

# **2009 ANNUAL TRANSPORTATION REPORT CARD**

**PREPARED BY:**

**CITY OF PASADENA  
DEPARTMENT OF TRANSPORTATION**

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## Introduction

The City of Pasadena Department of Transportation established the Annual Transportation Report Card in support of the *2004 General Plan Mobility Element*. The report card was established to inform and update constituents on the performance of key elements of the City's public road and transit system. Since 2006, the Report Card has been updated annually to measure the effectiveness of traffic mitigation measures and the trip reduction ordinance.

The Annual Transportation Report Card includes the following three sections: traffic counts, travel time and speed studies of arterials, and the Pasadena Area Rapid Transit System (ARTS) annual ridership report. The Report Card is also used to help city staff in managing multimodal corridors to promote and improve citywide transportation services. For example, the ARTS Bus ridership report is conducted annually to assist city staff in determining the effectiveness of the bus routes, stop locations, and headways.



Pasadena ARTS Bus

## **SECTION 1: TRAFFIC COUNTS**

Traffic counts have been collected by the Department of Transportation Planning and Development Section since the year 2000. These counts are from developments that have been required to do traffic impact studies within the city. Traffic impact studies are conducted to measure traffic impact of developments, closure and opening of roadways, addition and removal of lanes on roadways, etc.

Average daily traffic (ADT) counts represent 24-hr counts at any specified location usually conducted on a Tuesday, Wednesday, or Thursday when traffic volumes tend to be higher. These counts are obtained by hired contractors placing an automatic counter at the location for a 24-hr period. The traffic counts collected are usually in 15-minute intervals and according to direction. A table of the average daily traffic counts collected by the city from the Year 2000 to 2009, is located in Appendix A. These counts are presented alphabetically by street name. Also located in Appendix A is a Geographical Information System (GIS) map of the latest available ADT counts. This map is color-coded according to traffic volumes.

## **SECTION 2: TRAVEL TIME & SPEED STUDIES**

An effective methodology for measuring travel time and speed for corridors is to conduct a “floating car” travel time study. In the floating car technique, the driver is instructed to travel according to the traffic flow speed. Travel time studies are widely used to document congestion and to quantify the actual impact of mitigation improvements. The Department of Transportation worked closely with the Transportation Advisory Commission (TAC) to identify 15 corridors to be studied.

Upon review of available technologies, the use of Global Positioning System (GPS) technology allows for the most efficient and convenient way of data collection. Specialized hardware and software from GeoStats were selected for the task of collecting data. The equipment consisted of a data storage unit (called a Data Logger), a GPS receiver/antenna, and a cord to connect the Data Logger to the GPS receiver. GeoStats supplied two computer software programs referred to as Geologger Download Utility and TravTime.

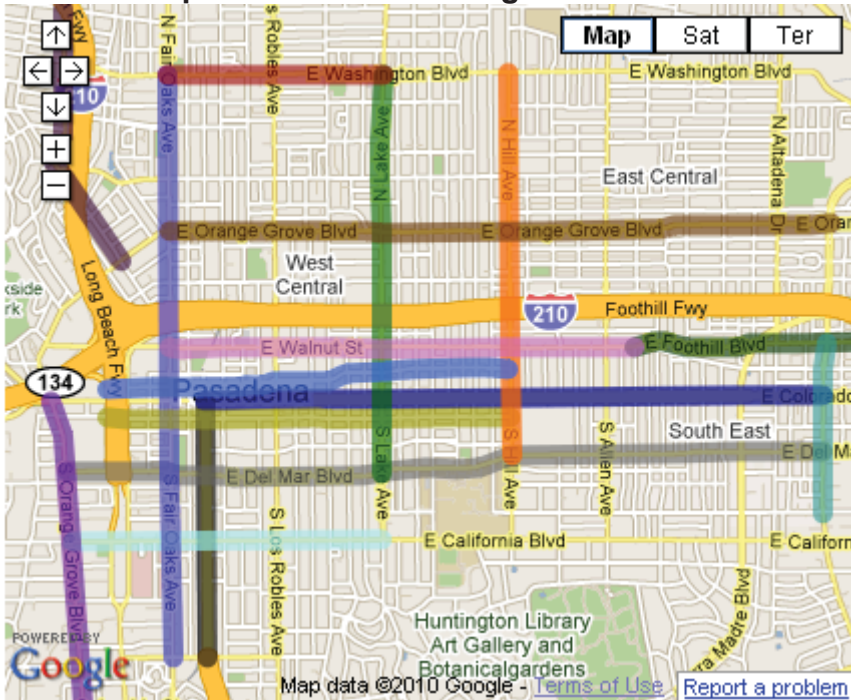
The morning, mid-day and the evening peak travel periods were defined as the time periods to gather the data. The morning peak period is 7 a.m. to 10 a.m.; the mid-day peak is 10 am to 3 pm; and the evening peak period is 4 p.m. to 6 p.m. All data gathering runs were limited to Tuesdays, Wednesdays, and Thursdays. The Department of Transportation staff drove assigned routes three times during each time period. Drivers were instructed to maintain a consistent driving style.

The driver should drive with the flow of traffic and not to weave in and out of lanes. It is optimal for travel time studies to have a sample size from two to six runs for each time period and corridor studied. It was determined that three runs would be sufficient for each corridor. The gathering of data took approximately 2 weeks.

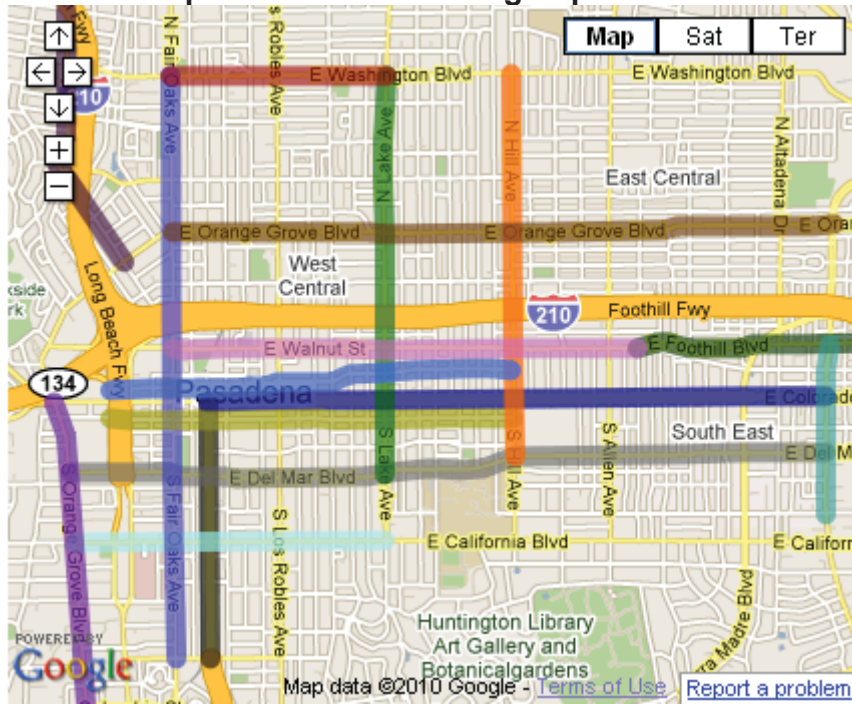
Once all the data was downloaded from the Data Logger and analyzed using the TravTime software, the results were tabulated and listed in Appendix B by segment. Charts and graphs comparing four years of collected average speed and travel time data of each route is located in Appendix C.

A new addition to the Report Card includes results that are shown graphically on the city's website through Google Maps®. The following links accesses a map of the corridors and their respective average travel times and speeds, respectively, by direction and year.

**Click on Map below to see Average Travel Time:**



Click on Map below to see Average Speeds:



Lake Avenue Shopping District

**Section 3: Area Rapid Transit System (ARTS)**

The Department of Transportation tracks ridership information for the City's Pasadena Area Rapid Transit System (ARTS) service on a fiscal year basis. Located in Appendix D is the ARTS 2009 Ridership Information. The information is collected and reported to the department by the City's contractor. The information presented in this report looks at the overall number of passenger boardings or trips, the number of passenger trips on each of the routes, and the number of passengers per service hour operated.

The following is a snapshot of the ARTS service:

<b>Fiscal Year 2009</b>	
<b>Service Area:</b>	<b>23 Square Miles</b>
<b>Population based on Metro 2005 Data:</b>	<b>148,126</b>
<b>Annual Passenger Trips:</b>	<b>1,816,342</b>
<b>Annual Service Hours:</b>	<b>61,036</b>
<b>Annual Service Miles:</b>	<b>699,937</b>
<b>Total Operating Expenses:</b>	<b>\$4,026,768</b>
<b>Annual Farebox Revenue:</b>	<b>\$542,826</b>
<b>Farebox Recovery Ratio:</b>	<b>14%</b>



*Route 20 ARTS Bus Stop*

## Conclusion

### *Travel Time & Speed Studies*

When comparing travel times from 2009 to the baseline of 2006, the 15 corridors can be classified into three categories. These categories include: corridors that show improvement in travel times, corridors that show similar travel times, and corridors that show significant increases in travel times. For the purposes of this report card, a minute or more increase in travel time is significant because it would roughly be equivalent to adding one signal to the system of signals on the corridor.

Below is a table that shows the corridors' respective 2009 versus 2006 increases and decreases in travel time. The corridors that are highlighted with green font show improvement in travel times. The ones that are highlighted with blue font show similar travel times and the ones that are highlighted with red font show increases in travel times of more than one minute and/or percentage change of more than 20%.

<b>Corridor &amp; Direction of Travel</b>	<b>2009 vs. 2006 (min)</b>	<b>% Change</b>
Fair Oaks Ave NB	-1.57	-16%
*Green St EB	-1.22	-23%
Lake Ave SB	-1.19	-17%
Lake Ave NB	-1.02	-14%
Arroyo Pkwy SB	-0.84	-16%
California BI WB	-0.55	-9%
Washington EB	-0.29	-9%
Washington WB	-0.18	-7%
Fair Oaks Ave SB	-0.18	-2%
San Gabriel NB	-0.16	-7%
**Union WB	-0.03	-1%
Colorado BI EB	0.08	1%
San Gabriel SB	0.10	5%
Lincoln Ave SB	0.18	18%
Orange Grove (E-W) EB	0.20	3%
Hill Ave NB	0.24	5%
Lincoln Ave NB	0.29	11%
Walnut EB	0.32	5%
Walnut WB	0.32	4%
Hill Ave SB	0.35	8%
California BI EB	0.38	6%
Orange Grove (E-W) WB	0.41	5%

<b>Foothill BI WB</b>	<b>0.50</b>	<b>10%</b>
<b>Arroyo Pkwy NB</b>	<b>0.52</b>	<b>14%</b>
<b>Foothill BI EB</b>	<b>0.74</b>	<b>14%</b>
<b>***Del Mar BI WB</b>	<b>0.86</b>	<b>10%</b>
<b>Orange Grove (N-S) SB</b>	<b>0.74</b>	<b>20%</b>
<b>Orange Grove (N-S) NB</b>	<b>0.90</b>	<b>22%</b>
<b>Colorado BI WB</b>	<b>1.05</b>	<b>10%</b>
<b>***Del Mar BI EB</b>	<b>1.14</b>	<b>16%</b>

\*Green Street only includes Hill Avenue to Arroyo Pkwy segment

\*\*Union Street only includes Hill Avenue to Arroyo Pkwy segment

\*\*\*Del Mar Blvd only includes Arroyo Pkwy to San Gabriel segment

Out of the 30 total corridors, 11 corridors show improvement in the 2009 travel times versus 2006. Corridors such as San Gabriel, Fair Oaks, and Arroyo Pkwy are important north-south connectors that link commercial and residential uses to freeways. A total of 14 corridors show similar travel times when comparing 2009 to 2006. These corridors have not experienced a significant amount of increase in travel times.

The corridors that are highlighted in red font are Orange Grove Blvd (N-S), Colorado Blvd westbound, and Del Mar Blvd westbound and eastbound. Orange Grove Blvd (N-S) includes the segment from Columbia St to Colorado Blvd. This segment has an average daily traffic of approximately 25,000 and is an important north-south corridor in the city that links to the SR-110 and the SR-134. Two causes that may be affecting the travel time increases include traffic volume increase and the reduction of the number of southbound lanes from two to one south of Columbia Street which is the city limit.

Colorado Blvd is a major east-west arterial connecting many residential and commercial uses. This corridor has an average daily traffic of approximately 23,000. Construction for MTA's rapid buses occurred in 2009 from Hill Avenue to the west city limit. Lane closures due to the construction may have increased the travel times on Colorado Blvd.

Many signals along Del Mar Boulevard have been altered to service the increasing amount of cross street traffic. Left turn phases have been added to the intersection of Hill Ave and Del Mar Blvd to improve safety and service demand. Signals that were once pre-timed are now fully actuated. These alterations may be the cause for the increase in travel times on Del Mar Boulevard. City staff will continue to monitor these corridors and make optimal signal timing changes to assist traffic flow.

Comparing all four years of the speed data collected in Appendix C, there has been no significant trend of increase or decrease. The fluctuations appear to be due to construction and lane closures. For example, Arroyo Parkway was under

construction in 2008. The speed and travel time data collected reflects how there was a delay in 2008. In 2009, the speed and travel time data went back to the levels of 2006 and 2007.

Even though development has increased significantly throughout the city within the last couple of years, the travel time and speed data have remained relatively constant with only minor fluctuations. There is no significant trend of increase in travel times. Therefore, it is reasonable to assume that the traffic mitigation measures and trip reduction program have been effective in maintaining the “status quo” of traffic flow on city arterials.

#### *Pasadena Area Rapid Transit System Report*

Overall, ridership increased overall by 10% in Fiscal Year 2009 compared to ridership in Fiscal Year 2008. Two of the several factors that may have contributed to the increase in ridership are less rainfall and high prices of gasoline. There was less rain fall during late autumn and winter months than there was in the prior year. The price of gasoline continued to be high during FY2009 which attracted many people to public transportation systems.

The operating costs for the ARTS program are broken into three categories: 1) contract costs, 2) fuel costs, and 3) administrative costs. Comparing fiscal year 2009 to fiscal year 2008, Contract cost has increased slightly. However, both fuel and administrative costs have decreased significantly. In FY09, overall system operating costs decreased by 2%.

Continued growth in transit ridership and improvement of travel time along major corridors is expected with the on-going efforts of city staff and the public. A larger sample over the course of several years is necessary to determine any significant trends of increases or decreases in average travel time and speed along study corridors. Future annual report cards will contain updated information and data for further comparison and analysis. The report will evolve as technology and resources become available in the future.

# **Appendix A: Average Daily Traffic Counts & Map**

CITY OF PASADENA  
AVERAGE DAILY TRAFFIC COUNTS  
YEAR 2000 - 2009

STREET NAME	LIMIT 1	LIMIT 2	NORTH / EAST	SOUTH / WEST	TOTAL ADT	DATE
CHEVY CHASE	HIGHLAND	STRATFORD	1056	1001	2057	5/27/2009
ALDER LN	RIVIERA DR	HASTINGS RANCH DR	118		118	5/1/2007
ALLEN AVE	ALLEN CT	DEL MAR BLVD	3918	3095	7013	6/4/2007
ALLEN AVE	ALLEN CT	DEL MAR BLVD	7354	2749	10103	5/9/2007
ALLEN AVE	ALLEN CT	DEL MAR BLVD	3113	7277	10390	5/3/2007
ALLEN AVE	ALLEN CT	DEL MAR BLVD	2628	6566	9194	5/7/2007
ALLEN AVE	ALLEN CT	DEL MAR BLVD	3734	3180	6914	2/19/2008
ALLEN AVE	CALIFORNIA BLVD	DEL MAR BLVD	3571	3072	6643	5/21/2009
ALLEN AVE	COLORADO BLVD	DEL MAR BLVD	4091	4763	8854	5/21/2009
ALLEN AVE	COLORADO BLVD	WALNUT ST	7524	7331	14855	5/21/2009
ALLEN AVE	GALBRETH RD	WASHINGTON BLVD	9938	8876	18814	7/11/2000
ALLEN AVE	OAKDALE ST	DEL MAR BLVD	6564	2744	9308	10/25/2006
ALLEN AVE	ROSE VILLA ST	DEL MAR BLVD	4327	3332	7659	6/6/2007
ALLEN AVE	ROSE VILLA ST	DEL MAR BLVD	3512	3126	6638	2/22/2008
ALLEN AVE	WALNUT ST	LOCUST ST	6484	7246	13730	7/12/2000
ALLEN AVE	WASHINGTON BLVD	WASHINGTON BLVD	7046	6799	13845	5/21/2009
ALTADENA DR	WASHINGTON BLVD	RIDGEVIEW DR	7849	7889	15738	7/11/2000
ARMADA DR	PROSPECT BLVD	LA MESA PL	445	119	564	2/15/2007
ARROYO BLVD	EVERTS ST	WOTKYN DR	394	950	1344	1/29/2008
ARROYO PKWY	CALIFORNIA BLVD	DEL MAR BLVD	13501	14755	28256	5/19/2009
ARROYO PKWY	COLORADO BLVD	DEL MAR BLVD	11295	6943	18238	5/19/2009
ARROYO PKWY	GLENARM ST	CALIFORNIA BLVD	17304	18202	35506	5/19/2009
ART CENTER COL. OF DESIGN	N/A	N/A	2113	2232	4345	6/6/2007
ASBURY DR	BRESEE AVE	SIERRA BONITA AVE	400	675	1075	6/10/2008
AVENUE 64	110 FREEWAY	YORK (N)	7929	7099	15028	5/28/2009
BARTHE DR	CYPRESS AVE	LINCOLN AVE	187	407	594	10/23/2007
BELL ST	MENTOR AVE	CATALINA AVE	347	264	611	9/13/2007
BELLEFONTAINE ST	SAINT JOHN AVE	FAIRMOUNT AVE	1886	3113	4999	7/29/2008
BERKSHIRE AVE	WOODLEIGH	BERSHIRE PL	1663	1258	2921	5/27/2009
BRIGDEN RD	SIERRA BONITA AVE	SINALOA AVE	0	316	316	6/10/2008
CALIFORNIA BLVD	MADRE ST	ROSEMEAD BLVD	4691	3365	8056	5/12/2009
CALIFORNIA BLVD	SIERRA MADRE	SAN GABRIEL BLVD	5794	4545	10339	5/12/2009
CALIFORNIA BLVD	FAIR OAKS AVE	LOS ROBLES AVE	11428	9959	21387	5/12/2009
CALIFORNIA BLVD	FAIR OAKS AVE	PASADENA AVE	10587	12022	22609	5/12/2009
CALIFORNIA BLVD	HILL AVE	ALLEN AVE	6481	7934	14415	5/12/2009
CALIFORNIA BLVD	LAKE AVE	HILL AVE	9282	7962	17244	6/4/2009
CALIFORNIA BLVD	LOS ROBLES AVE	LAKE AVE	10089	10868	20957	5/12/2009
CALIFORNIA BLVD	MENTOR AVE	CATALINA AVE	10116	10890	21006	5/3/2002

STREET NAME	LIMIT 1	LIMIT 2	NORTH / EAST	SOUTH / WEST	TOTAL ADT	DATE
CALIFORNIA BLVD	MADRE ST	SAN GABRIEL BLVD	3294	3999	7293	5/12/2009
CALIFORNIA BLVD	SIERRA MADRE BLVD	ALLEN AVE	5508	6531	12039	5/12/2009
CALIFORNIA BLVD	SIERRA BONITA AVE	HILL AVE	7916	13431	21347	5/3/2007
CALIFORNIA BLVD	SIERRA BONITA AVE	HILL AVE	7459	11906	19365	5/7/2007
CALIFORNIA BLVD	SIERRA BONITA AVE	HILL AVE	8394	12469	20863	5/9/2007
CALIFORNIA BLVD	SIERRA BONITA AVE	HILL AVE	8303	6768	15071	6/4/2007
CALIFORNIA BLVD	SIERRA BONITA AVE	HILL AVE	8931	7184	16115	6/6/2007
CALIFORNIA BLVD	SIERRA BONITA AVE	LANDOR LN	7948	6760	14708	2/19/2008
CANFIELD RD	HASTINGS RANCH DR	MICHILLINDA AVE	166	146	312	3/19/2002
CANFIELD RD	MICHILLINDA AVE	HASTINGS RANCH DR	174	254	428	4/18/2001
CANON DR	OAK KNOLL AVE	KEWEN DR	77	42	119	10/10/2007
CASA GRANDE ST	SIERRA BONITA AVE	HILL AVE	348	437	785	6/10/2008
CATALINA AVE	SAN PASQUAL ST	CALIFORNIA BLVD	554	862	1416	7/12/2002
CATALINA AVE	SAN PASQUAL ST	DEL MAR BLVD	787	692	1479	7/12/2002
CATALINA AVE	UNION ST	COLORADO BLVD	1704	834	2538	5/3/2005
CHESTER AVE	BELL ST	WASHINGTON BLVD	623	553	1176	3/9/2002
CHESTER AVE	CORDOVA ST	DEL MAR BLVD	407	680	1087	1/30/2007
CHESTER AVE	VILLA ST	ORANGE GROVE BLVD	172	188	360	11/15/2006
CHESTER AVE	VILLA ST	ORANGE GROVE BLVD	239	253	492	11/15/2006
CHESTER AVE	WASHINGTON BLVD	DANE ALY	450	583	1033	3/9/2002
CHEVY CHASE	PARWAY	LINDA VISTA AVE	2744	2523	5267	5/27/2009
COLORADO BLVD	ALLEN AVE	HILL AVE	11086	11465	22551	6/4/2009
COLORADO BLVD	LINDA ROSA	GENEVIEVE	7686	6992	14678	5/27/2009
COLORADO BLVD	CATALINA AVE	WILSON AVE	10554	15077	25631	5/3/2005
COLORADO BLVD	FAIR OAKS AVE	PASADENA AVE	6461	8848	15309	6/3/2009
COLORADO BLVD	FAIR OAKS AVE	RAYMOND AVE	10510	10441	20951	5/5/2005
COLORADO BLVD	LAKE AVE	LOS ROBLES AVE	11676	12154	23830	5/14/2009
COLORADO BLVD	LOS ROBLES AVE	FAIR OAKS AVE	9108	9807	18915	5/14/2009
COLORADO BLVD	OAKLAND AVE	MADISON AVE	11528	14119	25647	5/3/2005
COLORADO BLVD	SIERRA MADRE BLVD	ALLEN AVE	10010	11135	21145	5/14/2009
COLORADO BLVD	SIERRA MADRE BLVD	ROOSEVELT AVE	7838	6305	14143	4/4/2007
COLORADO BLVD	TERRACE DR	SAINT JOHN AVE	0	8862	8862	4/28/2005
CONVERSE ALY	MADISON AVE	OAKLAND AVE	108	130	238	12/5/2006
CORDOVA ST	MADISON AVE	EL MOLINO AVE	4155	7448	11603	1/1/2007
CORDOVA ST	MICHIGAN AVE	CHESTER AVE	2996	4047	7043	1/30/2007
CORONET AVE	HASTINGS RANCH DR	ALEGRIA ST	168	168	168	2/20/2007
CORSON ST	LOS ROBLES AVE	OAKLAND AVE	5427	0	5427	4/26/2005
CORSON ST	WILSON AVE	MAR VISTA AVE	3474	0	3474	4/26/2005
CRAIG AVE	FOOTHILL BLVD	WALNUT ST	1160	1315	2475	7/12/2000
DEL MAR BLVD	ALLEN AVE	SIERRA MADRE BLVD	10731	8978	19709	5/14/2009
DEL MAR BLVD	HILL AVE	ALLEN AVE	10255	11322	21577	5/14/2009

STREET NAME	LIMIT 1	LIMIT 2	NORTH / EAST	SOUTH / WEST	TOTAL ADT	DATE
DEL MAR BLVD	HOLLISTON AVE	HILL AVE	5523	11514	17037	8/17/2000
DEL MAR BLVD	HOLLISTON AVE	HILL AVE	4315	10449	14764	8/9/2000
DEL MAR BLVD	LAKE AVE	HILL AVE	10202	9216	19418	6/4/2009
DEL MAR BLVD	LOS ROBLES AVE	FAIR OAKS AVE	9784	9680	19464	6/4/2009
DEL MAR BLVD	MADRE ST	ROSEMEAD	5763	4469	10232	5/14/2009
DEL MAR BLVD	PASADENA AVE	FAIR OAKS AVE	9997	5370	15367	6/4/2009
DEL MAR BLVD	SAN GABRIEL BLVD	MADRE ST	4707	5844	10551	5/14/2009
DEL MAR BLVD	SAN MARINO AVE	OAK AVE	10709	9847	20556	10/9/2007
DEL MAR BLVD	SIERRA MADRE BLVD	ALTADENA DR	8597	7890	16487	5/2/2007
DEL MAR BLVD	SIERRA MADRE BLVD	SAN GABRIEL BLVD	6406	8892	15298	5/14/2009
DEL MAR BLVD	WILSON AVE	CATALINA AVE	10783	10276	21059	11/13/2007
DEL MAR BLVD	WILSON AVE	MICHIGAN AVE	10353	10512	20865	11/13/2007
DEL MONTE ST	ARROYO BLVD	FOREST AVE	151	148	299	9/21/2004
DOMINION AVE	WASHINGTON BLVD	ASBURY DR	1843	2378	4221	3/17/2004
EL MOLINO AVE	CALIFORNIA BLVD	PALM VIEW PL	2761	2538	5299	8/8/2000
EL MOLINO AVE	CORDOVA ST	DEL MAR BLVD	3039	2766	5805	4/28/2005
EL MOLINO AVE	GREEN ST	COLORADO BLVD	3516	3424	6940	1/11/2007
EL MOLINO AVE	PRESCOTT ST	WASHINGTON BLVD	1836	138	1974	7/11/2000
EL MOLINO AVE	UNION ST	COLORADO BLVD	2987	3952	6939	4/28/2005
EL SERENO AVE	CEDAR ST	WASHINGTON BLVD	705	510	1215	8/14/2002
EL SERENO AVE	HOWARD ST	CEDAR ST	592	420	1012	8/14/2002
ELMIRA ST	EL MOLINO AVE	WRIGHT AVE	411	606	1017	9/24/2004
ELMIRA ST	WRIGHT AVE	ORANGE GROVE BLVD	598	428	1026	12/4/2000
ENCINO DR	KEWEN DR	KEWEN DR	78	78	78	10/9/2007
EUCLID AVE	CORSON ST	WALNUT ST	1485	1347	2832	4/27/2005
EVERTS ST	ARROYO BLVD	FOREST AVE		310	310	1/29/2008
FAIR OAKS AVE	BELLEVUE DR	WAVERLY DR	17307	18224	35531	1/31/2008
FAIR OAKS AVE	CALIFORNIA BLVD	DEL MAR BLVD	14283	12033	26316	5/14/2009
FAIR OAKS AVE	CALIFORNIA BLVD	GLENARM ST	9275	8153	17428	5/14/2009
FAIR OAKS AVE	CLAREMONT ST (N)	WASHINGTON BLVD	12461	11781	24242	4/2/2002
FAIR OAKS AVE	CLAREMONT ST (S)	WASHINGTON BLVD	10295	11702	21997	7/11/2000
FAIR OAKS AVE	COLORADO BLVD	UNION ST	10000	10510	20510	5/3/2005
FAIR OAKS AVE	COLORADO BLVD	WALNUT ST	12282	9028	21310	5/14/2009
FAIR OAKS AVE	DEL MAR BLVD	COLORADO BLVD	13399	8341	21740	6/4/2009
FAIR OAKS AVE	FAIR OAKS DR	TREMONT ST (N)	9587	9354	18941	4/2/2002
FAIR OAKS AVE	HOLLY ST	WALNUT ST	12349	12708	25057	5/3/2005
FAIR OAKS AVE	ORANGE GROVE BLVD	WASHINGTON BLVD	11815	9689	21504	5/14/2009
FAIR OAKS AVE	PICO ST	CALIFORNIA BLVD	17765	17725	35490	1/31/2008
FAIR OAKS AVE	VALLEY ST	ORANGE PL	13263	10000	23263	5/3/2005
FAIR OAKS AVE	WASHINGTON BLVD	MONTANA ST	8153	9275	17428	5/14/2009
FAIRMEADE RD	CLIFF DR	HASTINGS RANCH DR	222	0	222	4/18/2001

STREET NAME	LIMIT 1	LIMIT 2	NORTH / EAST	SOUTH / WEST	TOTAL ADT	DATE
FAIRMEADE RD	CLIFF DR	HASTINGS RANCH DR	125	172	297	3/19/2002
FAIRMEADE RD	HASTINGS RANCH DR	MICHILLINDA AVE	129	223	352	3/19/2002
FAIRMEADE RD	HASTINGS RANCH DR	MICHILLINDA AVE	140	141	281	4/18/2001
FAIRMOUNT AVE	BELLEFONTAINE ST	CALIFORNIA BLVD		1604	1604	7/29/2008
FIGUEROA ST	YORK AVE	AVENUE 61	12040	11757	23797	5/28/2009
FILLMORE ST	EL MOLINO AVE	MAGNOLIA AVE	783	352	1135	10/23/2007
FILLMORE ST	MARENGO AVE (N)	ARROYO PKWY	1684	1635	3319	5/17/2007
FILLMORE ST	MARENGO AVE (N)	MAGNOLIA AVE	869	300	1169	1/29/2008
FOOTHILL BLVD	FIRE STN DRIVEWAY	FIRE STN DRIVEWAY	12889	11362	24251	9/17/2003
FOOTHILL BLVD	OAK GROVE DR	VIRO RD	3430	3287	6717	5/27/2009
FOOTHILL BLVD	ROSEMEAD BLVD	SIERRA MADRE VILLA AVE	10070	11071	21141	5/20/2009
FOOTHILL BLVD	SIERRA MADRE BLVD	HALSTEAD ST	12101	12322	24423	9/17/2003
FOOTHILL BLVD	SIERRA MADRE BLVD	WALNUT ST	13650	6094	19744	5/20/2009
FOREST AVE	WESTGATE ST	LINCOLN AVE	1254	852	2106	8/25/2008
GALBRETH RD	ALLEN AVE	TIERRA ALTA DR	219	245	464	11/15/2006
GALBRETH RD	ALLEN AVE	TIERRA ALTA DR	169	199	368	11/15/2006
GREEN ST	CATALINA AVE	WILSON AVE	2666	7395	10061	5/3/2005
GREEN ST	HOLLISTON AVE	HILL AVE	0	5882	5882	4/2/2002
GREEN ST	MADISON AVE	EL MOLINO AVE	12225	0	12225	12/5/2006
GREEN ST	OAKLAND AVE	MADISON AVE	8235	0	8235	4/26/2005
GREEN ST	RAYMOND AVE	FAIR OAKS AVE	11062	0	11062	4/26/2005
GREEN ST	TERRACE DR	SAINT JOHN AVE	4212	1117	5329	4/28/2005
GREENHILL RD	CLIFF DR	HASTINGS RANCH DR	963	657	1620	3/19/2002
GREENHILL RD	CLIFF DR	HASTINGS RANCH DR	0	2250	2250	4/18/2001
GREENHILL RD	HASTINGS RANCH DR	MICHILLINDA AVE	850	865	1715	3/19/2002
GREENHILL RD	HASTINGS RANCH DR	MICHILLINDA AVE	2672	0	2672	4/18/2001
GREENHILL RD	ROSEMEAD BLVD	CLIFF DR	3403	0	3403	4/18/2001
GREENHILL RD	ROSEMEAD BLVD	CLIFF DR	1815	1672	3487	3/19/2002
HALSTEAD ST	FOOTHILL BLVD	ELECTRONIC DR	3463	3463	6926	9/17/2003
HALSTEAD ST	GRAYBURN RD	FOOTHILL BLVD	1190	1190	2380	9/17/2003
HAMMOND ST	FLORENCE DR	SUNSET AVE	944	1247	2191	3/9/2002
HAMMOND ST	MORTON AVE	FAIR OAKS AVE	1261	1371	2632	3/9/2002
HAMMOND ST	SUNSET AVE	BIRGE AVE	944	1247	2191	3/9/2002
HASTINGS RANCH DR	CORONET AVE	ALEGRIA ST	1359	1153	2512	2/20/2007
HASTINGS RANCH DR	DENAIR ST	ALDER LN	297	292	589	5/1/2007
HASTINGS RANCH DR	GREENHILL RD	FAIRMEADE RD	0	4571	4571	4/18/2001
HASTINGS RANCH DR	GREENHILL RD	FAIRMEADE RD	2502	2198	4700	3/19/2002
HASTINGS RANCH DR	HAMPTON RD	MAYFAIR DR	0	4535	4535	4/18/2001
HASTINGS RANCH DR	MAYFAIR DR	HAMPTON RD	2776	2567	5343	3/19/2002
HASTINGS RANCH DR	SHADOW GROVE RD	GREENHILL RD	2314	2074	4388	3/19/2002
HASTINGS RANCH DR	SHADOW GROVE RD	GREENHILL RD	0	5803	5803	4/18/2001

STREET NAME	LIMIT 1	LIMIT 2	NORTH / EAST	SOUTH / WEST	TOTAL ADT	DATE
HILL AVE	210WB OFF HILL	ORANGE GROVE BLVD	10863	9956	20819	5/21/2009
HILL AVE	ASBURY DR	WASHINGTON BLVD	7461	6576	14037	7/11/2000
HILL AVE	ASBURY DR	WASHINGTON BLVD	6996	4018	11014	1/14/2008
HILL AVE	CALIFORNIA BLVD	DEL MAR BLVD	5728	4841	10569	5/21/2009
HILL AVE	CALIFORNIA BLVD	SAN PASQUAL ST	3886	4732	8618	7/12/2000
HILL AVE	COLORADO BLVD	DEL MAR BLVD	11190	9839	21029	5/21/2009
HILL AVE	COLORADO BLVD	WALNUT ST	16220	12003	28223	5/21/2009
HILL AVE	OAKDALE ST	DEL MAR BLVD	4705	9824	14529	1/1/2000
HILL AVE	ORANGE GROVE BLVD	WASHINGTON BLVD	8472	8275	16747	6/3/2009
HILL AVE	ROSE VILLA ST	DEL MAR BLVD	5250	5795	11045	2/19/2008
HILL AVE	ROSE VILLA ST	DEL MAR BLVD	4812	5343	10155	2/22/2008
HILL AVE	ROSE VILLA ST	DEL MAR BLVD	5197	5194	10391	6/6/2007
HILL AVE	ROSE VILLA ST	DEL MAR BLVD	4363	5687	10050	5/16/2007
HILL AVE	ROSE VILLA ST	DEL MAR BLVD	4937	5825	10762	1/1/2000
HILL AVE	UNION ST	WALNUT ST	14222	14305	28527	7/12/2000
HILL AVE	WALNUT ST	210 FREEWAY	17303	17325	34628	5/21/2009
HILL AVE	WASHINGTON BLVD	HOWARD ST	5128	4322	9450	5/21/2009
HOLLISTON AVE	DANE ALY	WASHINGTON BLVD	465	424	889	3/9/2002
HOLLISTON AVE	WASHINGTON BLVD	MOUNTAIN ST	777	720	1497	3/11/2002
HUDSON AVE	CORDOVA ST	DEL MAR BLVD	4439	0	4439	4/26/2005
HUDSON AVE	DEL MAR BLVD	CALIFORNIA BLVD	5522	0	5522	5/3/2002
IDAHO ST	NEWPORT AVE	MENTONE AVE	649	481	1130	6/12/2007
KEWEN DR	ENCINO DR	CANON DR	56	106	162	10/29/2007
KEWEN DR	PINEHURST DR	ENCINO DR	56	125	181	10/9/2007
KISS AND RIDE DRIVEWAY	EAST ENT	EAST ENT	129	0	129	9/17/2003
LA LOMA RD	LAGUNA RD	BURLEIGH DR	1514	1757	3271	9/17/2002
LA MESA PL	FOREST AVE	FOREST AVE	342	247	589	3/1/2007
LAGUNA RD	HILLSIDE TER	SAN RAFAEL AVE	280	300	580	9/17/2002
LAGUNA RD	LA LOMA RD	BURLEIGH DR	1075	1097	2172	9/17/2002
LAGUNA RD	SAN REMO RD	ELLINGTON LN	1292	0	1292	4/2/2002
LAGUNITA RD	LAGUNA RD	SAN RAFAEL AVE	115	0	115	6/12/2007
LAKE AVE	210EB OFF LAKE	ORANGE GROVE BLVD	17309	16798	34107	5/19/2009
LAKE AVE	ARDEN RD (N)	CALIFORNIA BLVD	8021	7619	15640	6/4/2009
LAKE AVE	WOODBURY	WASHINGTON BLVD	10667	13082	23749	6/4/2009
LAKE AVE	CALIFORNIA BLVD	DEL MAR BLVD	11395	10677	22072	5/19/2009
LAKE AVE	CALIFORNIA BLVD	GRANITE DR	10652	12528	23180	8/9/2000
LAKE AVE	CALIFORNIA BLVD	SAN PASQUAL ST	11490	17618	29108	5/3/2002
LAKE AVE	CLAREMONT ST	WASHINGTON BLVD	14132	15920	30052	8/9/2000
LAKE AVE	COLORADO BLVD	BOSTON CT	12622	11674	24296	5/3/2005
LAKE AVE	COLORADO BLVD	DEL MAR BLVD	13314	14868	28182	5/19/2009
LAKE AVE	COLORADO BLVD	WALNUT ST	20905	17420	38325	5/19/2009

STREET NAME	LIMIT 1	LIMIT 2	NORTH / EAST	SOUTH / WEST	TOTAL ADT	DATE
LAKE AVE	CORDOVA ST	DEL MAR BLVD	13854	14635	28489	5/3/2002
LAKE AVE	DEL MAR BLVD	SAN PASQUAL ST	12501	12887	25388	5/3/2002
LAKE AVE	ORANGE GROVE BLVD	WASHINGTON BLVD	15817	12925	28742	5/19/2009
LAKE AVE	WALNUT ST	210EB OFF LAKE	24641	21638	46279	5/19/2009
LAKE AVE	WALNUT ST	UNION ST	18777	23318	42095	5/3/2005
LANDFAIR RD	CLIFF DR	HASTINGS RANCH DR	424	2	426	4/18/2001
LANDFAIR RD	CLIFF DR	HASTINGS RANCH DR	204	348	552	3/19/2002
LANDFAIR RD	HASTINGS RANCH DR	MICHILLINDA AVE	200	144	344	3/19/2002
LANDFAIR RD	MICHILLINDA AVE	HASTINGS RANCH DR	0	244	244	4/18/2001
LAS LUNAS ST	CRAIG AVE	MARTELO AVE	106	112	218	9/21/2004
LIDA ST	LINDA VISTA RD	AVALON AVE	2929	3171	6100	6/6/2007
LIDA ST	LINDA VISTA RD	AVALON AVE	3011	2578	5589	9/25/2007
LIDA ST	MACMINN DR	MACMINN DR	2217	2166	4383	10/4/2007
LINCOLN AVE	BARTHE DR	CHAPMAN AVE	4144	3507	7651	10/23/2007
LINCOLN AVE	MORNINGSIDE ST	MORNINGSIDE ST	2498	3030	5528	4/2/2002
LINCOLN AVE	ORANGE GROVE BLVD	PEORIA ST	2879	4182	7061	7/17/2007
LINCOLN AVE	PEPPER ST	WASHINGTON BLVD	4240	3569	7809	7/11/2000
LINCOLN AVE	VILLA ST	PEORIA ST	1843	1513	3356	7/17/2007
LINDA VISTA AVE	LAUREL ST	LIDA ST	3467	3403	6870	9/25/2007
LINDA VISTA AVE	LAUREL ST	LIDA ST	3667	4239	7906	6/6/2007
LINDA VISTA AVE	LIDA ST	YOCUM ST	1803	1592	3395	9/25/2007
LINDA VISTA AVE	LIDA ST	YOCUM ST	2017	2307	4324	6/6/2007
LOMORA AVE	RIDA ST	PALOMA ST	96	66	162	3/13/2002
LOS ROBLES AVE	COLORADO BLVD	WALNUT ST	10707	9983	20690	5/19/2009
LOS ROBLES AVE	DEL MAR BLVD	CALIFORNIA BLVD	6284	6623	12907	5/19/2009
LOS ROBLES AVE	DEL MAR BLVD	COLORADO BLVD	7619	8045	15664	5/19/2009
LOS ROBLES AVE	GLENARM ST	CALIFORNIA BLVD	6810	5854	12664	5/19/2009
LOS ROBLES AVE	MAPLE ST	ORANGE GROVE BLVD	7633	7533	15166	5/19/2009
LOS ROBLES AVE	MAPLE ST	VILLA ST	8575	8476	17051	5/1/2007
LOS ROBLES AVE	MAPLE ST	VILLA ST	8473	8320	16793	11/28/2007
LOS ROBLES AVE	ORANGE GROVE BLVD	WASHINGTON BLVD	7283	6987	14270	5/19/2009
LOS ROBLES AVE	PARKE ST	ORANGE GROVE BLVD	7376	8510	15886	5/1/2007
LOS ROBLES AVE	PRESCOTT ST	WASHINGTON BLVD	7209	7424	14633	7/11/2000
LOS ROBLES AVE	UNION ST	FORD PL	10005	10755	20760	6/15/2007
LOS ROBLES AVE	VILLA ST	MAPLE ST	8346	8260	16606	11/28/2007
LOS ROBLES AVE	VILLA ST	PARKE ST	8167	8279	16446	5/1/2007
LOS ROBLES AVE	WALNUT ST	WALNUT ST	9930	9730	19660	5/19/2009
LOS ROBLES AVE	WASHINGTON BLVD	WOODBURY RD	5866	5376	11242	5/19/2009
MADISON AVE	CONVERSE ALY	COLORADO BLVD	1930	1687	3617	1/11/2007
MADISON AVE	CORDOVA ST	DEL MAR BLVD	692	725	1417	4/28/2005
MADISON AVE	CORDOVA ST	EL DORADO ST	740	1349	2089	3/13/2007

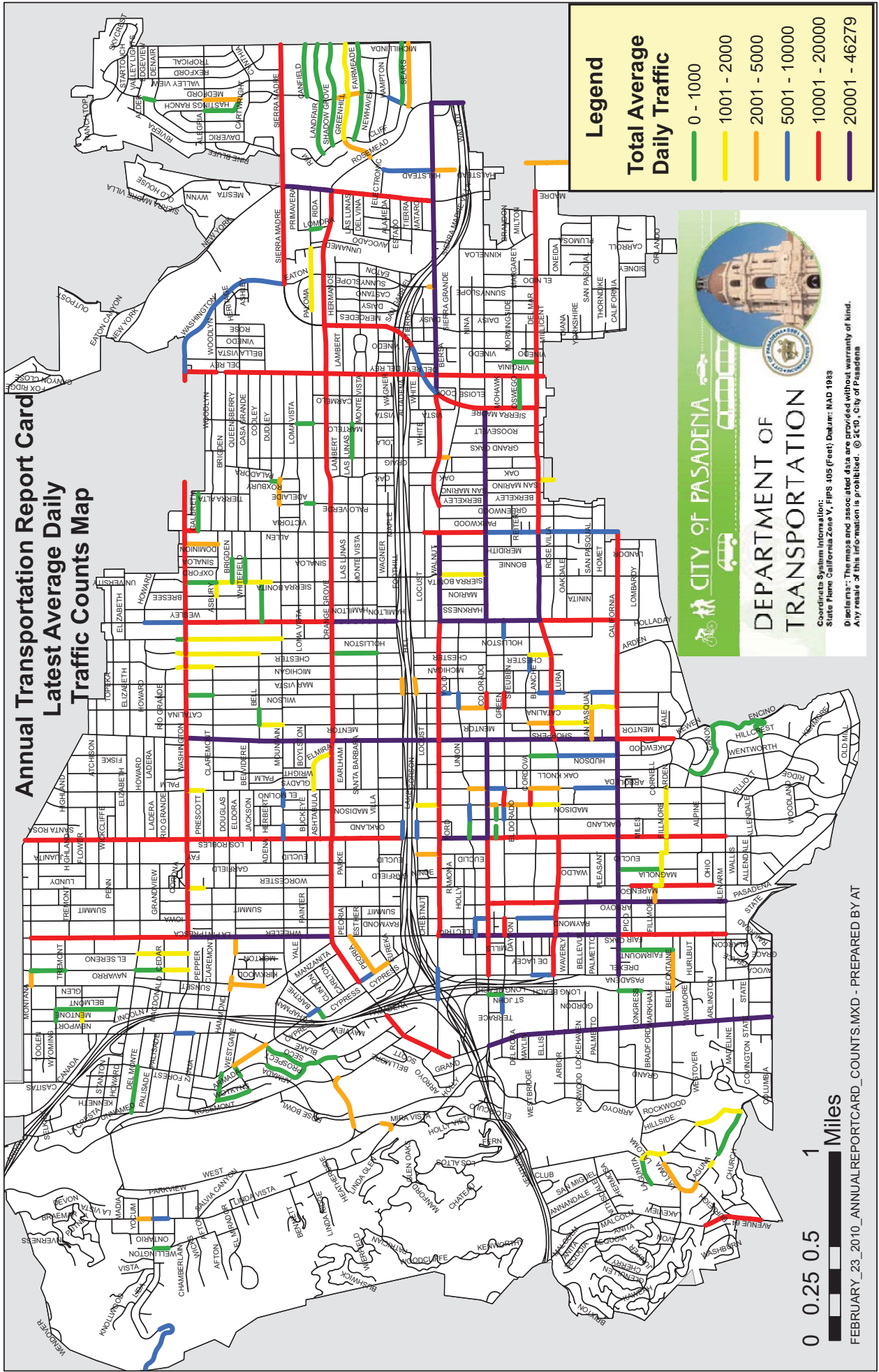
STREET NAME	LIMIT 1	LIMIT 2	NORTH / EAST	SOUTH / WEST	TOTAL ADT	DATE
MADISON AVE	CORDOVA ST	GREEN ST	1202	1369	2571	1/11/2007
MADISON AVE	CORSON ST	WALNUT ST	808	629	1437	4/27/2005
MAGNOLIA AVE	FILLMORE ST	CALIFORNIA BLVD	663	328	991	10/23/2007
MAPLE ST	LOS ROBLES AVE	OAKLAND AVE	0	6873	6873	4/26/2005
MAPLE ST	MAR VISTA AVE	WILSON AVE	0	4052	4052	4/26/2005
MARENGO AVE	CRYSTAL LN	WASHINGTON BLVD	1125	441	1566	7/11/2000
MARENGO AVE	FILLMORE ST (N)	OHIO ST	8269	8169	16438	5/17/2007
MARENGO AVE	FILLMORE ST (N)	PICO ST	7768	7738	15506	5/17/2007
MARTELO AVE	PALOMA ST	LOMA VISTA ST	345	289	634	3/13/2002
MAYFAIR DR	HASTINGS RANCH DR	MICHILLINDA AVE	378	0	378	4/18/2001
MAYFAIR DR	HASTINGS RANCH DR	MICHILLINDA AVE	177	259	436	3/19/2002
MENTONE AVE	IDAHO ST	WYOMING ST	412	366	778	6/12/2007
MENTONE AVE	STANTON ST	IDAHO ST	530	453	983	6/12/2007
MENTOR AVE	BELL ST	MOUNTAIN ST	530	637	1167	9/13/2007
MENTOR AVE	CORDOVA ST	DEL MAR BLVD	0	3563	3563	4/26/2005
MENTOR AVE	DEL MAR BLVD	SAN PASQUAL ST	0	1750	1750	5/4/2002
Meridian St	BRANCH	FIGUEROA	3201	3142	6343	5/28/2009
MICHIGAN AVE	CLAREMONT ST	WASHINGTON BLVD	474	597	1071	3/9/2002
MICHIGAN AVE	WASHINGTON BLVD	DANE ALY	762	725	1487	3/11/2002
MONTANA ST	NAVARRO AVE	GLEN AVE	1338	1340	2678	3/13/2002
MONTANA ST	NAVARRO AVE	GLEN AVE	1217	1137	2354	3/13/2002
MOUNTAIN ST	LOS ROBLES AVE	OAKLAND AVE	4270	3954	8224	11/5/2003
MOUNTAIN ST	MADISON AVE (E)	EL MOLINO AVE	4435	3979	8414	11/5/2003
MOUNTAIN ST	PALO VERDE AVE	ROXBURY DR (E)	1360	753	2113	2/25/2008
NAVARRO AVE	CEDAR ST	WASHINGTON BLVD	665	740	1405	8/14/2002
NAVARRO AVE	HENRY ALY	MONTANA ST	291	258	549	3/13/2002
NAVARRO AVE	HOWARD ST	CEDAR ST	506	410	916	8/14/2002
NAVARRO AVE	TREMONT ST	MONTANA ST	258	277	535	3/13/2002
ORANGE GROVE BLVD	ALLEN AVE	SIERRA MADRE BLVD	6026	5173	11199	5/27/2009
ORANGE GROVE BLVD	CALIFORNIA BLVD	DEL MAR BLVD	11152	12553	23705	5/27/2009
ORANGE GROVE BLVD	COLUMBIA ST	CALIFORNIA BLVD	13658	11401	25059	5/27/2009
ORANGE GROVE BLVD	CONTINENTAL CT	WALNUT ST	8518	7948	16466	7/12/2009
ORANGE GROVE BLVD	DEL MAR BLVD	COLORADO BLVD	11397	10594	21991	5/27/2009
ORANGE GROVE BLVD	FAIR OAKS AVE	LOS ROBLES AVE	10503	7568	18071	5/27/2009
ORANGE GROVE BLVD	HILL AVE	ALLEN AVE	6879	5545	12424	5/27/2009
ORANGE GROVE BLVD	LAKE AVE	HILL AVE	7974	6461	14435	5/27/2009
ORANGE GROVE BLVD	LINCOLN AVE	FAIR OAKS AVE	6519	5856	12375	2/25/2008
ORANGE GROVE BLVD	LINCOLN AVE	FAIR OAKS AVE	6636	6293	12929	5/27/2009
ORANGE GROVE BLVD	LOS ROBLES AVE	LAKE AVE	8548	7299	15847	5/27/2009
ORANGE GROVE BLVD	SIERRA MADRE BLVD	SIERRA MADRE VILLA AVE	5596	4449	10045	5/27/2009
ORANGE GROVE BLVD	WALNUT ST	PASADENA AVE	7453	7975	15428	5/27/2009

STREET NAME	LIMIT 1	LIMIT 2	NORTH / EAST	SOUTH / WEST	TOTAL ADT	DATE
OSWEGO ST	SIERRA MADRE BLVD	ALTADENA DR	213	180	393	1/25/2006
OSWEGO ST	SIERRA MADRE BLVD	ALTADENA DR	194	152	346	5/2/2007
PALO VERDE AVE	PALOMA ST	NELSON ALY	278	225	503	3/13/2002
PALOMA ST	MAGNA VISTA ST	SUNNYSLOPE AVE	645	528	1173	9/18/2002
PALOMA ST	SUNNYSLOPE AVE	CANYON WASH DR	723	510	1233	9/18/2002
PASADENA AVE	VALLEY ST	DEL MAR BLVD	5110	0	5110	4/26/2005
PASADENA AVE	WALNUT ST	WALNUT ST	3288	0	3288	7/12/2000
PEORIA ST	LINCOLN AVE	FAIR OAKS AVE (S)	1324	1399	2723	7/17/2007
PROSPECT BLVD	ARMADA DR	LA MESA PL	343	223	566	2/15/2007
PROSPECT BLVD	PROSPECT TER	ARMADA DR	357	489	846	2/15/2007
RAYMOND AVE	COLORADO BLVD	UNION ST	3966	3319	7285	5/3/2005
RAYMOND AVE	DAYTON ST	DEL MAR BLVD	3749	3419	7168	5/3/2005
ROSEMEAD BLVD	COLORADO BLVD	DEL MAR BLVD	15490	12703	28193	5/13/2009
ROSEMEAD BLVD	WALNUT ST	FOOTHILL BLVD	16350	16142	32492	5/13/2009
ROXBURY DR	MOUNTAIN ST (E)	DUDLEY ST	37	675	712	2/28/2008
SAINT JOHN AVE	CALIFORNIA BLVD	CONGRESS PL	0	17096	17096	4/1/2008
SAINT JOHN AVE	COLORADO BLVD	GREEN ST	0	2884	2884	4/1/2008
SAN MARINO AVE	DEL MAR BLVD	ROSE VILLA ST	644	364	1008	10/9/2007
SAN PASQUAL ST	LAKE AVE	MENTOR AVE	1386	2858	4244	5/3/2002
SAN PASQUAL ST	MENTOR AVE	CATALINA AVE	1748	1389	3137	5/3/2002
SAN RAFAEL AVE	LAGUNA RD	HILLSIDE TER	928	967	1895	9/17/2002
SAN RAFAEL AVE	LAGUNITA RD	BUCKINGHAM PL	904	790	1694	6/12/2007
SEARS WAY	HASTINGS RANCH DR	MICHILLINDA AVE	2222	2396	4618	3/19/2002
SECO ST	ROSEMONT AVE (1)	LINDA VISTA AVE (2)	2283	1946	4229	2/15/2007
SHADOW GROVE RD	CLIFF DR	HASTINGS RANCH DR	253	0	253	4/18/2001
SHADOW GROVE RD	CLIFF DR	HASTINGS RANCH DR	170	227	397	3/19/2002
SHADOW GROVE RD	CLIFF DR	HASTINGS RANCH DR	253	0	253	4/18/2001
SHADOW GROVE RD	HASTINGS RANCH DR	MICHILLINDA AVE	154	0	154	4/18/2001
SHADOW GROVE RD	HASTINGS RANCH DR	MICHILLINDA AVE	233	148	381	3/19/2002
SIERRA BONITA AVE	ASBURY DR	WASHINGTON BLVD	481	288	769	7/11/2000
SIERRA BONITA AVE	BRIGDEN RD	ASBURY DR	705	630	1335	6/10/2008
SIERRA BONITA AVE	CASA GRANDE ST	WHITEFIELD RD	636	757	1393	6/10/2008
SIERRA BONITA AVE	COLORADO BLVD	WALNUT ST	935	1033	1968	7/12/2000
SIERRA BONITA AVE	DUDLEY ALY	WHITEFIELD RD	590	685	1275	6/19/2007
SIERRA BONITA AVE	DUDLEY ALY	WHITEFIELD RD	665	670	1335	6/10/2008
SIERRA BONITA AVE	WHITEFIELD RD	BRIGDEN RD	646	724	1370	6/10/2008
SIERRA MADRE BLVD	210EB OFF SIERRA MADRE	FOOTHILL BLVD	4169	4633	8802	5/12/2009
SIERRA MADRE BLVD	210EB OFF SIERRA MADRE	ORANGE GROVE BLVD	6436	6128	12564	5/12/2009
SIERRA MADRE BLVD	COLORADO BLVD	FOOTHILL BLVD	10236	11681	21917	9/17/2003
SIERRA MADRE BLVD	COLORADO BLVD	FOOTHILL BLVD	8266	9156	17422	5/12/2009
SIERRA MADRE BLVD	DEL MAR BLVD	CALIFORNIA BLVD	9252	8899	18151	5/12/2009

STREET NAME	LIMIT 1	LIMIT 2	NORTH / EAST	SOUTH / WEST	TOTAL ADT	DATE
SIERRA MADRE BLVD	DEL MAR BLVD	COLORADO BLVD	8194	8178	16372	5/12/2009
SIERRA MADRE BLVD	DEL MAR BLVD	OSWEGO ST	9252	8782	18034	2/22/2008
SIERRA MADRE BLVD	DEL MAR BLVD	OSWEGO ST	9661	9280	18941	2/19/2008
SIERRA MADRE BLVD	DEL MAR BLVD	OSWEGO ST	9234	8887	18121	6/4/2007
SIERRA MADRE BLVD	DEL MAR BLVD	OSWEGO ST	8218	8229	16447	5/16/2007
SIERRA MADRE BLVD	DEL MAR BLVD	OSWEGO ST	7940	8029	15969	5/14/2007
SIERRA MADRE BLVD	DEL MAR BLVD	OSWEGO ST	9754	9670	19424	6/6/2007
SIERRA MADRE BLVD	DEL MAR BLVD	OSWEGO ST	8245	8242	16487	5/3/2007
SIERRA MADRE BLVD	ELECTRONIC DR	ELECTRONIC DR	7484	0	7484	10/5/2006
SIERRA MADRE BLVD	MOHAWK ST	COLORADO BLVD	9140	8908	18048	4/4/2007
SIERRA MADRE BLVD	MTA DRIVEWAY	MTA DRIVEWAY	14466	12898	27364	9/17/2003
SIERRA MADRE BLVD	MTA DRIVEWAY	MTA DRIVEWAY	15315	12902	28217	9/17/2003
SIERRA MADRE BLVD	OSWEGO ST	MOHAWK ST	2196	3382	5578	5/2/2007
SIERRA MADRE BLVD	OSWEGO ST	MOHAWK ST	8671	8906	17577	5/2/2007
SIERRA MADRE BLVD	SIERRA MADRE VILLA AVE	MICHILLINDA AVE	10078	8113	18191	5/19/2009
SIERRA MADRE BLVD	WASHINGTON BLVD	SIERRA MADRE VILLA AVE	8125	7494	15619	5/12/2009
SIERRA MADRE VILLA AVE	DEL MAR BLVD	CALIFORNIA BLVD	1542	2386	3928	5/20/2009
SIERRA MADRE VILLA AVE	NEW YORK	SIERRA MADRE BLVD	9858	10099	19957	5/19/2009
SIERRA MADRE VILLA AVE	COLORADO BLVD	DEL MAR BLVD	5519	4788	10307	5/20/2009
SIERRA MADRE VILLA AVE	FOOTHILL BLVD	ROSEMEAD BLVD (N)	7782	7816	15598	5/20/2009
SIERRA MADRE VILLA AVE	SIERRA MADRE BLVD	ROSEMEAD BLVD (S)	11248	9282	20530	5/20/2009
SUNNYSLOPE AVE	WENGER ALY	FOOTHILL BLVD	361	2166	2527	7/12/2000
SUNSET AVE	GLORIETA ST	HAMMOND ST	1566	1951	3517	2/4/2003
UNION ST	CATALINA AVE	WILSON AVE	0	5534	5534	5/3/2005
UNION ST	LOS ROBLES AVE	OAKLAND AVE	0	10953	10953	6/5/2007
UNION ST	OAKLAND AVE	MADISON AVE	0	9208	9208	4/26/2005
UNION ST	RAYMOND AVE	FAIR OAKS AVE	0	8763	8763	4/26/2005
VIRGINIA AVE	MORNINGSIDE ST	DEL MAR BLVD	233	262	495	4/2/2002
WALNUT ST	ALLEN AVE	HILL AVE	11114	9185	20299	5/13/2009
WALNUT ST	CATALINA AVE	WILSON AVE	7584	8252	15836	5/3/2005
WALNUT ST	CORSON ST	MAPLE ST	2308	3323	5631	4/27/2005
WALNUT ST	HILL AVE	LAKE AVE	8314	7713	16027	5/13/2009
WALNUT ST	LAKE AVE	LOS ROBLES AVE	7493	8023	15516	5/12/2009
WALNUT ST	LOS ROBLES AVE	FAIR OAKS AVE	8100	8481	16581	5/12/2009
WALNUT ST	OAKLAND AVE	MADISON AVE	11195	8809	20004	4/27/2005
WALNUT ST	RAYMOND AVE	FAIR OAKS AVE	9966	8790	18756	4/27/2005
WASHINGTON BLVD	ALLEN AVE	ALTADENA DR	6891	6522	13413	5/21/2009
WASHINGTON BLVD	ALTADENA DR	SIERRA MADRE BLVD	5203	3998	9201	5/21/2009
WASHINGTON BLVD	FAIR OAKS AVE	FAIR OAKS AVE	5532	5907	11439	5/21/2009
WASHINGTON BLVD	FAIR OAKS AVE	LOS ROBLES AVE	8428	8644	17072	5/21/2009
WASHINGTON BLVD	HILL AVE	ALLEN AVE	9039	8546	17585	5/21/2009

STREET NAME	LIMIT 1	LIMIT 2	NORTH / EAST	SOUTH / WEST	TOTAL ADT	DATE
WASHINGTON BLVD	HILL AVE	WESLEY AVE	9287	8972	18259	1/14/2008
WASHINGTON BLVD	LAKE AVE	HILL AVE	8675	8548	17223	5/21/2009
WASHINGTON BLVD	LOS ROBLES AVE	LAKE AVE	9412	9347	18759	5/21/2009
WELLINGTON AVE	BRYANT ST	LIDA ST	268	242	510	9/25/2007
WELLINGTON AVE	BRYANT ST	LIDA ST	335	325	660	7/24/2007
WESTGATE ST	ARMADA DR (W)	FOREST AVE	161	103	264	8/25/2008
WHITEFIELD RD	SIERRA BONITA AVE	SINALOA AVE	416	400	816	6/10/2008
WHITEFIELD RD	SIERRA BONITA AVE	SINALOA AVE	372	325	697	6/19/2007
WILSON AVE	CALIFORNIA BLVD	SAN PASQUAL ST	2424	2914	5338	8/9/2000
WILSON AVE	CLAREMONT ST	WASHINGTON BLVD	189	486	675	7/11/2000
WILSON AVE	DEL MAR BLVD	BLANCHE ST	2889	2766	5655	11/13/2007
WILSON AVE	DEL MAR BLVD	LURA ST	2948	3395	6343	11/13/2007
WILSON AVE	YOLO ST	WALNUT ST	2500	3500	6000	7/12/2000
WOTKYN DR	RICHLAND PL	ARROYO BLVD	91	0	91	1/29/2008
WYOMING ST	NEWPORT AVE	MENTONE AVE	443	275	718	6/12/2007
YORK BLVD	BRANCH	FIGUEROA	10967	10295	21262	5/28/2009

# Annual Transportation Report Card Latest Average Daily Traffic Counts Map



### Legend

**Total Average Daily Traffic**

- 0 - 1000
- 1001 - 2000
- 2001 - 5000
- 5001 - 10000
- 10001 - 20000
- 20001 - 46279

**DEPARTMENT OF TRANSPORTATION**

California System Information:  
State Plane California Zone V, FRS 405 (Feet) Datum: NAD 1983

Disclaimer: The maps and associated data are provided without warranty of kind.  
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FEBRUARY\_23\_2010\_ANNUALREPORTCARD\_COUNTS.MXD - PREPARED BY AT

**Appendix B:  
Average Travel Time & Speed  
Segment Data  
Year 2009**

**City of Pasadena Department of Transportation  
Annual Transportation Report Card Travel Time Studies FY 2010**

STREET NAME	FROM	TO	DIRECTION	DISTANCE (MILES)	TRAVEL TIME (MINUTES)			SPEED (MPH)		
					AM	MD	PM	AM	MD	PM
ARROYO PK	GLENARM	CALIFORNIA		0.6	1.55	1.58	1.13	22	22	30
	CALIFORNIA	DEL MAR	NB	0.3	0.77	0.89	0.82	25	22	23
	DEL MAR	GREEN		0.3	1.07	1.09	0.89	16	15	19
	GREEN	COLORADO		0.1	0.90	0.57	1.10	6	9	5
	COLORADO	GREEN		0.1	0.21	0.32	0.32	26	17	17
	GREEN	DEL MAR	SB	0.3	0.79	0.91	0.88	21	18	19
CALIFORNIA BL	DEL MAR	CALIFORNIA		0.3	1.32	1.23	1.56	15	16	12
	CALIFORNIA	GLENARM		0.6	1.42	1.70	2.47	24	20	14
	ORANGE GROVE	FAIR OAKS		0.5	2.00	1.95	3.04	15	15	10
	FAIR OAKS	ARROYO PKWY	EB	0.2	1.25	0.99	1.18	8	10	9
	ARROYO PKWY	LOS ROBLES		0.3	1.12	0.83	1.08	18	25	19
	LOS ROBLES	LAKE AVE		0.5	1.51	1.74	2.10	21	18	15
CALIFORNIA BL	LAKE AVE	LOS ROBLES		0.5	1.16	1.03	0.95	27	30	33
	LOS ROBLES	ARROYO PKWY	WB	0.3	1.06	0.98	1.46	19	21	14
	ARROYO PKWY	FAIR OAKS		0.2	1.15	1.12	1.26	9	9	8
	FAIR OAKS	ORANGE GROVE		0.5	1.85	2.12	2.21	16	14	13
	ARROYO PKWY	LOS ROBLES		0.5	1.43	1.62	1.83	15	13	11
	LOS ROBLES	LAKE AVE		0.5	1.73	1.85	2.64	18	17	12
COLORADO BL	LAKE AVE	HILL AVE	EB	0.6	1.70	2.69	2.36	22	14	16
	HILL AVE	ALLEN AVE		0.5	1.80	1.63	2.71	16	17	10
	ALLEN AVE	SAN GABRIEL		1.1	2.52	2.74	3.12	25	23	20
	SAN GABRIEL	ALLEN AVE		1.1	3.23	3.34	3.02	20	19	21
	ALLEN AVE	HILL AVE		0.5	2.14	2.93	2.57	13	10	11
	HILL AVE	LAKE AVE	WB	0.6	2.20	2.54	2.40	17	15	16
COLORADO BL	LAKE AVE	LOS ROBLES		0.5	1.60	2.45	1.92	19	13	16
	LOS ROBLES	ARROYO PKWY		0.5	0.84	1.25	1.72	25	17	12

STREET NAME	FROM	TO	DIRECTION	DISTANCE (MILES)	TRAVEL TIME (MINUTES)			SPEED (MPH)		
					AM	MD	PM	AM	MD	PM
DEL MAR BL	ORANGE GROVE	ARROYO PKWY	EB	0.7	4.07	2.68	3.50	10	15	12
	ARROYO PKWY	LOS ROBLES		0.4	0.82	1.09	0.93	25	19	23
	LOS ROBLES	LAKE AVE		0.5	1.45	1.95	2.47	21	16	13
	LAKE AVE	HILL AVE		0.6	1.39	1.70	1.81	28	23	21
	HILL AVE	ALLEN AVE		0.5	0.95	1.08	1.00	30	26	28
	ALLEN AVE	SAN GABRIEL		1.1	2.40	2.71	3.20	27	23	20
	SAN GABRIEL	ALLEN AVE		1.1	2.62	2.05	2.43	24	31	26
	ALLEN AVE	HILL AVE		0.5	1.57	1.02	1.08	18	28	26
	HILL AVE	LAKE AVE		0.6	2.36	2.09	1.99	16	18	19
	LAKE AVE	LOS ROBLES		0.5	1.71	1.77	1.33	18	18	24
FAIR OAKS AV	LOS ROBLES	ARROYO PKWY	WB	0.4	1.71	1.34	1.92	12	16	11
	ARROYO PKWY	ORANGE GROVE		0.7	2.76	2.41	3.15	15	17	13
	GLENARM	CALIFORNIA		0.6	1.02	1.67	1.85	34	20	18
	CALIFORNIA	DEL MAR		0.3	1.10	1.07	0.92	18	19	21
	DEL MAR	GREEN		0.3	0.74	0.60	0.60	22	27	27
	GREEN	COLORADO		0.1	0.20	0.65	0.89	28	8	6
	COLORADO	CORSON		0.4	1.28	0.74	1.59	17	29	14
	MAPLE	ORANGE GROVE		0.4	1.31	1.45	1.37	17	15	16
	ORANGE GROVE	WASHINGTON		0.8	1.96	2.05	2.17	23	22	21
	WASHINGTON	ORANGE GROVE		0.8	0.82	1.50	1.15	26	14	19
FOOTHILL BL	ORANGE GROVE	MAPLE	SB	0.4	0.18	0.27	0.19	30	20	28
	CORSON	COLORADO		0.4	0.52	0.78	0.71	31	21	23
	COLORADO	GREEN		0.1	1.18	1.59	3.61	17	12	5
	GREEN	DEL MAR		0.3	1.43	1.58	1.89	24	22	18
	DEL MAR	CALIFORNIA		0.3	2.24	2.00	2.32	20	23	20
	CALIFORNIA	GLENARM		0.6	1.24	1.24	0.84	18	18	26
	WALNUT	SAN GABRIEL		1.0	2.08	2.49	2.84	28	23	20
	SAN GABRIEL	MADRE		0.7	1.60	2.26	2.56	25	18	16
	MADRE	ROSEMEAD		0.5	0.99	1.96	1.44	31	16	22
	ROSEMEAD	MADRE		0.5	1.32	1.51	1.69	24	21	18
MADRE	SAN GABRIEL	0.7	2.13	1.18	1.79	19	34	22		
SAN GABRIEL	WALNUT	1.0	1.75	1.97	3.11	33	29	19		

STREET NAME	FROM	TO	DIRECTION	DISTANCE (MILES)	TRAVEL TIME (MINUTES)			SPEED (MPH)		
					AM	MD	PM	AM	MD	PM
GREEN ST	ST JOHN	ARROYO PKWY	EB	0.5	2.12	2.07	1.98	14	14	15
	ARROYO PKWY	LOS ROBLES		0.4	1.22	0.80	1.25	17	26	17
	LOS ROBLES	LAKE AVE		0.5	1.54	1.19	2.02	20	26	15
	LAKE AVE	HILL AVE		0.6	1.63	1.37	1.62	23	28	23
HILL AV	DEL MAR	COLORADO	NB	0.3	0.92	1.15	1.36	19	15	13
	COLORADO	WALNUT		0.2	0.68	0.81	0.57	21	18	25
	WALNUT	CORSON		0.2	0.66	0.83	0.45	15	12	21
	MAPLE	ORANGE GROVE		0.3	0.63	0.83	1.43	32	24	14
	ORANGE GROVE	WASHINGTON		0.8	1.45	1.52	1.44	32	30	32
	WASHINGTON	ORANGE GROVE		0.8	0.61	0.43	0.74	16	22	13
	ORANGE GROVE	MAPLE		0.3	0.64	0.96	0.79	23	15	18
	CORSON	WALNUT		0.2	1.23	0.99	0.95	14	18	18
LAKE AV	WALNUT	COLORADO	SB	0.2	1.74	1.71	1.42	27	27	33
	COLORADO	DEL MAR		0.3	0.95	0.81	1.02	21	25	20
	DEL MAR	COLORADO		0.4	1.90	1.37	2.23	11	16	10
	COLORADO	WALNUT		0.3	0.69	0.67	0.74	22	22	20
LINCOLN AV	WALNUT	CORSON	NB	0.1	0.24	0.25	0.64	30	29	11
	MAPLE	ORANGE GROVE		0.4	1.04	1.56	1.35	21	14	17
	ORANGE GROVE	WASHINGTON		0.8	1.85	1.63	2.01	25	28	23
	WASHINGTON	ORANGE GROVE		0.8	0.95	0.28	0.35	8	26	21
	ORANGE GROVE	MAPLE		0.4	0.58	0.67	0.96	26	23	16
	CORSON	WALNUT		0.1	1.14	1.20	1.36	19	18	16
	WALNUT	COLORADO		0.3	2.37	2.13	2.22	19	22	21
	COLORADO	DEL MAR		0.4	1.01	0.97	1.63	22	23	14
LINCOLN AV	ORANGE GROVE	MOUNTAIN	NB	0.5	1.36	1.08	1.12	24	30	29
	MOUNTAIN	HOWARD		0.8	1.61	1.54	2.30	30	31	21
	HOWARD	MOUNTAIN		0.8	1.93	1.63	2.26	25	30	21
	MOUNTAIN	ORANGE GROVE		0.5	1.28	1.33	1.56	25	24	21



STREET NAME	FROM	TO	DIRECTION	DISTANCE (MILES)	TRAVEL TIME (MINUTES)			SPEED (MPH)		
					AM	MD	PM	AM	MD	PM
WALNUT ST	FAIR OAKS	LOS ROBLES		0.5	1.20	1.26	1.56	26	25	20
	LOS ROBLES	LAKE AVE	EB	0.5	2.30	2.00	2.28	14	16	14
	LAKE AVE	HILL AVE		0.6	1.68	2.01	1.75	23	19	22
	HILL AVE	ALLEN AVE		0.5	1.07	1.05	1.27	26	27	22
	ALLEN AVE	FOOTHILL		0.1	0.38	0.39	0.44	22	22	19
	FOOTHILL	ALLEN AVE		0.1	0.32	0.43	0.38	26	20	22
	ALLEN AVE	HILL AVE	WB	0.5	1.13	1.22	1.66	25	23	17
	HILL AVE	LAKE AVE		0.6	1.91	1.62	1.44	20	23	26
	LAKE AVE	LOS ROBLES		0.5	1.79	1.48	1.72	17	21	18
	LOS ROBLES	FAIR OAKS		0.5	1.81	1.77	1.64	17	18	19
WASHINGTON BL	FAIR OAKS	LOS ROBLES	EB	0.5	1.56	1.23	1.69	20	25	18
	LOS ROBLES	LAKE AV		0.5	1.56	1.23	1.18	21	26	28
	LAKE AV	LOS ROBLES	WB	0.5	1.46	1.24	1.33	22	26	24
	LOS ROBLES	FAIR OAKS		0.5	1.13	0.97	1.4	28	32	22

**City of Pasadena Department of Transportation  
Annual Transportation Report Card Average Travel Time Comparison Study (2006 - 2009)**

STREET NAME	FROM	TO	DIRECTION	DISTANCE (MILES)	Travel Time (Minutes)			
					2006	2007	2008	
ARROYO PK	GLENARM	COLORADO	NB	1.30	3.60	4.38	5.64	4.12
	COLORADO	GLENARM	SB	1.30	5.23	4.20	5.90	4.39
<b>*NOTE: ARROYO PKWY UNDER CONSTRUCTION IN 2008.</b>								
CALIFORNIA BL	ORANGE GROVE	LAKE AVE	EB	1.50	5.98	6.25	6.45	6.36
	LAKE AVE	ORANGE GROVE	WB	1.50	6.00	6.24	6.08	5.45
COLORADO BL	ARROYO PKWY	SAN GABRIEL	EB	3.20	10.71	10.36	10.56	10.79
	SAN GABRIEL	ARROYO PKWY	WB	3.20	10.34	10.76	11.03	11.39

STREET NAME	FROM	TO	DIRECTION	DISTANCE (MILES)	Travel Time (Minutes)			
					2006	2007	2008	2009
DEL MAR BL	ORANGE GROVE	SAN GABRIEL	EB	3.80	7.18	10.91	11.07	11.73
	SAN GABRIEL	ORANGE GROVE	WB	3.80	8.54	11.09	11.88	11.78
<b>*Note: Del Mar route did not include Orange Grove to Arroyo Parkway Segment in 2006. On-street construction in 2009</b>								
FAIR OAKS AV	GLENARM	WASHINGTON	NB	2.90	9.98	10.72	8.83	8.41
	WASHINGTON	GLENARM	SB	2.90	9.27	11.18	9.06	9.09
FOOTHILL BL	WALNUT	ROSEMEAD	EB	2.20	5.34	5.62	5.49	6.08
	ROSEMEAD	WALNUT	WB	2.20	4.98	4.74	5.28	5.48

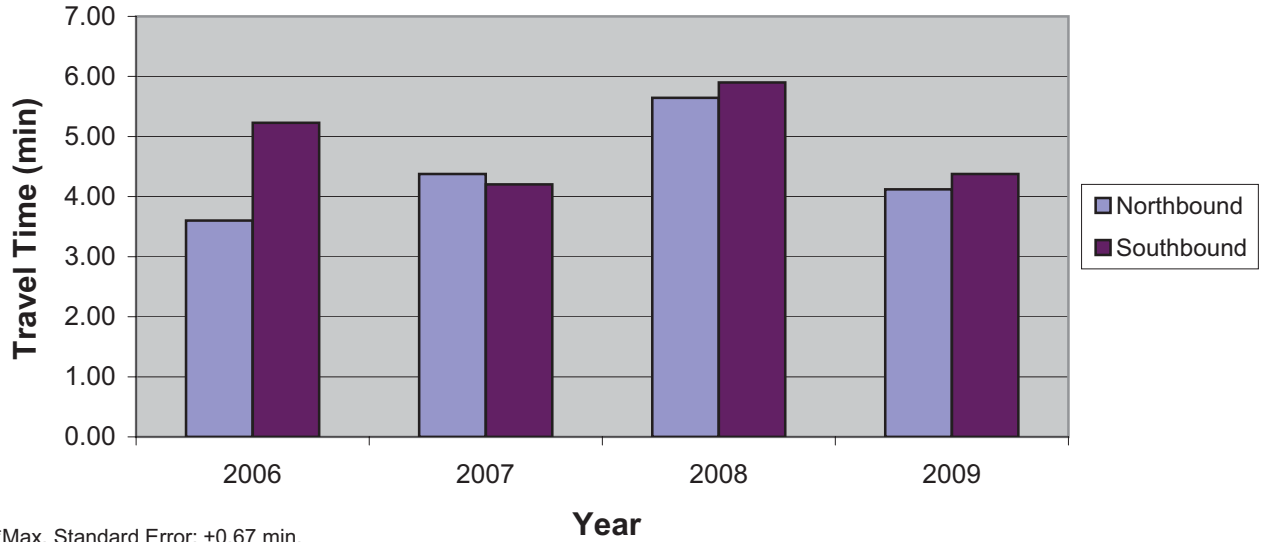
STREET NAME	FROM	TO	DIRECTION	DISTANCE (MILES)	Travel Time (Minutes)			
					2006	2007	2008	2009
GREEN ST	ST JOHN	HILL AVE	EB	2.00	5.43	6.89	7.54	6.28
<b>Note: Green Street route did not include St John to Arroyo Parkway segment in 2006.</b>								
HILL AV	DEL MAR	WASHINGTON	NB	1.80	4.67	4.38	4.91	4.91
	WASHINGTON	DEL MAR	SB	1.80	4.65	4.43	6.22	5.00
LAKE AV	DEL MAR	WASHINGTON	NB	2.00	7.08	7.35	6.99	6.06
	WASHINGTON	DEL MAR	SB	2.00	7.13	7.09	6.92	5.94
LINCOLN AV	ORANGE GROVE	HOWARD	NB	1.30	2.71	2.73	2.89	3.00
	HOWARD	ORANGE GROVE	SB	1.30	3.15	3.19	3.34	3.33

STREET NAME	FROM	TO	DIRECTION	DISTANCE (MILES)	Travel Time (Minutes)			
					2006	2007	2008	2009
ORANGE GROVE BL (EAST-WEST)	FAIR OAKS	SAN GABRIEL	EB	3.20	7.89	8.35	7.63	8.09
	SAN GABRIEL	FAIR OAKS	WB	3.20	8.05	7.36	8.09	8.46
ORANGE GROVE BL (NORTH-SOUTH)	COLUMBIA ST	COLORADO	NB	1.50	4.03	3.77	3.78	4.93
	COLORADO	COLUMBIA ST	SB	1.50	3.66	3.54	3.77	4.40
SAN GABRIEL BL	SAN PASQUAL	FOOTHILL	NB	0.90	2.44	2.43	2.57	2.28
	FOOTHILL	SAN PASQUAL	SB	0.90	1.96	1.92	2.33	2.06
UNION ST	HILL AVE	ST JOHN	WB	2.00	4.40	4.65	6.11	6.12

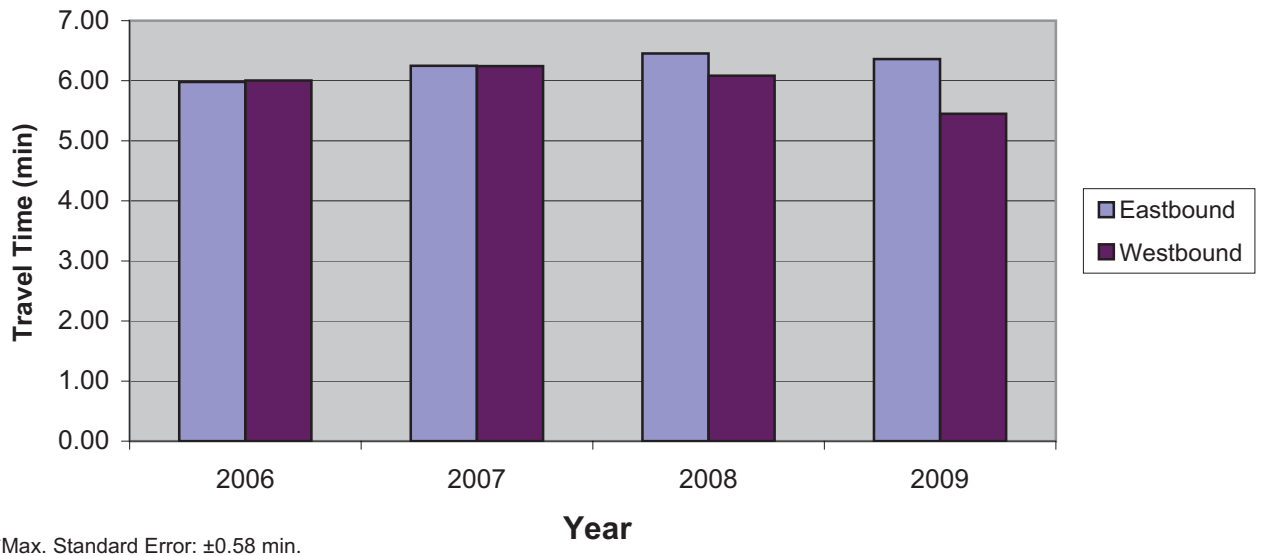
**Note: Union Street route did not include St John to Arroyo Parkway segment in 2006.**

STREET NAME	FROM	TO	DIRECTION	DISTANCE (MILES)	Travel Time (Minutes)			
					2006	2007	2008	2009
WALNUT ST	FAIR OAKS	FOOTHILL	EB	2.20	6.57	5.96	6.19	6.89
	FOOTHILL	FAIR OAKS	WB	2.20	7.34	7.06	6.66	6.78
WASHINGTON BL	FAIR OAKS	LAKE AV	EB	1.00	3.11	3.62	3.49	2.82
	LAKE AV	FAIR OAKS	WB	1.00	2.70	2.46	2.66	2.52

### Arroyo Pkwy [Glenarm - Colorado] Travel Time Study

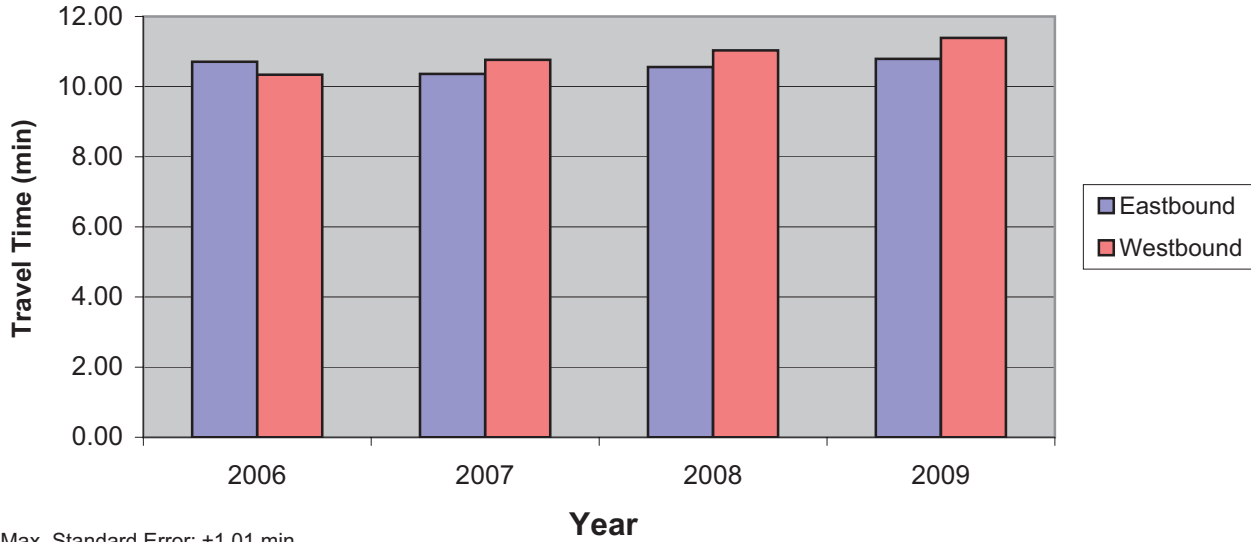


### California Blvd [Orange Grove - Lake] Travel Time Study

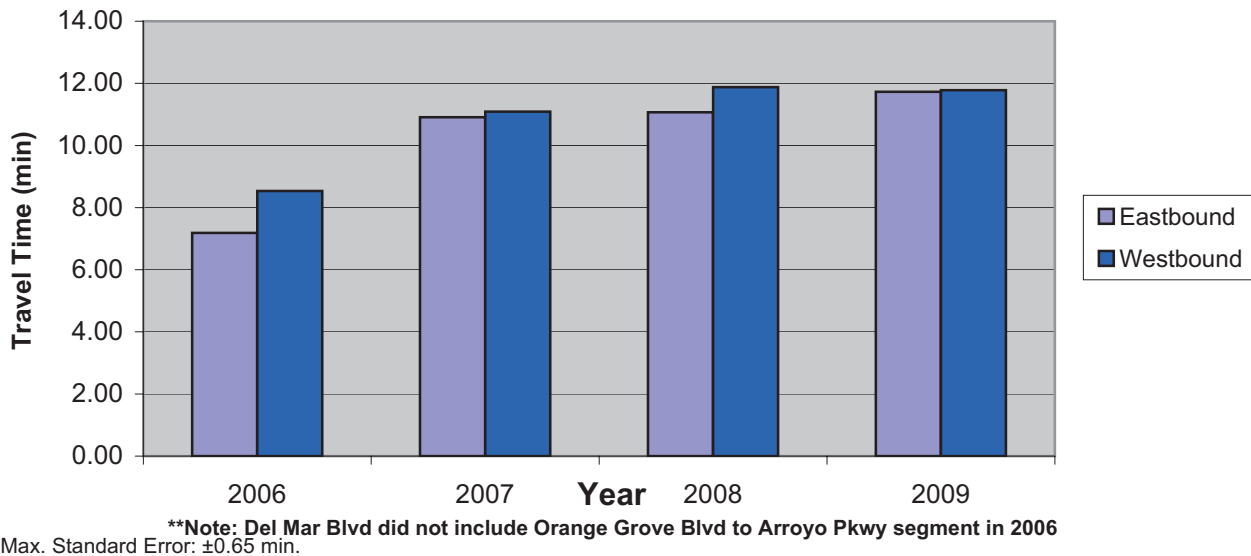


**Appendix C:  
Average Travel Time  
Route Comparison  
Data & Graphs  
Year 2006 to 2009**

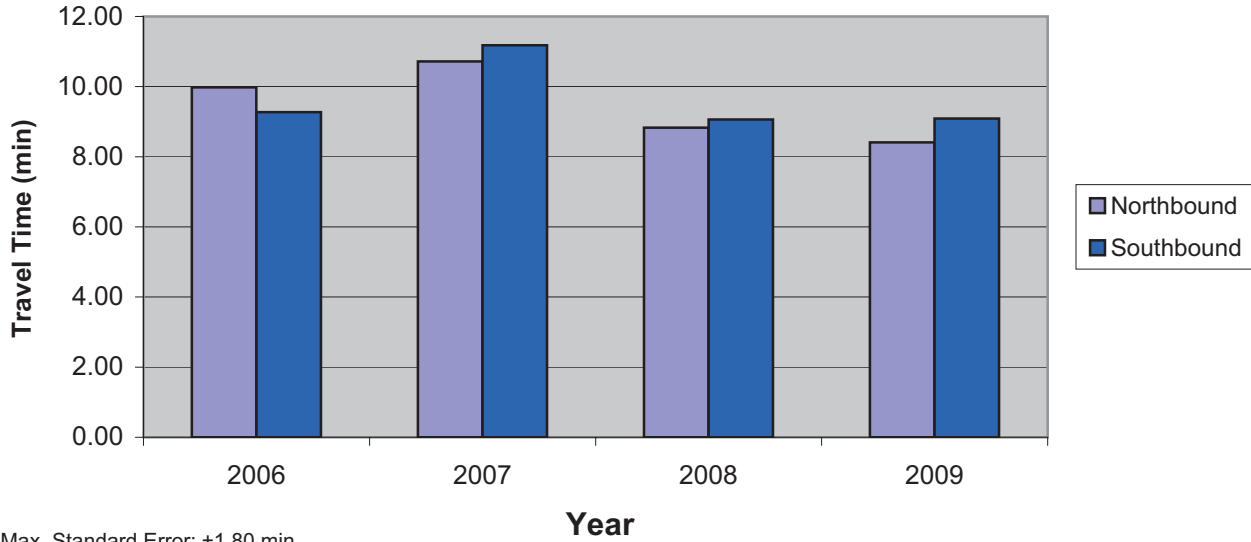
### Colorado Blvd [Arroyo Pkwy - San Gabriel] Travel Time Study



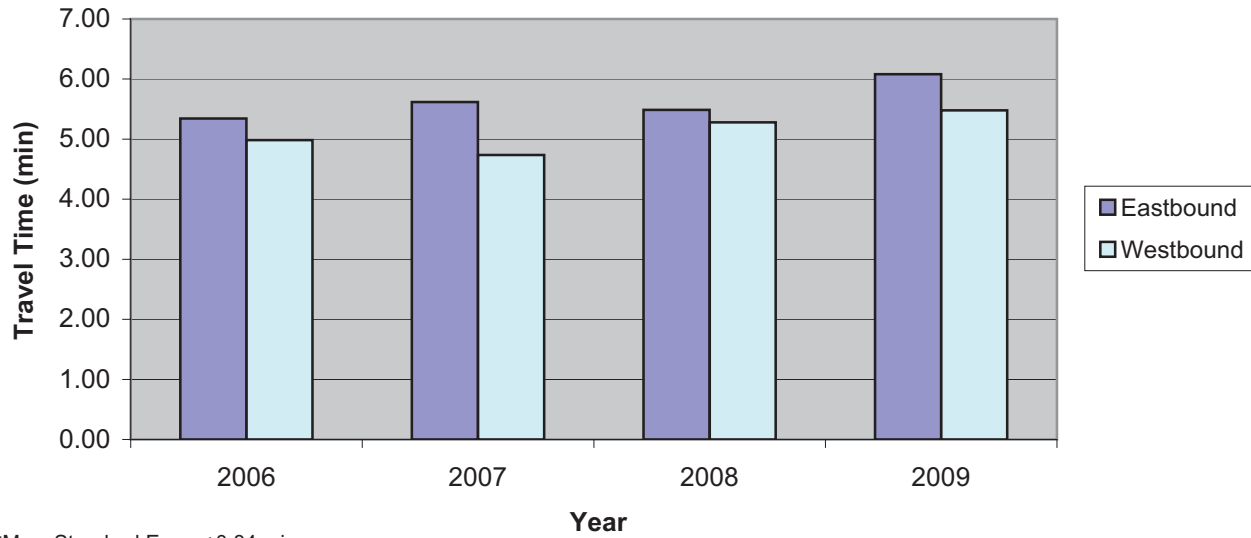
### Del Mar Blvd [Orange Grove - San Gabriel] Travel Time Study



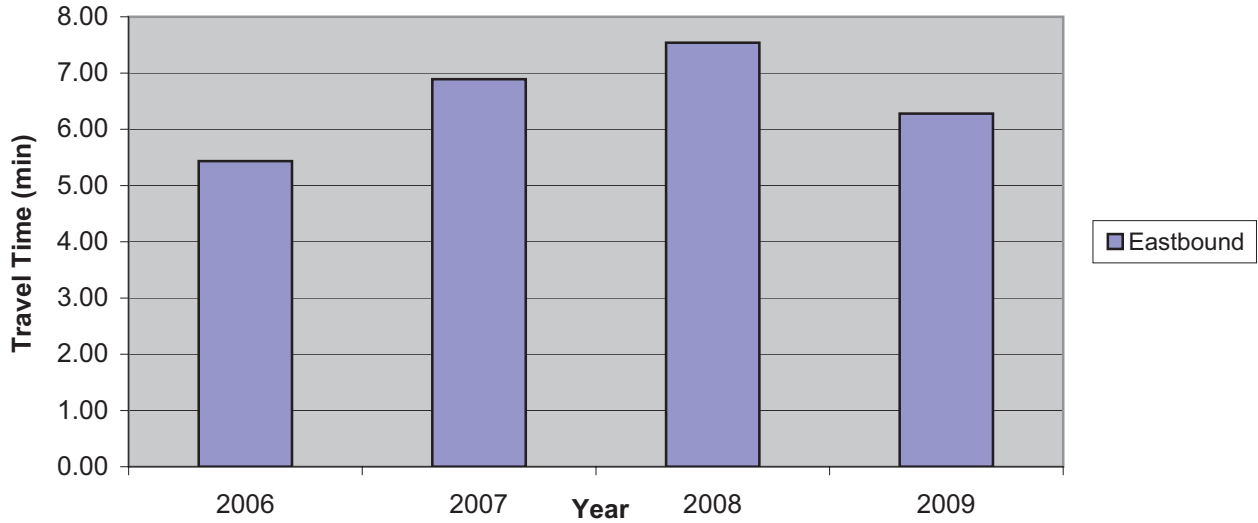
### Fair Oaks Ave [ Glenarm - Washington] Travel Time Study



### Foothill Blvd [Walnut - Rosemead] Travel Time Study

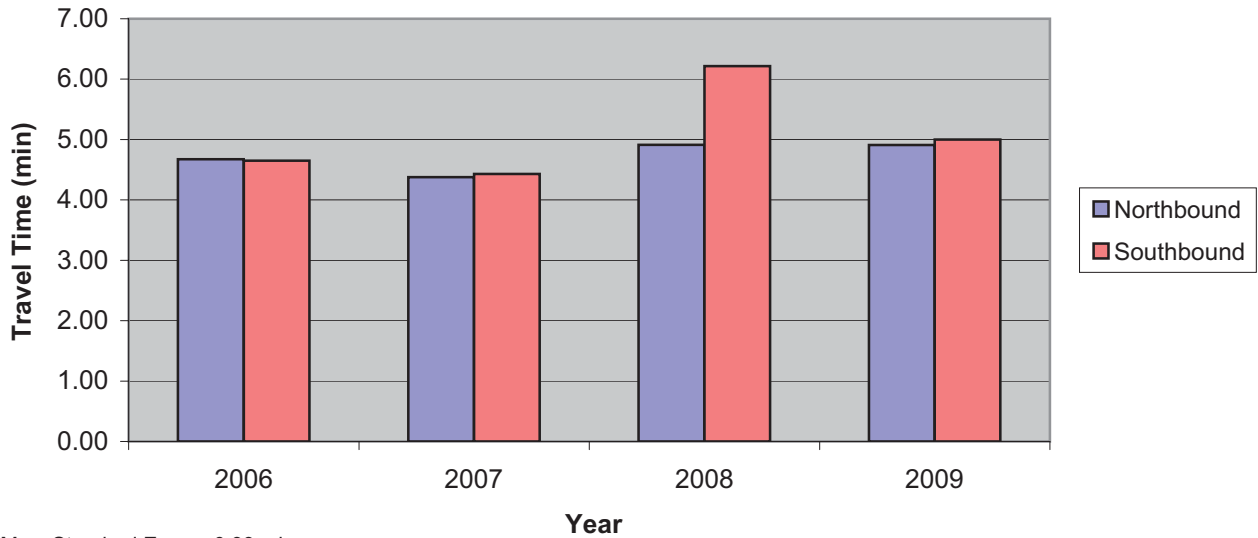


### Green Street [St John - Hill] Travel Time Study



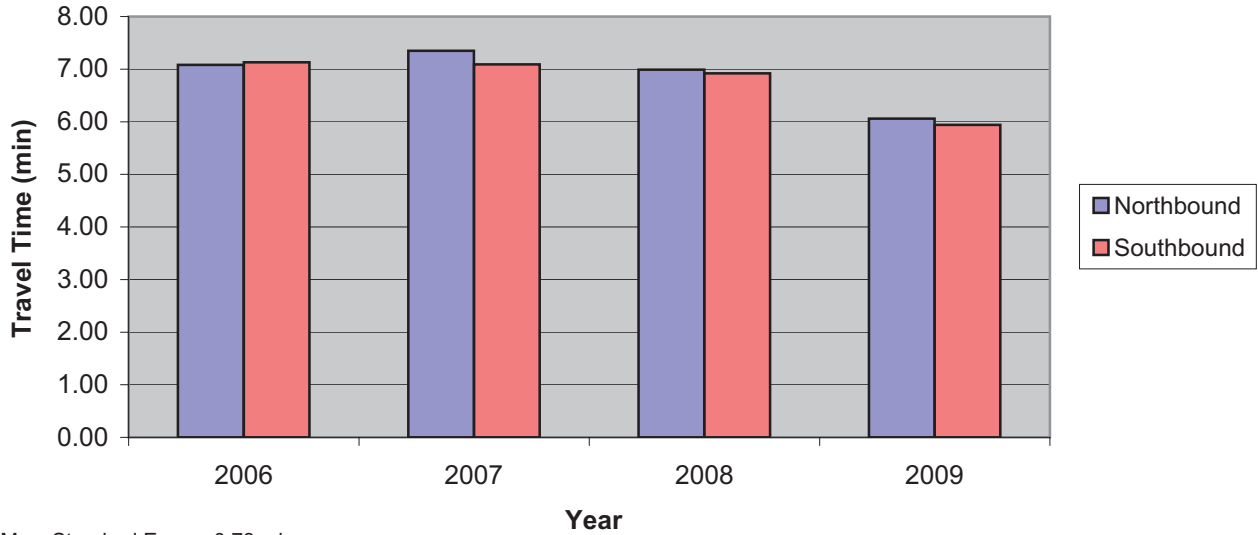
\*Max. Standard Error: ±1.29 min.  
**\*Note: Green Street did not include St John to Arroyo Pkwy segment in 2006**

### Hill Ave [Del Mar - Washington] Travel Time Study



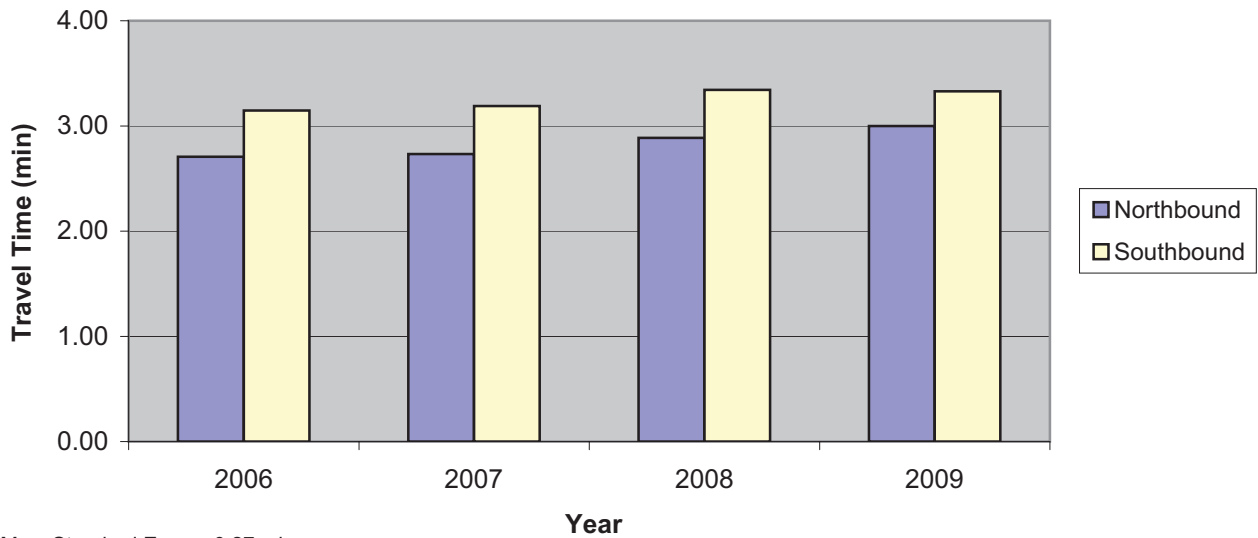
\*Max. Standard Error: ±0.99 min.

### Lake Ave [Del Mar - Washington] Travel Time Study



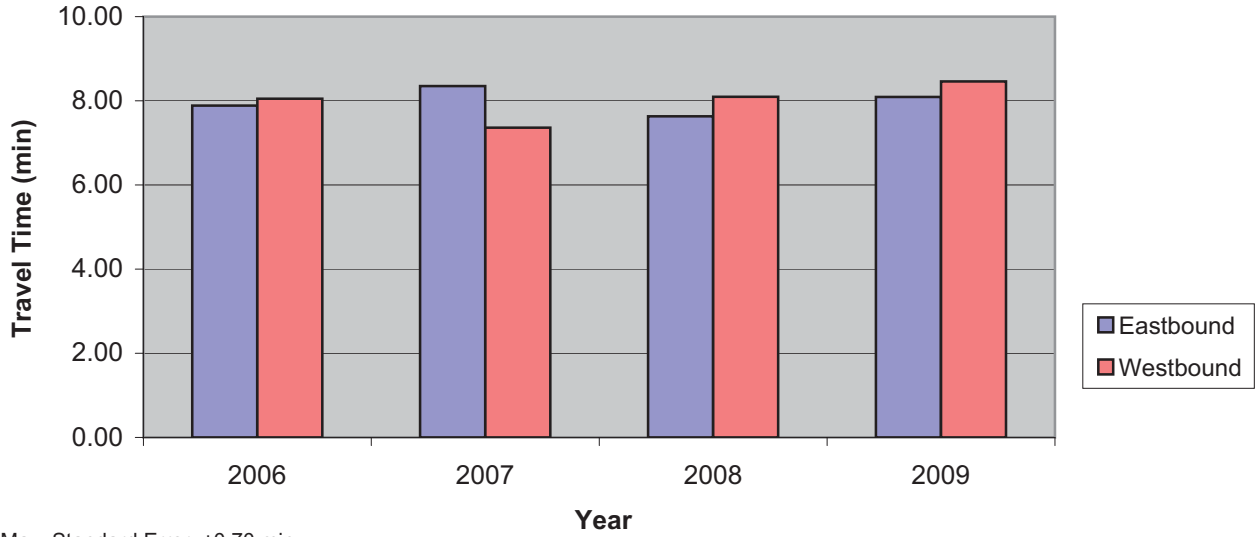
\*Max. Standard Error:  $\pm 0.78$  min.

### Lincoln Ave [Orange Grove - Howard] Travel Time Study

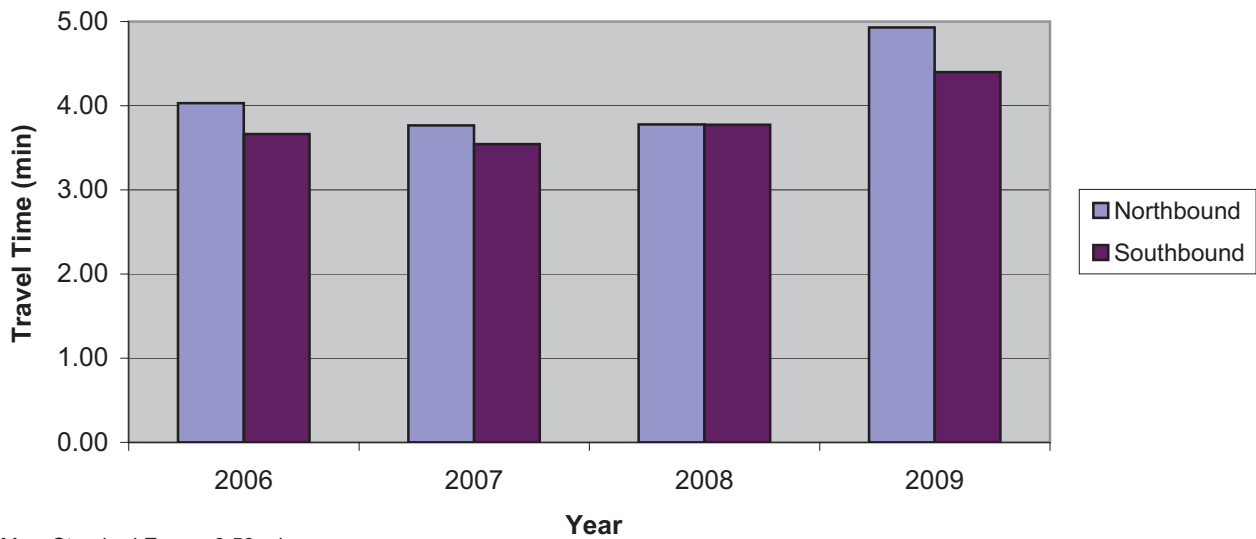


\*Max. Standard Error:  $\pm 0.27$  min.

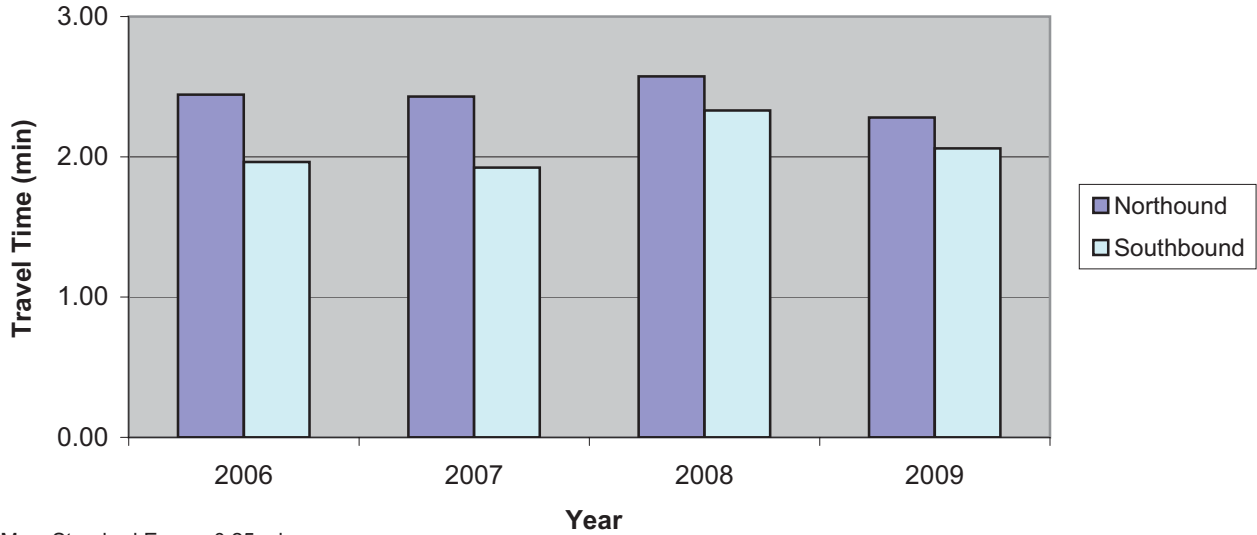
### Orange Grove BI [Fair Oaks - San Gabriel] Travel Time Study



### Orange Grove BI [Columbia - Colorado] Travel Time Study

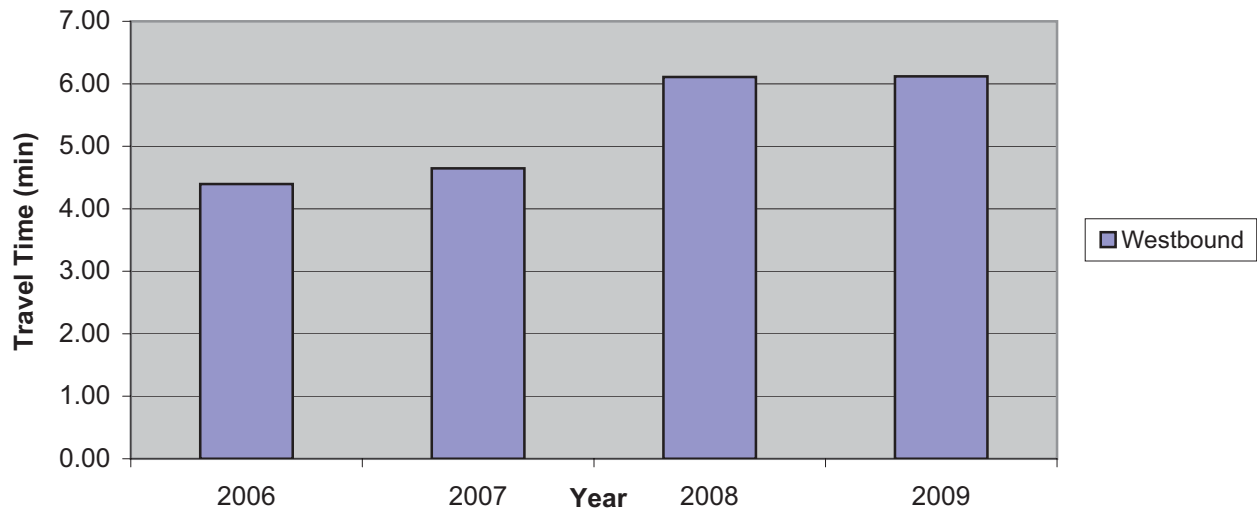


### San Gabriel BI [San Pasqual - Foothill] Travel Time Study



\*Max. Standard Error:  $\pm 0.25$  min.

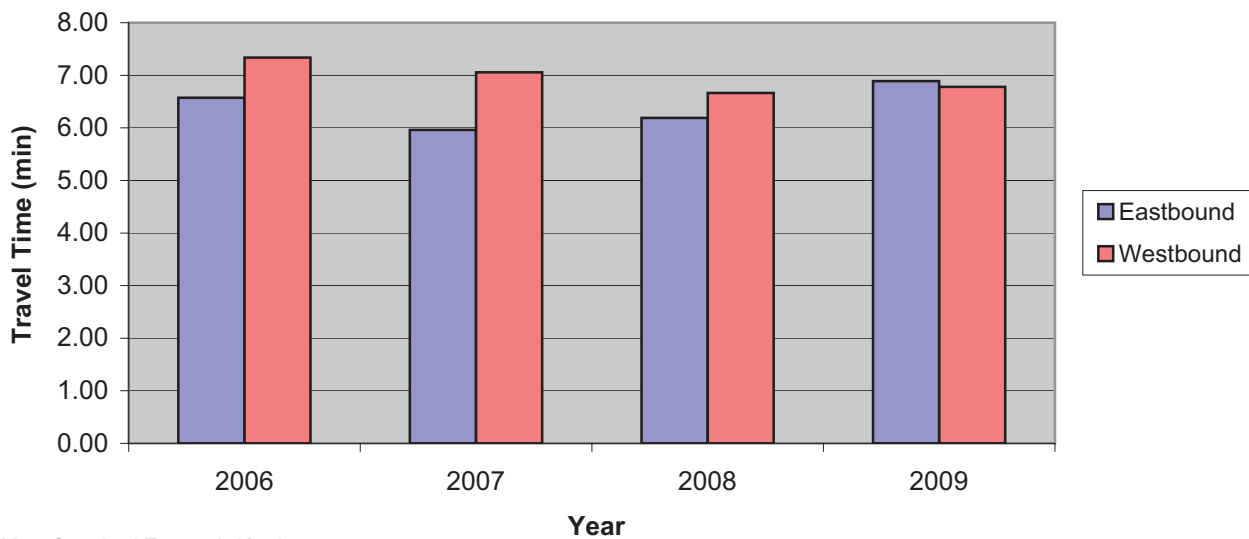
### Union St [Hill - St John] Travel Time Study



**\*Note: Union Street did not include St John to Arroyo Pkwy segment in 2006**

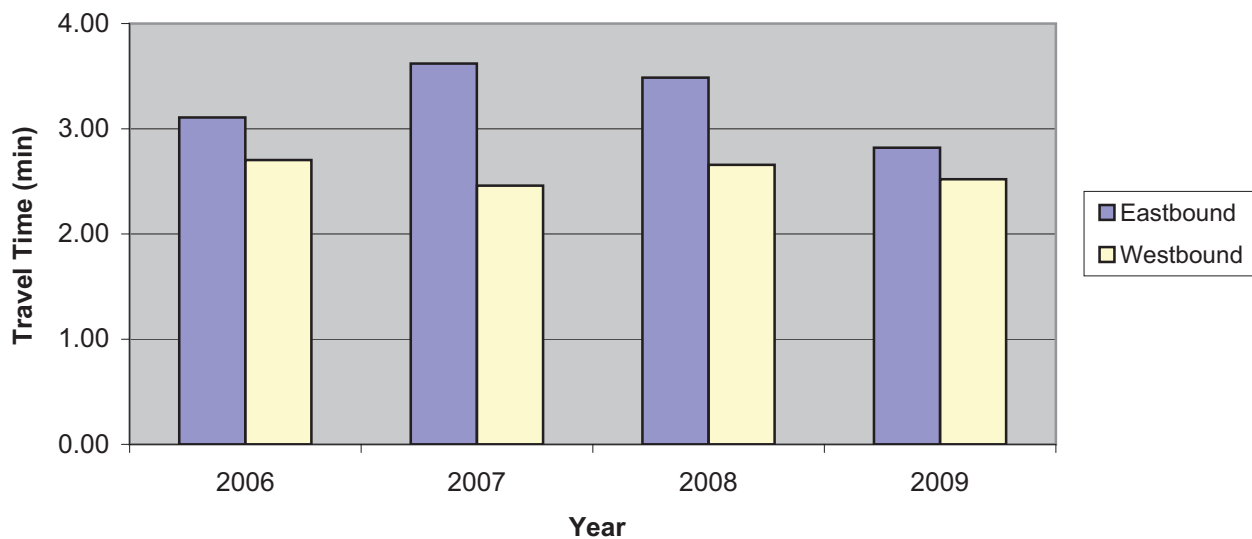
\*Max. Standard Error:  $\pm 0.62$  min.

### Walnut St [Fair Oaks - Foothill] Travel Time Study



\*Max. Standard Error:  $\pm 0.46$  min.

### Washington Bl [Fair Oaks - Lake] Travel Time Study



\*Max. Standard Error:  $\pm 0.61$  min.

**Appendix D:  
Average Speed  
Route Comparison  
Data & Graphs  
Year 2006 to 2009**

**City of Pasadena Department of Transportation  
Annual Transportation Report Card Average Speed Comparison Study (2006 - 2009)**

STREET NAME	FROM	TO	DIRECTION	DISTANCE (MILES)	Speed (mph)			
					2006	2007	2008	2009
ARROYO PK	GLENARM	COLORADO	NB	1.30	20	17	14	18
	COLORADO	GLENARM	SB	1.30	18	19	14	18
<b>*NOTE: ARROYO PKWY UNDER CONSTRUCTION IN 2008.</b>								
CALIFORNIA BL	ORANGE GROVE	LAKE AVE	EB	1.50	16	15	15	15
	LAKE AVE	ORANGE GROVE	WB	1.50	16	15	16	18
COLORADO BL	ARROYO PKWY	SAN GABRIEL	EB	3.20	18	19	17	17
	SAN GABRIEL	ARROYO PKWY	WB	3.20	19	18	17	16

STREET NAME	FROM	TO	DIRECTION	DISTANCE (MILES)	Speed (mph)			
					2006	2007	2008	2009
DEL MAR BL	ORANGE GROVE	SAN GABRIEL	EB	3.80	27	23	22	22
	SAN GABRIEL	ORANGE GROVE	WB	3.80	22	21	20	22

\*Note: Del Mar route did not include Orange Grove to Arroyo Parkway Segment in 2006.

FAIR OAKS AV	GLENARM	WASHINGTON	NB	2.90	19	17	20	20
	WASHINGTON	GLENARM	SB	2.90	18	17	20	21
FOOTHILL BL	WALNUT	ROSEMEAD	EB	2.20	25	24	24	22
	ROSEMEAD	WALNUT	WB	2.20	26	28	25	24

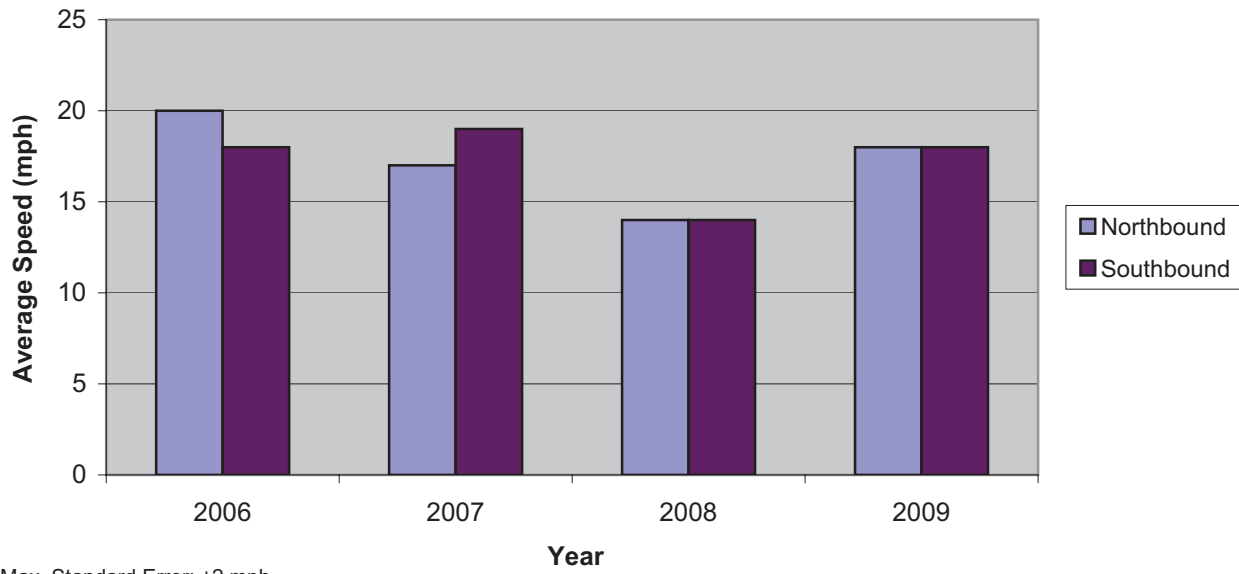
STREET NAME	FROM	TO	DIRECTION	DISTANCE (MILES)	Speed (mph)			
					2006	2007	2008	2009
GREEN ST	ST JOHN	HILL AVE	EB	2.00	17	18	17	20
<b>Note: Green Street route did not include St John to Arroyo Parkway segment in 2006.</b>								
HILL AV	DEL MAR	WASHINGTON	NB	1.80	23	25	22	22
	WASHINGTON	DEL MAR	SB	1.80	24	25	19	21
LAKE AV	DEL MAR	WASHINGTON	NB	2.00	16	15	16	20
	WASHINGTON	DEL MAR	SB	2.00	15	15	18	19
LINCOLN AV	ORANGE GROVE	HOWARD	NB	1.30	30	30	28	28
	HOWARD	ORANGE GROVE	SB	1.30	28	27	25	24

STREET NAME	FROM	TO	DIRECTION	DISTANCE (MILES)	Speed (mph)			
					2006	2007	2008	2009
ORANGE GROVE BL (EAST-WEST)	FAIR OAKS	SAN GABRIEL	EB	3.20	25	25	26	24
	SAN GABRIEL	FAIR OAKS	WB	3.20	25	28	26	24
ORANGE GROVE BL (NORTH-SOUTH)	COLUMBIA ST	COLORADO	NB	1.50	24	26	25	20
	COLORADO	COLUMBIA ST	SB	1.50	27	28	25	21
SAN GABRIEL BL	SAN PASQUAL	FOOTHILL	NB	0.90	22	22	21	23
	FOOTHILL	SAN PASQUAL	SB	0.90	27	27	23	25
UNION ST	HILL AVE	ST JOHN	WB	2.00	21	19	20	21

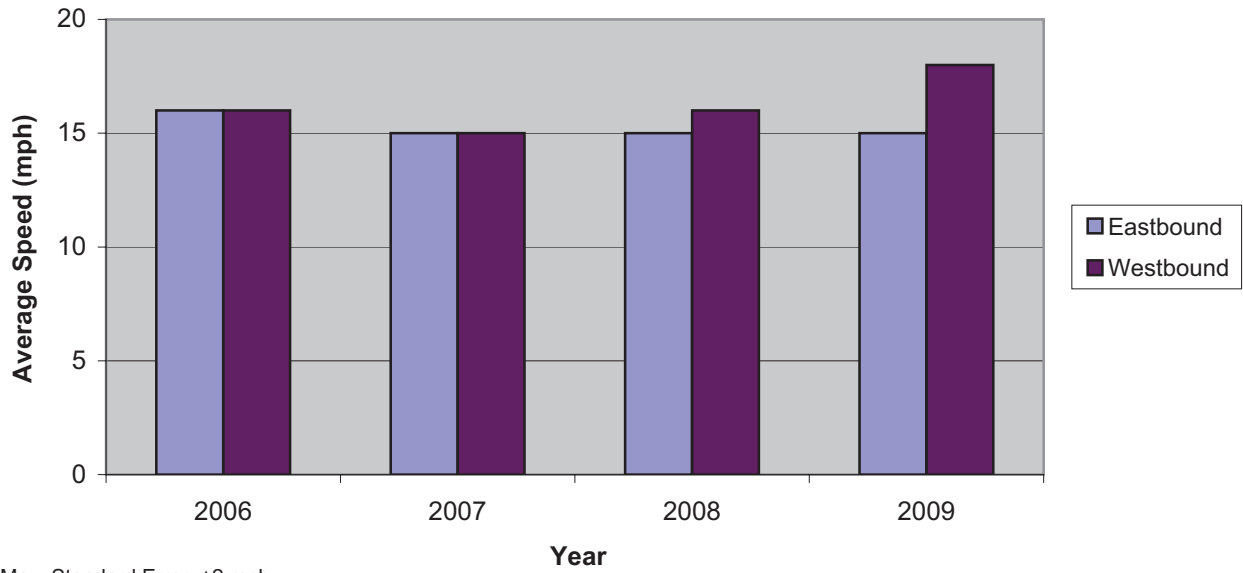
**Note: Union Street route did not include St John to Arroyo Parkway segment in 2006.**

STREET NAME	FROM	TO	DIRECTION	DISTANCE (MILES)	Speed (mph)			
					2006	2007	2008	2009
WALNUT ST	FAIR OAKS	FOOTHILL	EB	2.20	23	25	23	21
	FOOTHILL	FAIR OAKS	WB	2.20	21	20	22	21
WASHINGTON BL	FAIR OAKS	LAKE AV	EB	1.00	21	20	19	23
	LAKE AV	FAIR OAKS	WB	1.00	25	27	26	26

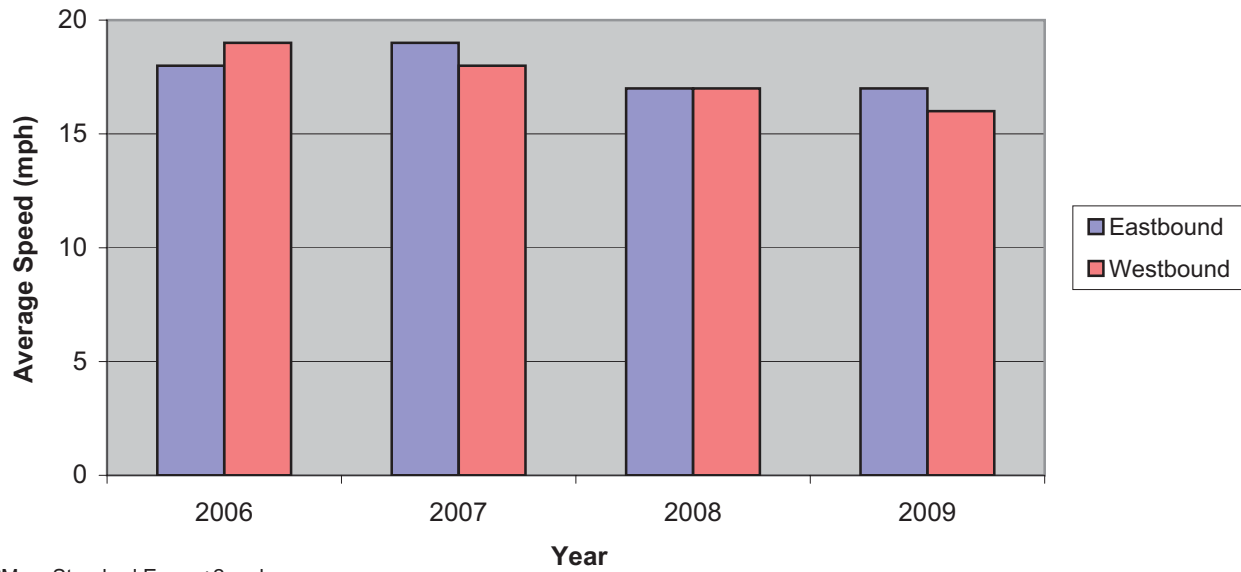
### Arroyo Pkwy [Glenarm - Colorado]



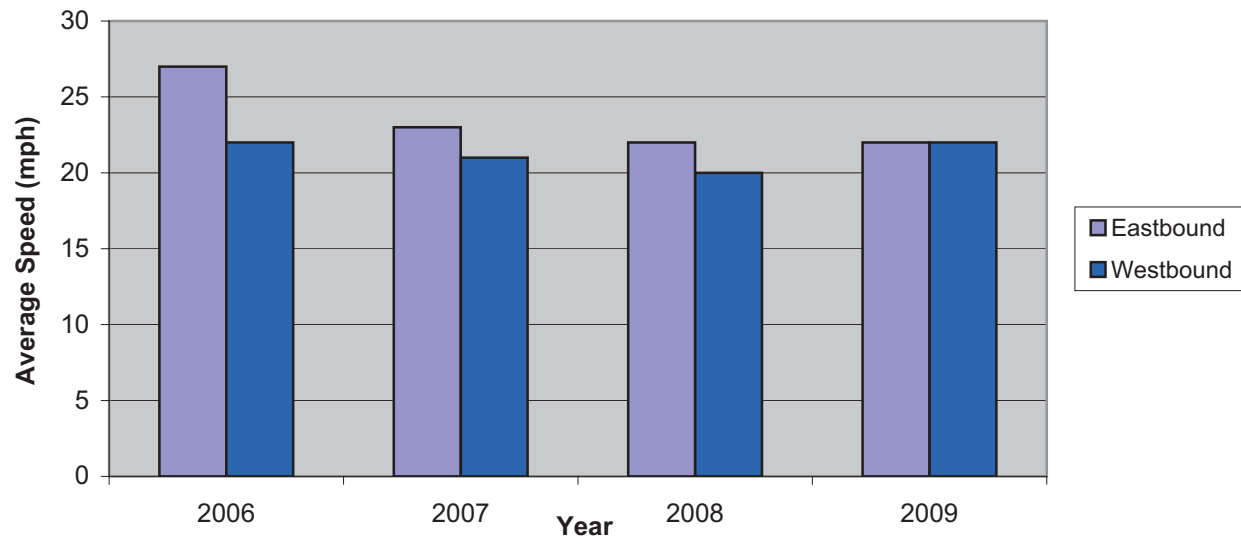
### California Blvd [Orange Grove - Lake]



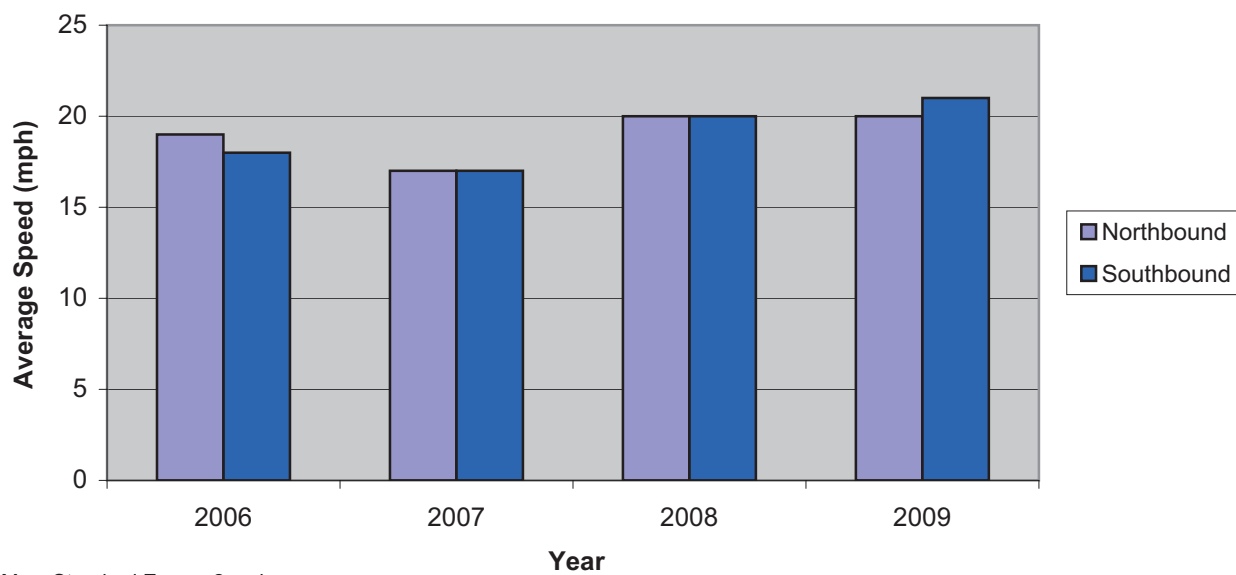
### Colorado Blvd [Arroyo Pkwy - San Gabriel]



### Del Mar Blvd [Orange Grove - San Gabriel]

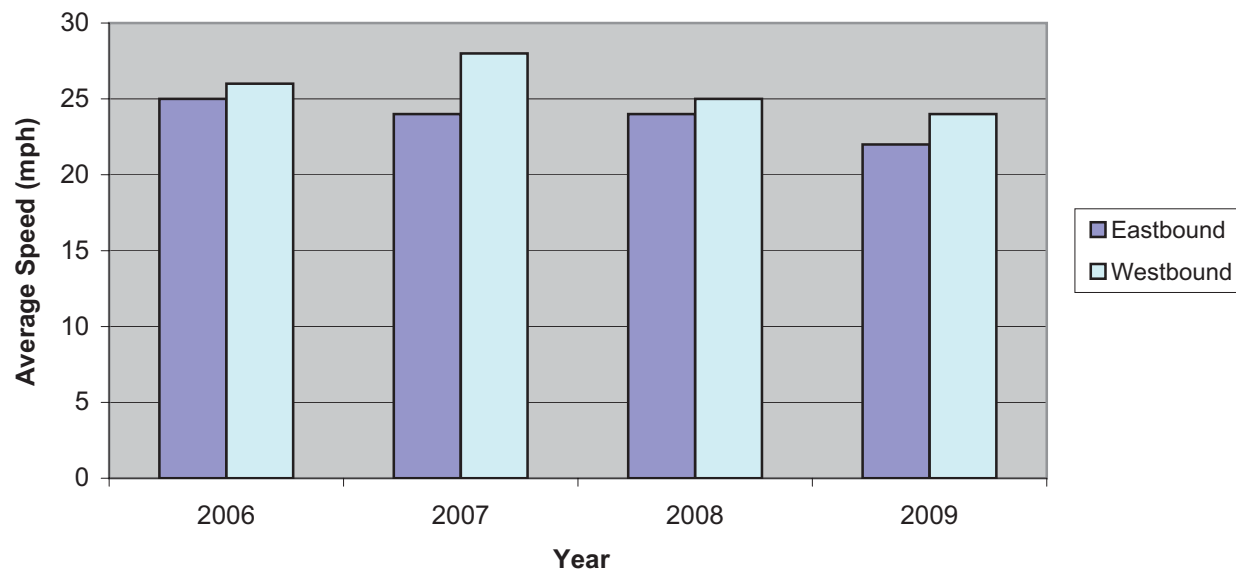


### Fair Oaks Ave [Glenarm - Washington]



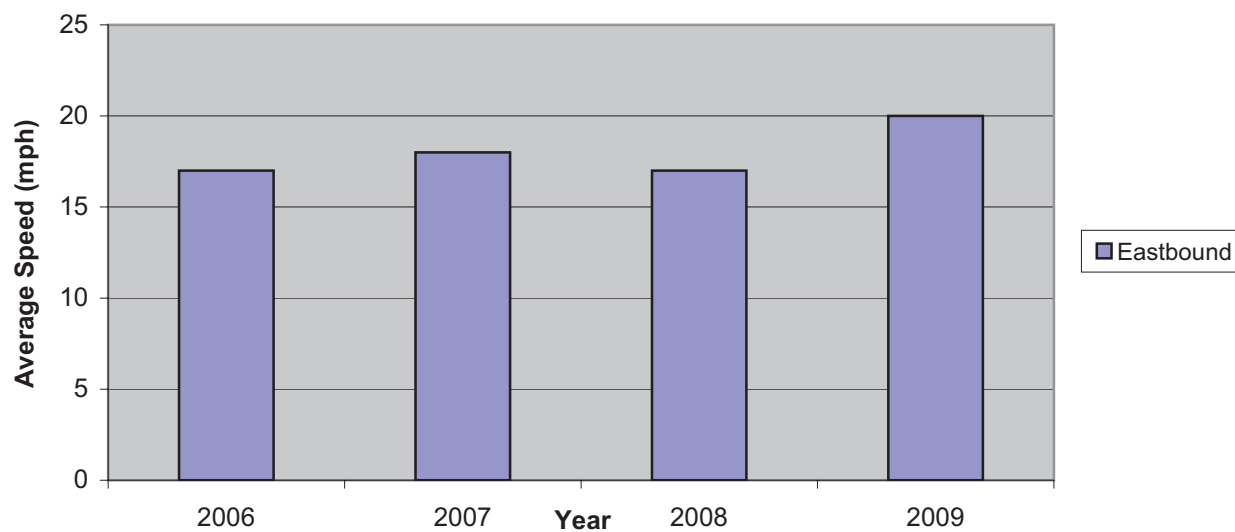
\*Max. Standard Error: ±2 mph

### Foothill Blvd [Walnut - Rosemead]



\*Max. Standard Error: ±3 mph

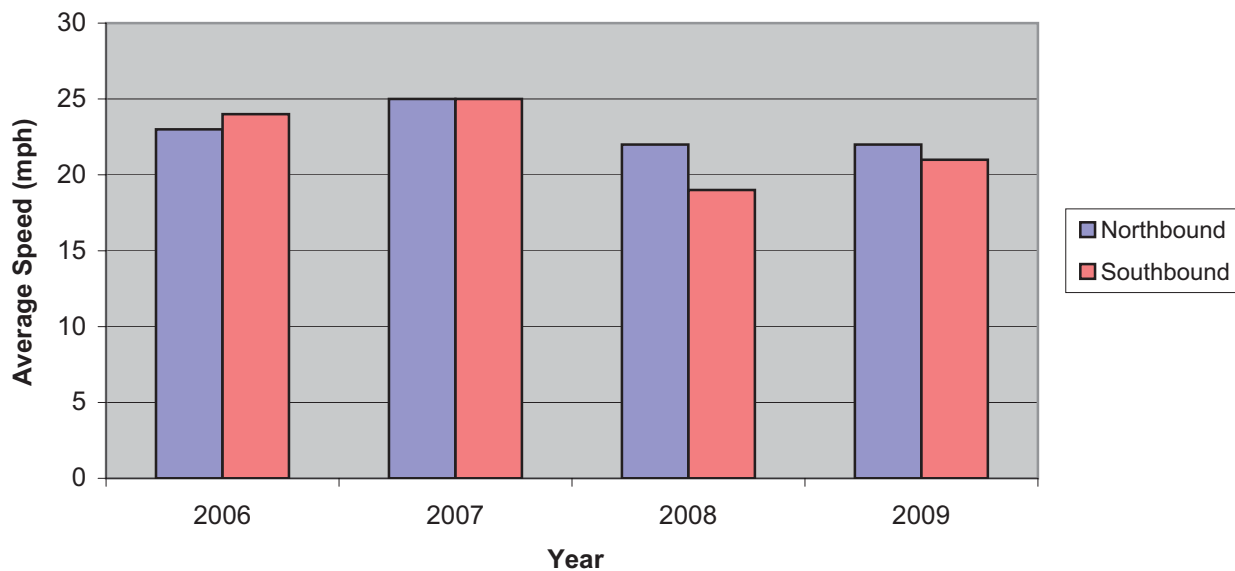
### Green St [St John - Hill]



**\*Note: Green Street did not include St John to Arroyo Pkwy segment in 2006**

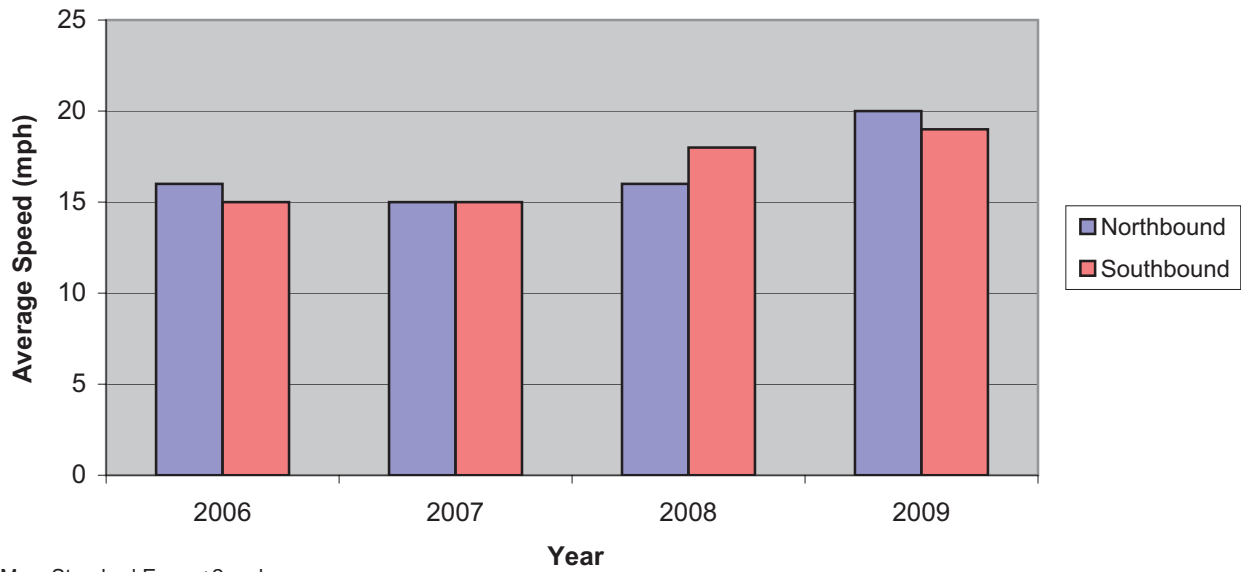
\*Max. Standard Error:  $\pm 3$  mph

### Hill Ave [Del Mar - Washington]

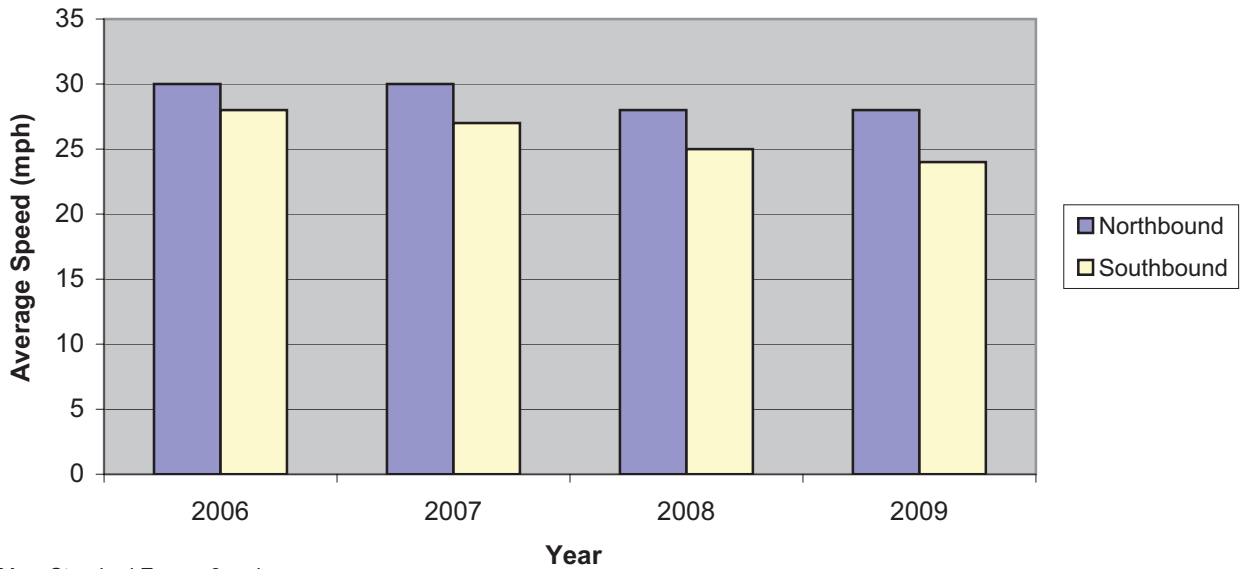


\*Max. Standard Error:  $\pm 3$  mph

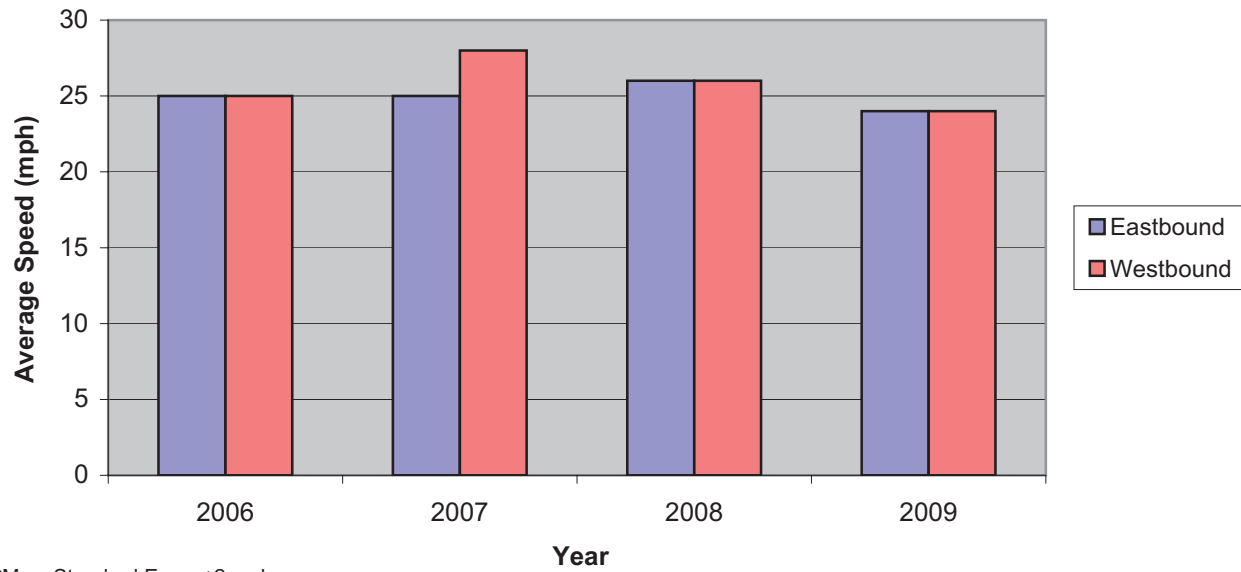
### Lake Ave [Del Mar - Washington]



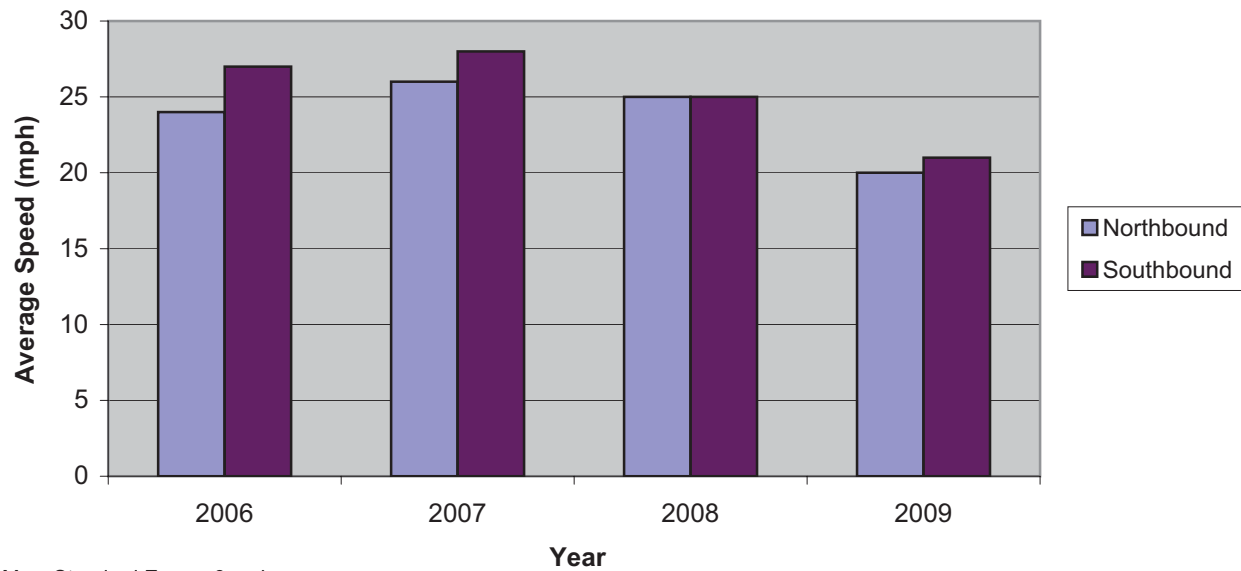
### Lincoln Ave [Orange Grove - Howard]



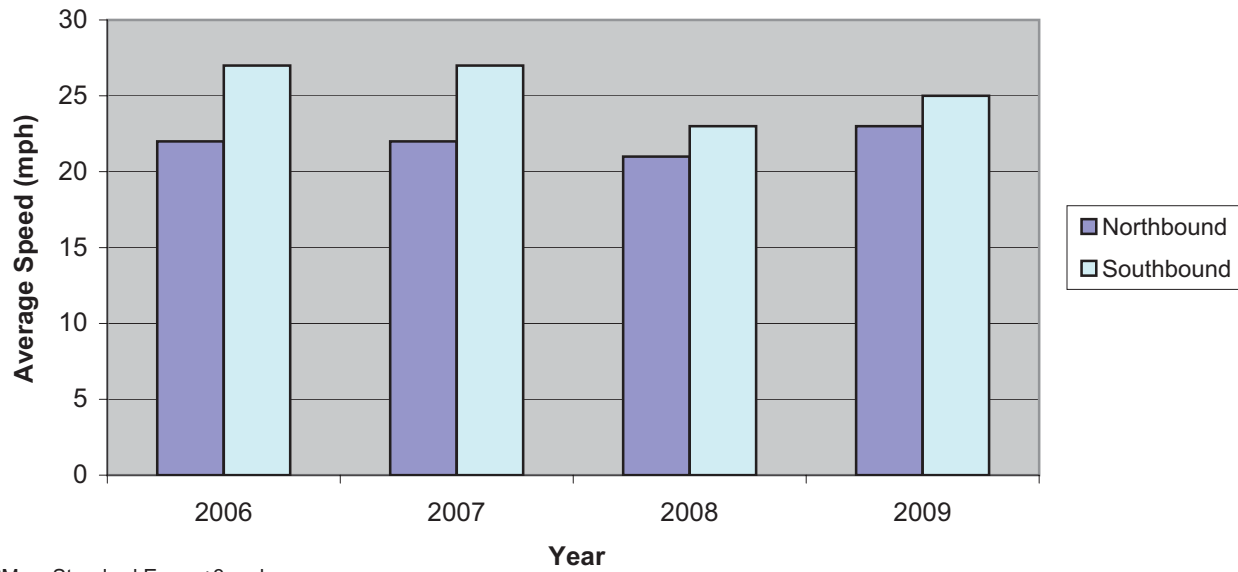
### Orange Grove Blvd [Fair Oaks - San Gabriel]



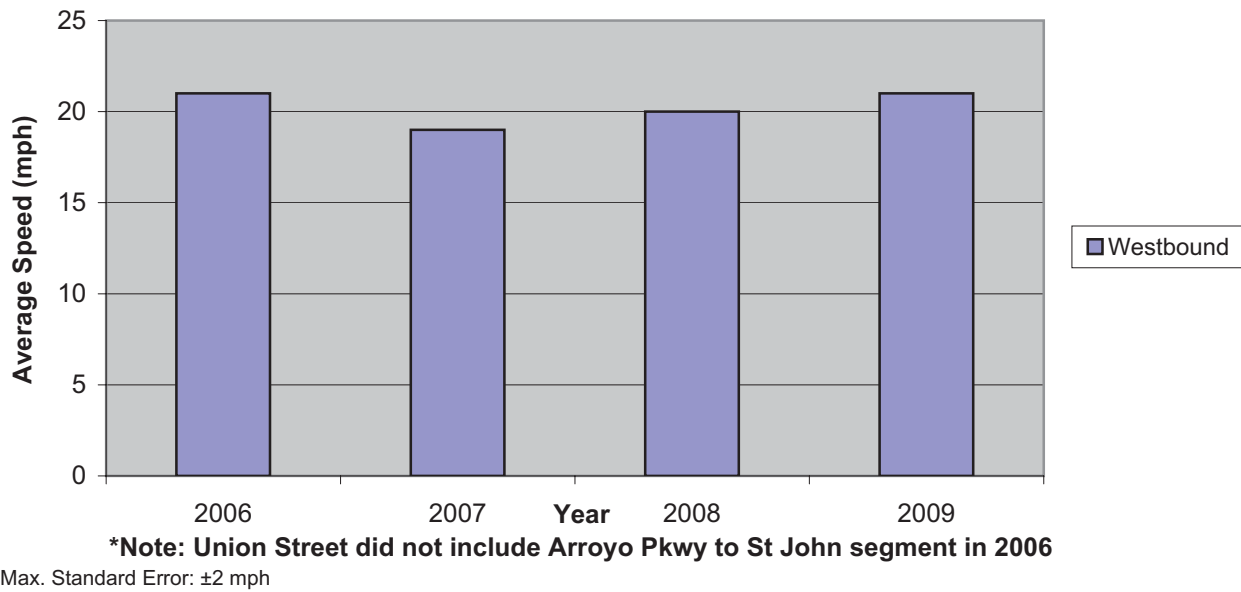
### Orange Grove Blvd [Columbia St - Colorado]



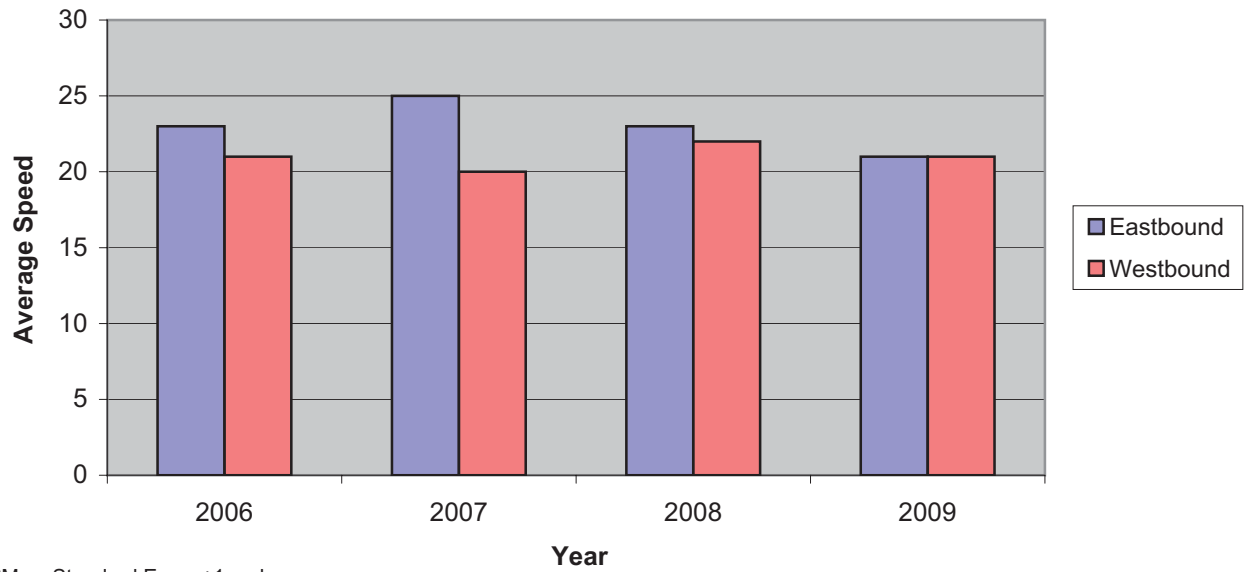
### San Gabriel Blvd [San Pasqual - Foothill]



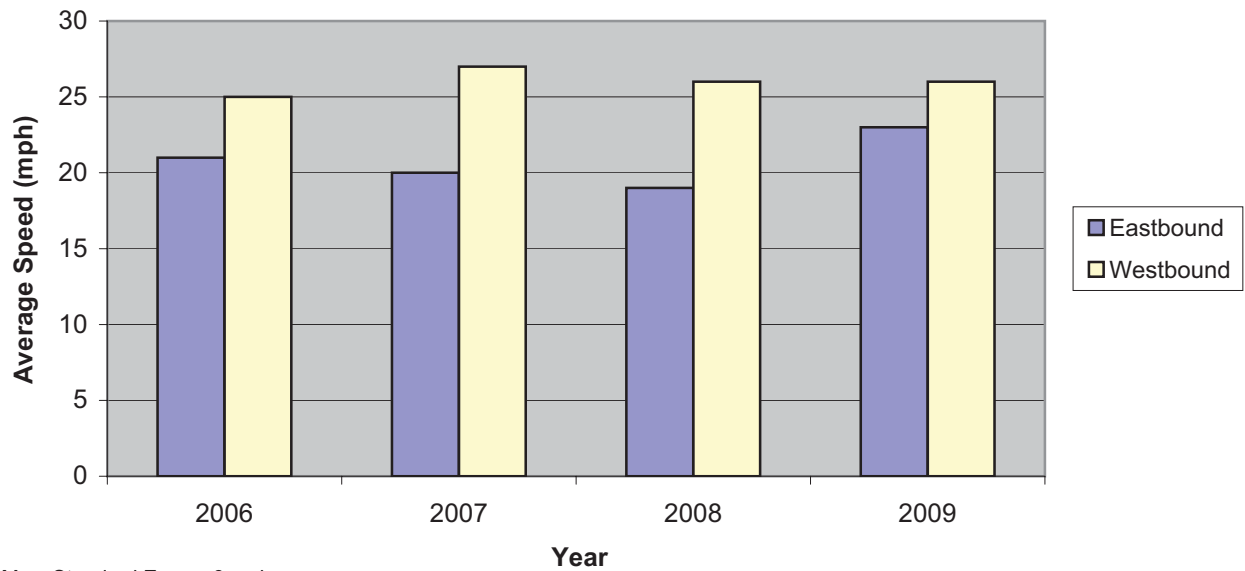
### Union St [Hill - St John]



### Walnut St [FairOaks - Foothill]



### Washington Blvd [Fair Oaks - Lake Av]



**Appendix E:  
Pasadena Area Rapid Transit  
System (ARTS)  
Fiscal Year 2009  
System Information**



# ***Pasadena ARTS Ridership Information***

***Fiscal Year 2009***



**December 2009**



## ***Pasadena ARTS Brief Program Overview***

The Pasadena Area Rapid Transit System (ARTS) is a community circulator serving the City of Pasadena since June 1994. The ARTS provides local transit service, complementing the regional transit service provided by the Metropolitan Transportation Authority (Metro) and Foothill Transit.

The ARTS service has undergone significant developments. In March 2002, the City restructured service from two routes to four routes. In June 2003, the ARTS system was again expanded to add two new routes – one connecting JPL and the west Pasadena area of Linda Vista to the Memorial Park Gold Line and the second providing coverage to East Pasadena. Another change to service included starting Route 10 at 7:00am. In July 2003, with the opening of the Gold Line, ARTS passengers began paying fares for the service.

There was another service change in late February 2005. As part of this service change, additional peak service was added to Route 20, Route 31 and Route 40 with the addition of a bus on each route. This action increased service frequency on the three routes. Service on Routes 10 and 60 were restructured. Route 10 was changed to provide service along Del Mar to Caltech and the Gold Line Allen Station. Route 60 was reconfigured to provide service to the eastern area of Del Mar with connections between the Sierra Madre Villa Gold Line Station and Pasadena City College. A new route, Route 70, was implemented to provide coverage to the southwest area of the City and tie these neighborhoods to the Fillmore Gold Line Station.

In Spring 2007 service changes were made to a few of the bus routes. Schedule adjustments were made to the ARTS Route 31/32 to increase the peak hour frequency for commuters traveling between the Sierra Madre Villa Gold Line Station and the New York Drive/Bradley Street employment center. Minor schedule changes were also made to the ARTS Route 51/52 to provide better bus connections for Art Center students. In addition, in an effort to increase ridership the Route 70 was modified to provide service to Old Pasadena from the South Orange Grove and Avenue 64 areas.

No changes to services were made in Fiscal Year 2008 or in Fiscal Year 2009. In December 2009 the Route 70 was discontinued due to extremely low patronage.

# ARTS Service “Snap Shot”

Fiscal Year 2009	
<b>Service Area:</b>	<b>23 Square Miles</b>
<b>Population based on Metro* Data:</b>	<b>148,126</b>
<b>Annual Passenger Trips:</b>	<b>1,816,342</b>
<b>Annual Service Hours:</b>	<b>61,036</b>
<b>Annual Service Miles:</b>	<b>699,937</b>
<b>Total Operating Expenses:</b>	<b>\$4,026,768</b>
<b>Annual Farebox Revenue:</b>	<b>\$542,826</b>
<b>Farebox Recovery Ratio:</b>	<b>14%</b>

\*Los Angeles County Metropolitan Transportation Authority’s most recent population estimate for Pasadena.

# Reported Productivity Measures

One measurement of service effectiveness is the number of passengers carried per service hour. The Department of Transportation has established ridership productivity measures for the Pasadena ARTS service that is reported to the City Council on a quarterly basis. The standards compared to the actual passengers per service hour statistics are shown below.

Two standards have been used for the ARTS, one for “Local Lines” and one for “Feeder Lines.” The local lines are Routes 20, 31/32 and 40. These are the lines that connect major neighborhood service areas to diverse community destination centers as well as schools, shopping centers and Gold Line stations. Routes 10, 51/52, 60 and 70 are Feeder Lines that provide links between the business districts and Gold Line stations (Route 10) or link low density residential neighborhoods to the central district (Routes 51/52, 60 and 70). Routes 51/52, 60 and 70 are weekday-only routes, with Routes 52, 60 and 70 only operating during the commute hours.

FY 2008	Local Lines	Feeder Lines	Total System
<b>Standard</b>	<b>26</b>	<b>10</b>	
1 <sup>st</sup> Quarter	38	10	28
2 <sup>nd</sup> Quarter	37	10	27
3 <sup>rd</sup> Quarter	35	11	26
4 <sup>th</sup> Quarter	37	11	27
Year Total	37	10	27

FY 2009	Local Lines	Feeder Lines	Total System
<b>Standard</b>	<b>26</b>	<b>10</b>	
1 <sup>st</sup> Quarter	38	13	29
2 <sup>nd</sup> Quarter	39	12	29
3 <sup>rd</sup> Quarter	41	12	30
4 <sup>th</sup> Quarter	42	12	31
Year Total	40	12	30

# Service Productivity Indicators

Service productivity indicators are used by transit agencies to measure the effectiveness (ridership) and efficiency (cost) of service that is provided. These indicators include:

- Ridership
  - Growth or decrease in ridership
  - Passengers per hour
- Cost
  - Cost per hour
  - Cost per passenger
  - Subsidy per passenger
  - Farebox recovery

These productivity indicators are used to examine the effectiveness and efficiency of service provided during Fiscal Year 2009. A performance assessment is provided in this report for various ridership and cost based indicators.

# Performance Assessment: Comparative Look

For a number of key performance measures identified in this report, a comparison is made between Pasadena ARTS and the Glendale Bee. The two transit programs share a number of common traits:

- The two transit programs are part of the Los Angeles County transit operators considered to be Local Transit Systems, as they are funded primarily with local return Proposition A and Proposition C sales tax money.
- They are two of the largest Local Transit System operators participating in Metro's Incentive Program:
  - Glendale operates 89,797 hours of service with 29 buses during the peak periods
  - Pasadena operates 61,036 hours of service with 18 buses during the peak periods
- Both transit programs are managed by their respective city under contract to a private transit operator.
- Pasadena and Glendale are neighboring cities which have a vibrant mix of land uses, with their local bus systems providing key connections between commercial, employment, and residential areas, as well as to regional transit bus and rail lines.

**Service Productivity Indicator**

**RIDERSHIP PERFORMANCE**

# Ridership: System-Wide

FY08      FY09      Variance

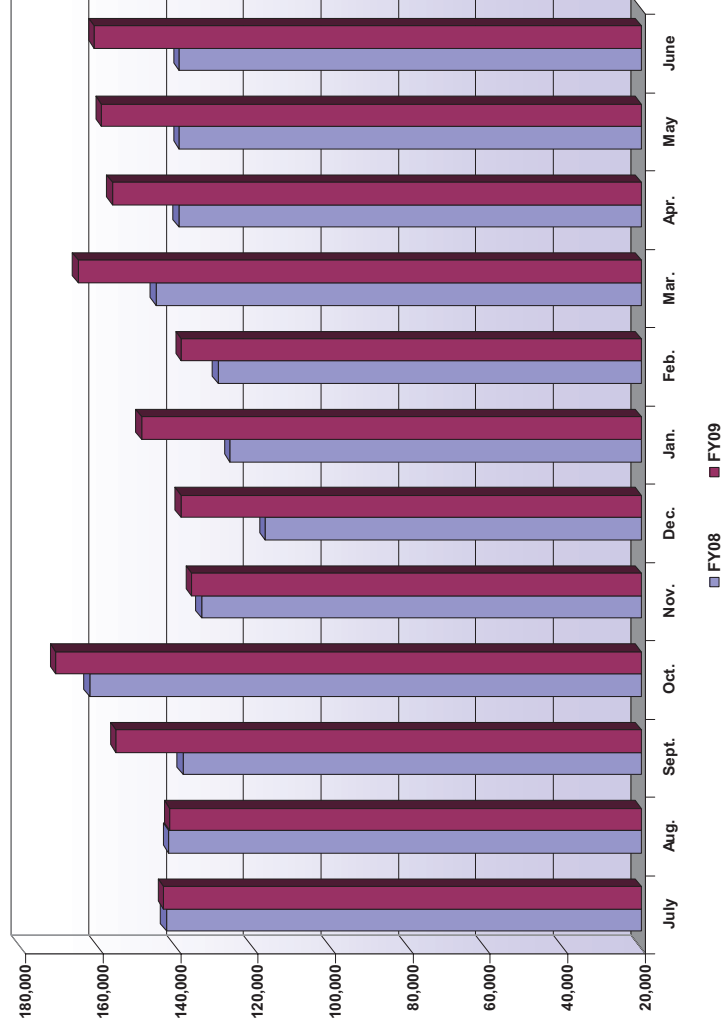
System Wide 1,654,147    1,816,342    + 10%

Ridership increased overall by 10 percent in Fiscal Year 2009 compared to Fiscal Year 2008. There are several factors that may have affected ridership:

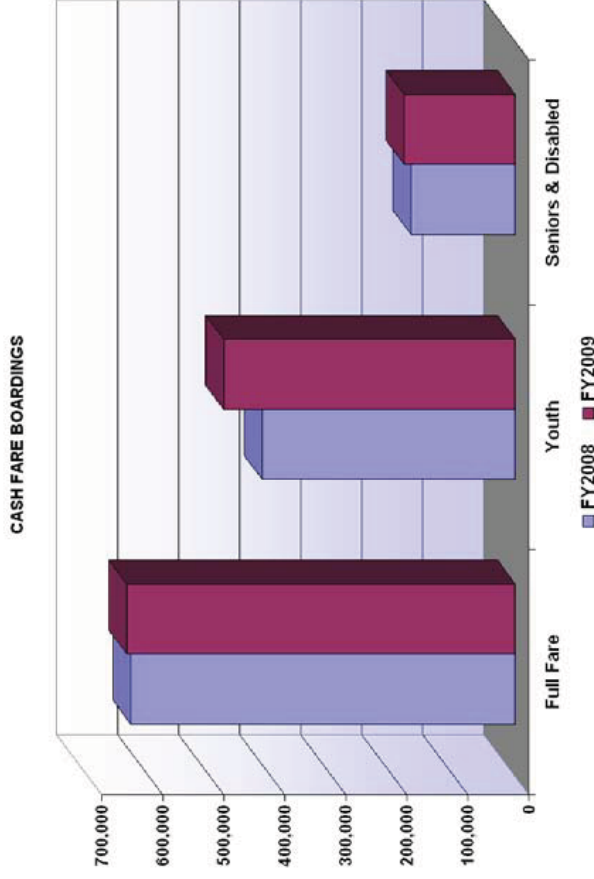
- There was less rain fall during late autumn and winter than there was in the prior year. Both Youth and Seniors & Disabled passenger groups are more likely to be impacted by weather conditions. These groups saw increased ridership in FY2009.
- The price of gasoline continued to be high during FY2009.

## Performance Assessment:

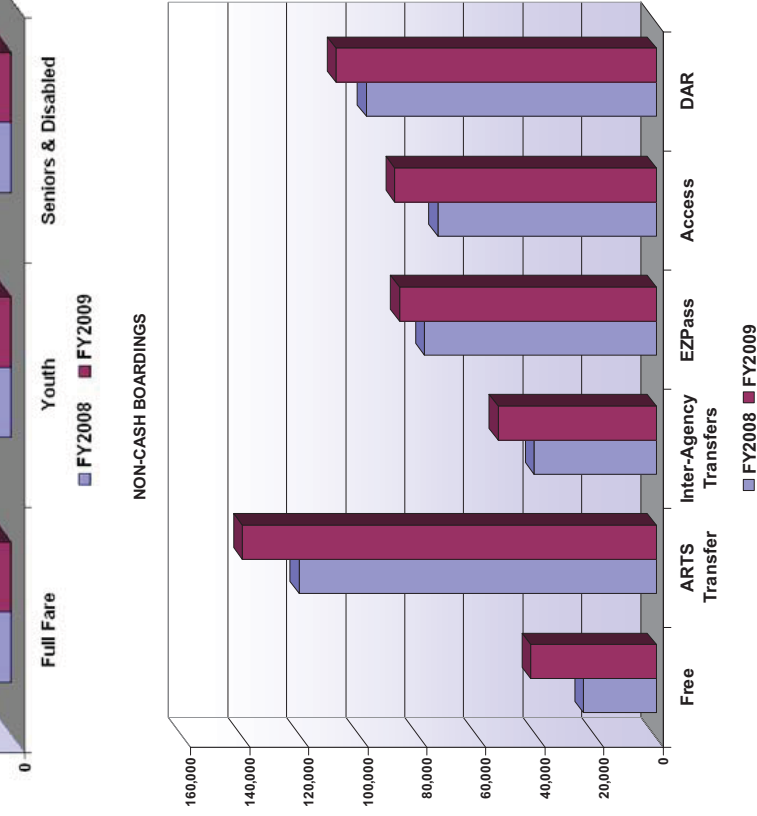
The ridership increase of 10 percent seen in Fiscal Year 2009 was very good. For comparison, the Glendale Bee transit service experienced an increase in ridership of 5 percent.



# Ridership: Comparison by Fare Category



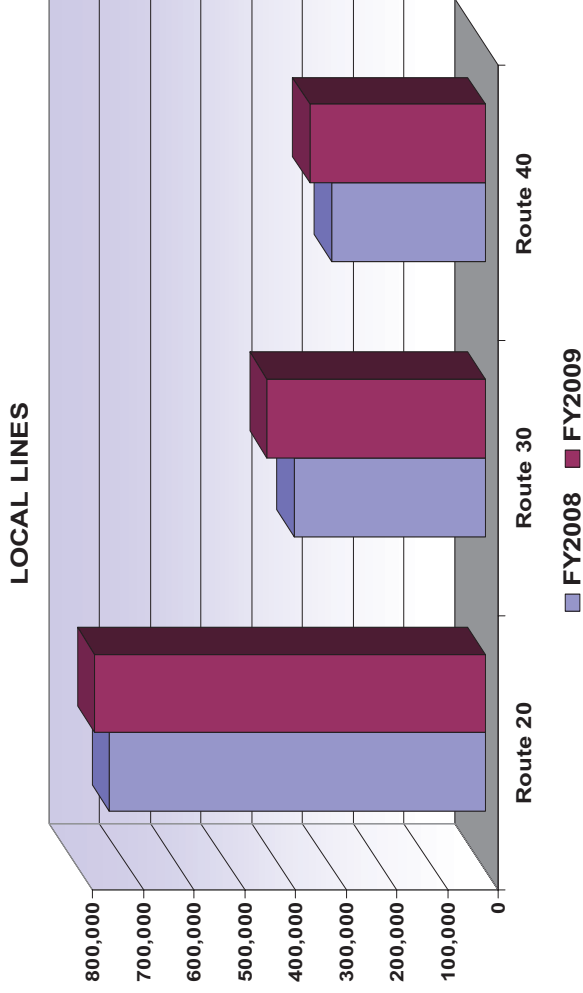
Understanding who is using the bus service is very important. The key tool for this information is the fare category of the passengers when they board the bus. There are two major categories: cash fare boardings and non-cash boardings. Each of these groups have subsets.



Ridership in the Cash Fare Boarding category increased overall by 7 percent. This group includes the Full Fare passenger category which had a very slight increase of 1 percent; the Youth group that had a significant increase of 15 percent; and the Seniors & Disabled group that had an increase of 6 percent.

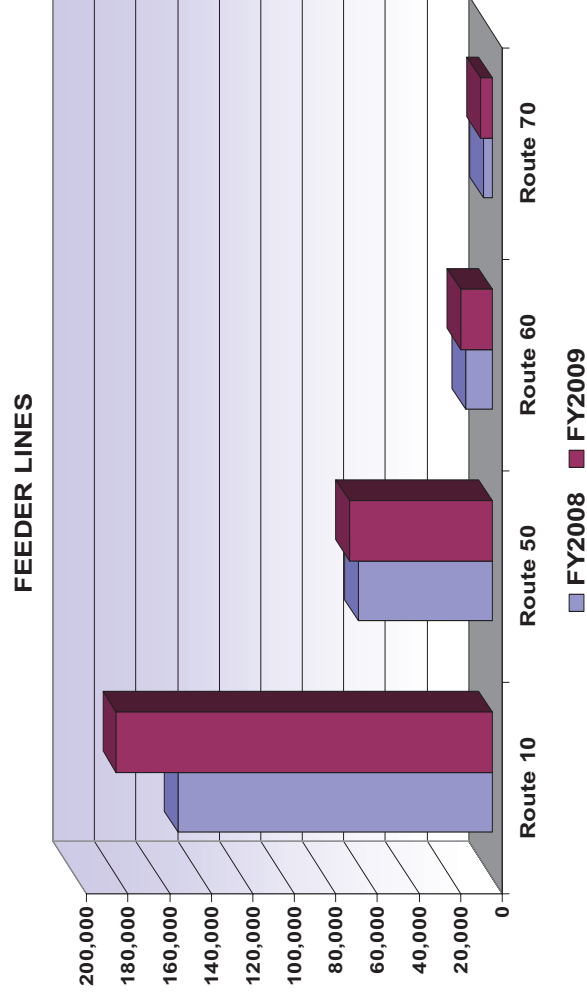
Ridership in the Non-Cash Boarding category increased overall by 19 percent.

# Ridership: Comparison by Route



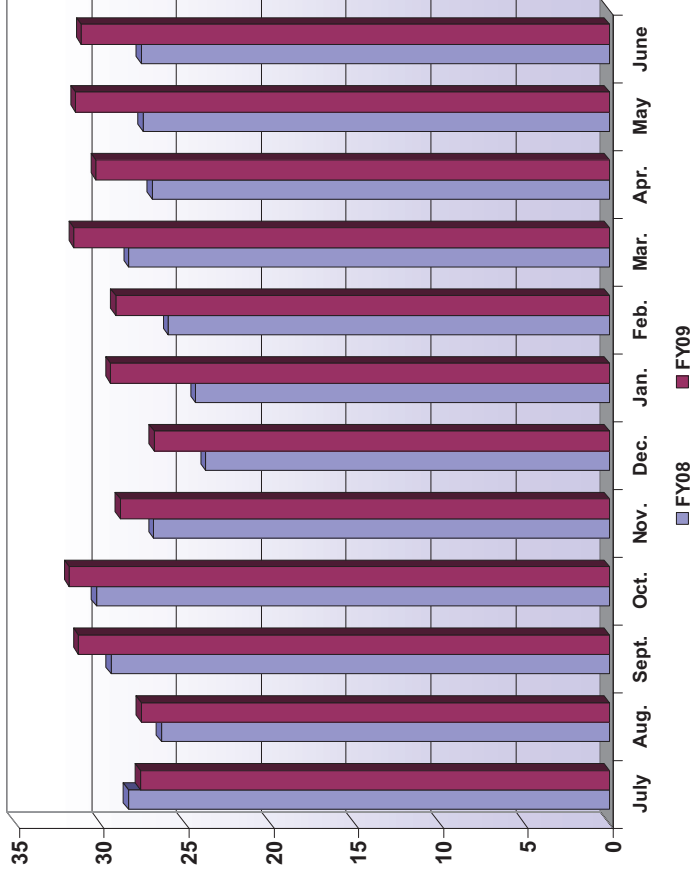
The overall number of passengers using each route provides an important look at service productivity.

The Local Lines which connect major neighborhood service areas to diverse community destination centers as well as schools, shopping centers and Gold Line stations include Routes 20, 31/32 and 40 carry the majority of the ridership. Ridership on these lines increased overall by 9 percent. Ridership on Route 20 grew by 4 percent; ridership on Routes 31/32 increased by 14 percent; and ridership on Route 40 increased by 14 percent.



The Feeder Lines which include Routes 10, 51/52, 60 and 70 provide links between the business districts and Gold Line stations or connect low density residential neighborhoods to the central district. Overall ridership on these lines increased by 16 percent. Route 10 had a 20 percent increase; Route 51/52 had an increase of 7 percent; Route 60 had a 17 percent increase; and Route 70 had an increase of 39 percent.

# Ridership: Passengers Per Hour



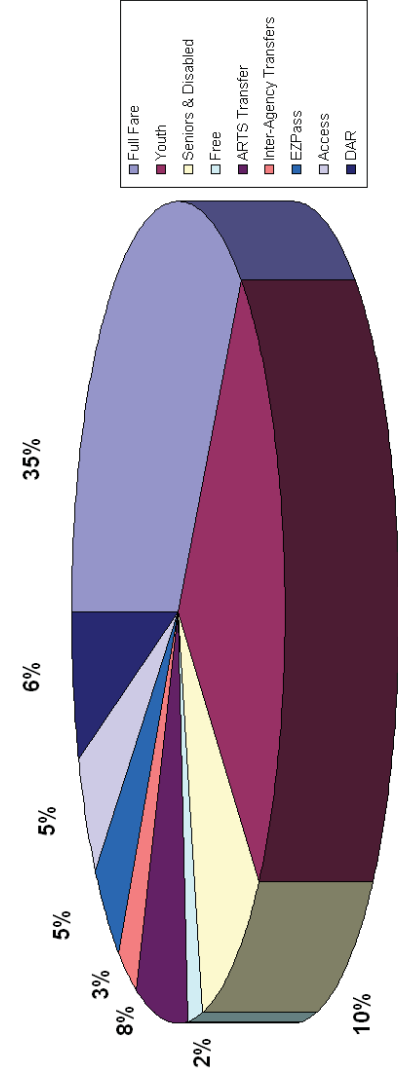
One measurement of service effectiveness is the number of passengers carried per service hour. A comparison of the number of passengers per hour for the last two years is shown on the chart to the left, with details displayed in the table below.

Average Passengers Per Hour			
	<u>FY08</u>	<u>FY09</u>	<u>Variance</u>
System Wide:	27	30	+10%
Route 10	12	14	+20%
Route 20	40	41	+ 4%
Route 31/32	37	42	+14%
Route 40	31	35	+14%
Route 50	13	14	+ 6%
Route 60	6	7	+16%
Route 70	2	3	+38%

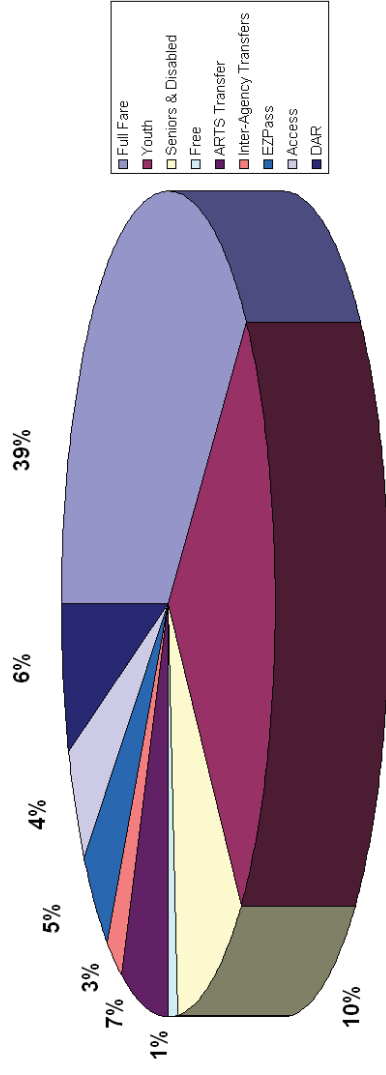
## Performance Assessment:

The 10 percent increase in the system-wide average passenger per hour is very good. For comparison, the Glendale Bee transit service experienced an increase of 6 percent in this area.

# Ridership: Passengers by Fare Category



**FY09**



**FY08**

- The distribution of ridership by fare category has remained relatively stable for the past several years as shown in the two charts to the left.
- The largest group of riders are those who paid the full fare of 50 cents.
- Youth age six years through 12<sup>th</sup> grade comprise the second largest group of riders paying 25 cents.
- Seniors and persons with disabilities comprise the third largest group of riders. This category includes three subsets: people who pay the 25 cents cash fare, people with disabilities who board showing an Access Services card membership, and Pasadena Dial-A-Ride members.
- The fourth largest category are people who board the ARTS bus with a transfer from either another ARTS bus or another agency bus (Inter-Agency Transfer) such as Metro or Foothill Transit.

# Performance: Agency Review

Agency	FY08 Passengers per Hour	FY09 Passengers per Hour
Alhambra	32	33
Baldwin Park	12	19
Carson	22	26
Cerritos	10	12
Cudahy	37	29
El Monte	27	28
Glendale	24	25
Huntington Park	15	18
Monterey Park	24	24
Palos Verdes	11	11
<b>Pasadena</b>	<b>27</b>	<b>30</b>
West Covina	9	10
West Hollywood	6	6

The City of Pasadena participates in the Metro county-wide incentive program for local fixed-route programs. The chart to the left shows how Pasadena compares to other agencies operating in this program.

## Performance Assessment:

The Pasadena ARTS service has the second highest performance in this area behind the City of Alhambra. A system wide average of 30 passengers an hour is very good.

**Service Productivity Indicator**

**COST PERFORMANCE**

# Operating Costs: Annual Costs & Costs per Hour

	Annual Costs		
	<u>FY08</u>	<u>FY09</u>	<u>Variance</u>
Contract	\$ 3,397,549	\$ 3,442,642	+ 1 %
Fuel	580,156	477,448	- 18 %
Administrative	<u>127,260</u>	<u>106,678</u>	- 16 %
<b>Total Costs</b>	<b>\$ 4,104,965</b>	<b>\$ 4,026,768</b>	<b>- 2 %</b>

The ARTS program has three operating cost centers: 1) contracts (service contract and other contracts), 2) fuel, and 3) administrative.

Contract costs are the highest cost center for the ARTS program. In FY2009 there was a one percent increase in this area.

Fuel costs decreased in FY2009 reflecting the trend in the general economy.

Expenditures in the Administrative area were reduced in two major areas: materials and supplies; and printing.

	Costs per Hour		
	<u>FY08</u>	<u>FY09</u>	<u>Variance</u>
Contract	\$55.77	\$56.40	+ 1%
Fuel	9.52	7.82	- 18%
Administrative	<u>2.09</u>	<u>1.75</u>	- 16%
<b>Total Cost</b>	<b>\$67.38</b>	<b>\$65.97</b>	<b>- 2 %</b>

## Performance Assessment:

The 2 percent decrease in the total annual costs is good. For comparison, the Glendale Bee transit service had a decrease of 4 percent in this area. The Glendale Bee service did operate slightly fewer hours of service in FY2009 compared to FY2008 while the ARTS operated slightly more hours in FY2009 compared to FY2008. Transit staff worked with the City's contractor, First Transit, to hold contract costs to a very modest 1 percent increase.

# Operating Costs: Cost Per Passenger

	<u>FY08</u>	<u>FY09</u>	<u>Variance</u>
Cost per Passenger	\$ 2.48	\$ 2.22	- 11%
Revenue per Passenger	.31	.30	- 3%
Subsidy per Passenger	\$ 2.17	\$ 1.92	- 12%

The decrease in operating costs per passenger trip is a result of the increase in ridership of 10 percent and the decrease in operating costs of two percent.

The decrease in revenue per passenger reflects the increase ridership in the non-cash fare categories (19% across all categories) and the slight increase in the cash fare passenger category (7% in all groups).

## Performance Assessment:

The large decreases in the cost per passenger and the subsidy per passenger are very good. As noted above, this is a result of the decrease in operating costs and the increase in passengers. Pasadena ARTS's cost per passenger decreased 11% compared to Glendale's decrease in cost by 9%. Pasadena ARTS's subsidy per passenger decreased by 12% compared to a decrease of 7% by Glendale.

# FY09 Performance: Agency Review

Agency	Buses	Hours	Cost per Hour	Cost per Passenger	Subsidy per Trip	Farebox Recovery Ratio
Alhambra	8	16,652	48.00	1.44	1.42	2%
Burbank	14	25,528	67.39	3.57	3.57	0%
Carson	8	28,842	64.63	2.48	2.24	10%
Cerritos	7	24,291	49.28	4.19	3.75	11%
Cudahy	1	3,158	49.83	1.71	1.71	0%
El Monte	7	23,523	66.50	2.40	2.04	15%
Glendale	29	89,797	71.62	2.85	2.66	7%
Huntington Park	5	18,418	36.80	2.04	1.72	16%
Monterey Park	6	18,791	60.39	2.53	2.40	5%
Palos Verdes	27	18,815	93.73	8.56	6.92	19%
<b>Pasadena</b>	<b>18</b>	<b>61,036</b>	<b>65.97</b>	<b>2.22</b>	<b>1.92</b>	<b>14%</b>
West Covina	6	19,963	61.63	6.30	6.07	4%
West Hollywood	4	10,799	66.55	10.95	10.92	0.3%
Average			61.72	3.94	3.64	8%

The City of Pasadena participates in the Metro county-wide incentive program for local fixed-route programs. The chart to the left shows how Pasadena compares in FY09 to other agencies operating in this program. The data is from a November 2009 report and may change following a complete audit.

The cost per passenger for each system relies on the performance of each operator in generating ridership.

The subsidy per trip relies on the number of passengers, the established fare and the average fare paid by each rider. The greater the number of discounts given to various fare categories, i.e., youth, seniors, etc., the lower the average fare is in relation to the base fare.

Farebox recovery represents the amount of operating costs recovered from passenger fares.