.3	7.5	7.6	8.3	8.7	9.0	9.3	9.6	9.9	9.6	9.1	8.1	7.7	7.5
	March	7.2	7.2	7.2	7.2	7.3	7.3	7.7	7.9	7.8	8.2	8.8	9.0	9.1	9.4	9.6	9.2	8.3	7.8	7.4	7.2
	April	7.2	7.2	7.2	7.2	7.2	7.3	7.3	7.4	7.7	8.3	8.6	8.6	9.0	9.3	9.3	9.0	8.2	7.5	7.3	7.3
	May	7.3	7.3	7.3	7.2	7.3	7.3	7.3	7.6	7.6	7.9	8.2	8.6	8.6	9.2	9.4	8.8	8.0	7.6	7.3	7.2
	June	7.2	7.2	7.2	7.2	7.3	7.3	7.3	7.3	7.4	7.7	7.9	8.2	8.5	9.1	9.8	9.1	8.2	7.5	7.3	7.2
	July	7.1	7.2	7.2	7.2	7.2	7.2	7.2	7.3	7.4	7.6	7.7	7.9	8.1	8.7	8.8	8.3	7.5	7.3	7.2	7.2
	August	7.1	7.1	7.1	7.2	7.2	7.2	7.2	7.4	7.7	8.3	8.8	9.1	9.2	9.9	9.8	9.2	8.1	7.4	7.2	7.2
	September	7.2	7.2	7.2	7.2	7.3	7.4	7.3	7.5	7.5	8.1	8.5	8.9	9.2	9.8	10.1	9.6	8.5	7.9	7.4	7.2
	October	7.2	7.2	7.2	7.2	7.2	7.4	7.4	7.7	7.7	8.5	8.9	9.0	9.4	9.9	10.4	9.9	9.1	8.1	7.6	7.3
	November	7.2	7.2	7.2	7.2	7.2	7.3	7.4	7.6	7.8	8.4	8.8	9.1	9.3	9.5	9.8	9.3	8.9	8.5	7.9	7.6
	December	7.2	7.1	7.2	7.2	7.2	7.2	7.3	7.5	7.7	8.1	8.9	9.1	9.2	9.6	9.6	9.0	8.3	7.8	7.6	7.3

Monthly Average Travel Time during Peak Periods (5-10am, 2-7pm) by Corridors

Travel Time Pattern by Month and Time



Travel Time Data Collection Worksheet

Complete the following worksheet for travel time data used in the calculation of performance measures.

- Travel time data is based on:
- Speed Sensors
 - Vehicle Probe Methods
 - Other – please describe

Speed Sensors:

Type of Speed Detectors Used -> Dual-loop and Passive Acoustic detectors

Density of detectors -> every 2-3 miles

Are they uniformly spaced? (if not, explain)-> Yes

Method used to convert speed to travel time estimates -> Link travel time is estimated by taking the average of speed measures from two ends as link's space-mean speed.

Maintenance and quality control procedures -> Detector count and speed measuring is evaluated by eye-ball count benchmark and LIDAR gun speed measurement. Raw data screening process filters out invalid records, value interpolation is then applied.

Vehicle Probes:

Probe technology (i.e. floating vehicle, toll tags, GPS AVL, etc.) ->

Sample size and anticipated level of accuracy ->

Validation procedures (if travel time data is contracted) ->

Other:

Description of technology ->

Method to determine and validate accuracy ->

For all methods:

Provide estimate of the cost of data collection:

Equipment: ADOT FMS data is shared with MAG at no cost.

Staff time: Program Manager time: Approximately 12 hours total. Data Analyst time: a minimum of 50 hours total.

Consultant support: TTI assisted in setting up the prototype freeway mobility report.

Contracted services: TTI assisted in setting up the prototype freeway mobility report.

Overall estimate: Total staff time 62 hours.

Does the data support other programs or applications. (For example, video based speed detection may be an outgrowth of a video surveillance program that support a traffic control center.)

Provide a log of any changes, calibrations, or technology updates during the study period that may cause fluctuation in the data not attributed to traffic flow.