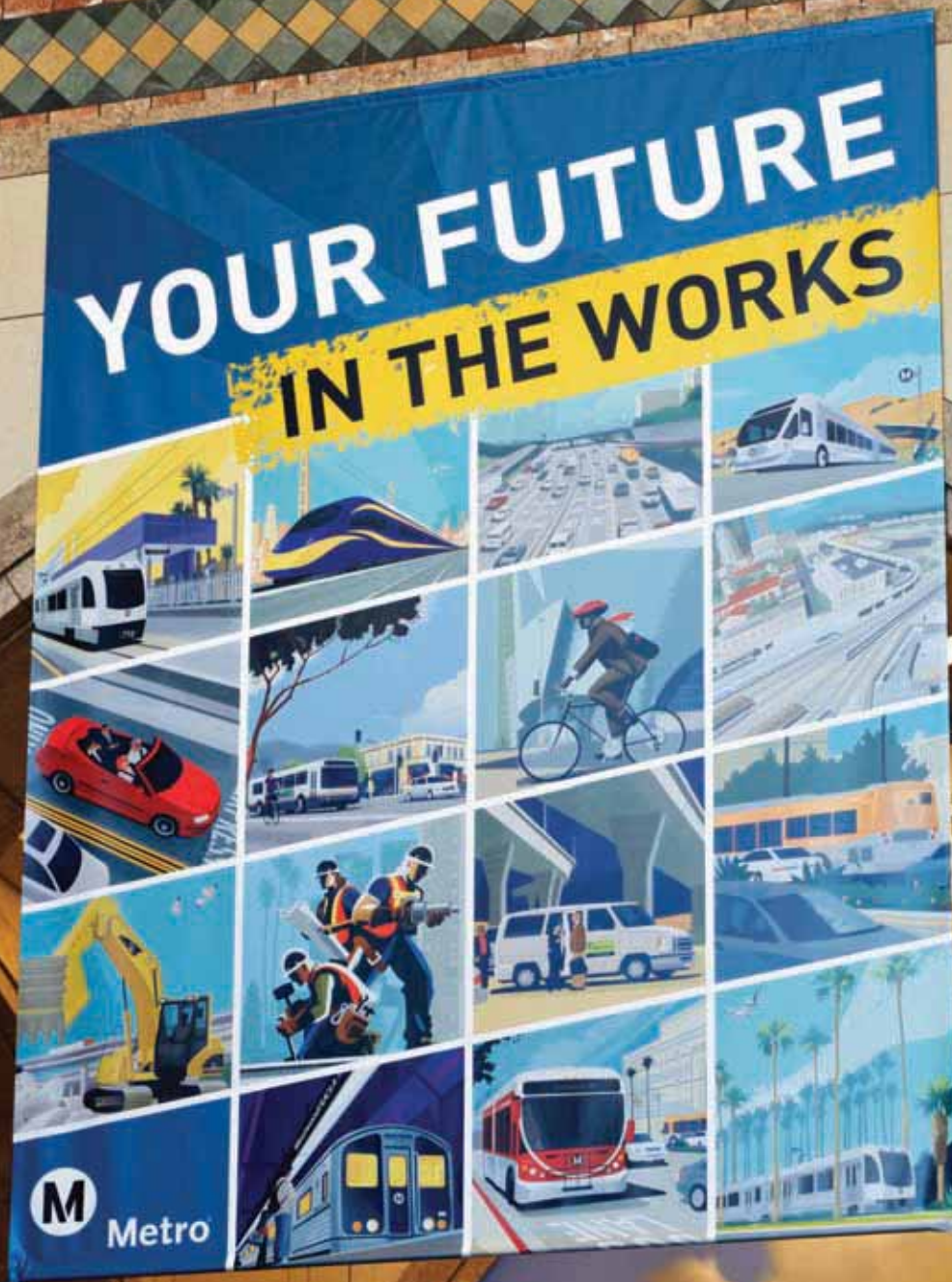


FINANCIAL STATEMENTS AND REQUIRED SUPPLEMENTARY INFORMATION

June 30, 2010

(With Independent Auditor's Report Thereon)



Metro®

**LOS ANGELES COUNTY
METROPOLITAN TRANSPORTATION AUTHORITY**

Financial Statements and
Required Supplementary Information

June 30, 2010

(With Independent Auditors' Report Thereon)



LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY

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KPMG LLP
Suite 700
20 Pacifica
Irvine, CA 92618-3391

Independent Auditors' Report

The Board of Directors
Los Angeles County Metropolitan Transportation Authority:

We have audited the accompanying financial statements of the governmental activities, the business-type activities, each major fund, and the aggregate remaining fund information of the Los Angeles County Metropolitan Transportation Authority (LACMTA) as of and for the year ended June 30, 2010, which collectively comprise LACMTA's basic financial statements as listed in the table of contents. These financial statements are the responsibility of LACMTA's management. Our responsibility is to express opinions on these financial statements based on our audit. We did not audit the defined benefit pension plan financial statements of the United Transportation Union Plan (UTU), the Transportation Communication Union Plan (TCU), the Amalgamated Transit Union Plan (ATU), the Non-Contract Employees Plan (NCE), and the American Federation State County Municipal Employees Plan (AFSCME), which are reported in LACMTA's Employee Retirement Trust Funds and represent 59%, 60%, and 69% of the assets, net assets/fund balances, and revenues/additions of the aggregate remaining fund information, respectively. Those financial statements were audited by another auditor whose reports thereon have been furnished to us, and our opinions, insofar as they relate to the amounts included for UTU, TCU, ATU, NCE, and AFSCME, are based solely on the reports of the other auditor.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of LACMTA's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinions.

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the governmental activities, the business-type activities, each major fund, and the aggregate remaining fund information of the Los Angeles County Metropolitan Transportation Authority, as of June 30, 2010, and the respective changes in financial position, and where applicable, cash flows thereof for the year then ended, in conformity with U.S. generally accepted accounting principles.

As discussed in note T in the notes to the financial statements, the LACMTA adopted the provisions of Governmental Accounting Standards Board (GASB) Statement No. 53, *Accounting and Reporting for Derivative Instruments*, effective July 1, 2009.



In accordance with *Government Auditing Standards*, we have also issued our report dated December 20, 2010 on our consideration of LACMTA's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* and should be considered in assessing the results of our audit.

The management's discussion and analysis on pages 3 through 15, the schedules of funding progress for pension plans and other postemployment benefits on pages 87 and 88, respectively, and the budgetary comparison information on pages 89 through 96 are not a required part of the basic financial statements but are supplementary information required by U.S. generally accepted accounting principles. We have applied certain limited procedures, which consisted principally of inquiries of management regarding the methods of measurement and presentation of the required supplementary information. However, we did not audit the information and express no opinion on it.

KPMG LLP

December 20, 2010

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY
Management's Discussion and Analysis
For the Fiscal Year Ended June 30, 2010

As management of the Los Angeles County Metropolitan Transportation Authority (LACMTA), we offer readers of our financial statements this narrative overview and analysis. It is designed to:

- Provide an overview of LACMTA's financial activities;
- Highlight significant financial issues;
- Discuss changes in LACMTA's financial position;
- Explain any material deviations from the approved budget; and
- Identify individual fund issues.

We encourage readers to consider information presented here in conjunction with the basic financial statements (beginning on page 17). All dollar amounts are expressed in thousands unless otherwise indicated.

Financial Highlights

- LACMTA's total assets exceeded its liabilities as of June 30, 2010 by \$7,063,499. Of this amount, \$232,492 is reported as unrestricted net assets.
- Total net assets increased by \$389,719 (5.84 percent) this year over previous year. Business-type net assets increased by \$278,772 (6.15 percent) and governmental net assets increased by \$110,947 (5.18 percent). The increase in the business-type activities net assets is due to capital grants received for billable projects. The increase in net assets in the governmental activities is mainly due to revenues received from Measure R half-cent sales tax which was became effective in July 2009.
- At year-end, the governmental funds reported fund balances totaling \$1,418,958. Of this amount, \$1,202,994 is reserved for encumbrances and other commitments and \$215,964 is unreserved fund balance available for spending at LACMTA's discretion.

Overview of the Financial Statements

This discussion and analysis is intended to serve as an introduction to LACMTA's basic financial statements. LACMTA's basic financial statements comprise three components: (1) the government-wide financial statements; (2) the fund financial statements; and (3) notes to basic financial statements. This report also contains required supplementary information in addition to the basic financial statements.

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Management's Discussion and Analysis
For the Fiscal Year Ended June 30, 2010

Government-wide Financial Statements

The government-wide financial statements provide a broad overview of LACMTA's finances in a manner similar to private-sector entities.

The statement of net assets (page 17) presents information on all of LACMTA's assets and liabilities, with the difference between the two being reported as net assets. Trends of increasing or decreasing net assets may serve as useful indicators of financial health.

The statement of activities (pages 18-19) shows how net assets changed during the year. It reports these changes when the underlying event occurs (total economic resources measurement focus) regardless of the timing of related cash flows. It shows the gross and net costs of LACMTA's functions.

Both of the government-wide financial statements distinguish between those functions that are intended to recover a significant portion of their costs from user fees and charges (business-type activities) and those functions that are principally supported by intergovernmental revenues (governmental activities).

The government-wide financial statements include LACMTA and its legally separate entities that are financially accountable to LACMTA. Since they are in substance part of LACMTA's operations, their information has been blended with LACMTA's information. These entities include Public Transportation Services Corporation (PTSC), the Service Authority for Freeway Emergencies (SAFE), and the Exposition Metro Line Construction Authority (EXPO).

Fund Financial Statements

A fund is a group of related accounts that is distinguished by specific activities or objectives in accordance with special regulations or restrictions. LACMTA uses fund accounting to ensure and demonstrate compliance with legal requirements. All of LACMTA's funds are divided into three categories: proprietary, governmental, and fiduciary.

Proprietary Funds

LACMTA maintains only one type of proprietary fund: the Enterprise fund. All transit-related transactions, including support services, capital and related debt transactions are in the Enterprise fund.

The Enterprise fund is used to report the type of functions presented in the business-type activities in the government-wide financial statements. LACMTA uses the Enterprise fund to account for its transit operations: bus, rail, and regional programs. The basic proprietary fund financial statements are on pages 27-29.

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Governmental Funds

Governmental funds are used to account for the functions reported as governmental activities in the government-wide financial statements. Unlike the government-wide financial statements, governmental funds use the current financial resources measurement focus. Thus, they report near term inflows, outflows, and balances of spendable resources.

The basic governmental fund financial statements are on pages 20-21 and 24-25.

Since the focus of governmental funds is narrower than that of the government-wide financial statements, it is useful to compare the information presented for governmental funds with similar information provided for governmental activities in the government-wide financial statements. As a result, readers may better understand the long-term impact of the government's near-term financing decisions. Reconciliation statements on pages 23 and 26 are shown to facilitate the comparison between the governmental funds and the government-wide financial statements.

LACMTA maintains eleven individual governmental funds, seven of which are considered major funds. Individual fund data for the major funds are presented in the governmental funds balance sheet and governmental funds statement of revenues, expenditures, and changes in fund balances.

LACMTA adopts a spending plan each year. Budgetary comparison schedules are provided for the General fund and for each major special revenue fund on pages 89-96.

Fiduciary Funds

Fiduciary funds are used to account for assets held by LACMTA in a trustee capacity or as an agent. Since these assets are not available to fund LACMTA's programs, they are excluded from the government-wide financial statements. The basic fiduciary fund statements can be found on pages 30-31. They cover the five employee pension funds and the OPEB Trust fund that are administered by LACMTA.

Notes to Basic Financial Statements

Various disclosures accompany the government-wide and fund financial statements in order to provide a full understanding of LACMTA's finances. The notes to basic financial statements are on pages 33-86.

Other Information

Besides the basic financial statements and accompanying notes, this report presents certain required supplementary information starting on page 87.

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Government-wide Financial Analysis

Statement of Net Assets

As mentioned earlier, net assets can serve as an indicator of financial health. LACMTA's net assets increased by 5.84 percent over the previous year. This increase was due to grants received to finance capital projects.

The following table is a summary of the statement of net assets as of June 30, 2010 and 2009.

Los Angeles County Metropolitan Transportation Authority Summary Statement of Net Assets						
	Business-type Activities		Governmental Activities		Total	
	2010	2009	2010	2009	2010	2009
Current & other assets	\$2,436,942	\$2,450,949	\$1,737,260	\$1,545,965	\$4,174,202	\$3,996,914
Capital assets	7,366,524	7,216,342	772,794	772,794	8,139,318	7,989,136
Deferred outflow – derivatives	25,386	32,406	-	-	25,386	32,406
Total assets and deferred outflows	9,828,852	9,699,697	2,510,054	2,318,759	12,338,906	12,018,456
Current liabilities	607,587	570,545	201,872	117,190	809,459	687,735
Noncurrent liabilities	4,409,816	4,596,475	56,132	60,466	4,465,948	4,656,941
Total liabilities	5,017,403	5,167,020	258,004	177,656	5,275,407	5,344,676
Invested in capital assets, net of related debt	4,366,480	3,900,614	772,794	772,794	5,139,274	4,673,408
Restricted for debt service	446,878	419,282	-	-	446,878	419,282
Restricted for other purpose	-	-	1,244,855	1,268,069	1,244,855	1,268,069
Unrestricted	(1,909)	212,781	234,401	100,240	232,492	313,021
Total net assets	\$4,811,449	\$4,532,677	\$2,252,050	\$2,141,103	\$7,063,499	\$6,673,780

The increase in current and other assets of \$191,295 (12.37%) in the governmental activities is mainly due to accrued Measure R sales tax revenues.

Invested in capital assets, net of related debt in the business-type activities increased by \$465,866 (11.94%) is attributable to the completion of the Gold Line Eastside extension which opened in November 2009, the continuing construction of Exposition Light Rail Project, and acquisition of rail cars and compressed natural gas (CNG) buses.

The decrease in unrestricted net assets in the business-type activities of \$214,690 (100.90%) is mainly due to the increase in capital assets not funded by long term debt.

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Overall, the significant changes in fiscal year 2010 are the opening of the Metro's Light Rail Gold Line Eastside extension, the implementation of Measure R half-cent sales tax, and the start of construction of the I-405 Sepulveda Pass Widening Project.

Statement of Activities

The following table is a summary of the statement of activities for the year ended June 30, 2010 and 2009.

Los Angeles Metropolitan Transportation Authority Change in Net Assets						
	Business-type Activities		Governmental Activities		Total	
	2010	2009	2010	2009	2010	2009
Revenues:						
Program revenues:						
Charges for services	\$342,087	\$357,895	\$15,713	\$10,101	\$357,800	\$367,996
Operating grants and contributions	239,835	214,285	267,306	162,387	507,141	376,672
Capital grants and contributions	411,392	424,732	-	-	411,392	424,732
General revenues:						
Sales tax	-	-	2,085,370	1,596,152	2,085,370	1,596,152
Investment income	8,811	7,912	35,068	44,742	43,879	52,654
Net appreciation (decline) in fair Value of investments	(709)	(119)	4,200	10,540	3,491	10,421
Miscellaneous	16,346	20,231	26,979	41,065	43,325	61,296
Total program revenues	<u>1,017,762</u>	<u>1,024,936</u>	<u>2,434,636</u>	<u>1,864,987</u>	<u>3,452,398</u>	<u>2,889,923</u>
Program Expenses:						
Transit operations	1,808,257	1,807,037	-	-	1,808,257	1,807,037
Transit operators programs	-	-	201,354	282,305	201,354	282,305
Local cities programs	-	-	370,177	300,113	370,177	300,113
Highway projects	-	-	247,715	45,591	247,715	45,591
Regional multimodal capital programs	-	-	102,084	145,354	102,084	145,354
Paratransit programs	-	-	25,283	14,208	25,283	14,208
Other transportation subsidies	-	-	88,180	79,910	88,180	79,910
General government	-	-	219,629	199,338	219,629	199,338
Total program expenses	<u>1,808,257</u>	<u>1,807,037</u>	<u>1,254,422</u>	<u>1,066,819</u>	<u>3,062,679</u>	<u>2,873,856</u>
Increase (decrease) in net assets before transfers:	(790,495)	(782,101)	1,180,214	798,168	389,719	16,067
Transfers	1,069,267	1,005,062	(1,069,267)	(1,005,062)	-	-
Increase (decrease) in net assets	278,772	222,961	110,947	(206,894)	389,719	16,067
Net assets—beginning of year	4,532,677	4,309,716	2,141,103	2,347,997	6,673,780	6,657,713
Net assets – end of year	<u>\$4,811,449</u>	<u>\$4,532,677</u>	<u>\$2,252,050</u>	<u>\$2,141,103</u>	<u>\$7,063,499</u>	<u>\$6,673,780</u>

Transit operations recovered 27.64 percent of total operating expenses from operating revenues, excluding depreciation and interest, compared to 30.3 percent of the prior year. The remaining costs were covered by grants and transfers provided by LACMTA's

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governmental activities. Capital asset replacement costs have traditionally been funded as needed with governmental resources.

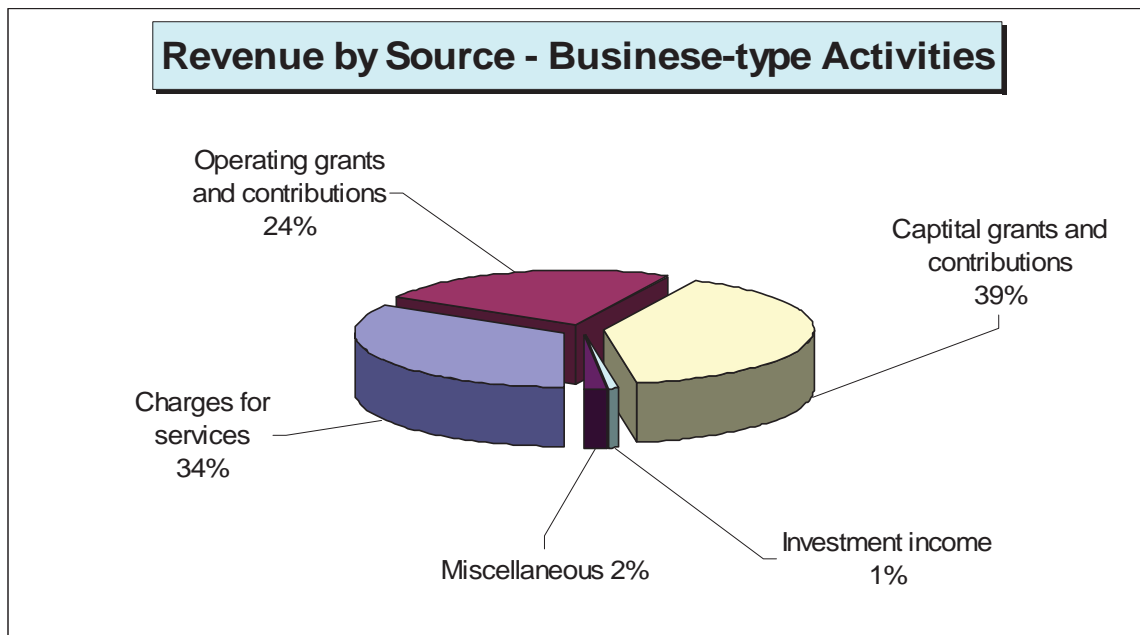
The increase in sales tax revenues in the governmental activities of \$489,218 (30.65%) is mainly due to the revenues received from the Measure R half-cent sales tax that became effective in July 2009.

Most of the governmental activities expenditures are subsidies related to countywide transportation planning and development programs. These programs are primarily funded by local sales taxes. Subsidies totaling \$1,034,793 to other agencies represented the largest governmental expenditures, which include the pass-through of state, federal and local funding to other agencies in Los Angeles County for public transit, transportation demand management, bikeways, and highway projects.

Highway project expenditures in the governmental activities increased by \$202,124 (443.34%) primarily due to the construction costs associated with the I-405 Sepulveda Pass Improvement Project which will add a 10-mile HOV lane and improve supporting infrastructure such as ramps, bridges and sound walls.

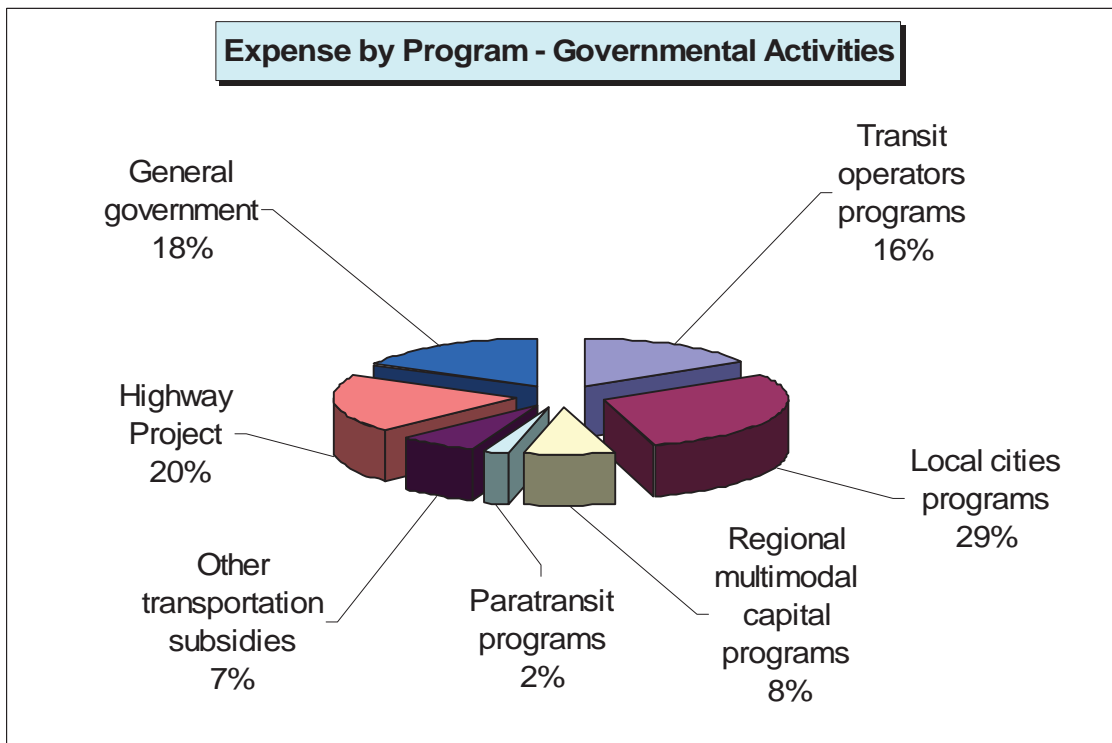
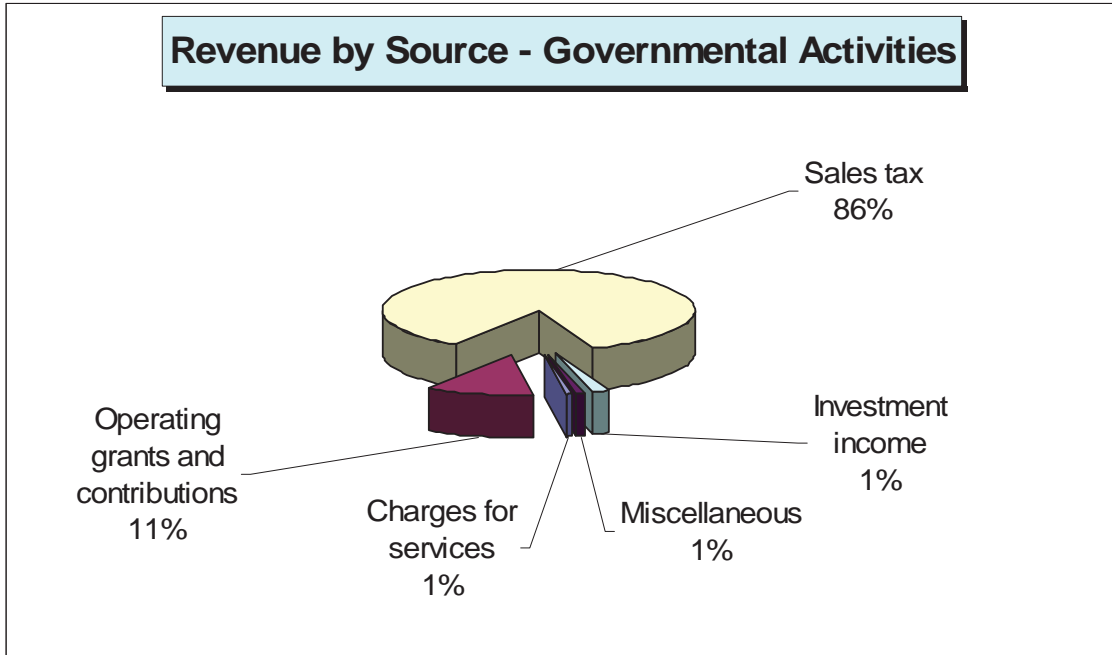
Regional multimodal capital programs decreased by \$43,270 (29.77%) primarily due to lesser reimbursements of project expenditures related to regional surface transportation, local traffic systems, and bus capital and operations.

Below are graphical depictions of the components of business-type revenues and expenses for the year ended June 30, 2010.



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Below are graphical depictions of the components of governmental revenues and expenditures for the year ended June 30, 2010.



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Proprietary Fund

The proprietary fund financial statements provide the same information found in the business-type section of the government-wide financial statements, but in more detail.

The increase of \$278,772 in net assets was mainly due to the grants received for billable capital projects such as EXPO construction and major bus acquisitions.

Governmental Funds

As previously noted, governmental funds present information about current financial (consumable) resources because they directly impact short-term financing requirements. This is particularly true to the unreserved fund balance, which represents uncommitted available resources.

LACMTA's governmental funds ended the fiscal year with \$1,418,958 in total fund balances. Approximately 85.09 percent of this amount has been committed to future programs. The major governmental funds are discussed below.

General fund balance increased by \$19,827, mainly due to fewer transfers out in FY10. Out of \$180,454 fund balance, \$1,843 is reserved for encumbrances.

Proposition A fund balance decreased by \$34,079 mainly due to lower sales tax revenues. LACMTA has reserved \$56,795 of the total fund balance of \$80,536.

Proposition C fund balance decreased by \$362,461 primarily due to lower sales tax and intergovernmental revenues. LACMTA has reserved \$987,867 for future programs, which is \$871,854 more than the fund balance of \$116,013. The negative unreserved fund balance is expected to be funded from future revenues.

Measure R has a fund balance of \$383,665 on its first year of commencement mainly due to receipts of sales tax revenues. LACMTA has reserved \$34,482 of the total fund balance for future programs.

Public Transportation Modernization, Improvement and Service Enhancement Account (PTMISEA) fund balance decreased by \$61,918 primarily due to transfers out during the year and no new funding from the State. The \$56,696 year-end fund balance has been reserved for specific projects.

Transportation Development Act fund balance decreased by \$25,650 primarily due to the decrease in sales tax revenues. LACMTA has reserved \$92,786 for future programs, which is \$1,107 more than the fund balance of \$91,679. The shortfall is expected to be funded from future revenues.

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State Transit Assistance fund balance increased by \$113,777 mainly due to the receipts of sales tax revenues, while no revenue allocation was made for the current fiscal year. Of the \$167,939 fund balance, \$7,142 is reserved for future programs and the remaining fund balance has been allocated as approved by the Board.

General Fund Budgetary Highlights

The general fund includes activities associated with the government that are not legally or otherwise required to be accounted for in another fund. It accounts for only 1.80 percent of LACMTA's total governmental funds revenues, while expenditures represent 1.77 percent of total governmental funds expenditures.

During the year, the original budget was decreased by \$491 due to the decrease in legal service fees for the ongoing sales-leaseback contract negotiations.

Revenues

The primary sources of revenue are the federal alternative fuel tax credit receipts, rental income from inactive rights-of-way, joint development projects, investment income, Federal, State, and local grants, and high occupancy vehicles (HOV) lane fines.

Investment income and net appreciation in fair value of investments is \$4,078 greater than budgeted levels mainly due to a higher rate of return than originally anticipated.

Expenditures

The general fund provides resources to pay for bus and rail operations, joint development administration, property management expenditures, administration of LACMTA's rideshare services, and other general expenditures.

Administration and other expenditures are \$4,233 lower than budgeted levels mainly due to less joint development and property administration expenditures than the anticipated programmed levels.

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Capital Assets

As of June 30, 2010, LACMTA had \$8,139,318 (net of accumulated depreciation) invested in capital assets, as shown below, a two percent increase compared from the previous fiscal year.

Los Angeles County Metropolitan Authority Capital Assets (Net of accumulated depreciation)						
	Business-type Activities		Governmental Activities		Total	
	2010	2009	2010	2009	2010	2009
Land	\$ 626,285	\$ 625,915	\$ 772,794	\$ 772,794	\$ 1,399,079	\$ 1,398,709
Buildings	4,692,688	4,070,288	-	-	4,692,688	4,070,288
Equipment	143,242	154,873	-	-	143,242	154,873
Vehicles	1,013,552	960,077	-	-	1,013,552	960,077
Construction in progress	890,757	1,405,189	-	-	890,757	1,405,189
Total Capital Assets	\$ 7,366,524	\$ 7,216,342	\$ 772,794	\$ 772,794	\$8,139,318	\$ 7,989,136

Major capital asset projects in various stages of development at the end of the current fiscal year included the following:

The Exposition Light Rail Project is a \$2.4 billion project that traverses 15.2 miles between Downtown Los Angeles and Santa Monica. The line is being built in two phases:

The first phase, with a budget of \$892 million, is approximately 8.6 miles long and parallels the heavy congested I-10 freeway extending from Downtown Los Angeles to Culver City with an estimated travel time of less than 30 minutes. It will operate in a dual track configuration on Flower Street and along the Exposition Boulevard right-of-way. It will have twelve stations, consisting of two existing stations and ten new stations, three of which will be aerial. The project is electrically powered from overhead power lines. As of June 30, 2010, \$562.8 million has been expended on Phase 1.

The second phase is estimated to cost \$1.5 billion, is approximately 6.6 miles and is continuing from Phase 1 terminus in Culver City to 4th Street and Colorado Avenue in the city of Santa Monica. It travels along the Exposition Boulevard right-of-way until it reaches 17th Street in Santa Monica, and operates in street-running mode down the middle of Colorado Avenue. It will have seven new stations, one of which will be aerial. The estimated travel time between downtown Los Angeles and Santa Monica is less than 46 minutes. As of June 30, 2010, \$17.9 million has been expended on Phase 2.

The Universal Fare System (UFS) and Transit Access Pass (TAP) is a \$165.6 million project designed to improve LACMTA's fare collection on the bus and rail systems through a regional electronic smartcard fare payment system. Installation of UFS fareboxes and ticket

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vending machines has been completed. Eleven Los Angeles County municipal transit operators will operate the UFS equipment as part of TAP which utilizes non-contact smart cards to provide seamless fare collection among the region's transit operators. LACMTA entered into a contract to enhance TAP operations by adding an advanced gating system and related services to deter fare evasion, improve system security, and capture ridership data. Design and preliminary engineering work for the gating project started in February 2008. As of June 30, 2010, \$120.3 million has been expended.

LACMTA's major bus acquisition project, initiated during FY09 for the purchase of 260 CNG high capacity buses, resulted in the delivery of 225 buses with total expenditures of \$163.8 million as of June 30, 2010. The remaining buses are expected to be delivered in FY11. LACMTA also awarded a \$24 million new contract for 53 additional 30-foot CNG buses for its contract service operations. As part of the Congestion Reduction Demonstration Project for the I-10 and I-110 express lanes, \$28.4 million is earmarked for a contract option to purchase 41 additional 45-foot CNG high capacity buses. All of these buses are scheduled for delivery in FY11.

LACMTA entered into a Light Rail Vehicle Base Contract to acquire fifty Light Rail Vehicles, which includes spare parts, special tools, and equipment. As of June 30, 2010, thirty-six vehicles were received and placed into service. As of June 30, 2010, \$118.6 million has been expended.

The Metro Orange Line Extension is a \$215.6 million, four-mile extension of the Metro Orange Line extending from the Canoga park-and-ride lot to the Chatsworth Metrolink Station. The project includes: 1) busway; 2) new station platforms at the Canoga Park park-and-ride lot; 3) new stations at Sherman Way (with park-and-ride), Roscoe Boulevard, Nordhoff Street, and the Chatsworth Metrolink Station (with park-and-ride); 4) grade-separation structure over active railroad tracks at Lassen Street (Lassen/Railroad overcrossing) providing direct access into the Chatsworth Metrolink Station; 5) Los Angeles River and Santa Susana Wash bridge crossings, and 6) satellite bus parking facility. The project also includes street improvements, bicycle/pedestrian path, systems equipment, and landscaping similar to the Metro Orange Line. As of June 30, 2010, \$24.8 million has been expended.

Additional information on capital assets can be found on page 49.

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Long-term Debt Administration

At the end of the fiscal year, LACMTA had total long-term debt of \$4,204,143 of which \$2,834,450 were bonds collateralized by sales tax revenue and \$911,774 were lease/leaseback obligations.

The remainder of the long-term debt consisted of general revenue bonds, capital grant receipts revenue bonds, commercial paper, and other debt as shown below:

Los Angeles County Metropolitan Transportation Authority Long-term Debt						
	Business-type Activities		Governmental Activities		Total	
	2010	2009	2010	2009	2010	2009
Sales tax revenue bonds and refunding bonds	\$ 2,834,450	\$ 2,873,395	\$ -	\$ -	\$ 2,834,450	\$ 2,873,395
Lease/leaseback to service obligations	911,774	870,872	-	-	911,774	870,872
Commercial paper notes	143,532	278,741	-	-	143,532	278,741
General revenue bonds	184,820	203,120	-	-	184,820	203,120
Capital grant receipts revenue bonds	90,155	132,460	-	-	90,155	132,460
Other debt	15,045	18,750	24,367	25,392	39,412	44,142
Total long-term liabilities	\$ 4,179,776	\$ 4,377,338	\$ 24,367	\$ 25,392	\$ 4,204,143	4,402,730

During the fiscal year, LACMTA issued several refunding bonds to achieve debt service savings. In August 2009, \$202,300 in Proposition C Series 2003-C Bonds were refinanced by the \$89,625 Proposition C Series 2009-C and \$118,875 Proposition C Series 2009-D Bonds to convert auction rate securities (ARS) to uninsured variable rate demand bonds (VRDBs) and fixed rate bonds. In October 2009, the Proposition C Series 1998-A Bonds with an outstanding balance of \$81,070 and \$44,000 in Proposition C Commercial Paper Notes were redeemed and refunded by \$118,940 Proposition C Series 2009-E bonds. In October 2009, the Proposition A Series 1999-A and Series 1999-B bonds, a portion of the Series 1999-C bonds, and a portion of the Proposition A Commercial Paper Notes, in an aggregate amount of \$319,221 were refinanced by the \$320,945 Proposition A Series 2009-A bonds. Lastly, in January 2010, a portion of the Proposition C Series 1998-A bonds and the Proposition C Series 2000-A bonds in an aggregate amount of \$45,160 were defeased and refunded by the \$45,455 Proposition C Series 2010-A bonds.

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY
Management's Discussion and Analysis
For the Fiscal Year Ended June 30, 2010

Bond Ratings

LACMTA's bonds are rated by Standard & Poor's, Moody's, and Fitch as specified in the following schedule of ratings:

Bonds Issue Type	Standard & Poor's	Moody's	Fitch
Proposition A First Tier Senior Lien Bonds	AAA	Aa2	AA-
Proposition C Senior Sales Tax Revenue Bonds	AA+	Aa2	AA-
General Revenue Bonds	A	A1	n/a
Capital Grant Receipts Revenue Bonds	A+	A1	n/a

Additional information on LACMTA's long-term debt can be found on pages 55 to 64.

Economic Factors and Next Year's Budget

The main economic factors affecting LACMTA's financial capacity to deliver transportation programs and projects include:

- Economic conditions influencing local sales tax revenues
- Capital grant revenues availability
- Interest rate fluctuations
- Fuel and labor costs

LACMTA uses forecasts from various governmental sources as a basis of its future funding assumptions. The budget for FY11 assumed a 4.5 percent growth in sales tax revenue as a result of the economic recovery following a 9.1 percent declines in FY09 and FY10. Local sales taxes registered as the largest revenue sources for LACMTA, comprising 55 percent of LACMTA's total FY11 estimated revenues. From this revenue base, LACMTA constructs a budget that balances anticipated revenues with area transportation needs.

Further Information

This report has been designed to provide our stakeholders with a general overview of LACMTA's financial condition and related issues. Inquiries should be directed to the Chief Financial Services Officer and Treasurer, One Gateway Plaza, Mail Stop 99-25-7, Los Angeles, CA, 90012-2952 or visit LACMTA's website at www.metro.net.

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Los Angeles County Metropolitan Transportation Authority
Statement of Net Assets
June 30, 2010
(Amounts expressed in thousands)

	Business-type Activities	Governmental Activities	Total
ASSETS AND DEFERRED OUTFLOWS			
Current assets:			
Cash and cash equivalents	\$ 79,929	\$ 551,941	\$ 631,870
Investments	53,467	859,580	913,047
Receivables (net of allowance for doubtful accounts)	225,791	345,018	570,809
Internal balances	21,098	(21,098)	-
Inventories	68,083	-	68,083
Prepaid and other current assets	3,781	-	3,781
Designated and restricted assets:			
Cash and cash equivalents – designated	5,431	-	5,431
Cash and cash equivalents – restricted	308,302	1,103	309,405
Investments – designated	268,743	-	268,743
Investments – restricted	133,466	-	133,466
Total current assets	1,168,091	1,736,544	2,904,635
Noncurrent assets:			
Loans receivable	2,574	450	3,024
Investments – restricted	210,724	-	210,724
Lease accounts	911,774	-	911,774
Net OPEB assets	18,313	-	18,313
Deferred charges	125,466	266	125,732
Capital assets			
Land and construction in progress	1,517,042	772,794	2,289,836
Other capital assets, net of depreciation	5,849,482	-	5,849,482
Total noncurrent assets	8,635,375	773,510	9,408,885
Deferred outflows:			
Deferred outflow – derivatives	25,386	-	25,386
Total assets and deferred outflows	9,828,852	2,510,054	12,338,906
LIABILITIES			
Current liabilities:			
Accounts payable and accrued liabilities	173,919	198,583	372,502
Accrued interest payable	68,209	-	68,209
Claims payable	74,049	-	74,049
Compensated absences payable	61,889	-	61,889
Bonds and notes payable	189,139	662	189,801
Deferred revenue and credits	21,649	2,158	23,807
Other liabilities	18,733	469	19,202
Total current liabilities	607,587	201,872	809,459
Noncurrent liabilities:			
Claims payable	194,578	-	194,578
Compensated absences payable	19,440	-	19,440
Net pension obligation	868	-	868
Pollution remediation obligations	7,700	-	7,700
Bonds and notes payable	3,990,637	23,705	4,014,342
Derivative instrument	60,802	-	60,802
Deferred revenues and credits	135,791	32,427	168,218
Total noncurrent liabilities	4,409,816	56,132	4,465,948
Total liabilities	5,017,403	258,004	5,275,407
NET ASSETS			
Invested in capital assets, net of related debt	4,366,480	772,794	5,139,274
Restricted for debt service	446,878	-	446,878
Restricted for other purposes	-	1,244,855	1,244,855
Unrestricted	(1,909)	234,401	232,492
Total net assets	\$ 4,811,449	\$ 2,252,050	\$ 7,063,499

See accompanying notes to basic financial statements.

Los Angeles County Metropolitan Transportation Authority
Statement of Activities
For the Year Ended June 30, 2010
(Amounts expressed in thousands)

<u>Functions/Programs</u>	<u>Expenses</u>	<u>Charges for Services</u>	<u>Program Revenues Operating Grants and Contributions</u>
Business-type activities:			
Transit operations	\$ 1,808,257	\$ 342,087	\$ 239,835
Governmental activities:			
Transit operators programs	201,354		
Local cities programs	370,177	-	-
Highway project	247,715	-	192,233
Regional multimodal capital programs	102,084	-	-
Paratransit programs	25,283	-	-
Other transportation subsidies	88,180	-	1,511
General government	219,629	15,713	73,562
Total governmental activities	1,254,422	15,713	267,306
Total	\$ 3,062,679	\$ 357,800	\$ 507,141

General revenues:

 Sales taxes
 Investment income
 Net appreciation (decline) in fair value
 of investments
 Miscellaneous
Transfers
Total general revenues
Change in net assets

Net assets – beginning of year

Net assets – end of year

See accompanying notes to basic financial statements.

Capital Grants and Contributions	Net (Expense) Revenue and Changes in Net Assets		
	Business-type Activities	Governmental Activities	Total
\$ 411,392	\$ (814,943)	\$ -	\$ (814,943)
-	-	(201,354)	(201,354)
-	-	(370,177)	(370,177)
-	-	(55,482)	(55,482)
-	-	(102,084)	(102,084)
-	-	(25,283)	(25,283)
-	-	(86,669)	(86,669)
-	-	(130,354)	(130,354)
-	-	(971,403)	(971,403)
\$ 411,392	(814,943)	(971,403)	(1,786,346)
	-	2,085,370	2,085,370
	8,811	35,068	43,879
	(709)	4,200	3,491
	16,346	26,979	43,325
	1,069,267	(1,069,267)	-
	1,093,715	1,082,350	2,176,065
	278,772	110,947	389,719
	4,532,677	2,141,103	6,673,780
\$ 4,811,449	\$ 2,252,050	\$ 7,063,499	

Los Angeles County Metropolitan Transportation Authority
 Balance Sheet
 Governmental Funds
 June 30, 2010
 (Amounts expressed in thousands)

	<u>Special</u>		
	<u>General Fund</u>	<u>Proposition A</u>	<u>Proposition C</u>
ASSETS			
Cash and cash equivalents	\$ 44,603	\$ 24,707	\$ 47,897
Investments	129,271	71,565	139,806
Receivables:			
Accounts	2,072	-	-
Interest	813	380	1,147
Intergovernmental	124	-	115,388
Sales taxes	-	43,883	43,887
Notes	-	-	-
Due from other funds	7,009	-	13,600
Restricted assets:			
Cash and cash equivalents	981	-	122
TOTAL ASSETS	\$ 184,873	\$ 140,535	\$ 361,847
LIABILITIES			
Accounts payable and accrued liabilities	\$ 1,308	\$ 21,036	\$ 130,936
Due to other funds	15	38,963	-
Deferred revenues	2,627	-	114,898
Other liabilities	469	-	-
TOTAL LIABILITIES	4,419	59,999	245,834
FUND BALANCES			
Reserved for			
Memoranda of understanding	-	56,795	987,867
Encumbrances	1,843	-	-
Unreserved, reported in:			
General fund	178,611	-	-
Special revenue funds	-	23,741	(871,854)
TOTAL FUND BALANCES	180,454	80,536	116,013
TOTAL LIABILITIES AND FUND BALANCES	\$ 184,873	\$ 140,535	\$ 361,847

See accompanying notes to basic financial statements.

Revenue Funds						
Measure R	PTMISEA	TDA	STA	Other Governmental Funds	Total Governmental Funds	
\$ 83,486	\$ 64,243	\$ 93,043	\$ 142,198	\$ 51,764	\$ 551,941	
242,078	14,842	-	-	262,018	859,580	
-	-	-	-	33	2,105	
1,381	-	292	101	2,171	6,285	
2,776	-	-	-	2,496	120,784	
106,058	-	22,016	-	-	215,844	
-	-	-	-	450	450	
-	-	-	25,640	39,915	86,164	
-	-	-	-	-	1,103	
<u>\$ 435,779</u>	<u>\$ 79,085</u>	<u>\$ 115,351</u>	<u>\$ 167,939</u>	<u>\$ 358,847</u>	<u>\$ 1,844,256</u>	
\$ 36,312	\$ -	\$ -	\$ -	\$ 8,991	\$ 198,583	
15,800	22,389	23,672	-	6,423	107,262	
2	-	-	-	1,457	118,984	
-	-	-	-	-	469	
<u>52,114</u>	<u>22,389</u>	<u>23,672</u>	<u>-</u>	<u>16,871</u>	<u>425,298</u>	
34,482	-	92,786	7,142	-	1,179,072	
-	-	-	-	22,079	23,922	
-	-	-	-	-	178,611	
<u>349,183</u>	<u>56,696</u>	<u>(1,107)</u>	<u>160,797</u>	<u>319,897</u>	<u>37,353</u>	
<u>383,665</u>	<u>56,696</u>	<u>91,679</u>	<u>167,939</u>	<u>341,976</u>	<u>1,418,958</u>	
<u>\$ 435,779</u>	<u>\$ 79,085</u>	<u>\$ 115,351</u>	<u>\$ 167,939</u>	<u>\$ 358,847</u>	<u>\$ 1,844,256</u>	

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Los Angeles County Metropolitan Transportation Authority
 Reconciliation of the Balance Sheet
 to the Statement of Net Assets – Governmental Activities
 June 30, 2010
 (Amounts expressed in thousands)

Fund Balance – total governmental funds (page 21)	\$ 1,418,958
Government capital assets are not financial resources, and therefore, are not reported in the funds.	772,794
Governmental funds account for cost of refunding bond obligation as expenditures. However, in the Statement of Net Assets, these costs are reported as prepayments and amortized over the life of the bonds.	266
Governmental funds account for revenues not available in the current period as deferred revenues. However, these accrued revenues are recognized in the Statement of Activities when earned.	116,295
Bonds and notes payable are not due and payable in the current period and, therefore, are not reported in the funds.	(24,367)
Governmental funds report revenue only to the extent that it increases current financial resources. However, in the Statement of Activities, revenues are reported when earned. The amount of revenue pertaining to future periods.	(31,896)
Net Assets of governmental activities (page 17)	<u>\$ 2,252,050</u>

See accompanying notes to basic financial statements.

Los Angeles County Metropolitan Transportation Authority
Statement of Revenues, Expenditures, and Changes in Fund Balances
Governmental Funds
For the Year Ended June 30, 2010
(Amounts expressed in thousands)

	<u>Special</u>		
	<u>General Fund</u>	<u>Proposition A</u>	<u>Proposition C</u>
REVENUES			
Sales taxes	\$ -	\$ 565,746	\$ 565,787
Intergovernmental	2,525	-	130,115
Investment income	5,201	2,419	10,020
Net appreciation (decline) in fair value of investment	1,049	316	(549)
Lease and rental	15,713	-	-
Licenses and fines	446	-	-
Other	16,764	-	-
TOTAL REVENUES	<u>41,698</u>	<u>568,481</u>	<u>705,373</u>
EXPENDITURES			
Current:			
Administration and other transportation projects	19,842	-	246,657
Transportation subsidies	149	229,407	423,686
Debt and interest expenditures:			
Principal	1,025	-	-
Interest and fiscal charges	1,249	-	-
TOTAL EXPENDITURES	<u>22,265</u>	<u>229,407</u>	<u>670,343</u>
EXCESS (DEFICIENCY) OF REVENUES OVER (UNDER) EXPENDITURES	<u>19,433</u>	<u>339,074</u>	<u>35,030</u>
OTHER FINANCING SOURCES (USES)			
Transfers in	12,878	47,744	3,942
Transfers out	(12,484)	(420,897)	(401,433)
TOTAL OTHER FINANCING SOURCES (USES)	<u>394</u>	<u>(373,153)</u>	<u>(397,491)</u>
NET CHANGE IN FUND BALANCES	19,827	(34,079)	(362,461)
Fund balances – beginning of year	160,627	114,615	478,474
FUND BALANCES – END OF YEAR	<u>\$ 180,454</u>	<u>\$ 80,536</u>	<u>\$ 116,013</u>

See accompanying notes to basic financial statements.

Revenue Funds						
Measure R	PTMISEA	TDA	STA	Other Governmental Funds	Total Governmental Funds	
\$ 551,480	\$ -	\$ 285,270	\$ 117,087	\$ -	\$ 2,085,370	
4,371	-	-	-	14,035	151,046	
2,656	121	2,240	1,246	11,165	35,068	
3,604	19	-	-	(239)	4,200	
-	-	-	-	-	15,713	
-	-	-	-	7,516	7,962	
-	-	-	-	56	16,820	
562,111	140	287,510	118,333	32,533	2,316,179	
52,306	-	-	-	58,388	377,193	
118,143	-	92,289	3,504	8,799	875,977	
-	-	-	-	-	1,025	
-	-	-	-	-	1,249	
170,449	-	92,289	3,504	67,187	1,255,444	
391,662	140	195,221	114,829	(34,654)	1,060,735	
29,353	-	-	-	39,688	133,605	
(37,350)	(62,058)	(220,871)	(1,052)	(46,727)	(1,202,872)	
(7,997)	(62,058)	(220,871)	(1,052)	(7,039)	(1,069,267)	
383,665	(61,918)	(25,650)	113,777	(41,693)	(8,532)	
-	118,614	117,329	54,162	383,669	1,427,490	
\$ 383,665	\$ 56,696	\$ 91,679	\$ 167,939	\$ 341,976	\$ 1,418,958	

Los Angeles County Metropolitan Transportation Authority
 Reconciliation of the Statement of Revenues, Expenditures,
 and Changes in Fund Balances of Governmental Funds to the Statement of Activities
 For the Year Ended June 30, 2010
 (Amounts expressed in thousands)

Amounts reported for governmental activities in the Statement of Activities (page 19) are different because:

Net change in fund balances – total governmental funds (page 25)	\$ (8,532)
Governmental funds account for principal payment as expenditures. The payment of principal of long-term debts consumes current financial resources but has no effect on net assets. Principal payments are included in the fund financials.	1,025
Revenues accrued in the Statement of Activities but not reported in the Statement of Revenues, Expenditures, and Changes in Fund Balances. These deferred revenues are not reported in the current period because they are not available.	116,295
Revenues in the Statement of Activities that do not provide current financial resources are not reported as revenue in the funds (e.g. amortization of Lease/leaseback proceeds).	<u>2,159</u>
Change in net assets of governmental activities (page 19)	<u><u>\$ 110,947</u></u>

See accompanying notes to basic financial statements.

Los Angeles County Metropolitan Transportation Authority
Statement of Net Assets
Proprietary Fund – Enterprise Fund
June 30, 2010
(Amounts expressed in thousands)

ASSETS AND DEFERRED OUTFLOWS

Current assets:	
Cash and cash equivalents	\$ 79,929
Investments	53,467
Receivables (net of allowance for doubtful accounts)	225,791
Inventories	68,083
Due from other funds	21,098
Prepaid and other current assets	3,781
Designated and restricted assets:	
Cash and cash equivalents – designated	5,431
Cash and cash equivalents – restricted	308,302
Investments – designated	268,743
Investments – restricted	133,466
Total current assets	<u>1,168,091</u>
Noncurrent assets:	
Loans receivables	2,574
Investments-restricted	210,724
Lease accounts	911,774
Net OPEB assets	18,313
Deferred charges	125,466
Capital assets (net of accumulated depreciation)	
Land and construction in progress	1,517,042
Other capital assets, net of depreciation	5,849,482
Total noncurrent assets	<u>8,635,375</u>
Deferred outflows:	
Deferred outflow – derivatives	25,386
Total assets and deferred outflows	<u>9,828,852</u>

LIABILITIES

Current liabilities:	
Accounts payable and accrued liabilities	173,919
Accrued interest payable	68,209
Claims payable	74,049
Compensated absences payable	61,889
Bonds and notes payable	189,139
Deferred revenue and credits	21,649
Other current liabilities	18,733
Total current liabilities	<u>607,587</u>
Noncurrent liabilities:	
Claims payable	194,578
Compensated absences payable	19,440
Net pension obligation	868
Pollution remediation obligations	7,700
Bonds and notes payable	3,990,637
Derivative instruments	60,802
Deferred revenues and credits	135,791
Total noncurrent liabilities	<u>4,409,816</u>
Total liabilities	<u>5,017,403</u>

NET ASSETS

Invested in capital assets, net of related debt	4,366,480
Restricted for debt service	446,878
Unrestricted deficit	(1,909)
	<u>\$ 4,811,449</u>

See accompanying notes to basic financial statements.

Los Angeles County Metropolitan Transportation Authority
Statement of Revenues, Expenses, and Changes in Fund Net Assets
Proprietary Fund – Enterprise Fund
For the Year Ended June 30, 2010
(Amounts expressed in thousands)

OPERATING REVENUES:	
Passenger fares	\$ 316,427
Auxiliary transportation	25,660
TOTAL OPERATING REVENUES	<u>342,087</u>
OPERATING EXPENSES:	
Salaries and wages	468,310
Fringe benefits	355,833
Professional and technical services	141,531
Material and supplies	87,598
Casualty and liability	30,634
Fuel, lubricants, and propulsion power	97,852
Purchased transportation	42,013
Depreciation	432,802
Other	14,046
TOTAL OPERATING EXPENSES	<u>1,670,619</u>
OPERATING LOSS	<u>(1,328,532)</u>
NON-OPERATING REVENUES (EXPENSES):	
Local grants	854
Federal grants	238,981
Investment income	8,811
Net decline in fair value of investments	(709)
Interest expense	(137,187)
Loss on disposition of capital assets	(451)
Other revenue	16,346
TOTAL NON-OPERATING REVENUES (EXPENSES)	<u>126,645</u>
LOSS BEFORE CAPITAL GRANTS AND CONTRIBUTIONS	<u>(1,201,887)</u>
CAPITAL GRANTS AND CONTRIBUTIONS:	
Local grants	784
State grants	208,109
Federal grants	202,499
Transfers in – capital	450,046
TOTAL CAPITAL GRANTS AND CONTRIBUTIONS	<u>861,438</u>
TRANSFERS IN – OPERATING	<u>619,221</u>
CHANGE IN NET ASSETS	278,772
Net assets – beginning of year	<u>4,532,677</u>
NET ASSETS – END OF YEAR	<u>\$ 4,811,449</u>

See accompanying notes to basic financial statements.

Los Angeles County Metropolitan Transportation Authority
Statement of Cash Flows
Proprietary Fund – Enterprise Fund
For the Year Ended June 30, 2010
(Amounts expressed in thousands)

Cash flows from operating activities	
Receipts from customers	\$ 350,836
Payments to suppliers	(319,433)
Payments to employees	(755,507)
Net cash flows used for operating activities	<u>(724,104)</u>
Cash flows from non-capital financing activities	
Transfers from other funds	571,585
Federal operating grant	238,981
Net cash flows from non-capital financing activities	<u>810,566</u>
Cash flows from capital and related financing activities	
Proceeds from the issuance of debt	693,750
Capital contributions	907,019
Payments for matured bonds and notes payable	(891,312)
Acquisition and construction of capital assets	(583,436)
Interest paid	(133,859)
Net cash flows used for capital and related financing activities	<u>(7,838)</u>
Cash flows from investing activities	
Proceeds from sales and maturity of investments	15,341,137
Purchase of investments	(15,493,062)
Investment earnings	8,721
Net cash flows used for investing activities	<u>(143,204)</u>
Net decrease in cash and cash equivalents	(64,580)
Cash and cash equivalents – beginning of year	458,242
Cash and cash equivalents – end of year	<u><u>\$ 393,662</u></u>
Reconciliation of operating loss to net cash used by operating activities	
Operating loss	<u>\$ (1,328,532)</u>
Adjustments to reconcile operating loss to net cash flows from operating activities	
Depreciation expense	432,802
Decrease in receivables	1,854
Increase in prepaid and other current assets	(68,473)
Decrease in inventories	9,385
Decrease in due from other funds	60,354
Increase in accounts payable and accrued liabilities	15,429
Decrease in pollution remediation obligations	(2,299)
Increase in compensated absences payable	4,160
Decrease in claims payable	(29,126)
Decrease in net pension obligation	(35)
Increase in post employment benefits payable	56,078
Increase in deferred revenues and credits	114,428
Increase in other current liabilities	9,871
Total adjustments	<u>604,428</u>
Net cash used for operating activities	<u><u>\$ (724,104)</u></u>
Non-cash investing, capital and financing transactions	
Lease/leaseback accretion	\$ 104,375
Capital assets write-off	956
Net decline in fair value of investments	709

See accompanying notes to the basic financial statements.

Los Angeles County Metropolitan Transportation Authority
Statement of Net Assets
Fiduciary Funds
June 30, 2010
(Amounts expressed in thousands)

	Employee Retirement Trust Funds	OPEB Trust Fund
ASSETS		
Cash and cash equivalents	\$ 2,689	\$ 13,250
Investments:		
Bonds and derivatives	247,479	39,960
Domestic stocks	104,230	34,545
Non-domestic stocks	7,493	10,430
Pooled investments	380,231	57,792
Receivables:		
Member contributions	1,193	214
Securities sold	694	-
Receivables from sponsors	544	-
Interest and dividends	5,433	344
Prepaid items and other assets	39	-
Total assets	<u>750,025</u>	<u>156,535</u>
LIABILITIES		
Accounts payable and other liabilities	1,223	725
Securities purchased	5,850	-
Total liabilities	<u>7,073</u>	<u>725</u>
NET ASSETS		
Held in trust for pension, OPEB benefits and other purposes	<u>\$ 742,952</u>	<u>\$ 155,810</u>

See accompanying notes to basic financial statements.

Los Angeles County Metropolitan Transportation Authority
Statement of Changes in Net Assets
Fiduciary Funds
For the Year Ended June 30, 2010
(Amounts expressed in thousands)

	Employee Retirement Trust Funds	OPEB Trust Fund
ADDITIONS		
Contributions:		
Employer	\$ 49,821	\$ 22,896
Member	23,184	615
Total contributions	<u>73,005</u>	<u>23,511</u>
From investing activities:		
Net increase in fair value of investments	41,284	12,157
Investment income	47,204	2,970
Investment expense	(2,831)	(651)
Other income	373	-
Total investing activities income	<u>86,030</u>	<u>14,476</u>
Total additions	<u>159,035</u>	<u>37,987</u>
DEDUCTIONS		
Retiree benefits	55,066	18,632
Administrative expenses	1,150	-
Total deductions	<u>56,216</u>	<u>18,632</u>
Net increase	102,819	19,355
Net assets – beginning of year	<u>640,133</u>	<u>136,455</u>
NET ASSETS – END OF YEAR	<u>\$ 742,952</u>	<u>\$ 155,810</u>

See accompanying notes to basic financial statements.

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LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY
Notes to Basic Financial Statements
June 30, 2010

The Notes to the Basic Financial Statements are a summary of significant accounting policies and other disclosures considered necessary for a clear understanding of the accompanying basic financial statements. Unless otherwise stated, all dollar amounts are expressed in thousands.

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SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

A. Reporting Entity

The Los Angeles County Metropolitan Transportation Authority (LACMTA) is governed by a 14-member Board of Directors (Board). The Board is composed of five members of the County Board of Supervisors, the Mayor of the City of Los Angeles, three members appointed by the Mayor, four members who are either mayors or members of a city council and have been appointed by the Los Angeles County City Selection Committee to represent the other cities in the County, and a non-voting member appointed by the Governor of the State of California.

Management has prepared LACMTA's financial statements and those of its blended component units. The blended component units discussed below are included as part of the reporting entity because they are financially dependent upon LACMTA and because LACMTA's approval is needed for the units to expend their budgets or charges, and issue long-term debt. Although they are legally separate entities, the blended component units are in substance part of LACMTA's operations and data from these units are combined with LACMTA's financial data.

LACMTA administers the activities of the Public Transportation Service Corporation (PTSC), the Service Authority for Freeway Emergencies (SAFE), and the Exposition Metro Line Construction Authority (EXPO) and, therefore, includes the activities of these organizations in the accompanying financial statements. PTSC and EXPO provide services exclusively to LACMTA and LACMTA shares its governing board with SAFE. These entities are presented as blended component units with PTSC and EXPO reported in the proprietary fund type and SAFE reported in the governmental fund type. Additional detailed financial information for each of these entities can be obtained from LACMTA's Accounting Department, One Gateway Plaza, Los Angeles, CA 90012-2952 or visit LACMTA's website at www.metro.net.

PTSC was created in August 1997 to conduct activities essential to the provision of public transportation in and around Los Angeles County. To achieve this goal, LACMTA entered into an Acquisition Agreement under which the planning, programming, administrative, operational management, and construction functions of LACMTA were transferred to and acquired by PTSC. Under this agreement, these functions are provided by PTSC and funded by LACMTA.

SAFE was established in 1988 under the authority of the California Legislature to provide emergency aid to motorists on freeways and expressways within Los Angeles County.

EXPO was established in February 2006 for the purpose of constructing the Exposition Light Rail Line, the newest extension of the 73-station Metro Rail system. The first phase of the project runs 8.6 miles from Metro Rail Station at 7th and Flower Streets in downtown Los Angeles to Washington and National Boulevards in Culver City.

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B. Government-wide and Fund Financial Statements

LACMTA's financial statements, prepared in accordance with Governmental Accounting Standards Board (GASB) Statement No.34, "*Basic Financial Statements and Management's Discussion and Analysis for State and Local Governments*", consist of government-wide statements, including a Statement of Net Assets and a Statement of Activities, and fund financial statements, which provide a more detailed level of financial information.

The government-wide financial statements report information on all of the non-fiduciary activities of the primary government and its component units. Business-type activities, which rely to a significant extent on fees and charges for services, are reported separately from government activities, which normally are supported by taxes and intergovernmental revenues.

The Statement of Activities demonstrates the degree to which the direct expenses, including centralized expenses of a given function or segment, are offset by program revenues. Direct expenses are those that are clearly identifiable with a specific function or segment. Program revenues include: 1) charges to customers or applicants who purchase, use, or directly benefit from goods, services, or privileges provided by a given function or segment and 2) grants and contributions that are restricted to meeting the operational or capital requirements of a particular function or segment. Taxes and other items not included among program revenues are reported as general revenues. Certain indirect costs are included in the reported program expenses.

Separate fund financial statements are provided for proprietary funds, governmental funds, and fiduciary funds, even though the latter are excluded from the government-wide financial statements. Major individual governmental funds are reported as separate columns in the fund financial statements.

C. Measurement Focus, Basis of Accounting, and Financial Statement Presentation

The government-wide and the proprietary fund financial statements are reported using the economic resources measurement focus and the accrual basis of accounting. Revenues are recorded when earned and expenses are recorded when a liability is incurred, regardless of the timing of related cash flows. Grants and contributions are recognized as revenues as soon as all eligibility requirements imposed by the provider have been met.

The fiduciary fund financial statements also use the accrual basis of accounting and are reported using the economic resources measurement focus.

Governmental fund financial statements are reported using the current financial resources measurement focus and the modified accrual basis of accounting. Revenues are recognized as soon as they are both measurable and available. Revenues are considered to be available when they are collectible within the current period or soon enough thereafter to pay liabilities of the current period. For this purpose, LACMTA considers revenues to be available if they are collected within 90 days of the end of the current fiscal period.

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Expenditures generally are recorded when a liability is incurred and a valid claim is presented. Transportation subsidies are recorded when all of the eligibility requirements have been met, including the receipt of the reimbursement request. Long-term debt is recorded only when payment is due.

Interests associated with the current fiscal period are subject to accrual and have been recognized as revenues of the current fiscal period.

Private-sector standards of accounting and financial reporting issued prior to December 1, 1989, generally are followed in both the government-wide and proprietary fund financial statements to the extent that those standards do not conflict with or contradict the guidance of the GASB. LACMTA also has the option of following subsequent private-sector guidance for business-type activities and enterprise funds, subject to the same limitation. LACMTA has elected not to follow subsequent private-sector guidance.

The effect of interfund activity has been eliminated from the government-wide financial statements. However, intra-activity billing for services provided and used are not eliminated in the process of consolidation.

Amounts reported as program revenues include: 1) charges to customers of transit services or privileges provided, 2) operating grants and contributions, and 3) capital grants and contributions. General revenues include all taxes, investment income, and miscellaneous revenues.

Proprietary funds distinguish operating revenues and expenses from non-operating items. Operating revenues and expenses generally result from providing services and producing and delivering goods in connection with a proprietary fund's principal ongoing operations. The principal operating revenues of LACMTA's Enterprise fund are charges to customers for services. Operating expenses include the cost of services, administrative expenses, and depreciation on capital assets. All revenues and expenses not meeting this definition are reported as non-operating revenues and expenses.

When both restricted and unrestricted resources are available for use, it is LACMTA's policy to use restricted resources first. Unrestricted resources are used as they are needed.

Fund Accounting

LACMTA utilizes fund accounting to report its financial position and the results of its operations. Fund accounting is designed to demonstrate legal compliance and to aid financial management by segregating transactions related to certain governmental functions or activities. A fund is a separate accounting entity with a self-balancing set of accounts. Funds are classified into three categories: proprietary, governmental, and fiduciary, as described below.

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The **Proprietary fund** is used to account for LACMTA's ongoing operations and activities similar to those found in the private sector where the determination of net income is necessary or useful to provide sound financial administration. The Enterprise fund is LACMTA's only proprietary fund.

LACMTA's Enterprise fund is used to account for operations that are financed and operated in a manner similar to private businesses where the intent is that costs, including depreciation, of providing goods or services to the general public on a continuing basis be recovered primarily through user charges and governmental transfers.

LACMTA reports all operations-related transactions, including capital and related debt, in the Enterprise fund.

All major transit operations capital projects are partially funded by proceeds from debt secured by sales tax revenue, State and Federal grants, and contributions from the governmental funds. Sales tax secured debt is reported as liabilities in the Enterprise fund. The financial resources used to pay the debt principal and interests are reported as contributions from the governmental funds.

Governmental funds are used to account for LACMTA's governmental activities. The measurement focus is the determination of changes in financial position, rather than net income determination. LACMTA uses the following governmental fund types:

General fund is used to account for those financial resources that are not required to be accounted for in another fund. The general fund is one of LACMTA's major governmental funds.

Special revenue funds are used to account for proceeds of specific revenue sources including sales taxes that are legally restricted to expenditures for specified purposes. The following are LACMTA's other major governmental funds:

Proposition A – This fund is used to account for the proceeds of the voter-approved one-half percent sales tax that became effective on July 1, 1982. Revenues collected are to be allocated: 1) 25 percent to local jurisdictions for local transit; 2) 35 percent to be used for construction and operation of rail rapid transit systems; and 3) 40 percent is allocated at the discretion of LACMTA.

Proposition C – The "Los Angeles County Anti-Gridlock Transit Improvement Fund" is used to account for the proceeds of the voter-approved one-half percent sales tax that became effective on April 1, 1991. Revenues collected are to be allocated: 1) 5 percent to improve and expand rail and bus security; 10 percent for Commuter Rail and construction of transit centers, park-and-ride lots and freeway bus stops; 2) 20 percent to local jurisdictions for public transit and related services; 3) 25 percent for essential county-wide transit-related improvements to freeways and state highways; and 4) 40 percent to improve and expand rail and bus transit county-wide.

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Measure R – The “Traffic Relief and Rail Expansion Ordinance” is used to account for the proceeds of the voter-approved half-cent sales tax that became effective on July 1, 2009 and continuing on for the next 30 years. Revenues collected are allocated to: 1) 2% for rail capital improvements; 2) 3% for Metrolink capital improvements; 3) 5% for rail operations for new transit projects; 4) 15% for local return; 5) 20% for bus operations allocated using LACMTA’s formula allocation procedure (based on vehicle service miles and fare revenue); 6) 20% for highway capital projects; and 7) 35% for transit capital specific projects.

Public Transportation Modernization, Improvement, and Service Enhancement Account (PTMISEA) – This fund is part of the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006. This fund is intended to fund projects, to protect the environment and public health, conserve energy, reduce congestion, and to provide alternative mobility and access choices for Californians.

Transportation Development Act (TDA) – This fund is used to account for revenues received from the State as part of the Transportation Development Act and are paid out to various transit operators, including LACMTA, for operating and capital uses.

State Transit Assistance (STA) – This fund is used to account for revenue received from the State Assistance Program of the Transportation Development Act, which provides formulas to determine the uses of the proceeds.

The LACMTA also has the following nonmajor special revenue funds:

Traffic Congestion Relief Program (TCRP) – This fund is used to account for revenue received from the State for projects that relieve congestion, provide for the safe and efficient movement of goods, and provide inter-modal connectivity of transportation systems throughout California.

Service Authority for Freeway Emergencies (SAFE) – This fund is used to account for revenues received from the State Department of Motor Vehicles, generated by a \$1 per car registration fee in Los Angeles County to improve freeway emergency responses program, including call box operations.

Propositions A and C, TDA Administration – This fund is used strictly to account for administrative activities, including planning, execution, use, and conduct of projects and programs, funded by Propositions A and C and TDA.

Other Special Revenue Funds - This fund is used to account for specific revenue sources related to funds not classified as a nonmajor special revenue funds.

Fiduciary funds are used to account for assets held by LACMTA in a trustee capacity or as an agent for individuals, other governmental units, or other funds. Fiduciary funds include the following fund types:

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Employee retirement trust funds account for the assets of the five defined benefit pension plans that LACMTA administers, and are accounted for in essentially the same manner as the proprietary funds.

Other Postemployment Benefits (OPEB) trust funds account for the resources held in trust by LACMTA for the benefits of members and beneficiaries not offered as an integral part of a pension plan.

D. Assets, Liabilities, and Net Assets

Deposits and Investments

LACMTA's cash and cash equivalents include cash on hand, demand deposits, and short-term investments with original maturities of 90 days or less at the date of acquisition. Investments include instruments or deposits beyond the 90-day original maturities. State statutes and LACMTA's policy allows LACMTA to invest in U.S. Treasury, commercial paper, repurchase agreements, and the State Treasurer's Investment pool. LACMTA's investments are reported at fair value, which is the quoted market price.

LACMTA is considered to be an involuntary participant in an external investment pool as required by the State of California statutes to maintain the cash surplus with the County Treasurer.

Receivables and Payables

Activities between funds that are representative of lending/borrowing arrangements outstanding at the end of the fiscal year are referred to as due to/from other funds. Any residual balance outstanding between the governmental activities is reported in the government-wide financial statements as internal balances. All receivables are shown as net of allowance for doubtful accounts.

Inventories and Prepaid Items

Inventories, consisting primarily of bus and rail vehicle parts, are valued at weighted average cost. Inventory items of governmental funds are recorded as expenditures when consumed. Certain payments to vendors applicable to future accounting periods are recorded as prepaid items.

Restricted and Designated Assets

Certain cash, cash equivalents, and investments are classified as designated or restricted assets on the Statement of Net Assets and Balance Sheets. Restricted assets are maintained in separate accounts and their use is externally restricted for debt service, construction, and asset acquisitions. Designated assets are separate unrestricted funds designated by

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management to pay for self-insurance claims related to public liability and property damages, and workers' compensation liabilities.

Capital Assets

Capital assets are reported in the applicable business-type or governmental activities in the government-wide financial statements. Capital assets are defined by LACMTA as assets with an initial individual cost of more than \$2,500 (amount not in thousands). Such assets are recorded at historical cost if purchased or constructed. If donated, capital assets are recorded at estimated fair market value at the date of donation.

The cost of normal maintenance and repairs that do not add to the value of the asset or materially extend the asset's life are expensed. Capital assets in the proprietary funds are recorded at cost.

Capital assets are carried at cost and depreciated using the straight-line method based on the estimated useful life of the related assets as follows:

Asset Type	Useful Life in Years
Buildings and structures	30
Rail cars	25
Buses	12 - 14
Equipment and other furnishings	5 - 10
Other vehicles	5

Proprietary fund capital assets acquired with Federal, State, and Local capital grants are included in the Statement of Net Assets. Depreciation on these capital assets is included in the accompanying Statement of Revenues, Expenses, and Changes in Fund Net Assets.

Compensated Absences

It is LACMTA's policy to permit employees to accumulate earned but unused vacation and sick pay benefits. There is no liability for unpaid accumulated vacation and sick leave in the governmental fund. All vacation and sick leave pay is accrued when earned in the government-wide and proprietary fund financial statements. Accumulation and payment of vacation and sick leave is based on the collective bargaining agreements with the various unions.

Long-term Obligations

In the government-wide and proprietary fund type fund financial statements, long-term debt and other long-term obligations are reported as liabilities. Bond premiums are recorded as deferred credits. Bond issuance costs, as well as bond discounts, are recorded as deferred charges. Both deferred charges and credits are amortized over the term of the related debt.

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In the fund financial statements, governmental fund types, bond premiums, discounts, and bond issuance costs are recognized as current period expenditures.

Deferred Revenues and Credits

In the government-wide and proprietary fund type fund financial statements, deferred revenues are resource inflows that do not meet the criteria for revenue recognition. Deferred revenues arise when resources are received by LACMTA before it has a legal claim to them, such as grant monies received prior to the incurrence of the qualifying expenditures, presale of passes and tickets, and others. When revenue recognition criteria are met, or when LACMTA has a legal claim to the resources, deferred revenue is removed from the Statement of Net Assets and the revenue is recognized.

The deferred credits represent unamortized bond premiums.

In the governmental fund type fund financial statements, deferred revenues and other credits represents revenues not collected within the 90-day period at the end of the current fiscal period.

II. STEWARDSHIP, COMPLIANCE, AND ACCOUNTABILITY

A. Budgetary Information

In February of each year, all LACMTA departments submit requests for appropriations to management so that an operational and capital projects budget can be prepared. The proposed budgets are submitted to the Board in May for review. Prior to adoption, the Board conducts public hearings for discussion of the proposed annual budgets. The Board adopts the final budget at the conclusion of the hearings, which is planned to occur no later than June 30.

Enabling legislation and adopted policies and procedures provide that LACMTA's Board approve an annual budget. Annual budgets are adopted on a basis consistent with U.S. generally accepted accounting principles (GAAP) for all governmental and proprietary funds. The Board also approves the life of project budget whenever new capital projects are approved. All non-capital appropriations lapse at fiscal year-end. The appropriated budget is prepared by fund, cost center, expense type, and project. The legal level of control is at the fund level and the Board must approve additional appropriations. By policy, the Board has provided procedures for management to make revisions within operational or project budgets only when there is no net dollar impact to the total appropriations at the fund level. Budget amendments are made when needed.

LACMTA employs the noted practices and procedures in establishing budgetary data on a basis consistent with GAAP as reflected in the basic financial statements.

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B. Encumbrances

Encumbrance accounting is employed in the general and special revenue funds. Under this method, purchase orders, contracts, Memoranda of Understanding (MOU), and other commitments outstanding at year-end are reported as reservations of fund balances since they do not constitute expenditures or liabilities. These commitments will be recognized in subsequent years' appropriations.

III. DETAILED NOTES ON ALL FUNDS

A. Cash and Investments

As of June 30, 2010, the following are LACMTA's cash deposits and investments:

	<u>Business-type Activities</u>	<u>Governmental Activities</u>	<u>Total</u>
Cash Deposits and Investments:			
Cash deposits	\$ 18,603	\$ 18,530	\$ 37,133
Banker's acceptance	2,503	29,069	31,572
Commercial paper	5,002	55,332	60,334
Guaranteed investment contracts	60,910	-	60,910
Investment pools	42,841	273,191	316,032
Medium-term notes	128,133	339,199	467,332
Mortgage-backed securities	12,101	31,072	43,173
Pooled funds and mutual funds	307,257	49,991	357,248
Repurchase agreements	21	279	300
U.S. Agency securities	215,619	378,259	593,878
U.S. Treasury obligations	267,072	237,702	504,774
Total fair value	<u>\$ 1,060,062</u>	<u>\$ 1,412,624</u>	<u>\$ 2,472,686</u>

Reported in the Statement of Net Assets and Balance Sheet:

Cash and cash equivalents	\$ 79,929	\$ 551,941	\$ 631,870
Investments	53,467	859,580	913,047
Cash and cash equivalents – designated	5,431	-	5,431
Cash and cash equivalents – restricted	308,302	1,103	309,405
Investments – designated	268,743	-	268,743
Investments – restricted	344,190	-	344,190
Total	<u>\$ 1,060,062</u>	<u>\$ 1,412,624</u>	<u>\$ 2,472,686</u>

LACMTA internally pools all cash deposits and investments. All proprietary and governmental funds maintain an equity interest in the pool. Each fund's positive equity in the internally pooled cash deposits and investment account is presented as cash and cash equivalents on the Statement of Net Assets and Balance Sheet. Negative equity balances have been reclassified and are reflected as interfund receivables/payables. Interest income earned and expenses incurred as a result of investing are allocated to the various funds based on their monthly equity balances. For purposes of the Statement of Net Assets, Balance

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Sheet, and Statement of Cash Flows, all highly liquid investments, including restricted/designated assets with an original maturity date of 90 days or less when purchased, are considered to be cash and cash equivalents. Otherwise, they are classified as investments.

All investments are stated at fair value. Net changes in the fair value of investments are shown in the Statement of Activities and the Statement of Revenues, Expenditures, and Changes in Fund Balances.

LACMTA's most recent investment policy, adopted by the Board on February 1, 2010, requires LACMTA's investment program to meet three criteria in the order of their importance: **Safety** – preservation of capital and the protection of investment principal; **Liquidity** – investment portfolios will remain sufficiently liquid to enable LACMTA to meet operating requirements that might be reasonably anticipated; **Return on Investments** – LACMTA will maximize yield on the portfolio consistent with the safety and liquidity objectives.

The table below briefly describes LACMTA's investment policy. This table does not address cash deposits and investments held by bond trustees that are governed by the provisions of LACMTA's bond trust agreements.

Authorized Investment Type	Maximum Effective Maturity	Maximum Percentage of Portfolio	Maximum Investment In One Issuer	Minimum Ratings
Bonds issued by LACMTA	5 years	No limit	No limit	None
U.S. Treasury obligations	5 years	No limit	No limit	None
State of California obligations	5 years	25%	No limit	A1/P-1 short term or Aa/AA long term
Local Agency within the State of California	5 years	25%	No limit	A1/P-1 short term or Aa/AA long term
U.S. Agency securities	5 years	50%	15%	A
Banker's acceptance	180 days	40%	10%	A1/P-1
Commercial paper	270 days	25%	10%	A
Negotiable certificates of deposit	5 years	30%	10%	A
Repurchase agreements	90 days	20%	None	None
Medium-term notes	5 years	30%	10%	A
Pooled funds and mutual funds	Not applicable	20%	10%	AAA/Aaa
Asset-backed securities	5 years	15% combined with any mortgage-backed securities	None	AAA
Mortgage-backed securities	5 years	15% combined with any asset-backed securities	None	AAA
State/County investment pool	Not applicable	No limit	Amount permitted by CGC	Not applicable

LACMTA's investment policy prohibits investing in derivatives or reverse repurchase agreements.

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The management of LACMTA's cash and investments can be categorized as follow:

- Cash deposits
- Short-term investments
- Bond proceeds and debt service investments

LACMTA's investment policy is applicable to the cash deposits and short-term investments. Bond proceeds and debt service investments accounts are governed by LACMTA's debt policy.

Cash Deposits

As of June 30, 2010, LACMTA's carrying amount of cash comprises of \$1,784 in cash on hand and \$35,349 in checking accounts for a combined total of \$37,133. LACMTA's total bank balance was \$46,259 with the difference represented primarily by outstanding checks and deposits in transit. Accounts with banks were insured by Federal Deposit Insurance Corporation (FDIC) for up to \$250,000 (amount not in thousands) each and amounts uninsured are collateralized by securities held by the bank's trust department or its agent in LACMTA's name.

Short-term Investments

As of June 30, 2010, LACMTA had the following short-term investments:

Investment Type	Fair Value	Weighted Average Duration (in years) per Investment Type	Concentration of Investments	Ratings
Banker's acceptance	\$ 31,572	0.002348	1.76%	A to A-1+
Commercial paper	60,334	0.003069	3.36%	A-1 to A-1+
State/County investment pools	316,032	0.000482	17.63%	Not Rated
Medium-term notes	461,752	0.407305	25.74%	A to AAA
Medium-term notes*	5,580	0.008254	0.31%	BBB+
Mortgage-backed securities	43,173	0.021052	2.41%	AAA
Pooled funds and mutual funds	62,036	0.007437	3.46%	Not Rated
Repurchase agreements	300	0.000000	0.02%	Not Rated
U.S. Agency securities	491,977	0.357053	27.44%	A to AAA
U.S. Treasury obligations	320,453	0.321111	17.87%	AAA
Total	<u>\$ 1,793,209</u>		<u>100.00%</u>	
Portfolio weighted average duration		<u>1.128111</u>		

**These medium-term notes had A-rated credit ratings by S & P at the time of purchase during 2008 to 2009 and were subsequently downgraded to B-rated credit ratings as of June 30, 2010.*

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The weighted average duration is calculated using the investment's effective duration weighted by the investment's fair value.

LACMTA is a voluntary participant for its investments with the California Local Agency Investment Fund (LAIF) totaling \$80,000. The LAIF Advisory Board, whose Chairman is the State Treasurer or designee, provides regulatory oversight for LAIF.

LACMTA is an involuntary participant for its investments with the Los Angeles County Investment Pool (LACIP) totaling \$236,032. The County Board of Supervisors provides regulatory oversight for LACIP.

Bond Proceeds and Debt Service Investments

As of June 30, 2010, the following table addresses the investments held by the bond trustees for the benefit of LACMTA in accordance with the provisions of the various bond trust agreements.

Investment Type	Fair Value	Weighted Average Maturities (In years) per Investment Type	Concentration of Investments	Ratings
Guaranteed investment contracts	\$ 60,910	0.743231	9.48%	Not Rated
Pooled funds and mutual funds	295,212	0.005814	45.96%	AAA
U.S. Agency securities	101,901	0.091057	15.86%	AAA
U.S. Treasury obligations	184,321	0.275078	28.70%	AAA
Total	<u>\$ 642,344</u>		<u>100.00%</u>	
Portfolio weighted average maturities		<u>1.115180</u>		

Risk

In accordance with GASB Statement No. 40, *"Deposit and Risk Disclosure – an Amendment of GASB Statement No.3"*, certain required disclosures regarding investment policies and practices with respect to the risk associated with their credit risk, concentration of credit risk, custodial credit risk, interest rate risk, and foreign currency risk and are discussed in the following paragraphs:

Credit Risk

Investments are subject to credit risk, which is the chance that an issuer will fail to pay principal or interest in a timely manner, or that negative perceptions of the issuer's ability to make these payments will cause price to decline. The tables above for short-term investments and bond proceeds and debt service investments summarize the market value of investment and the related credit ratings. LACMTA maintains policies to manage credit risk, which include requiring minimum credit ratings issued by nationally recognized statistical rating organizations for its investments.

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Concentration of Credit Risk

Concentration of credit risk is the risk associated with a lack of diversification or having too much invested in a few individual shares. As disclosed above, LACMTA maintains investment policies that establish thresholds for holdings of individual securities. LACMTA does not have any holdings meeting or exceeding these threshold levels.

As of June 30, 2010, LACMTA does not have any investments with more than 5 percent of the total investments under one issuer except for obligations of the U.S. government or obligations explicitly guaranteed by the U.S. government.

Custodial Credit Risk

LACMTA has no known custodial credit risk for deposits as financial institutions are required by the California Government Code to collateralize deposits of public funds by pledging government securities as collateral. Such collateralization of public funds is accomplished by pooling. The market value of pledged securities must be in accordance with the Government Code for the State of California. California law also allows financial institutions to collateralize public fund deposits by governmental securities with a value of 110 percent of the deposit or by pledging first trust deed mortgage notes having a value of 150 percent of a governmental unit's total deposits. LACMTA may waive collateral requirements for deposits that are fully insured up to \$250,000 (amount not in thousands) by the FDIC. All investment securities purchased were held and registered in LACMTA's name and maintained for the benefit of the LACMTA in the trust department or safekeeping department of a financial institution as established by a written third party safekeeping agreement between LACMTA and the financial institution.

Interest Rate Risk

Interest rate risk is the risk that changes in interest rate will adversely affect the fair value of an investment. LACMTA measures interest rate risk on its short-term investments using the effective duration method. LACMTA maintains a policy requiring the average duration of the externally managed short-term investments not to exceed 150 percent of the benchmark duration and the average duration of the internally managed short-term investments not to exceed three years. This policy does not apply to investments of proceeds related to bond financings. LACMTA measures interest rate risk on its bond proceeds and debt service investments using the weighted average maturity method.

Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair values of the cash deposits or investments. As of June 30, 2010 there is no exposure to currency risk as all LACMTA cash deposits and investments are denominated in U.S. dollar currency.

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B. Lease Accounts

LACMTA entered into various Lease/leaseback agreements in the form of Payment Undertakings, Equity Payment Undertakings, and Guaranteed Investment Certificates with various investment providers. These were general obligations of the investment providers for the benefit of the trust except for \$53,756 of Guaranteed Investment Certificates held in LACMTA's name. As of June 30, 2010, these Lease/leaseback agreements totaled \$911,774.

C. Interfund Receivables, Payables and Transfers

Internal fund balances represent receivables/payables owed to a particular fund by another fund for temporary loans, advances, goods delivered or services rendered.

As of June 30, 2010, the special revenue funds are indebted to the Enterprise fund in the amount of \$46,738.

<u>Business-type Activities</u>	<u>Governmental Activities</u>	<u>Amount</u>
<u>Receivable Fund</u>	<u>Payable Fund</u>	
Enterprise	TDA	\$ 23,672
Enterprise	PTMISEA	18,637
Enterprise	Others	4,429
Total		<u>\$ 46,738</u>

As of June 30, 2010, the Enterprise Fund is indebted to the special revenue funds in the amount of \$25,640.

Transfers in and out by fund are as follows:

<u>Transfers In</u>							
<u>Transfers Out</u>	<u>Enterprise Fund</u>	<u>General Fund</u>	<u>Prop A Fund</u>	<u>Prop C Fund</u>	<u>Measure R</u>	<u>Other Governmental Funds</u>	<u>Total</u>
General Fund	\$ 10,955	\$ -	\$ -	\$ 226	\$ -	\$ 1,303	\$ 12,484
Prop A	385,782	3,054	-	1,562	2,697	27,802	420,897
Prop C	331,910	9,824	47,744	-	7,449	4,506	401,433
Measure R	37,350	-	-	-	-	-	37,350
PTMISEA	61,916	-	-	-	142	-	62,058
TDA	215,518	-	-	-	-	5,353	220,871
STA	1,052	-	-	-	-	-	1,052
Others	24,784	-	-	2,154	19,065	724	46,727
Total	<u>\$ 1,069,267</u>	<u>\$ 12,878</u>	<u>\$ 47,744</u>	<u>\$ 3,942</u>	<u>\$ 29,353</u>	<u>\$ 39,688</u>	<u>\$ 1,202,872</u>

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D. Receivables

Receivables as of June 30, 2010, as shown in the government-wide financial statements, in the aggregate, including the applicable allowance for doubtful accounts, are as follows:

Receivables	Business-type Activities	Governmental Activities	Total
Accounts	\$ 11,161	\$ 2,105	\$ 13,266
Interest	3,221	6,285	9,506
Intergovernmental	213,920	120,784	334,704
Sales tax	-	215,844	215,844
Gross Receivables	228,302	345,018	573,320
Less: Allowances for doubtful accounts	(2,511)	-	(2,511)
Net Receivables	<u>\$ 225,791</u>	<u>\$ 345,018</u>	<u>\$ 570,809</u>

Receivables as of June 30, 2010 for governmental activities by individual major funds and nonmajor funds are as follows:

Receivables	General Fund	Prop A Fund	Prop C Fund	Measure R Fund	TDA Fund	STA Fund	Other Governmental Funds	Total
Accounts	\$ 2,072	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 33	\$ 2,105
Interest	813	380	1,147	1,381	292	101	2,171	6,285
Intergovernmental	124	-	115,388	2,776	-	-	2,496	120,784
Sales tax	-	43,883	43,887	106,058	22,016	-	-	215,844
Total	<u>\$ 3,009</u>	<u>\$ 44,263</u>	<u>\$ 160,422</u>	<u>\$ 110,215</u>	<u>\$ 22,308</u>	<u>\$ 101</u>	<u>\$ 4,700</u>	<u>\$ 345,018</u>

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E. Capital Assets

A summary of changes in capital assets for the year ended June 30, 2010 is as follows:

	Beginning Balance	Increases	Decreases	Ending Balance
Business-type Activities				
Capital assets, not being depreciated:				
Land	\$ 625,915	\$ 370	\$ -	\$ 626,285
Construction in progress	1,405,189	449,689	(964,121)	890,757
Total capital assets, not being depreciated	2,031,104	450,059	(964,121)	1,517,042
Capital assets, being depreciated:				
Buildings	6,417,748	855,184	(5,207)	7,267,725
Equipment	585,411	48,866	(11,232)	623,045
Vehicles	2,066,311	200,615	(151,041)	2,115,885
Total capital assets, being depreciated	9,069,470	1,104,665	(167,480)	10,006,655
Less accumulated depreciation for:				
Buildings	(2,347,460)	(227,791)	214	(2,575,037)
Equipment	(430,538)	(59,479)	10,214	(479,803)
Vehicles	(1,106,234)	(145,532)	149,433	(1,102,333)
Total accumulated depreciation	(3,884,232)	(432,802)	159,861	(4,157,173)
Total capital assets, being depreciated, net	5,185,238	671,863	(7,619)	5,849,482
Business-type Activities capital assets, net	\$ 7,216,342	\$ 1,121,922	\$ (971,740)	\$ 7,366,524
Governmental Activities				
Capital assets, not being depreciated:				
Land	\$ 772,794	\$ -	\$ -	\$ 772,794
Capital assets, being depreciated:				
Freeway Service Patrol SAFE Vehicles	368	-	(4)	364
Less accumulated depreciation	(368)	-	4	(364)
Total capital assets, being depreciated, net	-	-	-	-
Governmental Activities capital assets, net	\$ 772,794	\$ -	\$ -	\$ 772,794

Depreciation expense charged to functions and/or programs are as follows:

Business-type Activities	
Bus operations	\$ 189,244
Rail operations	243,558
Total – Business-type Activities	<u>\$ 432,802</u>

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F. Risk Management

The primary emphasis of risk management activities at LACMTA is to prevent or minimize the risk of injury to persons and damage to, or loss of property. Where losses cannot be prevented, LACMTA endeavors to self-insure or to assume such losses as it may deem advisable and economical, giving due consideration to the frequency and severity of probable losses. The consideration of the effect of potential self-insured or assumed losses is part of LACMTA's financial planning process.

For its construction projects, LACMTA requires contractors to maintain a contractor controlled insurance program (CCIP) to minimize LACMTA's risk of exposure to construction related losses. These policies provide property, liability, and workers' compensation insurance and cover many of the risks arising from the work of contractors and subcontractors on LACMTA construction projects.

Operations

The reserves for the workers' compensation and the public liability and property damage claims are actuarially determined and subject to periodic adjustment as conditions warrant. The reserves are discounted using an average rate of return of 3.0 percent. LACMTA believes that the estimated liability for self-insured claims as of June 30, 2010 will be sufficient to cover any costs arising from claims filed or to be filed for incidents that occurred through that date. The liability is based, in part, upon an independent actuarial estimate of reserves required for unsettled claims including losses that have been incurred but not reported and legal expenses but excluding direct administration costs both by LACMTA employees and third party administrators.

Since September 1, 2001, the workers' compensation program is both self-insured and self-administered by LACMTA. As of June 30, 2010, a designated investment has been set aside in the amount of \$183,694 equal to the workers' compensation liabilities.

LACMTA is partially self-insured for public liability and property damage for non-construction activities up to \$4,500 per occurrence. LACMTA has acquired outside insurance coverage for losses of \$200,000 in excess of self-insurance retentions. LACMTA is self-insured for losses less than \$200,000.

Furthermore, LACMTA has an all-risk property insurance program that covers all LACMTA property. The property insurance policy covers insurable values of approximately \$7.8 billion on a probable maximum loss basis with policy limits of \$350,000 for damages (\$150,000 for flood damages). Earthquake coverage is not included in the current program structure. LACMTA does not set aside funds to cover potential gaps in property insurance coverage in case of losses.

As of June 30, 2010, a designated investment has been set aside in the amount of \$84,933 equal to the property and casualty liabilities.

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The following table summarizes changes in the claims and judgments reserves for the years ended June 30, 2010 and 2009:

	Property and Casualty		Workers' Compensation		Total	
	2010	2009	2010	2009	2010	2009
Unpaid claims and claim adjustment						
reserve – beginning of year	\$ 93,185	\$ 98,592	\$ 204,568	\$ 220,022	\$ 297,753	\$ 318,614
Provisions for insured events	26,142	22,327	9,562	9,004	35,704	31,331
Interest income	3,057	6,317	6,162	12,644	9,219	18,961
Total incurred claims and claims						
adjustment expense	122,384	127,236	220,292	241,670	342,676	368,906
Payment attributable to insured events	(37,451)	(34,051)	(36,598)	(37,102)	(74,049)	(71,153)
Total unpaid claims and claim						
adjustment reserves – end of year	\$ 84,933	\$ 93,185	\$ 183,694	\$ 204,568	\$ 268,627	\$ 297,753

As of June 30, 2010, \$74,049 of the total claims liability is considered current.

G. Compensated Absences

LACMTA and PTSC's employees represented by the United Transportation Union (UTU), the Amalgamated Transportation Union (ATU), Transportation Communications Union (TCU), American Federation State, County, Municipal Employees (AFSCME) and the Brotherhood of Teamsters (Teamsters) accumulate vacation leave pay and sick leave pay in varying amounts based on the collective bargaining agreements with the various unions.

Under the July 2006 to June 2010 contracts, vacation periods are not cumulative, however, employees may carry forward vacation pay of up to 40 hours for TCU and ATU and 40 hours for UTU to the next vacation period if notice is given by April 1, otherwise, unused vacation hours earned for the year is paid off on May 31. UTU, TCU and Teamsters employees may request payment of a limited amount of unused sick leave each year at a rate of 75 percent of face value. Unused sick leave for contract employees is payable at the rate of 100 percent of the face value upon retirement or death.

LACMTA, PTSC and EXPO have a combined vacation and sick leave program for its non-represented and AFSCME represented employees. Under this program, vacation and sick leave are combined as time off with pay (TOWP), which accrues at varying rates throughout the year.

Accumulated vacation and sick leave prior to the implementation of TOWP policy on January 1, 1995 were considered frozen and remained on the books as a liability. Frozen vacation may be converted into TOWP once per year at the request of the employee, or will be paid at 100 percent at retirement, termination, or death. Frozen sick leave may be converted to TOWP prior to retirement at a 75 percent conversion rate when an employee reaches the age of 55 and has five years or more service. Upon retirement, unused sick pay

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is paid at 75 percent, except for those individuals who retire between the ages 50 and 55, wherein the payout rate varies from 50 to 75 percent depending on the employee's age at retirement. All employees with 30 or more years of service, regardless of age at retirement, have a payout rate at 75 percent. Upon death, payment of frozen sick leave will be at 100 percent to the employee's beneficiary.

The following is a summary of the compensated absences payable as of June 30, 2010:

	Balance June 30, 2009	Earned	Used	Balance June 30, 2010	Due Within One Year
Union Employees:					
Vacation leave	\$ 24,562	\$ 26,017	\$ (25,245)	\$ 25,334	\$ 25,175
Sick leave	26,058	16,480	(13,313)	29,225	13,271
TOWP	6,087	7,714	(7,688)	6,113	6,370
Sub-total	56,707	50,211	(46,246)	60,672	44,816
Non-Union Employees:					
Vacation leave	700	-	(15)	685	13
Sick leave	3,225	-	(418)	2,807	153
TOWP	16,536	17,261	(16,632)	17,165	16,907
Sub-total	20,461	17,261	(17,065)	20,657	17,073
Total	\$ 77,168	\$ 67,472	\$ (63,311)	\$ 81,329	\$ 61,889

H. Termination Benefits

LACMTA has two severance options which must be accounted for under GASB Statement No. 47 *Accounting for Termination Benefits*: the supplemental severance pay option and the two years additional age and service credit option (2+2 plan). Under the supplemental severance pay option, affected employees will receive supplemental severance pay based on the length of service up to a maximum of twenty four weeks. Under the 2+2 plan, the affected employees will receive two years additional age and service credit toward retirement under the LACMTA Non-Contract Employees' Retirement Income Plan. Employees who are not vested in the Non-Contract Retirement Income Plan are not eligible to receive the 2+2 plan.

Under both options, affected employees will receive two weeks basic severance pay. In addition, during the supplemental severance period, LACMTA will pay the employer contribution for the medical, dental and group life insurance costs for the last insurance plan in which the employee was enrollee during their employment with LACMTA. During fiscal year ended June 30, 2010, there were 172 non-contract employees who were terminated, of which 158 took the supplementary severance program and fourteen employees took the 2+2 plan.

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The severance pay and related benefit costs for the year ended June 30, 2010 amounted to \$6,819. The liability amounts are reflected in the Accounts Payable and Accrued Liabilities line item on the Statement of Net Assets. All termination benefits are based on average cost per employee and are shown at present cost.

I. Leases

Operating Leases

LACMTA has entered into various lease agreements as “lessor” to lease various parcels of land located within the vicinity of the Red Line stations. The majority of these leases will expire between 50 years to 99 years. These leases are considered operating leases for accounting purposes.

The carrying value of the land held for lease as of June 30, 2010 is \$48,678 and is included under the Land caption in the Capital Assets section of the Notes to the Basic Financial Statements found on page 49.

The following is a schedule by years of minimum future rentals to be received on non cancelable operating leases as of June 30, 2010:

YEAR ENDING JUNE 30	AMOUNT
2011	\$ 2,380
2012	2,756
2013	2,903
2014	2,952
2015	2,981
Thereafter	579,124
	\$ 593,096

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LACMTA is committed under various leases as “lessee” to lease for building and office space. These leases are considered to be operating leases for accounting purposes. Lease expenditures for the year ended June 30, 2010 totaled \$6,282. Future minimum lease payments for these leases are as follows:

Year Ending June 30	Amount
2011	\$ 1,327
2012	1,058
2013	563
2014	436
2015	438
Total	\$ 3,822

Capital Leases

LACMTA has entered into various lease agreements as “lessee” to finance the acquisition of buses and compressed natural gas (CNG) fueling facilities. These lease agreements qualify as capital leases for accounting purposes. The related assets and liabilities have been recorded as business-type activities. The liabilities represent the present values of the future minimum lease payments, while the assets covered by the leases are shown at depreciated cost.

The assets acquired through capital leases are as follows:

	Vehicles	Buildings	Total
Cost	\$ 30,445	\$ 35,051	\$ 65,496
Less: Accumulated Depreciation	(20,221)	(35,051)	(55,272)
Net Book Value	\$ 10,224	\$ -	\$ 10,224

The future minimum lease obligations and the net present value of these minimum lease payments as of June 30, 2010 are as follows:

Purpose	Interest Rates	Amount
Business-type Activities	2.89% - 6.66%	\$ 5,134

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The lease payment schedule to maturity is as follows:

Year Ending June 30	Principal	Interest
2011	\$ 2,313	\$ 124
2012	1,990	55
2013	831	11
Total	\$ 5,134	\$ 190

J. Long-term Obligations

LACMTA's bonds and notes obligation as of June 30, 2010 are as follows:

	Balance June 30, 2009	Additions	Reductions	Balance June 30, 2010	Due Within One Year
<u>Business-type Activities</u>					
General revenue bonds	203,120	\$ -	\$ (18,300)	\$ 184,820	\$ 15,120
Capital grant receipts revenue bonds	132,460		(42,305)	90,155	-
Sales tax revenue and refunding bonds	2,873,395	693,750	(732,695)	2,834,450	118,990
Lease/leaseback to service obligations	870,872	104,375*	(63,473)	911,774	51,569
Commercial paper notes	278,741		(135,209)	143,532	-
Notes payable	11,013		(1,102)	9,911	1,147
Capitalized lease	7,737		(2,603)	5,134	2,313
Business-type Activities – Long-term Liabilities	4,377,338	798,125	(995,687)	4,179,776	189,139
<u>Governmental Activities</u>					
Redevelopment and housing bonds	25,392	-	(1,025)	24,367	662
Total Long-term Liabilities	\$ 4,402,730	\$798,125	\$ (996,712)	\$ 4,204,143	\$ 189,801

*Represents leaseback accretion

Bond premiums and discounts, as well as issuance costs, are deferred and amortized over the life of the bonds using the straight-line method, which approximates the effective interest rate method. All bonded indebtedness, except for the taxable commercial paper, is subject to the Federal arbitrage regulation.

In January 2010, LACMTA transferred \$18,054 to an escrow account to be used solely for both principal and interest payments for the Proposition C Sales Tax Revenue Refunding Bonds, Series 1998-A maturing on July 1, 2010. As of June 30, 2010, the outstanding principal of \$17,535 was considered defeased in substance and reported as reduction of outstanding bonds payable.

General Revenue Bonds

LACMTA has two outstanding general revenue bond issues. These are the General Revenue Refunding Bonds (Workers' Compensation Funding Program) Series 2003, which were

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issued to refund the Certificates of Participation and the General Revenue Refunding Bonds Series 2004 (Union Station Gateway Project), which refunded the General Revenue Refunding Bonds Series 1996-A.

General Revenue bonds currently outstanding are as follows:

<u>Purpose</u>	<u>Interest Rates</u>	<u>Amount</u>
Business-type Activities	3.50% - 4.56%	\$ 184,820

Annual debt service requirements to maturity for the General Revenue bonds are as follows:

<u>Year Ending June 30</u>	<u>Business-type Activities</u>	
	<u>Principal</u>	<u>Interest</u>
2011	\$ 15,120	\$ 6,347
2012	5,650	5,842
2013	6,075	5,637
2014	6,525	5,417
2015	7,000	5,180
2016-2020	42,750	21,736
2021-2025	58,050	12,960
2026-2028	43,650	2,348
Total	<u>\$ 184,820</u>	<u>\$ 65,467</u>

Capital Grant Receipts Revenue Bonds

The Capital Grant Receipts Revenue Bonds (Gold Line Eastside Extension Project) Series 2005-A are fixed rate bonds with rates of 3.13 percent to 5.00 percent. The bond proceeds were used to provide funds to finance a portion of the design and construction costs of the light rail transit line from Union Station in downtown Los Angeles to certain East Los Angeles communities; to fund a debt service reserve fund; to fund capitalized interest on the bonds and to pay the bond issuance costs. The bonds are limited obligations of LACMTA, payable solely from and secured solely by grant receipts, amounts on deposit in the funds and accounts established under the Indenture (except the rebate fund), and investment earnings thereon.

Capital Grant Receipt Revenue bonds outstanding are as follows:

<u>Purpose</u>	<u>Interest Rates</u>	<u>Amount</u>
Business-type Activities	3.13% - 5.00%	\$ 90,155

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Annual debt service requirements for the Capital Grant Receipts Revenue Bonds are as follows:

Year Ending June 30	<u>Business-type Activities</u>	
	Principal	Interest
2011	\$ -	\$ 4,376
2012	49,765	3,132
2013	40,390	944
Total	<u>\$ 90,155</u>	<u>\$ 8,452</u>

Sales Tax Revenue and Refunding Bonds

LACMTA has outstanding sales tax revenue and sales tax revenue refunding bonds, each secured by either LACMTA's Proposition A or C sales tax. Proceeds from sales tax revenue bonds provide funds for the acquisition and construction of major capital facilities. Proceeds from sales tax revenue refunding bonds are used to provide funds to retire previously issued sales tax revenue bonds and commercial paper notes. Refunding bonds are generally issued to reduce LACMTA's debt service costs when more favorable interest rates are available.

In August 2009, LACMTA issued Proposition C Sales Tax Revenue Refunding Bonds, Second Senior Bonds, Series 2009-C, collectively referred to as "Series 2009-C Bonds" with a total par value of \$89,625. The Series 2009-C bonds consist of four subseries: (1) Subseries 2009-C1 Bonds, (2) Subseries 2009-C2 Bonds, (3) Subseries 2009-C3 Bonds and, (4) Subseries 2009-C4 Bonds. Concurrent with the issuance of the Series 2009-C Bonds, LACMTA issued Proposition C Sales Tax Revenue Refunding Bonds, Second Senior Bonds, Series 2009-D (the "Series 2009-D Bonds") for a total par value of \$118,785. The proceeds of the Series 2009-C Bonds and the Series 2009-D Bonds and other available funds were used to (a) refund its outstanding Proposition C Sales Tax Revenue Refunding Bonds, Second Senior Bonds, Series 2003-C, (b) make a deposit to the Reserve Fund, (c) pay amounts due in connection with the partial termination of an interest rate swap, and (d) pay the costs of issuing the Series 2009-C Bonds and the Series 2009-D Bonds.

The Series 2009-C Bonds initially bear interest in the weekly mode. The weekly rate for each Subseries of Series 2009-C Bonds for each interest period is the rate of interest determined by the applicable remarketing agent on and as of the applicable rate determination date not to exceed 12% per annum. While the Series 2009-C Bonds are in the weekly mode, LACMTA may convert the interest rate on any Subseries of the Series 2009-C Bonds to any other interest rate mode on any interest payment date, upon not less than twenty days prior written notice from the Trustee to the registered owners of the applicable Subseries of Series 2009-C Bonds.

In October 2009, LACMTA issued Proposition C Sales Tax Revenue Refunding Bonds, Second Senior Bonds, Series 2009-E (the "Series 2009-E Bonds") for a total par value of \$118,940. The proceeds from the Series 2009-E Bonds and other available funds were used to (a) refund a portion of its outstanding Proposition C Sales Tax Revenue Bonds, Second

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Senior Bonds, Series 1999-A in an aggregate principal amount of \$81,070; (b) pay the principal of the outstanding Proposition C Commercial Paper Notes in the amount of \$44,000; (c) make a deposit to the Reserve Fund; and (d) pay the costs of issuing the Series 2009-E Bonds.

In October 2009, LACMTA issued Proposition A First Tier Senior Sales Tax Revenue Refunding Bonds, Series 2009-A Bonds (the "Series 2009-A Bonds") for a total par value of \$320,945. The proceeds of the Series 2009-A Bonds, together with certain other available funds were used to (a) refund all of LACMTA's Proposition A First Tier Senior Sales Tax Revenue Refunding Bonds Series 1999-A, all of LACMTA's Proposition A First Tier Senior Sales Tax Revenue Bonds Series 1999-B, and the LACMTA's Proposition A First Tier Senior Sales Tax Revenue Refunding Bonds Series 1999-C maturing on and after July 1, 2012, in an aggregate amount of \$286,205; (b) redeem \$33,016 principal of LACMTA's outstanding Proposition A Commercial Paper Notes; (c) make deposits to the Reserve Fund for the First Tier Senior Lien Bond and to the Surety Replacement Account; and (d) pay the costs associated with the issuing the Series 2009-A Bonds.

In January 2010, LACMTA issued Proposition C Sales Tax Revenue Refunding Bonds, Senior Bonds, Series 2010-A (the "Series 2010-A Bonds") for a total par value of \$45,455. The proceeds of the Series 2010-A Bonds and other available funds were used to (a) refund and defease the LACMTA's Proposition C Sales Tax Revenue Refunding Bonds, Second Senior Bonds, Series 1998-A, and Proposition C Sales Tax Revenue Bonds, Second Senior Bonds, Series 2000-A with an aggregate amount of \$45,160, (b) make a deposit to the Reserve Fund, and (c) pay the costs associated with issuing the Series 2010-A Bonds.

Sales Tax Revenue and Refunding bonds outstanding as of June 30, 2010 are as follows:

Purpose	Interest Rates	Amount
Business-type Activities	1.50% - 6.50%	\$ 2,834,450

Annual debt service requirements to maturity for the Sales Tax Revenue and Refunding bonds are as follows:

Year Ending June 30	Business-type Activities	
	Principal	Interest
2011	\$ 118,990	\$ 132,491
2012	140,895	123,281
2013	147,520	113,041
2014	150,110	106,176
2015	161,670	98,868
2016-2020	921,495	372,548
2021-2025	761,055	163,858
2026-2030	298,290	59,322
2031-2035	121,385	17,049
2036	13,040	326
Total	<u>\$ 2,834,450</u>	<u>\$ 1,186,960</u>

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Lease/Leaseback and Lease-to-service Obligations

From January 1997 through July 2003, LACMTA entered into a number of "Lease/leaseback" leveraged lease agreements for assets including heavy rail vehicles, buses, light rail vehicles, and various real property operating facilities. Under these agreements, LACMTA entered into a head-lease as lessor with an investor and simultaneously into a sublease agreement as lessee to lease the assets back. LACMTA received upfront rent prepayments which were invested in fixed income investments in an amount that, including interest income, will be sufficient to fund all scheduled payments through exercise of the early buyout option. LACMTA has realized \$64.7 million in net benefit after funding of fixed income investments and payment of transaction expenses.

For the leveraged lease transactions, LACMTA was obligated to insure and maintain the facilities, buses, and rail cars. The leveraged lease agreements provided for LACMTA's right to continue to use and control the facilities, buses, and rail cars during the term of the sublease. LACMTA agreed to indemnify the investors against increased costs, and any new or increased taxes or fees imposed on the leased assets, and cash flows or income of the lease, other than changes to the income tax rate.

The proceeds from the various finance obligations have been recorded as Lease accounts in the Statement of Net Assets – Enterprise Fund. These funds were placed with fiscal agents and are sufficient to cover all scheduled payments. The related liabilities are shown as business-type long-term debt. These debts will be repaid from earnings on the related investments together with the principal amounts of the investments.

American International Group (AIG), provided a fixed income investment product known as "payment undertaking agreement" that was used in seven of the Lease/leaseback transactions in order to invest the proceeds to fund all the scheduled rent payments and early buy-out option payments. In addition, AIG provided credit support in the form of letters of credit for three Lease/leaseback transactions. Under the Lease/leaseback documents, AIG was required to be replaced or credit enhanced if any of its credit ratings fall below either Aa2/AA or A2/A, depending on the transactions. As for the letters of credit documents, AIG's credit rating should not fall below either A2 or A.

In September, 2008 AIG's credit rating was downgraded to "A-" by S&P, requiring replacement of the payment undertaking agreements and credit enhancement, as appropriate, and in two instances required AIG to post collateral.

As of June 2010, in the current market environment, most products specified in the Lease/leaseback transaction documents as acceptable replacement facilities are not available. In November 2009, LACMTA reached an agreement with one lessor to post collateral in lieu of obtaining a replacement facility. Extensions to the deadlines to obtain acceptable replacement facilities are in place with most other lessors. Failure to reach a solution could result in early termination of six of the leases that would require LACMTA to pay an estimated \$155 million plus legal costs.

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Efforts have been underway to implement a Federal legislative solution, currently, focused on implementation of an excise tax that would penalize the lessors for taking any windfall gains from termination of a leverage lease transaction. LACMTA continues to be in contact with the lessors to request extensions of the deadlines to replace the facilities and to negotiate other solutions or agree on a minimal out-of-pocket settlement amounts.

The lease obligations currently outstanding are as follows:

Purpose	Interest Rates	Amount
Business-type Activities	1.85% - 7.38%	\$ 911,774

Annual debt service requirements to maturity for the lease obligations are as follows:

Year Ending June 30	Business-type Activities	
	Accretion	Interest
2011	\$ 51,569	\$ 32,008
2012	5,037	54,148
2013	(36,696)	50,670
2014	73,345	56,605
2015	252,112	50,203
2016-2020	(97,171)	198,966
2021-2025	77,420	224,867
2026-2030	185,491	182,664
2031-2035	354,365	57,786
2036-2039	46,302	7,535
Total	<u>\$ 911,774</u>	<u>\$ 915,452</u>

Commercial Paper Notes

LACMTA operates two commercial paper programs to maintain access to a low cost, flexible source of capital financing. Proposition A and Proposition C Commercial paper notes (CPN), taxable and tax-exempt, are issued by LACMTA with maturity dates ranging from 1 to 270 days at various interest rates. Under the terms of the programs, maturing principal amounts can be rolled-over by issuing new notes. It is the intention of LACMTA to pay the accrued interest and reissue the principal amounts as they mature. Therefore, the outstanding amounts have been classified as non-current liabilities. The proceeds from the CPN have been generally used to provide interim financing for construction and acquisition activities, including construction of rail capital projects and rail right-of-way acquisitions. LACMTA periodically retires CPN by issuing long-term, fixed rate bonds.

The Proposition A and Proposition C commercial paper programs are supported by direct-pay irrevocable letters of credit. The letters of credit are issued by a single bank for the Proposition C CPN program and a single bank for the Proposition A CPN program. Each

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bank is required to have a short term credit rating of at least A-1/P-1. The letters of credit are drawn upon at each note maturity to pay the principal and interest due. Principal that has been advanced by the banks and paid to the holders of the matured notes is reimbursed to the banks either by issuing new notes or by direct payment from LACMTA.

Interest is reimbursed to the banks on a current basis from sales tax revenues. In the event that the CPN dealers are unable to remarket the commercial paper and/or LACMTA is unable to repay the interest or principal, the banks will incur an unreimbursed draw on the letters of credit. Unreimbursed draws are converted to term loans following a specified period of time. The term loan for Proposition C CPN is repayable over a period of four years with equal quarterly principal payments. The term loan for Proposition A CPN is repayable beginning nine months after the commencement of the term loan, with quarterly principal payments over a period of two years and three months. Interest is charged at rates specified in the applicable Reimbursement Agreement. The letter of credit supporting the Proposition C commercial paper program expires in May 2013, while the letter of credit supporting the Proposition A commercial paper program expires in January 2012.

As of June 30, 2010, \$143,532 of commercial paper notes were outstanding. Proposition A and Proposition C commercial paper notes were \$119,046 and \$24,486, respectively.

Notes Payable

LACMTA entered into a financing, acquisition and control account agreement for the acquisition and installation of the solar energy generation and conservation equipment at the Metro Support Services Center (MSSC). The Notes Payable outstanding balance as of June 30, 2010 is as follows:

Purpose	Interest Rates	Amount
Business-type Activities	4.04%	\$ 9,911

The payment schedule to maturity is as follows:

Year Ending June 30	Business-type Activities	
	Principal	Interest
2011	\$ 1,147	\$ 387
2012	1,194	339
2013	1,244	291
2014	1,295	240
2015	1,348	186
2016-2018	3,683	409
Total	\$ 9,911	\$ 1,852

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Redevelopment and Housing Bonds

LACMTA entered into an agreement with the Community Redevelopment Financing Authority (CRFA) of the Community Redevelopment Agency (CRA) of the City of Los Angeles to assist in the financing of the Grand Central Square Multifamily Housing and Redevelopment Project. Under this agreement, housing and redevelopment bonds were issued by CRA.

The 2007-A multifamily housing refunding bonds were issued to redeem the 1993 Series that funded the development in a historic central location in downtown Los Angeles served by and accessible to the Metro Red Line.

The 2002-A redevelopment bonds were issued to refund the 1993-A bonds that assisted in the financing of the CRA's Redevelopment Plan for its Central Business District Redevelopment Project, also located in downtown Los Angeles, which borders the Bunker Hill Project and is in close proximity to the Metro Red Line. Both projects were undertaken with a commitment to promote the use of mass transit and reduce traffic congestion.

The projects were completed and LACMTA is making debt service payments related to these bonds. Under a reimbursement agreement collateralized by real property of the Grand Central Square Housing Project, the developer issued two promissory notes with a combined value of \$41,112 due in fiscal year 2027.

Housing and Redevelopment bonds currently outstanding are as follows:

Purpose	Interest Rates	Amount
Governmental Activities	4.13% - 5.38%	\$ 24,367

Annual debt service requirements to maturity for the Housing and Redevelopment bonds are as follows:

Year Ending June 30	Governmental Activities	
	Principal	Interest
2011	\$ 662	\$ 1,208
2012	1,015	1,163
2013	1,060	1,116
2014	1,110	1,067
2015	1,160	1,014
2016-2020	6,705	4,147
2021-2025	8,570	2,219
2026-2027	4,085	215
Total	\$ 24,367	\$ 12,149

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Summary of Significant Changes to Long-term Bond and Note Obligations

During the fiscal year, LACMTA refunded the Proposition C 2003-C Sales Tax Revenue Refunding Bonds, which were auction rate securities (ARS). Beginning in September 2007, the financial marketplace became increasingly unstable as a result of the "subprime crisis." ARS began falling out of favor with investors and collapsed dramatically at the beginning of calendar 2008, causing rates to more than double. In order to mitigate interest rate risk, the Series 2009-C and 2009-D Bonds were issued to significantly reduce LACMTA's interest costs by eliminating exposure to Ambac and the auction rate securities market.

The Proposition C Series 2009-C Refunding Bonds are uninsured VRDBs backed with letters of credit with two highly rated banks, which are more attractive to the investment community under present market conditions. The Proposition C 2009-C Bonds were issued in the amount of \$89,625, to refund \$89,625 of Proposition C 2003-C ARS. Concurrently with the issuance of the Series 2009-C Bonds, LACMTA refunded the remaining outstanding Series 2003-C Bonds through the issuance of the Series 2009-D fixed rate bonds because of savings due to relatively low interest rates on fixed rate bonds and much lower on-going expenses because no bank facilities are required with fixed rate bonds. One of LACMTA's existing Interest Rate Swap agreements was partially terminated in connection with the Series 2009-D refunding bonds, incurring a termination fee of \$6,125 that was paid from the bond proceeds.

Proposition A Series 2009 A Bonds, Proposition C Series 2009 E Bonds, and Proposition C Series 2010 A Bonds issued during FY10 were fixed rate bond issues that refunded outstanding fixed rate bond issues, for net cash flow savings. Proposition A Series 2009-A Bonds were issued in the amount of \$320,945 to refund Proposition A Series 1999-A, Proposition A Series 1999-B Bonds, and portion of Proposition A Series 1999-C Bonds with an aggregate amount of \$286,205 and pay \$33,016 principal of the outstanding Proposition A Commercial Paper Notes. Proposition C Series 2009-E Bonds were issued in the amount of \$118,940 to refund a portion of its outstanding Proposition C Series 1999-A Bonds in an aggregate principal amount of \$81,070 and pay the principal of the outstanding Proposition C Commercial Paper Notes in the amount of \$44,000. Proposition C Series 2010-A Bonds were issued in the amount of \$45,455 refund Proposition C Series 1998-A Bonds and Proposition C Series 2000-A for an aggregate amount of \$45,160.

In October 2009, LACMTA redeemed \$42,305 Capital Grant Receipts Revenue Bonds Series 2005-B from capital grant receipts. The bonds were redeemed earlier than scheduled to reduce its future debt service requirements.

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The net cash flow savings that resulted from the FY10 bond refundings are as follows:

Refunding Debt	Prior Cash Flow	Refunded Cash Flow	Net Cash Flow Savings	Present Value of Net Cash Flow Savings
Proposition A 2009-A Refunding Bonds	\$ 405,066	\$ 391,452	\$ 13,614	\$ 10,899
Proposition C 2009-C & D Refunding Bonds	283,516	253,331	30,185	11,038
Proposition C 2009-E Refunding Bonds	111,632	101,063	10,569	7,024
Proposition C 2010-A Refunding Bonds	70,819	64,973	5,846	3,807

K. Capital and MOU Commitments

Construction in Progress and Other Significant Commitments

LACMTA's commitments to vendors for capital projects which are in various phases of development as of June 30, 2010 are as follows:

<u>Project</u>	<u>Contract Commitments</u>	
	<u>Total</u>	<u>Remaining</u>
Rail Projects	\$ 1,113,213	\$ 192,107
Bus Rapid Transitways	98,752	81,225
Bus Acquisition and Others	658,876	248,422
Total	<u>\$ 1,870,841</u>	<u>\$ 521,754</u>

LACMTA has entered into various Memoranda of Understanding (MOU) to fund local transportation projects. For this purpose, LACMTA has reserved Propositions A and C, TDA, STA and Measure R funds totaling \$1,179,072 as of June 30, 2010.

L. Pensions

LACMTA provides pension benefits that cover substantially all full-time employees through five self-administered defined benefit pension plans and the California Public Employees' Retirement System (CalPERS). Four of the self-administered plans are restricted to specific union members, while the fifth provides benefits to Non-Represented employees and Teamsters.

California Public Employees' Retirement System (CalPERS)

CalPERS is an agent multiple-employer public retirement system.

Most full-time employees of PTSC are covered members under CalPERS and become fully vested in their accrued benefits after five years of credited service. Normal retirement is at age 60 with five years of credited service. The form of the normal benefit is a modified straight-line annuity equal to two percent (benefit factor) of final average compensation

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(generally the last or the highest consecutive 36 months of employment) times years of credited service. Other optional benefits are available at a reduced amount. Early retirement is available at age 50 with five years of credited service. The benefit factor is actuarially reduced for retirement prior to age 60 and actuarially increased after age 60 up to age 63. The plan provides for survivor and disability benefits. The benefit provisions and all other requirements are established by contract with the CalPERS in accordance with the provisions of the Public Employees' Retirement Law. An annual stand-alone financial report is issued and a copy can be obtained by a request from CalPERS, P.O. Box 942709, Sacramento, CA 94229-2709 or visit CalPERS's website at www.CalPERS.ca.gov.

The employer and employee contributions are a percentage of the employee's compensation. The rates are defined by law and are based on the employer's benefit formula as determined by periodic actuarial valuations. These contributions are deposited in a fund established for each entity for the purpose of creating actuarial reserves for future benefits. For the year ended June 30, 2010, the contribution rate of covered payroll was 14.44 percent. This rate includes the mandatory employee contribution of 7.0 percent that is currently paid by PTSC.

Total Annual Required Contributions (ARC) for the years ended June 30, 2010, 2009, and 2008 were \$17,661, \$17,286, and \$17,468, respectively, all of which were attributable to the PTSC and paid in full. Such contributions were made in accordance with the latest CalPERS actuarial valuation. These pension contributions for normal costs include the employees' portion, and for the years ended June 30, 2010, 2009, and 2008, were \$8,559, \$8,328, and \$8,353, respectively. At June 30, 2010, 2009, and 2008, there were no Net Pension Obligations (NPO).

The most recent actuarial valuation date was June 30, 2007 and the individual entry age normal cost was the actuarial cost method used to determine the ARC.

The smoothing of market value method was used to determine the actuarial value of assets, which was set to be no less than 80 percent or greater than 120 percent of actual market value for the purpose of determining 2009/2010 employer contributions. Initial unfunded liabilities are amortized over a closed period with subsequent plan amendments amortized as a level percentage of pay over a closed 20-year period. The actuarial assumptions are 7.75 percent investment rate of return; an inflation rate of 3.0 percent; and projected salary increases of 3.25 percent to 14.45 percent dependent on age, service, and type of employment.

LACMTA-administered Plans

LACMTA has a single-employer public employees retirement system that includes five defined benefit pension plans (Plans) covering substantially all employees, providing retirement, disability, and death benefits. Generally, employees' rights to retirement benefits vest after five (5) years for non-represented, Teamsters, and AFSCME employees and ten (10) years for UTU, ATU, and TCU employees. All contract and non-contract retirement benefits are based on the individual employee's years of service, age, final

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compensation, bargaining units, and disability status. The benefit provisions and all other requirements are established by state statute, ordinance, collective bargaining agreements, or Board's actions. An annual stand-alone financial report is issued for the Plans and can be obtained by requesting a copy from the Accounting Department, One Gateway Plaza, Los Angeles, CA 90012-2952.

The Plans' member contributions, benefits paid, and refunds are recorded using the accrual basis of accounting. The Plans' member contributions are recognized in the period in which the contributions are due and member benefits and refunds are recognized when due and payable in accordance with the terms of the plan.

The Plans' equity securities, pooled equity trust, and the fixed income securities are reported at the fair value based on quoted market prices as of fiscal year end.

LACMTA's funding policy is to make annual contributions to the Plans in amounts that, when combined with employees' contributions, fund the actuarially computed cost as they accrue. Actuarially computed costs are determined using the projected unit credit method. The employee and employer contributions are required by the plan agreements as either a percentage of annual earnings which is applicable only to ATU pension plan or the dollar amount recommended to finance the benefits provided in the UTU, TCU, AFSME and Non-contract plans on a sound actuarial basis. LACMTA uses the level percentage of payroll method to amortize the unfunded liability or surplus of the base plan over 15 years for UTU, TCU, Non-Contract, and AFSCME, and through 2023 for ATU.

The annual required contributions (ARC), for LACMTA and employees, by plan, for the years ended June 30, 2010, 2009, and 2008, are as follows:

Contributions	United Transportation Union Plan	Transportation Communication Union Plan	Amalgamated Transit Union Plan	Non-Contract Employees Plan	AFSCME	Total
<u>2010</u>						
Employer	\$ 23,230	\$ 4,639	\$ 16,752	\$ 3,620	\$ 1,581	\$ 49,822
Employee	16,541	1,910	5,137	-	-	23,588
Total	<u>\$ 39,771</u>	<u>\$ 6,549</u>	<u>\$ 21,889</u>	<u>\$ 3,620</u>	<u>\$ 1,581</u>	<u>\$ 73,410</u>
<u>2009</u>						
Employer	\$ 14,716	\$ 2,480	\$ 13,638	\$ 2,288	\$ 1,179	\$ 34,301
Employee	16,712	1,977	2,567	-	-	21,256
Total	<u>\$ 31,428</u>	<u>\$ 4,457</u>	<u>\$ 16,205</u>	<u>\$ 2,288</u>	<u>\$ 1,179</u>	<u>\$ 55,557</u>
<u>2008</u>						
Employer	\$ 14,495	\$ 2,446	\$ 14,541	\$ 2,652	\$ 1,121	\$ 35,255
Employee	15,872	1,873	3,639	-	-	21,384
Total	<u>\$ 30,367</u>	<u>\$ 4,319</u>	<u>\$ 18,180</u>	<u>\$ 2,652</u>	<u>\$ 1,121</u>	<u>\$ 56,639</u>

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The annual pension cost, annual amount contributed, and net pension obligation for the years ended June 30, 2010, 2009, and 2008 are as follows:

	United Transportation Union Plan	Transportation Communication Union Plan	Amalgamated Transit Union Plan	Non- Contract Employees Plan	AFSCME	Total
<u>2010</u>						
Annual Pension Cost	\$ 23,195	\$ 4,639	\$ 16,777	\$ 3,620	\$ 1,581	\$ 49,812
Annual Amount Contributed	23,230	4,639	16,752	3,620	1,581	49,822
Net Pension Obligation	868	-	-	-	-	868
<u>2009</u>						
Annual Pension Cost	14,681	2,480	13,644	2,288	1,179	34,272
Annual Amount Contributed	14,716	2,480	14,406	2,288	1,179	35,069
Net Pension Obligation	903	-	-	-	-	903
<u>2008</u>						
Annual Pension Cost	14,460	2,446	14,541	2,652	1,121	35,220
Annual Amount Contributed	14,495	2,446	14,790	2,652	1,121	35,504
Net Pension Obligation	937	-	-	-	-	937

The components of the net pension obligation for UTU employees for years ended June 30, 2010, 2009, and 2008 are as follows:

	Annual Required Contribution (ARC) (a)	NPO at the beginning of the year (BOY) (b)	Interest on the NPO at the BOY (c)	Adjustment to ARC (d)	Amortization of NPO at the BOY (Decrease in NPO) (e)	NPO at the end of the year (EOY) (b)+(c)+(d)+(e)
<u>2010</u>	\$ 23,230	\$ 903	\$ 67	\$ -	\$ (102)	\$ 868
<u>2009</u>	14,716	937	75	-	(109)	903
<u>2008</u>	14,495	973	78	-	(114)	937

LACMTA's contributions to the Plans for the year ended June 30, 2010 were made in accordance with the actuarially determined requirements computed as of December 31, 2008 for the UTU, TCU, Non-Contract, and AFSCME Plans while the ATU Plan was computed as of January 1, 2009. Actuarially computed costs are determined using the projected unit credit method. The total annual required contributions (ARC) for all plans for the years ended June 30, 2010, 2009, and 2008 were \$49,822, \$34,301, and \$35,255, respectively. Annual pension cost, which is equivalent to ARC plus interest on Net Pension Obligation (NPO) less amortization of NPO, amounted to \$49,812, \$34,272, and \$35,220 for the years ended June 30, 2010, 2009, and 2008 respectively. The NPO for the UTU Plan for the years ended June 30, 2010, 2009, and 2008 were \$868, \$903, and \$937, respectively. There was no NPO at June 30, 2010, 2009, and 2008 for the TCU, ATU, Non-Contract, and AFSCME Plans.

The required contribution rate by employees for the fiscal years ended June 30, 2010, 2009, and 2008 were between 0 and 8.58 percent, 0 and 8.86 percent, 0 and 8.51 percent, respectively, of their annual wages. The employer rate is equal to the ARC. The method of ½ book value + ½ market value was used to determine the actuarial value of assets for the

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UTU, TCU, Non-Contract, and AFSCME Plans. Effective with the actuarial valuation as of December 31, 2007, the ATU Plan adopted the 4-year smoothed market value method with a 15 percent corridor to determine the actuarial value of assets. The key actuarial assumptions are: 8.0 percent investment rate of return including a 3.0 percent rate for inflation projected salary increases tied to age-based rates, and no postemployment benefit increases.

The schedule of funding progress, presented as required supplementary information following the notes to the financial statements, presents multi-year trend information, which shows whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liability for benefits.

The LACMTA's funding progress information as of June 30, 2010 is presented below:

Actuarial Valuation Date	Normal Accrued Liability (a)	Actuarial Value of Assets (b)	Unfunded Liability (UAAL) (a)-(b)	Funded Ratio (b)/(a)	Annual Covered Payroll (c)	UAAL as a Percentage of Covered Payroll (a)-(b)/(c)
PTSC						
06/30/2008	\$ 282,568	\$ 276,752	\$ 5,816	97.94%	\$ 123,548	4.71%
LACMTA						
12/31/2009						
UTU	512,887	362,222	150,665	70.62%	190,212	79.21%
TCU	90,027	61,866	28,161	68.72%	27,578	102.11%
ATU	295,021	211,174	83,847	71.58%	109,214	76.77%
Non-Contract	131,773	114,115	17,658	86.60%	6,206	284.53%
AFSCME	50,675	44,653	6,022	88.12%	6,161	97.74%
Total	\$ 1,080,383	\$ 794,030	\$ 286,353	73.50%	\$ 339,371	84.38%

M. Other Postemployment Benefits (OPEB)

Plan Description

On February 22, 2007, the Board adopted a resolution authorizing the establishment of an irrevocable Retiree Health Care and Welfare Benefits Trust ("Plan"). The Plan is a single-employer, defined benefit plan administered by LACMTA to provide OPEB benefits, such as medical, dental, vision, life insurance, and similar benefits offered by LACMTA to its active and retired employees. The Plan covers benefits administered by LACMTA to Non-contract employees and employees represented by AFSCME and the Teamsters and the contractual obligations to the respective Union Health & Welfare Trusts for employees represented by ATU, TCU, and UTU. Generally, eligibility for coverage is based on an employee's service and age. An annual stand-alone financial report is issued for the Plan and can be obtained by requesting a copy from the Accounting Department, LACMTA, One Gateway Plaza, Los Angeles, CA 90012-2952.

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Plan Accounting Practices

Basis of Accounting – The Plan’s financial statements have been prepared using the accrual basis of accounting. Revenues are recognized when earned and expenses are recorded when a liability is incurred.

Contributions and Benefits – Plan member contributions are recognized in the period in which the contributions are due. LACMTA contributions are on a “pay-as-you-go” basis reflecting budgeted retirees’ medical and life insurance benefits. Benefits and refunds are recognized when due and payable in accordance with the terms of the Plan.

Method Used to Value Investments – Investments are reported at fair value based on quoted market prices as of fiscal year end. Investment income is recognized on an accrual basis. Gains and losses on sales and exchange of securities are recognized on the trade date. Gains or losses on sales of securities are determined on the basis of average cost.

Enrollment

The numbers of participants (not in thousands) by employee group as of January 1, 2009 (the effective date of the bi-annual OPEB valuation) are as follows. There have been no significant changes in the number of employees covered since that date.

Participant	Union Health & Welfare Trusts				Total
	LACMTA	ATU	TCU	UTU	
Active Employees	1,927	2,178	702	4,048	8,855
Retirees under 65	301	445	162	898	1,806
Retirees over 65	617	549	133	810	2,109
Total Actives and Retirees	2,845	3,172	997	5,756	12,770

Funding Policy

Member Contribution

Contributions made by Non-contract/AFSCME/Teamsters retirees are established and approved by the Board. Generally, the contribution is calculated as a percent of the premium cost based on service. The benchmark is 25 years or more to qualify for the active employee contribution rate. For each year of service less than 25 years, the retiree pays an additional 4 percent of LACMTA’s cost. Contributions are remitted by LACMTA to the Plan. The Union Health and Welfare Trusts establish the plan member contribution rate. ATU retirees’ contributions are \$80 per month pre-65 years of age and \$60 per month post-65 years of age. TCU retiree contributions are \$35 per month for single coverage; \$50 per month for retiree plus dependent coverage. UTU retiree contributions are \$50 per month.

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Contributions made by employees represented by ATU, UTU, and TCU are directly remitted to their respective Union Health and Welfare Trusts.

LACMTA Contribution

LACMTA's funding policy is to make annual contributions to cover the pay-as-you-go costs and partial payments against the actuarially required contribution. Actuarially computed costs are determined using the projected unit credit method.

Since LACMTA is funding the pay-as-you-go cost, but less than the ARC, contributions were determined reflecting a "partial" funding approach. LACMTA elected to use a blended discount rate of 4.0 percent, which implicitly assumes the level of funding in excess of current year costs of pay-as-you-go that represents approximately one-third of the ARC in excess of the current year costs and the investment policy of the trust to support a long-term expected rate of return on assets of 7.5 percent. The ARC calculation uses an open 20-year rolling amortization that meets the requirements of GASB Statement No. 45, *"Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions"*.

Actuarial Methods and Assumptions

Projections of benefits for financial reporting purposes are based on the substantive plan (the Plan as understood by the employer and the plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing benefit costs between the employer and plan members.

Actuarial valuations for OPEB plans involve estimates of the value of reported amounts and assumptions about the probability of events far into the future. Actuarially determined amounts reflect a long-term perspective and are subject to continual revision as results are compared with past expectations, and new estimates are made about the future. The most significant actuarial assumptions include: a) 4.0 percent discount rate, compounded annually; b) increase in future payroll of 3.5 percent per year; c) mortality using RP-2000 Mortality Table (male and female with blue collar adjustments) with mortality improvements projected to year 2010; d) health care cost trend rate of 8.5 percent; and e) an inflation rate of 2.5 percent. The trend assumptions are comprised of three elements: 1) initial trend rate, 2) ultimate trend rate, and 3) the grade-down period. The trend rate assumptions exclude the expected impact of aging since this impact is explicitly reflected elsewhere in the valuation. The initial trend rate is the expected increase in health care costs into the second year of the valuation (i.e. the first assumed annual increase in starting per capita rates). The assumed ultimate trend rate and grade-down period are based on macroeconomic principles reflecting assumed long-term general information, nominal gross domestic product growth rates, and the excess of national health expenditures over other goods and services, and an adjustment for an assumed impact of population growth. LACMTA's contractual contributions, which are assumed to increase in years after the current contract, in accordance with medical trend and retirees' contributions are assumed to increase at the same rate as medical costs.

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LACMTA opted to perform biannual valuations of its liabilities under the provision of GASB Statement No. 45, "Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions". As such, the January 1, 2009 valuation is used to determine the Annual Required Contributions (ARC) for the fiscal years beginning July 1, 2009 and 2010. In the January 1, 2009 valuation, the ARC was determined by amortizing the unfunded liability over 20 years as a level percentage of pay equal to 14.86 percent, and aggregate payroll assumed to grow at 3.5 percent per year. The ARC for the period ending June 30, 2010 was determined using the level percentage of pay method.

The following table summarizes the valuation results applying the level percentage of pay method to the valuation date of January 1, 2009:

<u>Summary of Costs</u>	
Normal Cost	\$ 39,535
▪ Percentage of Total Payroll	6.81%
Amortization of Unfunded Actuarial Accrued Liability	\$ 46,668
▪ Percentage of Total Payroll	8.04%
ARC with 20-year Level Percent of Payroll	
Amortization	\$ 86,203
▪ Percentage of Total Payroll	14.86%

Annual OPEB Cost and Net OPEB Obligation (Asset)

The Annual Required Contributions (ARC) represents a level of funding that if paid on an ongoing basis, is projected to cover normal costs each year, and amortize any unfunded actuarial liabilities (or funding excess) of the plan over a period not to exceed thirty years. Amounts required but not set aside to pay for these benefits are accumulated as part of the Net OPEB obligation (Assets).

LACMTA's annual OPEB cost for the year, the amount paid on behalf of the plan, and changes in the LACMTA's Net OPEB Obligation (Asset) to the plan for the year ended June 30, 2010 are as follows:

Annual Required Contribution	\$ 86,203
Interest on Net OPEB obligation	(2,977)
Adjustment to ARC	4,048
Total Annual OPEB Cost	<u>87,274</u>
Less Contributions made	<u>(31,197)</u>
Increase in Net OPEB Obligation	56,077
Net OPEB Obligation (Asset) – beginning of year	<u>(74,390)</u>
Net OPEB Obligation (Asset) – end of year	<u>\$ (18,313)</u>

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LACMTA's annual OPEB cost, the percentage of annual OPEB cost contributed to the plan, and the Net OPEB Obligation (Asset) for the year ended June 30, 2010, 2009 and 2008 are as follows:

Year Ended	Annual OPEB Cost	Percentage of OPEB Cost Contributed	Net OPEB Obligation (Asset)
2010	\$ 87,274	35.75%	\$ (18,313)
2009	75,725	37.65%	(74,390)
2008	72,054	268.77%	(121,602)

Funding Progress

The schedule of funding progress presents multi-year trend information on whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liabilities for benefits. This schedule will be expanded to include three years as actuarial information becomes available.

The LACMTA's funding progress information as of June 30, 2010 is illustrated as follows:

Actuarial Valuation Date	Projected Unit Credit Accrued Liability (a)	Actuarial Value of Assets (b)	Unfunded Liability (UAAL) (a)-(b)	Funded Ratio (b)/(a)	Annual Covered Payroll (c)	UAAL as a Percentage of Covered Payroll (a)-(b)/(c)
January 1, 2009						
LACMTA	\$ 148,150	\$ 22,934	\$ 125,216	15.48%	\$ 165,924	75.47%
ATU	462,109	71,537	390,572	15.48%	142,512	274.06%
TCU	90,227	13,968	76,259	15.48%	35,372	215.59%
UTU	314,221	48,643	265,578	15.48%	236,341	112.37%
Total	\$ 1,014,707	\$ 157,082	\$ 857,625	15.48%	\$ 580,149	147.83%

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N. Deferred Compensation and 401(k) Savings Plan

Deferred Compensation Plan

LACMTA has a deferred compensation plan for all employees established in accordance with IRC Section 457, which permits employees to defer a portion of their current salary to future years.

Under this plan, employees may contribute up to the lesser of \$16,500 (not in thousands) or 100 percent of their earnings in calendar year 2010. A special provision in the law allows an additional \$5,500 (not in thousands) for "Baby Boomers" (age 50 or greater by December 31, 2010), and employees eligible for retirement within three years may defer up to a total of \$33,000 (not in thousands).

The plan is managed by a third party plan administrator and trustee. Employee deferrals can be allocated among several investment options as directed by the employee. Although the employee is always 100 percent vested in the plan, withdrawals are not available to employees until termination, retirement, death, or unforeseeable emergency. In the opinion of management, LACMTA has no liability for any losses under the plans, but does have the fiduciary responsibility of due professional care that would be required from a prudent investor. Accordingly, the assets of the deferred compensation plan and the related liability to employees are not reported in the fiduciary fund. LACMTA does not match employees' contributions to the deferred compensation plan. As of June 30, 2010, the deferred compensation plans had assets (at fair value) of \$192,604.

401 (k) Savings Plan

LACMTA also offers a deferred savings plan to all employees created in accordance with IRC Section 401(k). Under this, employees may contribute up to the lesser of \$16,500 (not in thousands) or 100 percent of their earnings in calendar year 2010. A special provision in the law allows an additional \$5,500 (not in thousands) for "Baby Boomers" (age 50 or greater by December 31, 2010).

The savings plan is managed by a third party plan administrator, and the participants can direct the plan administrator to allocate their deferral based on several investment options. Plan benefits are based solely on amounts contributed by employees to their own accounts. Withdrawals are not available to employees until termination, retirement, age 59-1/2, death, or unforeseen emergency. In the opinion of management, LACMTA has no liability for any losses under the plan, but does have the fiduciary responsibility of due professional care that would be required from a prudent investor. Accordingly, the plan's assets and liability to employees are not reported in the fiduciary fund. LACMTA does not match employees' contribution to the 401(k) savings plan. As of June 30, 2010, the 401(k) savings plan had assets (at fair value) of \$242,267.

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Employees may participate in both deferred compensation and 401(k) savings plan. The maximum annual combined contribution per calendar year using both plans is \$44,000 (not in thousands), or \$55,000 (not in thousands) if an employee falls within the catch up provision.

O. Joint Powers

LACMTA is a member of the Southern California Regional Rail Authority (SCRRA), which was formed as a regional Joint Powers Agency between the transportation commissions of the counties of Los Angeles, San Bernardino, Orange, Riverside, and Ventura. SCRRA's purpose is to plan, design, construct, and administer the operation of regional passenger rail lines serving the participating counties. SCRRA named the regional commuter rail system "Metrolink."

Metrolink's capital acquisition and expansion have been funded by contributions from member agencies and the State of California.

As of June 30, 2010, LACMTA provided funding for the majority of the Metrolink's operating and capital costs. Summary audited financial information for the SCRRA for the year ended June 30, 2009 (most recent data available) was as follows:

Current Assets	\$	165,077
Capital Assets, net		847,802
Other Assets		25,829
Total Assets		1,038,708
Total Liabilities		155,168
Net Assets	\$	883,540
Total Revenues	\$	323,638
Total Expenses		(252,054)
Increase in Net Assets	\$	71,584

Additional detailed financial information is available from the Office of Finance and Administration, SCRRA, 700 South Flower Street, 26th Floor, Los Angeles, CA 90017.

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P. Derivative Instruments

As of June 30, 2010, LACMTA had the following hedging derivative instruments outstanding within business-type activities:

Type	Objective	Notional Amount	Effective Date	Maturity Date	Fair Value June 30, 2010	Terms
<u>Interest Rate Swap</u>						
Pay Fixed Interest Rate Swap	To reduce the risks associated with the change in interest rate associated to Prop C Series 2009-A Bonds.	\$ 166,900	10/9/2003	7/1/2023	\$ (13,470)	Receive 68% LIBOR, pay 3.44%
Pay Fixed Interest Rate Swap	To reduce the risks associated with the change in interest rate associated to 2004 Gateway Bonds.	174,925	9/22/2004	7/1/2027	(13,592)	Receive 64% LIBOR plus 0.21%, pay 3.50%
Pay Fixed Interest Rate Swap	To reduce the risks associated with the change in interest rate associated to Prop A Series 2008-A1/A2.	130,775	8/23/2005	7/1/2031	(11,399)	Receive 63% LIBOR plus 0.14%, pay 3.37%
Pay Fixed Interest Rate Swap	To reduce the risks associated with the change in interest rate associated to Prop A Series 2008-A3/A4.	130,850	8/23/2005	7/1/2031	(11,281)	Receive 63% LIBOR plus 0.14%, pay 3.36%
Pay Fixed Interest Rate Swap	To reduce the risks associated with the change in interest rate associated to Prop C Series 2009-C Bonds.	89,625	7/23/2009	7/1/2025	(6,007)	Receive 68% LIBOR, pay 3.40%
	Sub-total	<u>693,075</u>			<u>(55,749)</u>	
<u>Commodity Swap</u>						
Compressed Natural Gas (CNG)	To reduce the risks associated with the changes in the cost of natural gas.	13,140	7/1/2010	6/30/2011	(2,003)	Receive variable, pay 0.6480
Compressed Natural Gas (CNG)	To reduce the risks associated with the changes in the cost of natural gas.	13,140	7/1/2010	6/30/2011	(2,068)	Receive variable, pay 0.6530
Compressed Natural Gas (CNG)	To reduce the risks associated with the changes in the cost of natural gas.	8,760	7/1/2010	6/30/2011	(982)	Receive variable, pay 0.6075
	Sub-total	<u>35,040</u>			<u>(5,053)</u>	
	Grand Total	<u>\$ 728,115</u>			<u>\$ (60,802)</u>	

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Interest Rate Swap

LACMTA entered interest rate swap agreements to manage the exposure of changes in variable interest rate related to its debt obligations. LACMTA makes a fixed rate payment to the counterparty and receives a variable rate payment in order to achieve a synthetic fixed rate for the bonds and hedge exposure to variable interest rates. LACMTA has entered into these swap agreements at a cost anticipated to be less than what LACMTA would have paid to issue fixed rate debt.

The LACMTA's Board annually adopts an Interest Rate Swap Policy that governs the use and management of interest rate swaps as they are used in conjunction with debt issues. The policy establishes guidelines to be used when considering the use of swaps, as well as in the ongoing management of existing swaps. Guidance is provided specifying appropriate uses: selection of acceptable swap products, swap providers and swap advisors, negotiation of favorable terms and conditions, and stipulating annual surveillance of the swaps and the providers.

LACMTA's Interest Rate Swap Policy specifies that interest rate swaps may be used to lock-in a fixed rate or to create additional variable rate exposure. Interest rate swaps may be used to produce interest rate savings, limit or hedge variable rate payments, alter the pattern of debt service payments, or for asset/liability matching purposes.

On July 23, 2009, the Prop C Series 2003-C interest rate swap was partially terminated with the refunding of the Prop C Series 2003-C series bonds by the Prop C Series 2009-C and Prop C Series 2009-D bonds. The Prop C Series 2009-D bonds are fixed rate securities and the underlying portion of the swap was terminated, resulting in the termination fee of \$6,125 (i.e. the deferred outflow upon termination of the swap). This amount was included in the balance of the deferral account in the net carrying amount of the old debt for the purpose of calculating the difference between that amount and the reacquisition price of the old debt. The Prop C Series 2009-C bonds are variable rate securities and maintained its portion of the swap: the Prop C Series 2009-C interest rate swap. The swap had a fair value of \$5,110 upon association with the new debt.

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At of June 30, 2010, LACMTA outstanding interest swap agreements fair value along with the changes in fair values for the year then ended, and the associated counterparty and its credit ratings are as follows:

Bond Series	Fair Value June 30, 2009	Change in Fair Value	Fair Value June 30, 2010	Counterparty	Counterparty Credit Ratings	
					Moody's	S&P
Proposition C Series 2003- C/Proposition C Series 2009-C ¹	\$ (11,372)	\$ 5,365	\$ (6,007)	Goldman Sachs Mitsui Marine Derivative Products, L.P.	Aa1	AAA
Proposition C Series 2009-A	(9,125)	(4,345)	(13,470)	Wachovia Bank	Aa2	AA
2004 Gateway Bonds	(9,179)	(4,413)	(13,592)	Bank of Montreal	Aa2	A+
Proposition A Series 2008- A1/A2	(7,771)	(3,628)	(11,399)	Bank of Montreal	Aa2	A+
Proposition A Series 2008- A3/A4	(7,148)	(4,133)	(11,281)	Deutsche Bank AG	Aa3	A+
Total	\$ (44,595)	\$ (11,154)	\$ (55,749)			

¹The Proposition C Series 2003-C interest rate swap was partially terminated. The terms for the remaining portion were revised for the Proposition C Series 2009-C interest rate swap.

The increase in fair value of the interest rate swap is reported as a deferred outflow in the Business-type Activities on the Statement of Net Assets.

The fair value represents the theoretical cost to terminate the swap at the date indicated, assuming that a termination event occurred on that date. The fair values were estimated using the zero-coupon method. This method calculates the future net settlement payments required by the swap, assuming that the current forward rates implied by the yield curve correctly anticipate future spot interest rates. These payments are then discounted using the spot rates implied by the current yield curve for a hypothetical zero-coupon bond due on the date of each future net settlement on the swap.

LACMTA neither received nor paid any upfront amount when these swaps were initiated. Relevant market interest rates on the valuation date of the swaps reflected in the schedule above were lower than market interest rates on the effective date of the swaps and, consequently, resulted in negative fair values at valuation date.

The following risks are generally associated with swap agreements:

Credit Risk – The counterparty could experience weakening financial condition or insolvency, which could affect its ability to perform its financial obligations. In the

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event of deterioration in the credit ratings of the counterparty, the swap agreement may require that collateral be posted to secure the party's obligations under the swap agreement. Further ratings deterioration by either party below levels agreed-to in each swap agreement could result in a termination event requiring a cash settlement. See "Termination Risk" below. To mitigate credit risk, LACMTA monitors the credit ratings of the counterparties on a quarterly basis. In addition, if the outstanding ratings of the counterparties fall to certain levels, the counterparties must post collateral with a third-party custodian to secure their potential termination payments above certain threshold amounts. Collateral must be cash, U.S. Government securities or certain federal agency securities. As of June 30, 2010, LACMTA was required to post collateral for two of its counterparties: Bank of Montreal and Wachovia Bank for \$11.5 and \$3.5million, respectively.

Basis Risk – The variable interest rate paid by the counterparty under the swap agreement and the variable interest rate paid by LACMTA on the associated bonds may not be equal. If the counterparty's rate under the swap is lower than the bond interest rate, then the counterparty's payment under the swap agreement would not fully reimburse LACMTA for its interest payment on the associated bonds. Conversely, if the bond interest rate is lower than the counterparty's rate on the swap, there would be a net benefit to LACMTA. LACMTA monitors the basis differential for its existing swaps on a monthly basis. Prior to entering into any new interest rate swaps, LACMTA and its swap advisor review the historical trading differentials between LACMTA's outstanding variable rate bonds and the proposed index. This allows LACMTA to structure its interest rate swaps to minimize basis risk.

Termination Risk – Under certain conditions, the swap agreement could be terminated and depending on current market interest rates, either LACMTA or the counterparty could be required to make a termination payment. LACMTA's swap agreements only permit the counterparty to terminate if an Event of Default or a Termination Event has occurred. Events of Default include non-payment, false or misleading representations, or the bankruptcy of LACMTA or the counterparty. Termination Events include, a downgrade of LACMTA's rating to below "BBB," an event of taxability, or conversion of bonds to fixed rate. To closely monitor the risk, LACMTA calculates its termination exposure for all existing and proposed swaps at market value monthly. A contingency plan is periodically updated identifying alternatives to finance a termination payment and/or replace or restructure the hedge.

Rollover Risk – When the notional amount under the swap agreement terminates prior to the final maturity of the hedged bonds, the governmental issuer would then be exposed to the current short-term bond interest rates, as well as to current swap pricing in order to continue the benefit of the synthetic fixed rate for the duration of the bond issue. As of June 30, 2010, LACMTA does not have any swap agreements that terminate prior to the final maturity of the hedged bonds.

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Interest Rate Risk – Interest rate risk is the risk that changes in interest rates will adversely affect the fair values of a government's financial instruments or a government's cash flows. In certain circumstances a swap can have the effect of increasing the risk of loss as a result of changes in interest rates, such as a swap from a fixed rate to a variable rate. As of June 30, 2010, LACMTA does not have any swaps that have any fixed to variable rate swaps.

Market-access Risk – Market-access risk is the risk that a government will not be able to enter credit markets or that credit will become more costly. If a governmental issuer were to enter into a derivative in anticipation of entering the credit market at a later date, but was ultimately unable to do so, there is a risk that the lack of market access would frustrate the purpose of the derivative and could result in a termination payment becoming due. As of June 30, 2010, LACMTA has not entered into a derivative in anticipation of entering the credit market at a later date.

Liquidity Risk – At some point in the future, LACMTA could be unable to obtain liquidity support for its variable rate bonds that require liquidity and are currently hedged with interest rate swaps. This situation could result in LACMTA incurring additional costs to convert the bonds to a different variable rate product that does not require liquidity support or to refund the bonds to a fixed rate mode, which would require the swaps to be either canceled or terminated. LACMTA periodically evaluates the expected availability of liquidity support for hedged and unhedged variable rate debt. As of June 30, 2010, LACMTA has sufficient liquidity support.

As of June 30, 2010, the annual debt service requirements of the variable rate obligations and net swap payments for the Proposition C Series 2009-A, Proposition C Series 2009-C, Proposition A Series 2008-A, and Gateway Series 2004 are as follows:

Fiscal Year	Variable-rate Bonds		Interest Rate Swaps, Net	Total
	Principal	Interest		
2011	\$ 3,225	\$ 2,553	\$ 21,269	\$ 27,047
2012	7,600	2,506	21,044	31,150
2013	8,125	2,455	20,804	31,384
2014	8,650	2,400	20,547	31,597
2015	29,175	2,324	19,960	51,459
2016-2020	190,625	9,877	83,533	284,035
2021-2025	299,350	5,709	44,463	349,522
2026-2030	139,025	1,013	7,199	147,237
2031-2032	3,400	10	103	3,513
Total	\$ 689,175	\$ 28,847	\$ 238,922	\$ 956,944

As rates vary, variable rate bond interest payments and net swap payments will vary. The debt service requirements are reflected in the table of sales tax revenue bond debt service requirements to maturity can be found on page 58.

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Commodity Swap

In FY10, LACMTA has entered into commodity swap agreements to hedge approximately 95 percent of its annual exposure to changes in the cost of natural gas. LACMTA pays a counterparty an amount based on a fixed rate and receives an amount based on a specified variable rate index. The variable rate is intended to be, on average, equal to the rate LACMTA will pay to purchase its natural gas. If the variable rates LACMTA receives from the swap counterparty and actual payments for natural gas fully offset each other, then the fixed rate paid to the counterparty becomes the cost of purchasing natural gas.

At June 30, 2010, LACMTA outstanding commodity swaps fair value along with the changes in fair values for the year then ended, and the associated counterparty and its credit ratings are as follows:

Fair Value June 30, 2009	Changes in Fair Value	Fair Value June 30, 2010	Counterparty	Counterparty Ratings		
				S&P	Moody's	Fitch
\$ (3,290)	\$ 3,290	\$ -	Bank of America, N.A			
(4,645)	4,645	-	BP Corp. North America			
(5,088)	5,088	-	BP Corp. North America			
(4,060)	4,060	-	BP Corp. North America			
(3,094)	3,094	-	RBC Capital Market			
(2,206)	2,206	-	BP Corp. North America			
(392)	(1,611)	(2,003)	Barclays Capital	AA-	Aa3	AA-
(452)	(1,616)	(2,068)	Bank of America, Merrill	A+	Aa3	A+
-	(982)	(982)	Barclays Capital	AA-	Aa3	AA-
<u>\$ (23,227)</u>	<u>\$ 18,174</u>	<u>\$ (5,053)</u>				

The net changes in fair value of commodity swap are reported under the Transit Operations in the Business-type Activities on the Statement of Activities.

The negative fair value is the theoretical cost that LACMTA will pay to terminate the swap at the valuation date. The fair values were estimated by discounting the future monthly net cash flows that would be anticipated based on future pricing.

The following risks are generally associated with swap agreements:

Counterparty Risk – the risk that the counterparty fails to make required payments or otherwise comply with the terms of the swap agreement. This non-performance would usually result from financial difficulty, but could also occur for physical, legal, or business reasons. This risk is mitigated by establishing minimum credit quality criteria, establishing maximum credit limits, requiring collateral on counterparty downgrade. To mitigate credit risk, LACMTA monitors the credit ratings of the counterparties on a quarterly basis.

Basis Risk – The risk that there is a mismatch between the variable rate payment received from the swap counterparty and the variable rate paid for gas purchases. LACMTA mitigates this risk by conducting an extensive survey of relevant products

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and indices, and selecting one that has a strong correlation with the price changes of the cost of gas.

Termination Risk – The risk that there will be a mandatory early termination of the commodity swap that would result in LACMTA either paying or receiving a termination payment. Mandatory terminations generally result when a counterparty or LACMTA suffers degraded credit quality, illiquidity, bankruptcy, or failure to perform. LACMTA mitigates this risk by establishing minimum credit quality criteria, establishing maximum credit limits, and requiring collateral on counterparty downgrade and employing credit rating surveillance. LACMTA monitors the credit ratings of the counterparties on a quarterly basis. LACMTA calculates quarterly its termination exposure for all existing and proposed swaps at market value.

Q. Litigation and Other Contingencies

Litigation

LACMTA is named as a defendant in various lawsuits. Although the outcome of these lawsuits is not presently determinable, in the opinion of management, the resolution of these matters will not have a material adverse effect on the financial condition of LACMTA.

Federal, State, and Other Governmental Funding

LACMTA receives significant funding from Federal, State, and other governmental grant funds as reimbursement for costs incurred. Such grants are subject to review and audit by the grantor agencies. These audits could result in disallowed expenditures under the terms of the grant or in reductions of future grant monies. Based on prior experience, LACMTA's management believes that costs ultimately disallowed, if any, would not materially affect the financial condition of LACMTA.

Excise Tax on Lease/Leaseback Transactions

On May 17, 2006, President Bush signed into law the Tax Increase Prevention and Reconciliation Act of 2005 (TIPRA). Pursuant to the 2005 Tax Act, a new Section 4965 was added to the Internal Revenue Code of 1986, as amended (the "Code"). Section 4965 imposes a Federal excise tax (the "New Excise Tax") on the net income or proceeds of Sale In/Lease Out transactions entered into by tax-exempt entities, including states and their political subdivisions. On February 7, 2007, the Internal Revenue Service (IRS) released Notice 2007-18, which addresses how the provisions of new section 4965 will be applied. This provision could impact LACMTA's leveraged leasing transactions. The Internal Revenue Service recently released proposed regulations to further clarify which transactions are subject to the New Excise Tax and calculation of the New Excise Tax. Based on the proposed regulations, LACMTA believes that the New Excise Tax will not have a material adverse effect on its financial condition or results of its operation.

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R. Pollution Remediation Obligations

LACMTA adopted GASB Statement No. 49, "*Accounting and Financial Reporting for Pollution Remediation Obligations*", establishing accounting and financial reporting standards for pollution (including contamination) remediation obligations, which are obligations to address the current or potential detrimental effects of existing pollution by participating in pollution remediation activities such as site assessments and cleanups.

LACMTA is responsible for the pollution remediation obligations for various facilities and capital projects. In general, these facilities and projects include those with known soil and/or groundwater impacts or either current or anticipated future litigation involving contamination of soil or groundwater at locations not controlled by LACMTA.

Identification and reporting of pollution remediation obligations under GASB 49 that do not qualify for capitalization are accrued as a liability and expense when a range of expected outlays is reasonably estimable or expensed upon receipt of goods and services. LACMTA calculates expected outlays related to this pollution remediation using established potential environmental liability estimates for three different cost categories identified below:

External Remediation Costs – costs for goods and services that are provided to LACMTA and represent outlays for services, including subcontracted direct labor, overhead, profit, and fees. Examples of these goods and services include environmental site assessment activities, remedial action planning and design, remedial action implementation, and post-remediation monitoring.

LACMTA Internal Administration Costs – internal administration costs incurred by LACMTA including direct and indirect outlays (e.g. general overhead) associated with technical management and procurement activities.

Litigation and Settlement Costs – litigation and settlement costs for sites where LACMTA has been named as a responsible party and has agreed to pay all or part of the quantified financial obligations to implement environmental mitigations or environmental damages associated with the site.

The remediation obligation estimates accrued as of June 30, 2010 are subject to change over time. Cost may vary due to price fluctuations, changes in technology, changes in potential responsible parties, results of environmental studies, changes to status and regulations and other factors that could result in revisions to these estimates.

Prospective recoveries from responsible parties may reduce LACMTA's obligation. Capital assets may be created when pollution outlays are made under specific circumstances. LACMTA is not expecting recovery from other responsible parties.

As of June 30, 2010, LACMTA has an outstanding pollution remediation liability of \$7,700 related to soil and/or groundwater pollution cleanup activities. Of this amount,

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approximately \$3,262 is associated with litigation or settlement costs and approximately \$480 is associated with LACMTA's internal administration as presented below:

The following table summarizes the pollution remediation by activity as of June 30, 2010:

Facility Name	External Remediation	Internal Administration	Litigation and Settlements	Assessment/ Remediation Spent	Total Costs
Division 1	\$ 198	\$ 30	\$ -	\$ -	\$ 228
Division 3	651	80	-	-	731
Division 7	2,160	130	-	(198)	2,092
Division 10	705	70	-	(58)	717
Division 12	300	20	-	-	320
Division 11	100	-	-	-	100
Division 30	-	100	-	-	100
Red Line	100	10	-	-	110
Oil Landfill	-	10	2,937	-	2,947
McArthur Park Remediation	-	-	100	-	100
Omega	-	10	100	-	110
Mountaineer Refinery	-	10	75	-	85
SFV/N Hollywood Former Division 15	-	10	50	-	60
Total	<u>\$ 4,214</u>	<u>\$ 480</u>	<u>\$ 3,262</u>	<u>\$ (256)</u>	<u>\$ 7,700</u>

External remediation costs noted above were estimated on a lifecycle basis through retirement of the pollution remediation obligation or a forecasted, year-by-year scope of the remaining project lifecycles to No Further Action (NFA) (i.e., closure). The scoping period for newly identified sites and for the continuance of other identified obligation at other sites was assumed to start July 1, 2010.

Internal costs noted above were estimated on a site-specific basis. A full time equivalent (FTE) basis was used to estimate the internal cost of administration and overhead. An FTE value of \$200,000 (amount not in thousands) per annum was multiplied by the annual FTE equivalent anticipated for each site and the projected duration required to retire the pollution remediation obligations.

Litigation and settlement costs are based on LACMTA's proportionate share of cleanup and remediation costs at each clean up sites identified in the table above that received LACMTA's generated hazardous waste, based on volume, ongoing remediation costs, and prior years' expenses.

LACMTA does not currently have any pollution remediation activities for liabilities not yet recognized because they are not reasonably estimable.

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S. Reclassifications

Comparative data for the prior year has been presented in selected sections of the accompanying financial statements. Also, certain accounts presented in prior year's data have been reclassified in order to be consistent with the current year's presentation.

T. Effects of New Pronouncements

The following summarizes recent GASB pronouncements and their impact, if any, on the financial statements:

In June 2007, GASB issued Statement No. 51, "*Accounting and Financial Reporting for Intangible Assets.*" This statement addresses how to establish accounting and financial reporting requirements for intangible assets, including easements, water rights, timber rights, patents, trademarks, and computer software. The requirements of this statement are effective for financial statements for periods beginning after June 15, 2009. LACMTA implemented the new reporting requirements of GASB 51 for the fiscal year ended June 30, 2010. The adoption of GASB 51 did not have a material impact on LACMTA's financial statements.

In June 2008, GASB issued Statement No. 53, "*Accounting and Financial Reporting for Derivative Instruments.*" This statement addresses the recognition, measurement, and disclosure of information regarding derivative instruments entered into by state and local governments. Derivative instruments are often complex financial arrangements used by synthetically fixing prices. Common types of derivative instruments include interest rate and commodity swaps, interest rate locks, options (caps, floors, and collars), swap options, forward contracts, and futures contracts. The requirements of this statement are effective for financial statements for periods beginning after June 15, 2009. LACMTA implemented the new reporting requirements of GASB 53 for fiscal year ended June 30, 2010. Additional information on GASB 53 can be found on pages 75 to 81.

In March 2009, GASB issued Statement No. 54, "*Fund Balance Reporting and Governmental Fund Type Definitions.*" This statement enhances the usefulness of fund balance information by providing clearer fund balance classifications that can be more consistently applied and by clarifying the fund type definitions. This statement also provides for additional classification as restricted, committed, assigned, and unassigned based on the relative strength of the constraints that control how specific amounts can be spent. Disclosure of the policies in the notes to the financial statements is required. The requirements of this statement are effective for financial statements for periods beginning after June 15, 2010. LACMTA plans to implement the new reporting requirements of GASB 54 for fiscal year ending June 30, 2011.

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U. Subsequent Events

New LACMTA Fare Structure

Effective July 1, 2010, LACMTA changed its fare structure for bus and rail service. The increase will help LACMTA's financial stability while maintaining quality of service.

The first phase of the fare increase went into effect on July 1, 2007. Prior to the implementation of July 1, 2009 fare increase, the Measure R half-cent sales tax was approved by voters to improve mobility in the region. As a result of the November 4, 2008 ballot initiative, LACMTA was able to defer the July 1, 2009 fare increase until July 1, 2010.

Long-term Debt

As of June 30, 2010, LACMTA had one outstanding auction rate security bond issue: the \$171,025 General Revenue Refunding Bonds (Union Station Gateway Projects) Series 2004. Auctions have failed for the Series 2004 Bonds since the third quarter of 2008. This was primarily the result of deteriorating financial strength and credit ratings downgrade of virtually all of the previously AAA-rated monoline bond insurers. In July 2010, LACMTA issued \$79,620 General Revenue Refunding Bonds (Union Station Gateway Projects) Series 2010-A for the purchase and cancellation of a portion of the Series 2004 Bonds through a tender offer for purchase at a discount from the par amount of the refunded Series 2004 Bonds. The proceeds of the Series 2010-A bonds together with other funds released as stated in the Series 2010-A Official Statement were used to (1) purchase an aggregate amount of \$83,525 outstanding Series 2004 Bonds; (2) pay \$6,675 for the partial termination of the notional amount of the Series 2004 Swap Agreement related to the refunded Series 2004 Bonds; (3) make a deposit to the Reserve Account; and (4) pay for costs of issuance. Following the issuance of the Series 2010-A Bonds, the total amount of Series 2004 Bonds outstanding is \$86,175.

The Capital Grant Receipts Revenue Bonds (Gold Line Eastside Extension Project) Series 2005-A are fixed rate bonds with rates of 3.13 percent to 5.00 percent, of which \$90,155 was outstanding as of June 30, 2010. In October 2010, LACMTA redeemed the entire \$90,155 outstanding Capital Grant Receipts Revenue Bonds from capital grant receipts in order to reduce its future debt service requirements.

In November 2010, LACMTA issued \$732,410 Measure R Senior Sales Tax Revenue Bonds, composed of \$573,950 Series 2010-A Taxable Build America Bonds and \$158,460 Series 2010-B Tax-Exempt Bonds. The Series A Bonds mature June 1, 2021 through June 1, 2039 with rates ranging from 4.28% to 5.74%. LACMTA expects to receive a cash subsidy from the United States Treasury equal to 35% of the interest payable on the Series 2010-A Bonds. The Series 2010-B Bonds mature June 1, 2012 through June 1, 2020 at rates ranging from 0.50% to 5.00%.

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY
Notes to Basic Financial Statements
June 30, 2010

Commercial Paper Notes

In August 2010, LACMTA entered into two direct-pay irrevocable letters of credit for \$50,000 for each bank, to support the Proposition A commercial paper program. Each bank is required to have a short term credit rating of at least A-1/P-1. The letters of credit are drawn upon at each note maturity to pay the principal and interest due. Principal that has been advanced by the banks and paid to the holders of the matured notes is reimbursed to the banks either by issuing new notes or by direct payment from LACMTA. Interest is reimbursed to the banks on a current basis from sales tax revenues. In the event that the CPN dealers are unable to remarket the commercial paper and/or LACMTA is unable to repay the interest or principal, the banks will incur an unreimbursed draw on the letters of credit. Unreimbursed draws are converted to term loans following a specified period of time. The term loan for Proposition A CPN is repayable beginning nine months after the commencement of the term loan, with quarterly principal payments over a period of two years and three months. Interest is charged at rates specified in the applicable Reimbursement Agreement. The letters of credit supporting the Proposition A commercial paper program will expire in January 2012.

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY
Required Supplementary Schedule
Schedule of Funding Progress – Pension Plans
For the Fiscal Year Ended June 30, 2010

The schedule of Funding Progress below shows the recent history of the actuarial value of assets, actuarial accrued liability, their relationship, and the relationship of the unfunded actuarial accrued liability to payroll for the pension funds contributed to by:

Valuation Date	Normal Accrued Liability (a)	Actuarial Value of Assets (b)	Unfunded Liability (Excess Assets) (a)-(b)	Funded Ratio (b)/(a)	Annual Covered Payroll (c)	UAAL as a % of Payroll (a)-(b)/ (c)
PTSC *						
06/30/08	\$ 282,568	\$ 276,752	\$ 5,816	97.94%	\$ 123,548	4.71%
06/30/07	247,609	246,342	1,267	99.49%	115,303	1.10%
06/30/06	215,195	213,556	1,639	99.24%	108,085	1.52%
LACMTA **						
UTU						
12/31/09	512,887	362,222	150,665	70.62%	190,212	79.21%
12/31/08	488,327	306,525	181,802	62.77%	192,718	94.34%
12/31/07	439,532	310,067	129,465	70.54%	188,648	68.63%
TCU						
12/31/09	90,027	61,866	28,161	68.72%	27,578	102.11%
12/31/08	86,148	53,052	33,096	61.58%	27,057	122.32%
12/31/07	72,981	53,142	19,839	72.82%	26,735	74.21%
ATU						
12/31/09	295,021	211,174	83,847	71.58%	109,214	76.77%
12/31/08	275,021	174,733	100,288	63.53%	115,504	86.83%
12/31/07	257,642	181,305	76,337	70.37%	100,643	75.85%
Non-Contract						
12/31/09	131,773	114,115	17,658	86.60%	6,206	284.53%
12/31/08	129,195	101,878	27,317	78.86%	6,855	398.50%
12/31/07	121,427	105,987	15,440	87.28%	7,291	211.77%
AFSCME						
12/31/09	50,675	44,653	6,022	88.12%	6,161	97.74%
12/31/08	48,528	40,120	8,408	82.67%	6,951	120.96%
12/31/07	46,482	41,364	5,118	88.99%	7,095	72.14%
LACMTA						
TOTAL						
12/31/09	\$ 1,080,383	\$ 794,030	\$ 286,353	73.50%	\$ 339,371	84.38%
12/31/08	1,027,219	676,308	350,911	65.84%	349,085	100.52%
12/31/07	938,064	691,865	246,199	73.75%	330,412	74.51%

Annual Financial Report can be obtained by writing to:

* CalPERS, PO BOX 942709, Sacramento, CA 94229-2709 or visit CalPERS's website at www.calpers.ca.gov

** Finance Department, LACMTA, One Gateway Plaza, Los Angeles, CA 90012-2952 or visit LACMTA's website at www.metro.net.

See accompanying independent auditors' report.

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY
Required Supplementary Schedule
Schedule of Funding Progress – OPEB
For the Fiscal Year Ended June 30, 2010

The schedule of Funding Progress below shows the recent history of actuarial value of assets, actuarial accrued liability, their relationship, and the relationship of the unfunded actuarial accrued liability to payroll for the OPEB fund established by LACMTA:

Actuarial Valuation Date	Projected Unit Credit Accrued Liability (a)	Actuarial Value of Assets (b)	Unfunded Liability (UAAL) (a)-(b)	Funded Ratio (b)/(a)	Annual Covered Payroll (c)	UAAL as a Percentage of Covered Payroll (a)-(b)/(c)
January 1, 2009						
LACMTA	\$ 148,150	\$ 22,934	\$ 125,216	15.48%	\$ 165,924	75.47%
ATU	462,109	71,537	390,572	15.48%	142,512	274.06%
TCU	90,227	13,968	76,259	15.48%	35,372	215.59%
UTU	314,221	48,643	265,578	15.48%	236,341	112.37%
Total	<u>\$ 1,014,707</u>	<u>\$ 157,082</u>	<u>\$ 857,625</u>	<u>15.48%</u>	<u>\$ 580,149</u>	<u>147.83%</u>
January 1, 2007						
LACMTA	\$ 104,433	\$ -	\$ 104,433	-%	\$ 144,609	72.22%
ATU	351,541	-	351,541	-%	122,385	287.24%
TCU	62,883	-	62,883	-%	31,242	201.28%
UTU	214,585	-	214,585	-%	233,331	91.97%
Total	<u>\$ 733,442</u>	<u>\$ -</u>	<u>\$ 733,442</u>	<u>-%</u>	<u>\$ 531,567</u>	<u>137.98%</u>

*Annual Financial Report can be obtained by writing to:
Finance Department, LACMTA, One Gateway Plaza, Los Angeles, CA 90012-2952 or visit LACMTA's website at www.metro.net.*

See accompanying independent auditors' report.

Los Angeles County Metropolitan Transportation Authority
Schedule of Revenues, Expenditures, and Changes in Fund Balances – Budget and Actual
General Fund
For the Year Ended June 30, 2010
(Amounts expressed in thousands)

	Budgeted Amounts*		Actual Amounts	Variance with Final Budget
	Original	Final		
REVENUES				
Intergovernmental	\$ 3,335	\$ 3,234	\$ 2,525	\$ (709)
Investment Income	2,172	2,172	5,201	3,029
Net appreciation in fair value of investments	-	-	1,049	1,049
Lease and rental	16,563	16,563	15,713	(850)
Licenses and fines	500	500	446	(54)
Other	11,243	11,423	16,764	5,341
TOTAL REVENUES	33,813	33,892	41,698	7,806
EXPENDITURES				
Current:				
Administration and other	24,075	24,075	19,842	4,233
Transportation subsidies	-	-	149	(149)
Debt and interest expenditures:				
Principal	-	-	1,025	(1,025)
Interest and fiscal charges	2,262	2,262	1,249	1,013
TOTAL EXPENDITURES	26,337	26,337	22,265	4,072
EXCESS OF REVENUES OVER EXPENDITURES	7,476	7,555	19,433	11,878
OTHER FINANCING SOURCES (USES)				
Transfers in	12,111	12,261	12,878	617
Transfers out	(10,700)	(11,420)	(12,484)	(1,064)
TOTAL OTHER FINANCING SOURCES AND USES	1,411	841	394	(447)
NET CHANGE IN FUND BALANCES	8,887	8,396	19,827	11,431
Fund balances – beginning of year	160,627	160,627	160,627	-
FUND BALANCES – END OF YEAR	\$ 169,514	\$ 169,023	\$ 180,454	\$ 11,431

*Budget prepared in accordance with GAAP

See accompanying independent auditors' report.

Los Angeles County Metropolitan Transportation Authority
Schedule of Revenues, Expenditures, and Changes in Fund Balances – Budget and Actual
Proposition A Fund
For the Year Ended June 30, 2010
(Amounts expressed in thousands)

	Budgeted Amounts*		Actual Amounts	Variance with Final Budget
	Original	Final		
REVENUES				
Sales taxes	\$ 616,725	\$ 616,725	\$565,746	\$ (50,979)
Investment income	600	600	2,419	1,819
Net appreciation in fair value of investments	-	-	316	316
TOTAL REVENUES	617,325	617,325	568,481	(48,844)
EXPENDITURES				
Current:				
Transportation subsidies	248,060	248,060	229,407	18,653
TOTAL EXPENDITURES	248,060	248,060	229,407	18,653
EXCESS OF REVENUES OVER EXPENDITURES	369,265	369,265	339,074	(30,191)
OTHER FINANCING SOURCES (USES)				
Transfers in	-	19,900	47,744	27,844
Transfers out	(437,443)	(450,297)	(420,897)	29,400
TOTAL OTHER FINANCING SOURCES AND USES	(437,443)	(430,397)	(373,153)	57,244
NET CHANGE IN FUND BALANCES	(68,178)	(61,132)	(34,079)	27,053
Fund balances – beginning of year	114,615	114,615	114,615	-
FUND BALANCES – END OF YEAR	\$ 46,437	\$ 53,483	\$ 80,536	\$ 27,053

*Budget prepared in accordance with GAAP

See accompanying independent auditors' report.

Los Angeles County Metropolitan Transportation Authority
Schedule of Revenues, Expenditures, and Changes in Fund Balances – Budget and Actual
Proposition C Fund
For the Year Ended June 30, 2010
(Amounts expressed in thousands)

	Budgeted Amounts *		Actual Amounts	Variance with Final Budget
	Original	Final		
REVENUES				
Sales taxes	\$ 616,886	\$ 616,886	\$ 565,787	\$ (51,099)
Intergovernmental	326,959	310,704	130,115	(180,589)
Investment income	1,171	1,171	10,020	8,849
Net decline in fair value of investments	-	-	(549)	(549)
TOTAL REVENUES	945,016	928,761	705,373	(223,388)
EXPENDITURES				
Current:				
Administration and other	350,568	351,318	246,657	104,661
Transportation subsidies	516,291	516,291	423,686	92,605
TOTAL EXPENDITURES	866,859	867,609	670,343	197,266
EXCESS OF REVENUES OVER EXPENDITURES	78,157	61,152	35,030	26,122
OTHER FINANCING SOURCES (USES)				
Transfers in	500	26,628	3,942	(22,686)
Transfers out	(408,273)	(413,781)	(401,433)	12,348
TOTAL OTHER FINANCING SOURCES USES	(407,773)	(387,153)	(397,491)	(10,338)
NET CHANGE IN FUND BALANCES	(329,616)	(326,001)	(362,461)	(36,460)
Fund balances – beginning of year	478,474	478,474	478,474	-
FUND BALANCES – END OF YEAR	\$ 148,858	\$ 152,473	\$ 116,013	\$ (36,460)

*Budget prepared in accordance with GAAP

See accompanying independent auditors' report.

Los Angeles County Metropolitan Transportation Authority
Schedule of Revenues, Expenditures, and Changes in Fund Balances – Budget and Actual
Measure R Fund
For the Year Ended June 30, 2010
(Amounts expressed in thousands)

	Budgeted Amounts*		Actual Amounts	Variance with Final Budget
	Original	Final		
REVENUES				
Sales taxes	\$ 361,248	\$ 361,248	\$ 551,480	\$ 190,232
Intergovernmental	24,679	3,283	4,371	1,088
Investment income	-	-	2,656	2,656
Net appreciation in fair value of investments	-	-	3,604	3,604
TOTAL REVENUES	385,927	364,531	562,111	197,580
EXPENDITURES				
Current:				
Administration	53,196	62,446	52,306	10,140
Transportation subsidies	97,266	114,939	118,143	(3,204)
TOTAL EXPENDITURES	150,462	177,385	170,449	6,936
EXCESS OF REVENUES OVER EXPENDITURES	235,465	187,146	391,662	204,516
OTHER FINANCING SOURCES (USES)				
Transfers in	1,009	25,436	29,353	3,917
Transfers out	(32,000)	(38,687)	(37,350)	1,337
TOTAL OTHER FINANCING SOURCES AND USES	(30,991)	(13,251)	(7,997)	5,254
NET CHANGE IN FUND BALANCES	204,474	173,895	383,665	209,770
Fund balances – beginning of year	-	-	-	-
FUND BALANCES – END OF YEAR	\$ 204,474	\$ 173,895	\$ 383,665	\$ 209,770

*Budget prepared in accordance with GAAP

See accompanying independent auditors' report.

Los Angeles County Metropolitan Transportation Authority
Schedule of Revenues, Expenditures, and Changes in Fund Balances – Budget and Actual
PTMISEA Fund
For the Year Ended June 30, 2010
(Amounts expressed in thousands)

	Budgeted Amounts *		Actual Amounts	Variance with Final Budget
	Original	Final		
REVENUES				
Intergovernmental	\$ -	\$ 1,400	\$ -	\$ (1,400)
Investment income	-	-	121	121
Net appreciation in fair value of investment	-	-	19	19
TOTAL REVENUES	-	1,400	140	(1,260)
OTHER FINANCING SOURCES AND (USES)				
Transfers out	-	(113,950)	(62,058)	51,892
TOTAL OTHER FINANCING SOURCES AND USES	-	(113,950)	(62,058)	51,892
NET CHANGE IN FUND BALANCES	-	(112,550)	(61,918)	50,632
Fund balances – beginning of year	118,614	118,614	118,614	-
FUND BALANCES – END OF YEAR	\$ 118,614	\$ 6,064	\$ 56,696	\$ 50,632

* Budget prepared in accordance with GAAP

See accompanying independent auditors' report.

Los Angeles County Metropolitan Transportation Authority
Schedule of Revenues, Expenditures, and Changes in Fund Balances – Budget and Actual
Transportation Development Act Fund
For the Year Ended June 30, 2010
(Amounts expressed in thousands)

	Budgeted Amounts*		Actual Amounts	Variance with Final Budget
	Original	Final		
REVENUES				
Sales taxes	\$ 307,345	\$ 307,345	\$ 285,270	\$ (22,075)
Investment income	-	-	2,240	2,240
TOTAL REVENUES	307,345	307,345	287,510	(19,835)
EXPENDITURES				
Current:				
Transportation subsidies	89,757	82,178	92,289	(10,111)
TOTAL EXPENDITURES	89,757	82,178	92,289	(10,111)
EXCESS OF REVENUES OVER EXPENDITURES	217,588	225,167	195,221	(29,946)
OTHER FINANCING SOURCES (USES)				
Transfers out	(261,502)	(251,143)	(220,871)	30,272
TOTAL OTHER FINANCING SOURCES AND USES	(261,502)	(251,143)	(220,871)	30,272
NET CHANGE IN FUND BALANCES	(43,914)	(25,976)	(25,650)	(326)
Fund balances – beginning of year	117,329	117,329	117,329	-
FUND BALANCES – END OF YEAR	\$ 73,415	\$ 91,353	\$ 91,679	\$ (326)

* Budget prepared in accordance with GAAP

** Budget deficiency explained on page 22

See accompanying independent auditors' report.

Los Angeles County Metropolitan Transportation Authority
Schedule of Revenues, Expenditures, and Changes in Fund Balances – Budget and Actual
State Transit Assistance Fund
For the Year Ended June 30, 2010
(Amounts expressed in thousands)

	Budgeted Amounts*		Actual Amounts	Variance with Final Budget
	Original	Final		
REVENUES				
Sales taxes	\$ -	\$115,161	\$ 117,087	\$ 1,926
Investment income	-	-	1,246	1,246
TOTAL REVENUES	-	115,161	118,333	3,172
EXPENDITURES				
Current:				
Transportation subsidies	-	-	3,504	(3,504)
TOTAL EXPENDITURES	-	-	3,504	(3,504)
EXCESS OF REVENUES OVER EXPENDITURES	-	115,161	114,829	(332)
OTHER FINANCING SOURCES (USES)				
Transfers out	(280)	(280)	(1,052)	(772)
TOTAL OTHER FINANCING SOURCES AND USES	(280)	(280)	(1,052)	(772)
NET CHANGE IN FUND BALANCES	(280)	114,881	113,777	(1,104)
Fund balances – beginning of year	54,162	54,162	54,162	-
FUND BALANCES – END OF YEAR	\$ 53,882	\$169,043	\$ 167,939	\$ (1,104)

**Budget prepared in accordance with GAAP*

See accompanying independent auditors' report.

Los Angeles County Metropolitan Transportation Authority
Schedule of Revenues, Expenditures, and Changes in Fund Balances – Budget and Actual
Other Governmental Funds
For the Year Ended June 30, 2010
(Amounts expressed in thousands)

	Budgeted Amounts*		Actual Amounts	Variance with Final Budget
	Original	Final		
REVENUES				
Intergovernmental	\$ 25,594	\$ 26,065	\$ 14,035	\$ (12,030)
Investment income	580	580	11,165	10,585
Net decline in fair value of investments	-	-	(239)	(239)
Licenses and fines	6,000	8,000	7,516	(484)
Other	-	-	56	56
TOTAL REVENUES	32,174	34,645	32,533	(2,112)
EXPENDITURES				
Current:				
Administration and other	79,133	79,133	58,388	20,745
Transportation subsidies	19,053	19,053	8,799	10,254
TOTAL EXPENDITURES	98,186	98,186	67,187	30,999
EXCESS OF REVENUES OVER EXPENDITURES	(66,012)	(63,541)	(34,654)	28,887
OTHER FINANCING SOURCES (USES)				
Transfers in	57,043	53,255	39,688	(13,567)
Transfers out	-	(75,480)	(46,727)	28,753
TOTAL OTHER FINANCING SOURCES AND USES	57,043	(22,225)	(7,039)	15,186
NET CHANGE IN FUND BALANCES	(8,969)	(85,766)	(41,693)	44,073
Fund balances – beginning of year	383,669	383,669	383,669	-
FUND BALANCES – END OF YEAR	\$ 374,700	\$ 297,903	\$ 341,976	\$ 44,073

*Budget prepared in accordance with GAAP

See accompanying independent auditors' report.

One Gateway Plaza
Los Angeles, CA 90012-2952

213.922.6000
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C) Inflation Rate Forecasts

The historical and forecasted inflation rates utilized throughout the Financial Plan are identified in this Appendix C. The LACMTA applied escalation factors based upon the University of California, Los Angeles (UCLA) Anderson Forecast from July 2010, developed by UCLA Anderson Graduate School of Management.

Los Angeles County Long-term Forecast

**UCLA Anderson Forecast
July 2010**

Long-term Forecast of Los Angeles County

Prepared by

The UCLA Anderson Forecast
Anderson Graduate School of Management
University of California, Los Angeles

This forecast was prepared based upon assumptions reflecting the Forecast's judgement as of the date it bears. Actual results could vary materially from the forecast. Neither the UCLA Anderson Forecast nor the Regents of the University of California shall be held responsible as a consequence of any such variance. Unless approved by the UCLA Anderson Forecast, the publication or distribution of this forecast and the preparation, publication or distribution of any excerpts from this forecast are prohibited.

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The L.A. Report: 2nd Quarter 2010

The Long Road to Recovery

Julia Thornton Snider
Economist
UCLA Anderson Forecast

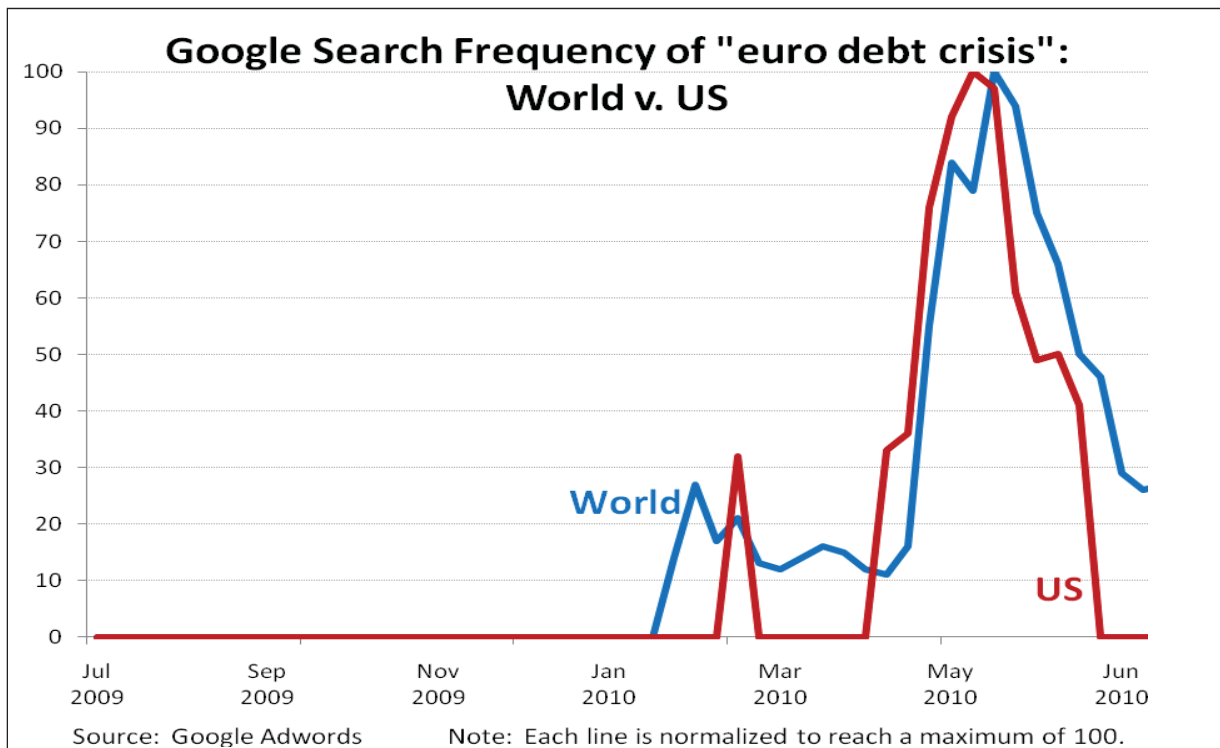
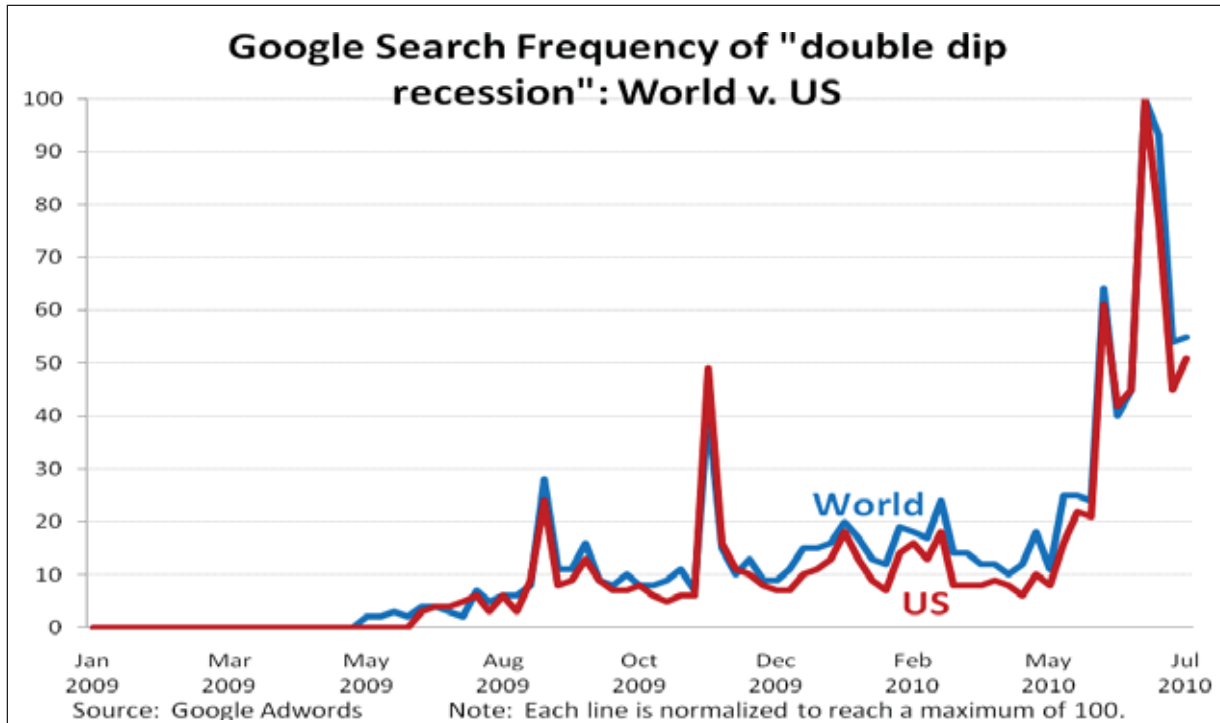
July 2010

Overview

Although the NBER recession dating committee has yet to officially make the call, all the evidence suggests that the Great Recession ended over a year ago, sometime around July 2009. Los Angeles was already facing a net loss of nonfarm payroll jobs (mainly in construction, manufacturing, and information) in the quarter before the recession began, and as it missed the worst of the housing crisis, it should be among the first places to recover. And yet economic anxiety, of late, appears to be on the rise. The stock market cycles through climbs and crashes like a roller coaster. After a long period of little activity, Google searches of the phrase “double dip recession” reached a sharp peak in late June and early July of this year.¹ (See the chart below.) A Google search of the phrase “second stimulus” yields nearly 20,000 hits, with headlines like these topping the list: “US Economy Needs a Second Stimulus,” from the Christian Science Monitor in January, “Do We Need a Second Stimulus?” from Time in June and the Wall Street Journal in July, and “Obama Advisor Says US Should Mull Second Stimulus,” from Bloomberg in July. The experts may profess that the recession is over, but the public seems far from convinced.

And yet, while the feeling of economic anxiety is easy to encounter, whether in Washington or Los Angeles or in the blogosphere, its precise source is difficult to pinpoint. Google searches of the phrase “euro debt crisis” arrived at a nail-biting zenith in early May, but since then have fallen off precipitously. LA appears to have hit a trough of nonfarm payroll jobs in the last quarter of 2009, with employment generally rising since then. For comparison, it took eight quarters after the official end of the “tech bust” recession of 2001 for nonfarm payroll jobs in LA to hit bottom and resume climbing. And the story of the defense dry-up recession of 1990-1991 is an even sorrier tale. LA, which as an aerospace center was particularly hard hit, saw a staggering 11 quarters of continued employment decline after the official end of the recession.

¹ Where the data is available, Google searches originating in Los Angeles generally mirror those in the US as a whole. However, the LA data is choppier due to censoring for privacy concerns.



So if doubts about Europe have subsided and the job turn-around, if anything, has arrived on the early side, why is LA, like the nation, so fraught with anxiety? While I generally resist playing market psychologist, my hunch is that the reason can be found in the severity of our recent experience. Unemployment in LA hit a high of 12.4 percent in the first quarter of this

year, a level not previously registered in the local data series dating back to 1979. When the pain is this bad, it is that much harder to wait for a recovery. Since April, the events in Europe and a round of weaker-than-anticipated jobs reports have prompted us to revise our forecast a touch downward. Nevertheless, we continue to forecast a recovery, albeit a slightly slower one than we previously had envisioned. We are on the road to recovery, but the road is long and sometimes its twists and turns test our patience.

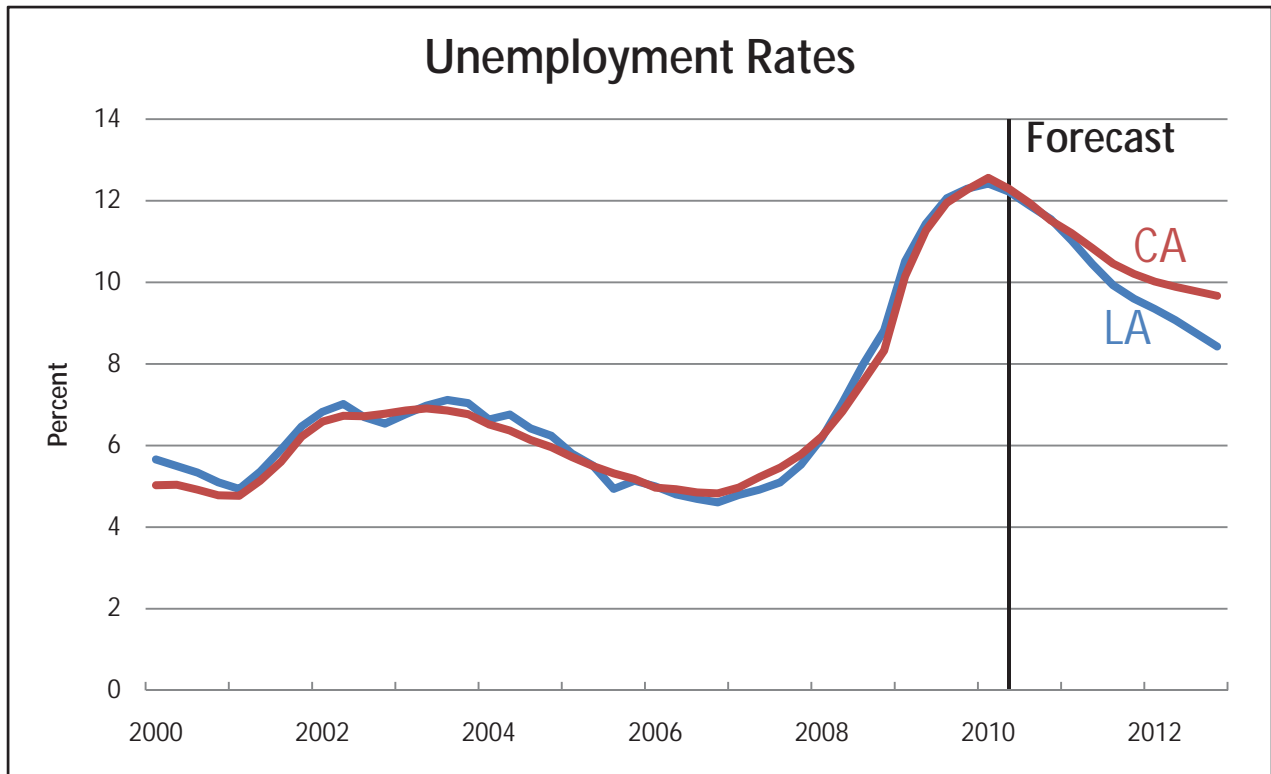
Overall, we foresee a recovery with the following features:

- **Unemployment** was revised upward, to 12.2 percent, for the second quarter of 2010. Nonetheless, our previous prediction that it reached a peak in the first quarter of 2010 appears correct, and we forecast it continuing downward. It should pass below 12 percent later this year and break into the single digits in 2011.
- **Nonfarm payroll employment**, at -0.1 percent growth, was actually flat in the second quarter, a downward revision compared with our previous forecast. Despite this setback, we forecast it climbing 1.0 percent in the third quarter and a more robust 2.3 percent in the fourth quarter. The downside is that after such a steep fall, it will take time to recover the many lost jobs. We don't see payroll jobs surpassing their pre-recession peak until 2014.
- **Employment reported in the household survey** has actually improved more quickly than payroll employment, with a growth rate of 3.4 percent in the second quarter, an upward revision. We expect continued growth at about 2 percent for each of the remaining quarters of this year, followed by more robust growth of 2.6 percent for 2011 and 2012.
- We estimate that **real personal income** climbed 3.2 percent in the second quarter, although this is mainly because at -0.8 percent, second quarter **inflation** in LA actually registered in the negative range (that is, deflation). We foresee continued strong real personal income growth as the recovery continues.
- We estimate that the second quarter gain in **real taxable sales** was more modest, at 1.1 percent. After a weak third quarter, we forecast stronger growth of 3.8 percent for 2011 and 5.1 percent for 2012.

This report presents our vision of what the recovery has in store for Los Angeles, turning first to the patterns of employment and unemployment. Next we will examine LA's ports to see whether international trade can fuel the recovery. Afterward we will turn briefly to LA's housing markets. We will conclude with the short-term forecast and an analysis of LA's long-term demographic and economic trends.

Employment and Unemployment

Last quarter we forecast that unemployment in Los Angeles would reach a peak in the first quarter of this year, slowly abating after that. Fortunately, that does appear to be the case, as shown in the following graph.



Sources: California Employment Development Department (EDD), UCLA Anderson Forecast

Unemployment in Los Angeles appears to have reached a peak of 12.4 percent in the first quarter of this year, proceeding to fall to 12.2 percent in the second quarter. This echoes the pattern thus far in California as a whole, where unemployment topped out at 12.6 percent and has since fallen to 12.3 percent. (For an explanation of why we forecast the LA and California unemployment rates to diverge as the recovery gains steam, please see last quarter's Los Angeles report.)

Of course a modest drop in the unemployment rate after three years of watching it march upward has prompted no one to break out the champagne. Los Angeles lost over 350,000 nonfarm payroll jobs between the end of 2007 and the end of 2009. On top of this the potential labor force is continuously growing along with the working age population, meaning that we need to gain back even more jobs than we lost just to end up at the same unemployment rate. It would take a couple of years of very strong economic growth to accomplish this; however the recovery we are forecasting is more tepid. We foresee only 1.0 percent growth in real personal income this year, accelerating to 3.4 percent growth for 2011. For real taxable sales we predict flat-lining at -0.2 percent growth this year and 3.8 percent growth in 2011.² At these more modest rates of economic expansion, it takes more time to make up for lost ground. We forecast nonfarm payrolls to surpass their pre-recession peak only

² The modestly negative growth rate of real taxable sales for 2010 is mainly a mathematical fluke. Although real taxable sales are consistently growing in 2010, they fell throughout 2009 and over the course of 2010 they come just short of returning to their 2009 average: hence a small negative growth rate despite increasing throughout the year.

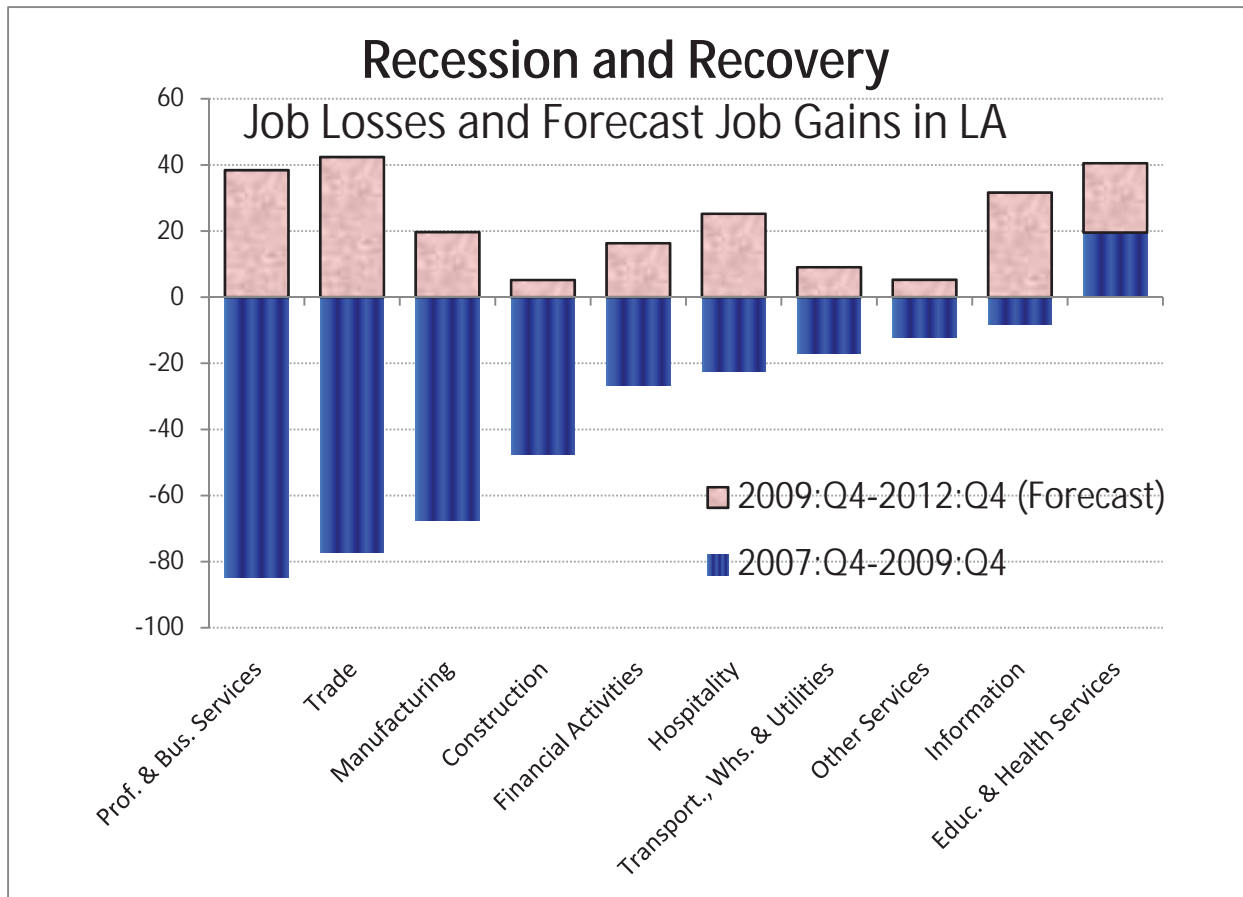
in 2014, but due to an expanded labor force, that will still leave us with a six and a half percent unemployment rate. To return to a healthier unemployment rate of around five and a half percent will take another year or two beyond that—pushing us out to about 2016.

As in last quarter's Los Angeles report, the source of our forecasted recovery is exports. The subprime crisis brought about a massive dissipation of wealth, prompting individuals and businesses across the nation to recalibrate their balance sheets. While at home consumers have delayed purchasing major durable goods and businesses have postponed hiring decisions, overseas, especially in East Asia, many countries were never afflicted with the same economic malaise that took hold of this country. China and India in particular never experienced a recession.³ While Americans pare back our effervescent spending, demand from abroad provides a vital source of wind to our sails. And as a major international port city located on a natural, deep water harbor, Los Angeles is particularly well suited to benefit from an export-led recovery. The first jobs regained have generally been in trade-related sectors, but as the recovery builds speed, we foresee the gains spreading across the local economy.

The overall pattern of job loss during the Great Recession and the job gains we forecast in our near-term recovery can be seen in the chart below. Wholesale and retail trade, manufacturing, and construction have seen massive job losses, as has the diverse sector of professional business services, which comprises everything from legal services and accounting to waste management. Financial activities shed jobs as the financial crisis unfolded, and transportation, warehousing, and utilities contracted as world trade temporarily collapsed. The only sector to grow continuously during the recession was education and health services—as young people have continued to seek an education, and an aging population has required an ever increasing number of doctor's visits.

An export-led recovery is fortuitous for LA and its relatively export-oriented economy, but LA also has a large logistics industry which will benefit as domestic demand picks up and imports, too, begin to revive. Over the course of 2010, we foresee job gains mainly concentrated in the trade-related sectors. For example, transportation, warehousing, and utilities (shipping the traded goods) should gain 3,200 jobs; leisure and hospitality (hosting tourists) should gain 8,900 jobs; information (exports of Hollywood movies) should gain a healthy 17,100; and wholesale and retail trade (obvious) should gain 11,900. Government, to some extent at the federal level but especially state and local, will be a continued source of weakness this year, shedding 8,700 jobs, a full 8,000 of these at the state and local level. However, as the recovery gains steam, we foresee all sectors regaining jobs, though most will not see payrolls return to their pre-recession levels by the end of 2012.

³ World Bank, World Development Indicators, Chapter 4: Economy, pp. 220-221.

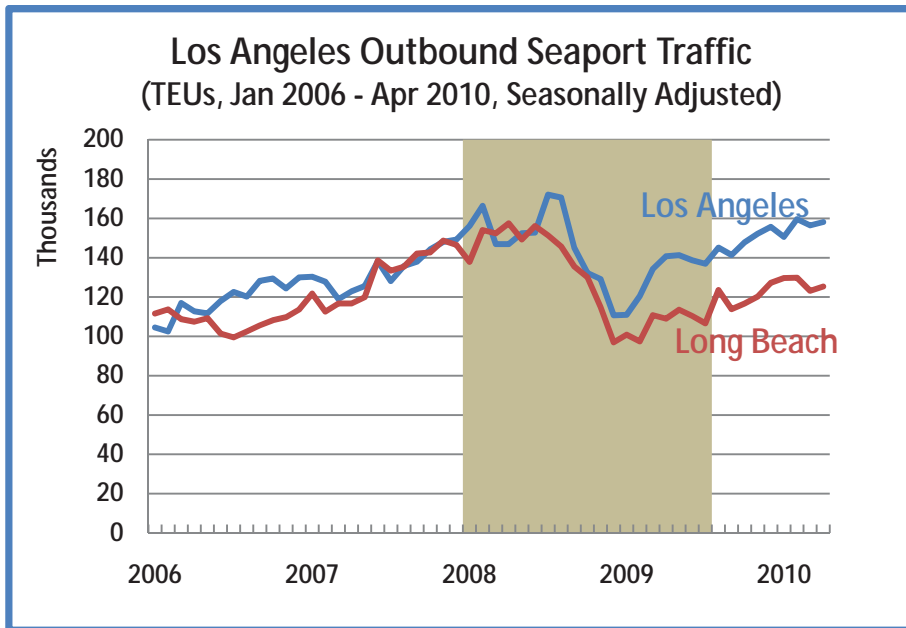


Sources: California Employment Development Department (EDD), UCLA Anderson Forecast

Los Angeles Port Activity

Los Angeles is counting on exports to fuel the recovery and imports to sustain its important logistics industry—which makes it high time that we took the pulse of the ports. Last quarter we reported that an export-led recovery could already be seen at the ports. This quarter we see that exports and imports keep plodding along, perhaps not as quickly as we would like, but pressing forward nonetheless.

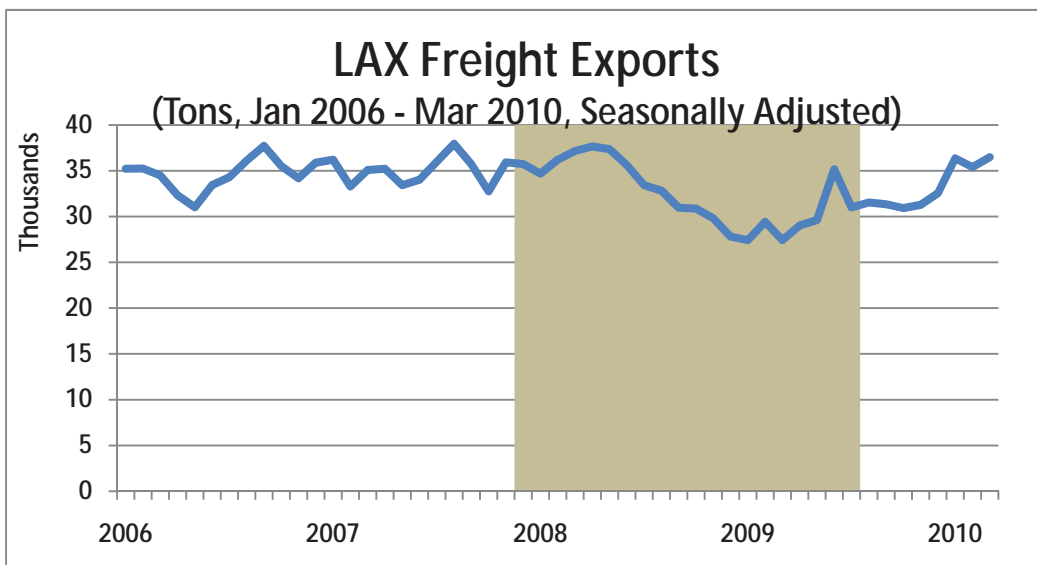
Exports through the ports of Los Angeles and Long Beach took a plunge in mid-2008, but fortunately they have followed an upward trajectory since early 2009. Exports through the port of Los Angeles have essentially recovered their pre-recession levels, and exports through the port of Long Beach have made up about half the lost ground, as can be seen in the chart below.



Sources: Ports of Los Angeles and Long Beach

Note: A "TEU" is a "twenty foot equivalent," a standard shipping container.

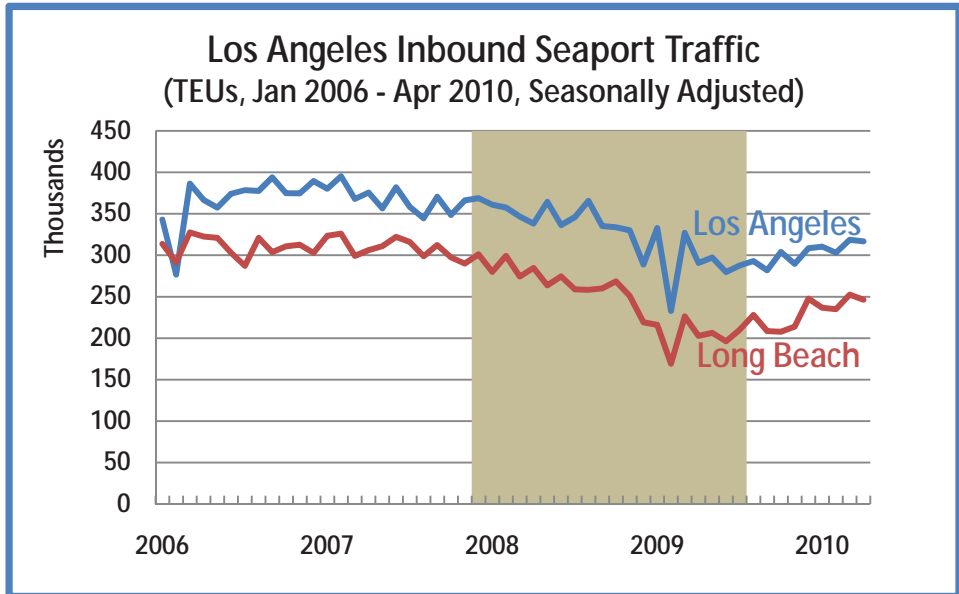
While the bulkier goods, such as transportation equipment and raw materials, travel by sea, LA's high-value exports, such as computer and electronic equipment, travel through the air. Tracking the movement of freight exports through LAX reveals a recession-induced slump in 2008 followed by a strong recovery from early 2009. Freight exports through LAX have essentially reached their pre-recession levels, providing a welcome infusion of income from abroad.



Source: Los Angeles World Airports

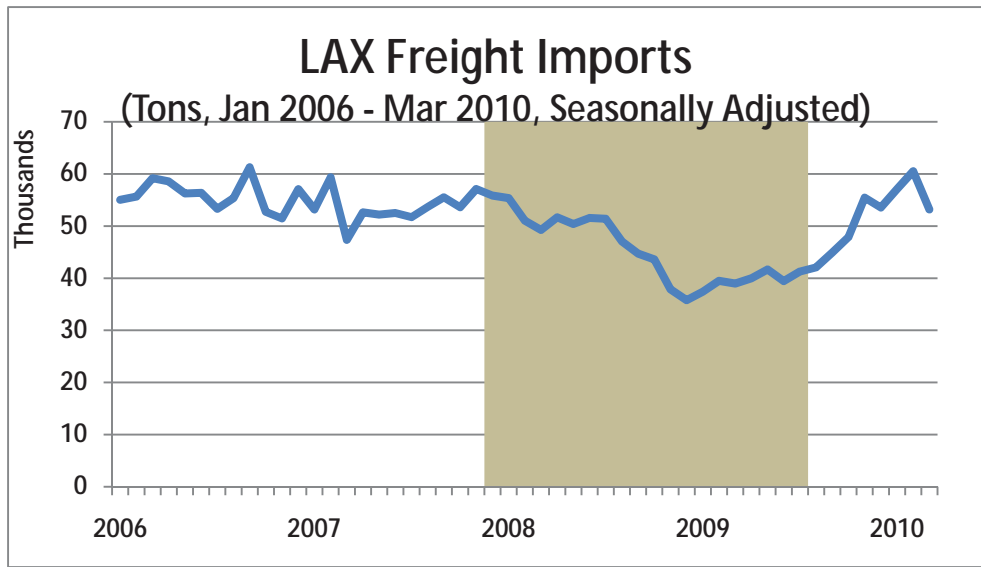
While we see exports as a key driver of the economic recovery both in Los Angeles and the nation as whole, imports are particularly important to LA's expansive logistics industry. The

ports of Los Angeles and Long Beach serve as major conduits, providing cars for dealership lots and merchandise for Walmart’s shelves throughout the region. In contrast to exports, imports through the ports saw a more gradual decline as the recession progressed, and their resurgence has also been gradual. Nonetheless, imports through LA’s seaports have been slowly increasing since early 2009 and should continue to do so.



Sources: Ports of Los Angeles and Long Beach
 Note: A "TEU" is a "twenty foot equivalent," a standard shipping container.

Unlike goods traveling through the seaports, imports through LAX are less bulky and provide less work for LA’s logistics industry. They hit a trough in late 2008, but resumed their climb in 2009. Despite a dip in the early part of 2010, LAX freight imports have essentially recovered their pre-recession levels.



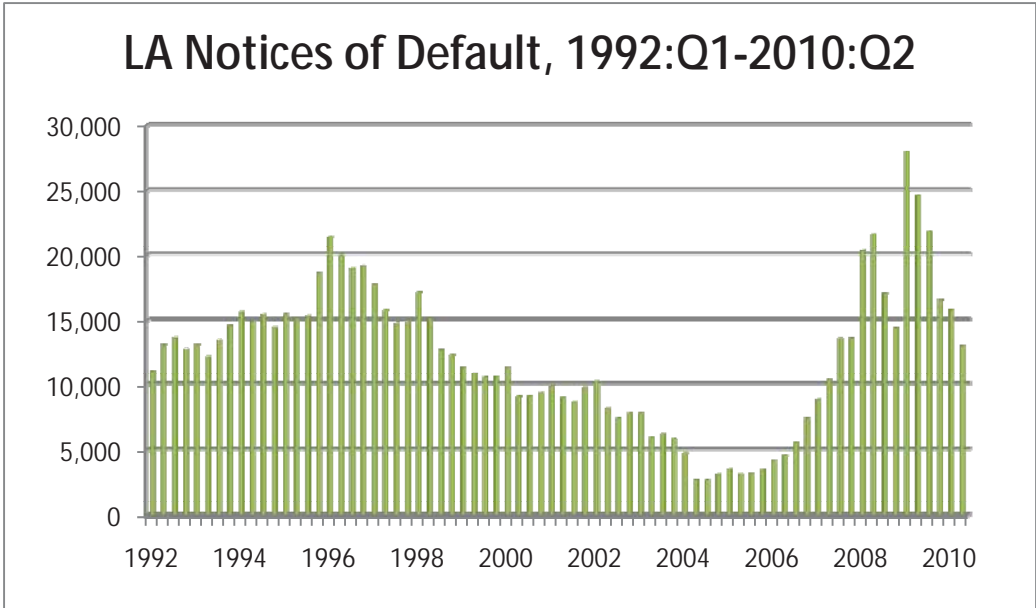
Source: Los Angeles World Airports

Overall, the news from LA's air- and seaports is good. Exports have nearly recovered, and imports are on their way to doing so. The road to recovery may be long, but the evidence from the ports suggests we are pushing forward.

Housing Markets and Construction

Last quarter we reported that LA's housing market appeared to have reached a turning point. Fortunately, this quarter we can report that those gains have not vanished despite the expiration of the federal incentives in April, although the pace of the recovery has perhaps not been as quick as we would like.

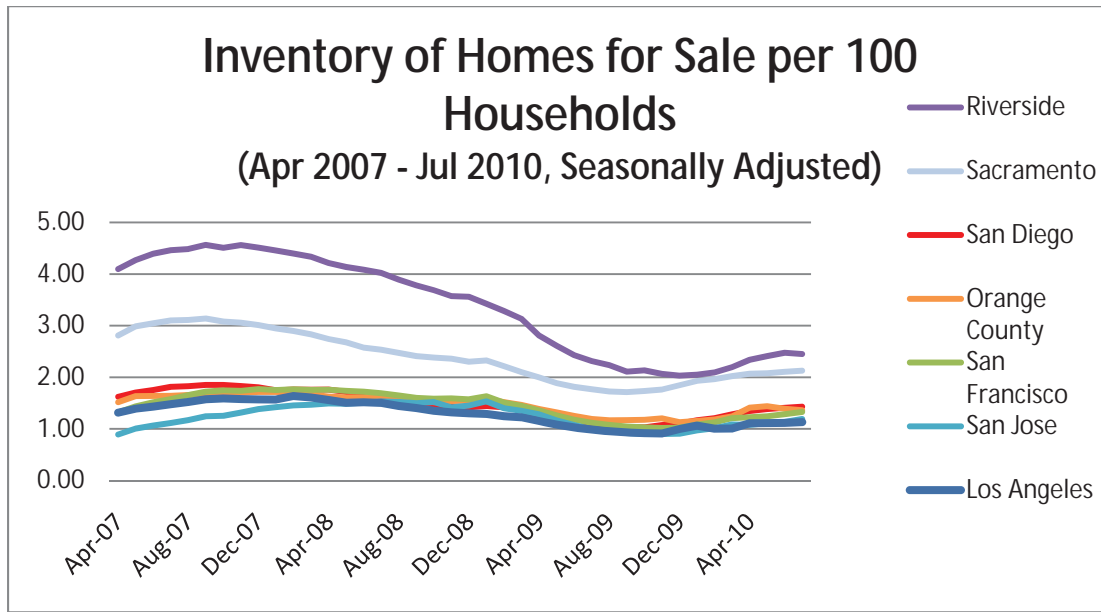
The best news on the supply side of the market is that the worst of the foreclosure epidemic appears to be behind us. Notices of default (NODs), an early step in the foreclosure process, have fallen every quarter since the beginning of 2009. And while NODs are still high compared to the frothy days of 2004 and 2005, they have retreated to levels last seen in 1998, obviously a rosier economic time. Moreover, it is unrealistic to think that they should fall to 2004-2005 levels: Only the desperate would have to resort to default on a mortgage when housing prices were smashing through the roof and easy loans to refinance were widely available.



Source: DataQuick

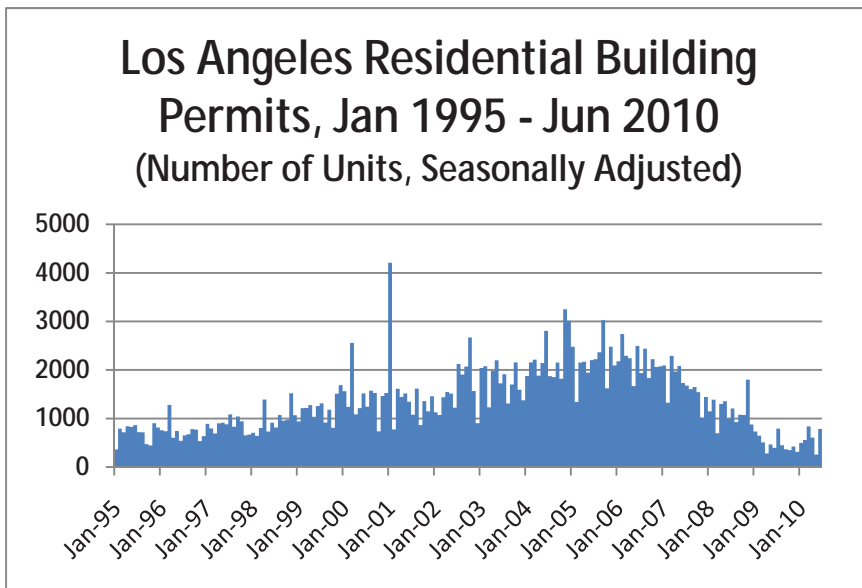
As foreclosures have begun to taper off and a lack of construction has led to a dearth of new homes, the inventory of homes for sale in Los Angeles, relative to its number of households, has stabilized and even crept slightly upward, as signs of a turnaround have brought new sellers to the market. Yet even in its darker days, the inventory of homes for sale per household in LA never reach the levels of inland California. And today Los Angeles, followed closely by San Jose

and San Francisco, continues to have the lowest levels of inventory relative to households in the state.



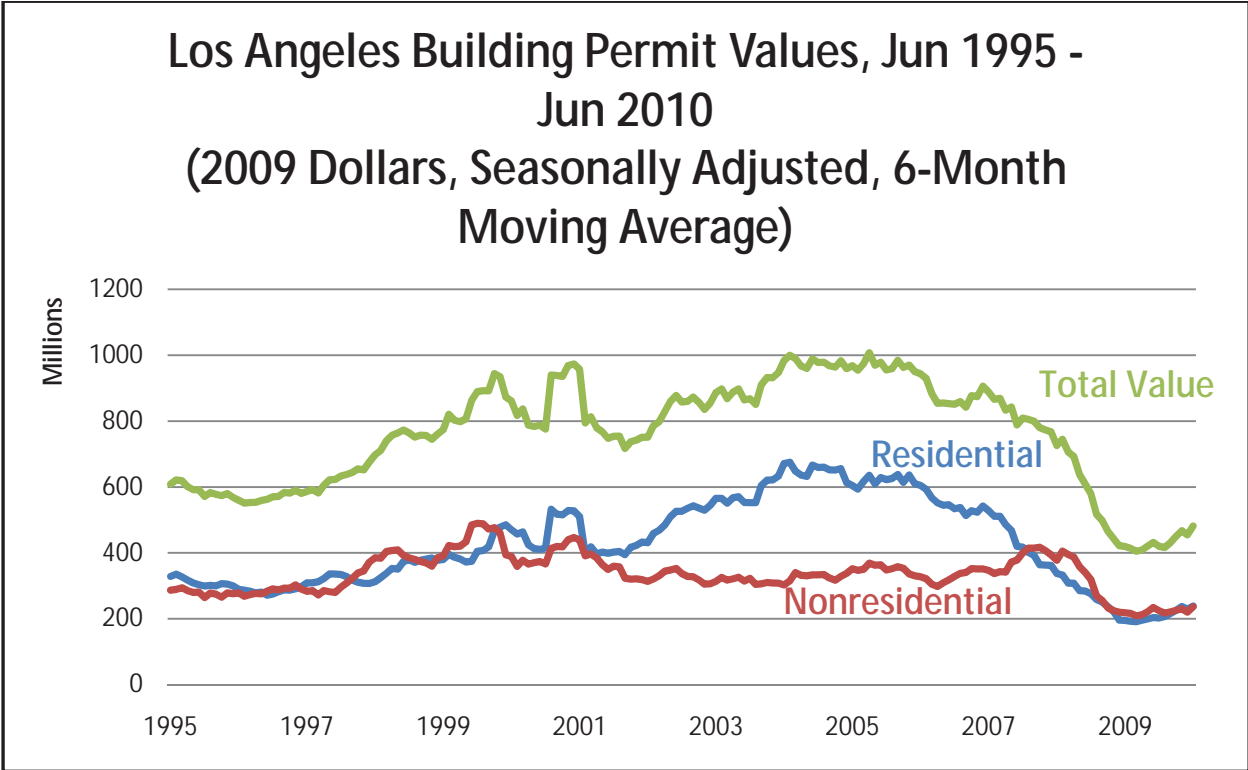
Sources: Home Tracker and U.S. Census

Given that the overstock of supply in Los Angeles—which never reached the excesses of the inland parts of the state—appears to have been burned off, the time is ripe for building to resume. There is some evidence that this is occurring, though it is not as strong as we would like. After falling to their lowest levels in 15 years, at a minimum we can say that residential building permits in Los Angeles appear to have bottomed out. In the coming months we will look for signs of a more complete recovery.



Source: Construction Industry Research Board

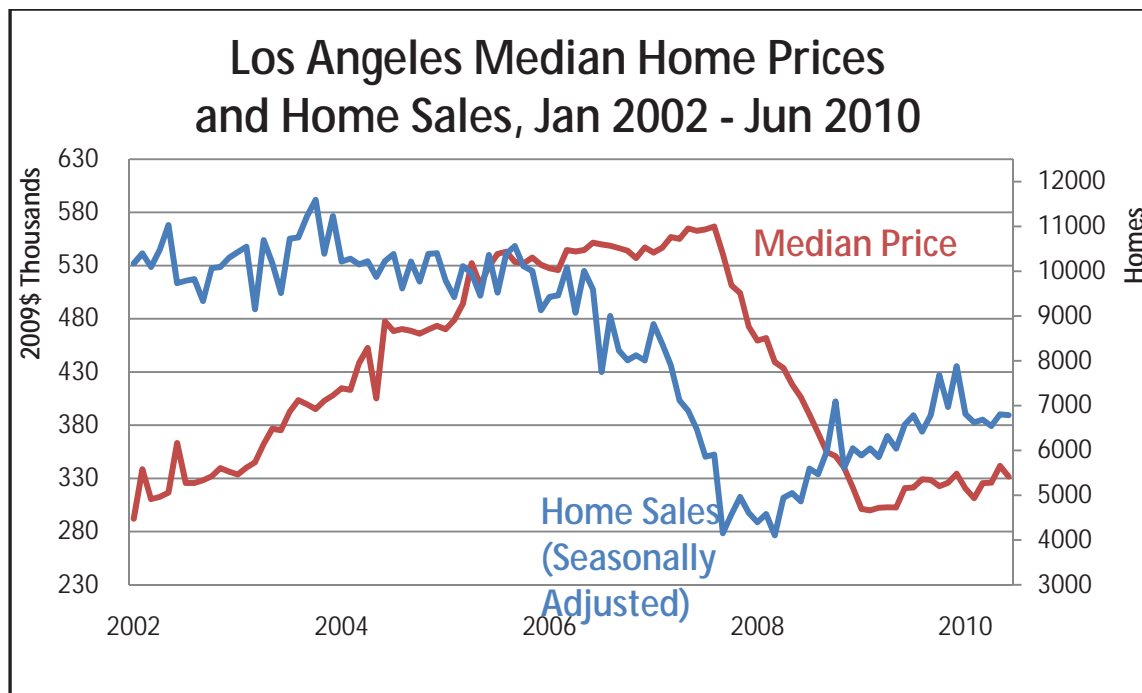
The evidence of a rebound in construction is a bit more favorable when looking at the value of permits obtained, with modest growth in residential permit values and nonresidential permit values combining to create a more noticeable uptick in total building permit values.



Sources: Construction Industry Research Board, Bureau of Labor Statistics, Turner Construction Company

As the sense grows that the worst days of the housing crisis are behind us, demand has begun to revive. The good news is that this gradual reawakening of demand appears not to have been quashed by the expiration of the federal incentives in April. After an expected spike before the incentives ran out, sales growth has been slacker, but has not fallen off the charts. The median home price in LA appears to have hit bottom in early 2009, and has gained about 10 percent since then.

While it would be nice to be able to say that prices and sales have surged strongly upward—and the economy could certainly use the construction jobs and renewed consumer confidence that such a surge would bring—it is a relief that LA’s housing market appears to be tolerating the loss of the federal incentives. The groundwork for a modest recovery appears in place.



Source: DataQuick

Near-Term L.A. Forecast

The near-term LA forecast is of a continued recovery. Expansion this year will be muted, but will pick up to a stronger clip in 2011 and 2012. We forecast unemployment to fall from 12.2 percent in the second quarter of this year to 8.4 percent by the end of 2012: nobody's ideal but a solid improvement. We expect continued anemic growth in real taxable sales and real personal income for the remaining quarters of this year, building up to healthier growth rates in 2011: 3.8 percent for real taxable sales and 3.4 percent for real personal income. In nominal terms, unsurprisingly, the numbers look even better: real taxable sales should grow 1.2 percent in 2010 and 5.6 percent in 2011. Payroll employment growth should accelerate in the latter half of 2010, and inflation should remain quite low (though no longer negative).

The major risk to this forecast derives from the anxious state of American businesses and consumers—as evidenced by their many recent Google searches of “double dip recession”—and the unresolved fiscal issues in Europe. It appears that the worst of the Euro zone crisis is behind us—but should things there take a turn for the worse, this forecast would be too optimistic. And as for the general state of American consumers and businesspeople, one can only hope that slow but continued economic recovery will be enough to calm the “animal spirits.”

Los Angeles appears firmly on the road to recovery—bumps along the way notwithstanding. It is difficult to be patient when so many face the very real hardship of unemployment, but it is the best we can do. LA will assuredly find brighter days ahead as we journey down the road.

Demographic Developments and the Long-Term Los Angeles Forecast

Recent Demographic Developments

The height of the housing boom saw population growth in Los Angeles slow to a trickle, as unaffordable home prices drove many to seek refuge in the cheaper suburbs and exurbs of the neighboring counties. Population growth fell from a height of 1.8 percent in 2000 to a trough of 0.3 percent in 2007. But as the LA economy, though enduring plenty of its own hardship, has fared better than the neighboring counties', population growth has begun to pick up again, hitting 0.7 percent in 2008 and 2009. We forecast it will rise further to 0.8 percent in 2010 before hitting a peak of 0.9 percent in 2011 to 2013.

Population growth is the sum of two components: natural increase and net migration. Natural increase is simply births minus deaths. This is a fairly stable source of growth, and over the past decade it has added about 90,000 people a year.

Net migration, on the other hand, is more volatile, and fluctuates in response to economic conditions. (Birth rates can respond to economic conditions to some extent as well—although obviously with a greater lag than net migration.) The near-term acceleration in population growth that we predict for LA derives from the fact that we forecast the Los Angeles economy to emerge from the Great Recession more rapidly than that of California as a whole. (And while we do not produce an economic forecast for neighboring states like Arizona and Nevada, we can make an educated guess, given the difficult conditions in those states, that they, too, would provide a boost to Los Angeles population growth.)

We predict this acceleration in population growth even though LA has actually had a net *out*-migration of residents since 2005, and we predict this to continue through the end of our long-term forecast. The reason for this seemingly counterintuitive result is twofold. First, net out-migration lessens in response to the relative strength of the LA economy. So even though more people are leaving than arriving in Los Angeles, the rate of outflow becomes slower during better economic times. Second, net-out-migration has been—and we forecast it will continue to be—significantly lower than the rate of natural increase of the population. In other words, enough babies are born in Los Angeles to outweigh both the deaths that occur and the residents who leave to seek their fortunes elsewhere, and the result is a modest increase in population.

Assumptions and Long-Term Trends

Our long-term forecast calls for population growth increasing over the next few years as the Los Angeles economy improves, reaching a peak of 0.9 percent in 2011 through 2013, and then gradually declining to hit 0.5 percent in 2040. While California still has many communities that are only modestly developed, Los Angeles is a mature urban center where growth will be

limited by its vast size and density. For this reason we predict slower population growth for LA than for California in the long run.

Our long-term forecast has the following features:

- Net migration stabilizes at about -0.1 percent in the long run (2010-2040), while natural increase stabilizes at about 0.4 percent (2020-2040).
- Natural increase will be the long-term source of population growth, counteracting a small drag from out-migration.
- The County of Los Angeles will add 2.2 million people between 2010 and 2040.
- According to the California Department of Finance Demographic Research Unit, blacks and Caucasians will decline as a share of the LA and California populations, while Hispanics and Asians will increase.
- According to the same source, the share of Angelenos over age 65 will increase steadily, from 10 percent in 2000 to 21 percent in 2040. In California as a whole, the share of the population over 65 will increase as well, though not as rapidly as in LA.
- We expect the labor force participation of older Angelenos to increase over time, as better health and less physically demanding jobs enable people to continue working longer.

Long-Term Forecast Highlights

Over the long-term horizon, we expect growth of real personal income and real taxable sales to slow as the population matures and its growth rate declines. (On a per capita basis, we expect real personal income and taxable sales growth to remain strong.) While we expect the population of LA to age, we also expect higher rates of labor force participation both for 45 to 65 year-olds and for people over age 65, leading to higher economic growth than if people continued to retire at the ages common today. We expect LA, like California, to become increasingly Asian and Hispanic. And while LA will age over the next 30 years, we expect it to remain younger than the US as a whole.

We also foresee our county putting the Great Recession behind us, with unemployment dropping off through the middle part of the coming decade, reaching a long-term natural rate of around five percent.

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Guide to California Model Variable Names

AHEM@CA	AVG. HOURLY EARNINGS OF MANUFACTURING
BNTV@CA	BLDG. PERMITS VALUE, NONRESIDENTIAL
BNTVR@CA	BLDG. PERMITS VALUE, NONRESIDENTIAL IN 2005 DOLLARS
BRMU@CA	BLDG. PERMIT UNITS, MULTIPLE DWELLINGS
BRSU@CA	BLDG. PERMIT UNITS, SINGLE DWELLINGS
BRTU@CA	BLDG. PERMIT UNITS, TOTAL DWELLINGS
CONS	CONSUMPTION EXPENDITURES, TOTAL
CPI	CONSUMER PRICE INDEX - ALL URBAN CONSUMERS
CPIU@CA	CONSUMER PRICE INDEX
EA@CA	EMPLOYMENT IN AGRICULTURE
EC@CA	EMPLOYMENT IN CONTRACT CONSTRUCTION
EEA	EMPLOYMENT - NONAGRICULTURAL ESTABLISHMENTS
EEA@CA	EMPLOYMENT IN NONAGRICULTURAL ESTABLISHMENTS
EEHS@CA	EMPLOYMENT IN EDUCATION & HEALTH SERVICES
EENRM	EMPLOYMENT - NATURAL RESOURCES & MINING
EFA@CA	EMPLOYMENT IN FINANCIAL ACTIVITIES
EG@CA	EMPLOYMENT IN TOTAL GOVERNMENT
EGF@CA	EMPLOYMENT IN FEDERAL GOVERNMENT
EGOODS@CA	EMPLOYMENT IN GOODS PRODUCING
EGSL@CA	EMPLOYMENT IN STATE & LOCAL GOVERNMENT
EHH@CA	EMPLOYED HOUSEHOLD SURVEY
EI@CA	EMPLOYMENT IN INFORMATION
ELH@CA	EMPLOYMENT IN LEISURE & HOSPITALITY
EM@CA	EMPLOYMENT IN MANUFACTURING
EMD@CA	EMPLOYMENT IN DURABLE MANUFACTURED GOODS
EMF	EMPLOYMENT - MANUFACTURING
EMN@CA	EMPLOYMENT IN NONDURABLE MANUFACTURED GOODS
ENRM@CA	EMPLOYMENT IN NATURAL RESOURCES & MINING
EPBS@CA	EMPLOYMENT IN PROFESSIONAL BUSINESS SERVICES
ERESID@CA	RESIDUAL BETWEEN TOTAL PAYROLL & HOUSEHOLD EMPLOYMENT
ESV@CA	EMPLOYMENT IN SERVICES INDUSTRIES
ESVOTH@CA	EMPLOYMENT IN OTHER SERVICES
ET@CA	EMPLOYMENT IN WHOLESALE & RETAIL TRADE
ETR@CA	EMPLOYMENT IN RETAIL TRADE

@CA = California endogenous variables

All others are U.S. exogenous variables

Guide to California Model Variable Names

ETW@CA	EMPLOYMENT IN WHOLESALE TRADE
ETWU@CA	EMPLOYMENT IN TRANSPORTATION, WAREHOUSING & UTILITIES
GDPR	GROSS DOMESTIC PRODUCT IN 2005 DOLLARS
GFAIDSL	FEDERAL GRANTS IN AID TO STATE & LOCAL GOVTS IN \$
GFMLR	FEDERAL GOVERNMENT PURCHASES - NATIONAL DEFENSE IN 2005 DOLLARS
HUSPS	HOUSING STARTS, TOTAL
HUSPS1	HOUSING STARTS, SINGLE UNIT
IFNRESR	GROSS INVEST IN PRIVATE NONRES STRUCTURES IN 2005 DOLLARS
JPC	IMPLICIT PRICE DEFLATOR - CONSUMPTION EXPENDITURES
JPGDP	IMPLICIT PRICE DEFLATOR - GROSS DOMESITC PRODUCT
JPIFNRES	IMPLICIT PRICE DEFLATOR - PRIVATE NONRES STRUCT INVEST
JWSSNF	COMPENSATION PER HOUR - NONFARM BUSINESS SECTOR
LC@CA	CIVILIAN LABOR FORCE
LFPR@CA	LABOR FORCE PARTICIPATION RATE
NINMIG@CA	NET INMIGRATION
NJULY@CA	TOTAL POPULATION AS OF JULY 1
NLFC	CIVILIAN LABOR FORCE
NNATINC@CA	NATURAL INCREASE
NP16A	TOTAL POPULATION AGE 16 & OVER
PC@CA	ESTIMATE OF IMPLICIT PRICE DEFLATOR OF PERSONAL CONSUMP. EXP.
REGAUTON@CA	REGISTERED NEW VEHICLES
RESADJF@CA	RESIDENCE ADJUSTMENT
RU@CA	UNEMPLOYMENT RATE
RW@CA	DERIVED AVG. ANNUAL SALARY TOTAL
RWC@CA	DERIVED AVG. ANNUAL SALARY IN CONSTRUCTION
RWEHS@CA	DERIVED AVG. ANNUAL SALARY IN EDUCATION & HEALTH SERVICES
RWFA@CA	DERIVED AVG. ANN SALARY IN FINANCIAL ACTIVITIES
RWG@CA	DERIVED AVG. ANNUAL SALARY IN GOVERNMENT, TOTAL
RWI@CA	DERIVED AVG. ANNUAL SALARY IN INFORMATION
RWLH@CA	DERIVED AVG. ANNUAL SALARY IN LEISURE & HOSPITALITY
RWM@CA	DERIVED AVG. ANNUAL SALARY IN MANUFACTURING
RWNRM@CA	DERIVED AVG. ANN SALARY IN NATURAL RESOURCES & MINING

@CA = California endogenous variables

All others are U.S. exogenous variables

Guide to California Model Variable Names

RWPBS@CA	DERIVED AVG. ANN SALARY IN PROFESSIONAL BUSINESS SERVICES
RWSVOTH@CA	DERIVED AVG. ANNUAL SALARY IN OTHER SERVICES
RWT@CA	DERIVED AVG. ANNUAL SALARY IN TRADE, TOTAL
RWTWU@CA	DERIVED AVG. ANNUAL SALARY IN TRANSPORTATION, WAREHOUSING & UTILITIES
ST@CA	TAXABLE SALES
STR@CA	REAL TAXABLE SALES
SUVA	RETAIL SALES, NEW CARS, TOTAL
TAXBASE	PERSONAL INCOME TAX BASE
TAXBASEF@CA	PERSONAL INCOME TAX BASE
TP@CA	ESTIMATE OF PERSONAL TAX & NONTAX PAYMENTS
TWPERF@CA	PER CONTRIBUTIONS FOR SOCIAL INSURANCE NEG. PLACE OF WORK
TXPGF	FEDERAL GOV'T PERSONAL TAX & NONTAX RECEIPTS
TXPGSL	STATE & LOCAL GOVT PERSONAL TAX & NONTAX RECEIPTS
TXSIWC	PERSONAL CONTRIBUTIONS FOR SOCIAL INSURANCE
UHH@CA	UNEMPLOYED HOUSEHOLD SURVEY
VF@CA	TRANSFER PAYMENTS, PLACE OF RESIDENCE
WSDAFF@CA	WAGE & SALARY DISTRIB. IN FARM
WSDCF@CA	WAGE & SALARY DISTRIB. IN CONSTRUCTION
WSDHFS@CA	WAGE & SALARY DISTRIB. IN EDUCATION & HEALTH SERVICES
WSDF@CA	WAGE & SALARY DISTRIB., PLACE OF WORK
WSDFAF@CA	WAGE & SALARY DISTRIB. IN FINANCIAL ACTIVITIES
WSDGF@CA	WAGE & SALARY DISTRIB. IN GOVERNMENT, TOTAL
WSDIF@CA	WAGE & SALARY DISTRIB. IN INFORMATION
WSDLHF@CA	WAGE & SALARY DISTRIB. IN LEISURE & HOSPITALITY
WSDMF@CA	WAGE & SALARY DISTRIB. IN MANUFACTURING
WSDNRMF@CA	WAGE & SALARY DISTRIB. IN NATURAL RESOURCES & MINING
WSDPBSF@CA	WAGE & SALARY DISTRIB. IN PROFESSIONAL BUSINESS SERVICES
WSDSVOTHF@CA	WAGE & SALARY DISTRIB. IN OTHER SERVICES
WSDTF@CA	WAGE & SALARY DISTRIB. IN TOTAL TRADE
WSDTWUF@CA	WAGE & SALARY DISTRIB. IN TRANSPORTATION, WAREHOUSING & UTILITIES

@CA = California endogenous variables
All others are U.S. exogenous variables

Guide to California Model Variable Names

XR	EXPORTS OF GOODS & SERVICES IN 2005 DOLLARS
YDF@CA	DISPOSABLE PERSONAL INCOME
YDFR@CA	DISPOSABLE PERSONAL INCOME TOTAL IN 2005 DOLLARS
YENTAFF@CA	PROPRIETOR'S INCOME, FARM
YENTEAFF@CA	PROPRIETOR'S INCOME, NONFARM
YOLF@CA	OTHER LABOR INCOME
YP	PERSONAL INCOME
YPADIV	DIVIDEND PAYMENTS TO INDIVIDUALS
YPAINT	PERSONAL INTEREST INCOME
YPCOMPSUPPAI	OTHER LABOR INCOME
YPCOMPWSD	WAGE & SALARY DISBURSEMENTS
YPF@CA	PERSONAL INCOME TOTAL
YEFR@CA	PERSONAL INCOME TOTAL IN 2005 DOLLARS
YPPROPADJF	PROPRIETOR'S INCOME WITH IVA & CCADJ - FARM
YPPROPADJNF	NONFARM PROPRIETORS' INCOME WITH INVENTORY & CAPITAL CONS. ADJS.
YPPROPF@CA	PROPERTY INCOME
YPRENTADJ	RENTAL INCOME OF PERSONS WITH CCADJ
YPTRFGF	TRANSFER PAYMENTS TO PERSONS BY FEDERAL GOVT
YPTRFGSL	STATE & LOCAL GOVT TRANSFER PAYMENTS TO PERSONS

*@CA = California endogenous variables
All others are U.S. exogenous variables*

Table 1. Summary of the UCLA Forecast for California

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
	Personal Income, Taxable Sales, and Price Inflation (%Change)									
Personal Income (Bil. \$)	661.8	694.5	710.8	737.8	776.0	825.2	878.7	962.6	1027.2	1135.3
Calif. (% Ch)	3.4	5.0	2.3	3.8	5.2	6.3	6.5	9.5	6.7	10.5
U.S. (% Ch)	3.8	6.3	4.1	5.5	5.6	6.3	6.2	7.5	5.1	8.2
Pers. Income (Bil. 2005\$)	891.3	904.3	909.0	934.9	972.8	1021.8	1067.6	1153.3	1202.3	1292.7
Calif. (% Ch)	-0.2	1.5	0.5	2.8	4.1	5.0	4.5	8.0	4.3	7.5
U.S. (% Ch)	0.2	3.2	1.9	3.4	3.3	4.0	4.3	6.5	3.5	5.6
Taxable Sales (Bil. \$)	270.8	272.4	272.1	285.9	300.7	321.0	340.8	358.6	394.2	441.6
(% Ch)	-3.9	0.6	-0.1	5.1	5.2	6.7	6.2	5.2	9.9	12.0
(Bil. 2005\$)	363.7	353.7	347.1	361.4	376.1	396.6	414.1	429.7	461.3	502.8
(% Ch)	-7.3	-2.7	-1.9	4.1	4.1	5.5	4.4	3.8	7.4	9.0
Consumer Prices (% Ch)	4.2	3.5	2.6	1.4	1.7	2.0	2.2	2.0	2.9	3.7
	Employment and Labor Force (Household Survey, % Change)									
Employment	-2.5	-0.4	-0.4	1.0	0.8	1.7	3.4	2.8	2.4	2.9
Labor Force	-0.3	1.3	-0.2	-0.1	-0.0	1.1	2.3	2.3	1.7	2.5
Unemployment Rate (%)	7.8	9.4	9.6	8.6	7.9	7.3	6.4	6.0	5.3	4.9
U.S.	6.9	7.5	6.9	6.1	5.6	5.4	4.9	4.5	4.2	4.0
	Total Nonfarm Nonfarm Employment (Payroll Survey, % Change)									
Calif.	-1.2	-1.7	-0.9	1.0	2.2	2.6	3.0	3.6	2.9	3.6
U.S.	-1.0	0.3	2.0	3.1	2.6	2.0	2.6	2.6	2.4	2.2
Construction	-12.8	-11.9	-7.4	3.6	5.1	3.4	7.5	10.6	11.3	7.1
Manufacturing	-4.2	-5.2	-5.2	-0.7	1.9	3.4	2.8	1.7	-1.4	1.2
Nondurable Goods	-1.0	-1.7	-2.9	1.3	2.2	1.6	1.0	-0.1	-0.6	1.1
Durable Goods	-5.7	-7.1	-6.4	-1.9	1.8	4.5	3.8	2.7	-1.8	1.3
Trans. Warehousing & Util	3.1	-0.1	0.7	1.5	2.8	2.0	2.0	3.9	2.3	1.8
Trade	-2.6	-1.4	-1.0	0.5	1.8	2.2	2.8	2.5	2.4	3.2
Information	1.0	-2.1	-0.3	2.6	5.1	4.1	6.6	4.5	7.2	11.3
Financial Activities	-1.7	-2.5	-0.5	-2.2	-3.8	-0.0	1.8	4.6	2.4	0.3
Professional Busi. Serv.	-0.4	-0.3	2.3	3.0	5.0	5.7	6.9	7.8	4.0	6.5
Edu. & Health Serv.	3.3	2.4	1.2	1.5	2.2	2.1	2.1	2.9	2.9	2.2
Leisure & Hospitality	1.4	-0.5	0.9	1.8	3.3	3.6	0.9	2.2	2.7	2.8
Other Services	0.7	-1.3	-0.4	2.0	2.4	2.0	1.3	3.3	2.9	2.9
Federal Gov't	-4.0	-0.5	-2.8	-3.3	-4.0	-5.1	-3.8	-4.2	-0.9	1.0
State & Local Gov't	1.8	0.4	-0.3	1.4	1.5	1.3	2.1	2.0	4.0	3.8
	Nonfarm Employment (Payroll Survey, Thous.)									
Total Nonfarm	12354	12146	12035	12151	12413	12735	13121	13588	13984	14488
Construction	563	496	459	476	500	517	556	615	685	733
Manufacturing	1887	1788	1696	1684	1716	1775	1825	1856	1830	1853
Nondurable Goods	635	625	607	615	628	638	645	644	640	647
Durable Goods	1252	1164	1089	1069	1088	1136	1180	1212	1190	1206
Trans. Warehousing & Util	439	438	441	448	460	470	479	498	509	518
Trade	1945	1917	1899	1908	1943	1986	2041	2092	2141	2209
Information	396	388	387	397	417	434	463	484	518	577
Financial Activities	808	788	784	767	738	738	751	786	805	807
Professional Busi. Serv.	1493	1489	1524	1570	1648	1742	1861	2007	2086	2222
Edu. & Health Serv.	1155	1183	1197	1214	1241	1268	1294	1332	1371	1401
Leisure & Hospitality	1121	1115	1126	1146	1184	1227	1238	1265	1299	1335
Other Services	420.3	414.7	413.1	421.3	431.5	440.3	446.0	460.7	474.0	487.7
Federal Gov't	347.6	345.9	336.1	325.0	311.9	295.9	284.6	272.6	270.1	272.9
State & Local Gov't	1743.3	1749.7	1743.9	1768.5	1794.9	1817.5	1856.1	1893.7	1969.4	2045.2
	Population and Migration									
Net Inmigration(Thous)	234	131	-45	-146	-149	-68	181	114	263	379
Population (Thous)	30459	30987	31314	31524	31712	31963	32453	32863	33419	34095
(% Ch)	2.1	1.7	1.1	0.7	0.6	0.8	1.5	1.3	1.7	2.0
	Construction Activity									
Residential Building										
Permits (Thous. Un.)	105.2	97.9	84.2	96.3	85.6	94.1	111.7	125.2	139.8	148.9
Nonres. Const. (Mil. 2005\$)	17711	14973	13481	13597	13440	15470	18954	22030	23849	25688

Table 1. Summary of the UCLA Forecast for California

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
	Personal Income, Taxable Sales, and Price Inflation (%Change)									
Personal Income (Bil. \$)	1168.7	1187.4	1233.0	1312.2	1387.7	1495.6	1572.3	1604.1	1563.3	1595.5
Calif. (% Ch)	2.9	1.6	3.8	6.4	5.7	7.8	5.1	2.0	-2.5	2.1
U.S. (% Ch)	3.8	2.0	3.5	6.0	5.5	7.5	5.6	2.9	-1.7	3.4
Pers. Income (Bil. 2005\$)	1290.6	1283.6	1306.0	1354.5	1387.1	1445.0	1473.8	1460.9	1420.7	1429.1
Calif. (% Ch)	-0.2	-0.5	1.7	3.7	2.4	4.2	2.0	-0.9	-2.8	0.6
U.S. (% Ch)	1.8	0.6	1.4	3.3	2.5	4.6	2.8	-0.4	-1.9	1.8
Taxable Sales (Bil. \$)	441.7	440.8	459.9	499.9	536.4	559.5	561.3	532.4	458.8	462.4
(% Ch)	0.0	-0.2	4.3	8.7	7.3	4.3	0.3	-5.2	-13.8	0.8
(Bil. 2005\$)	487.8	476.5	487.1	516.0	536.1	540.7	526.2	484.9	417.0	414.2
(% Ch)	-3.0	-2.3	2.2	5.9	3.9	0.9	-2.7	-7.9	-14.0	-0.7
Consumer Prices (% Ch)	4.0	2.4	2.3	2.6	3.6	3.9	3.3	3.4	-0.3	1.6
	Employment and Labor Force (Household Survey, % Change)									
Employment	1.1	-0.6	0.0	1.1	1.9	1.5	1.0	-0.5	-4.5	-1.1
Labor Force	1.6	0.8	0.2	0.5	1.0	1.0	1.4	1.6	-0.0	-0.3
Unemployment Rate (%)	5.4	6.7	6.9	6.2	5.4	4.9	5.3	7.2	11.4	12.1
U.S.	4.7	5.8	6.0	5.5	5.1	4.6	4.6	5.8	9.3	9.7
	Nonfarm Employment (Payroll Survey, % Change)									
Total Nonfarm	0.8	-1.0	-0.5	1.0	1.8	1.8	0.8	-1.3	-6.0	-1.2
Calif.	0.8	-1.0	-0.5	1.0	1.8	1.8	0.8	-1.3	-6.0	-1.2
U.S.	0.0	-1.1	-0.3	1.1	1.7	1.8	1.1	-0.6	-4.3	-0.4
Construction	6.4	-0.8	2.9	6.7	6.4	3.2	-4.4	-11.7	-21.2	-9.2
Manufacturing	-4.0	-8.3	-5.5	-1.4	-1.2	-1.0	-1.6	-2.7	-10.1	-3.0
Nondurable Goods	-4.6	-5.3	-3.2	-1.5	-2.1	-0.6	-1.1	-2.0	-8.1	-2.9
Durable Goods	-3.7	-9.9	-6.7	-1.3	-0.7	-1.2	-1.9	-3.0	-11.3	-3.0
Trans. Warehousing & Util	-0.8	-4.5	-2.1	0.4	0.9	1.8	2.3	-0.6	-6.0	-2.0
Trade	1.2	-0.0	0.2	1.6	2.7	2.0	1.0	-2.5	-7.8	-1.2
Information	-4.3	-9.9	-4.3	1.3	-1.8	-1.6	1.0	1.0	-6.0	1.4
Financial Activities	3.6	2.0	3.8	1.9	2.8	0.9	-3.3	-6.0	-6.3	-2.0
Professional Busi. Serv.	-1.6	-3.1	-1.6	0.6	3.0	3.8	1.0	-1.2	-8.3	0.7
Edu. & Health Serv.	3.3	3.5	2.5	1.5	1.7	1.7	3.5	3.3	0.9	2.0
Leisure & Hospitality	2.2	1.3	1.3	2.8	2.5	3.0	2.7	0.8	-4.7	-0.4
Other Services	2.4	1.3	-0.3	-0.1	0.3	0.3	1.0	-0.2	-5.3	-1.8
Federal Gov't	-6.8	-0.2	0.6	-1.7	-0.2	-0.7	-0.7	0.5	1.2	-0.5
State & Local Gov't	4.0	3.1	-1.0	-1.1	1.1	1.6	2.0	1.0	-1.1	-2.5
	Nonfarm Employment (Payroll Survey, Thous.)									
Total Nonfarm	14603	14458	14393	14531	14800	15060	15173	14983	14082	13918
Construction	781	775	797	850	905	934	893	788	621	564
Manufacturing	1779	1632	1542	1521	1503	1488	1464	1425	1281	1243
Nondurable Goods	617	585	566	557	546	543	536	526	483	469
Durable Goods	1161	1047	976	964	957	945	928	900	798	775
Trans. Warehousing & Util	514	491	481	483	487	496	507	505	474	465
Trade	2235	2234	2238	2273	2335	2382	2405	2345	2163	2137
Information	552	497	476	482	474	466	471	475	447	453
Financial Activities	836	853	886	902	927	935	905	850	797	781
Professional Busi. Serv.	2187	2119	2084	2097	2159	2241	2264	2237	2052	2067
Edu. & Health Serv.	1448	1499	1536	1560	1587	1614	1670	1725	1740	1774
Leisure & Hospitality	1365	1382	1400	1439	1475	1519	1560	1573	1499	1493
Other Services	499.2	505.7	504.3	503.8	505.4	507.0	512.1	511.3	484.3	475.6
Federal Gov't	254.4	253.8	255.4	251.0	250.4	248.7	247.0	248.3	251.4	250.2
State & Local Gov't	2127.8	2193.3	2170.6	2146.6	2169.8	2203.7	2247.6	2270.6	2246.0	2189.0
	Population and Migration									
Net Inmigration(Thous)	375	301	279	209	129	62	69	127	39	66
Population (Thous)	34767	35361	35944	36454	36899	37275	37674	38134	38488	38880
(% Ch)	2.0	1.7	1.6	1.4	1.2	1.0	1.1	1.2	0.9	1.0
	Construction Activity									
Residential Building										
Permits (Thous. Un.)	148.6	167.8	197.2	213.1	208.9	163.6	113.2	65.5	36.3	67.8
Nonres. Const. (Mil. 2005\$)	22141	18369	16986	17700	18236	18731	18659	15366	8870	8541

Table 1. Summary of the UCLA Forecast for California

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
	Personal Income, Taxable Sales, and Price Inflation (%Change)									
Personal Income (Bil. \$)	1667.0	1768.5	1884.5	2016.5	2153.0	2286.4	2415.0	2541.2	2668.4	2793.0
Calif. (% Ch)	4.5	6.1	6.6	7.0	6.8	6.2	5.6	5.2	5.0	4.7
U.S. (% Ch)	4.5	4.5	4.6	5.8	5.3	5.3	4.8	4.6	4.7	4.7
Pers. Income (Bil. 2005\$)	1470.3	1530.7	1600.2	1683.3	1771.7	1852.4	1925.0	1995.0	2065.1	2129.6
Calif. (% Ch)	2.9	4.1	4.5	5.2	5.2	4.6	3.9	3.6	3.5	3.1
U.S. (% Ch)	2.8	2.7	2.7	4.0	3.6	3.7	3.2	3.0	3.2	3.3
Taxable Sales (Bil. \$)	484.8	519.4	560.0	604.7	651.3	700.9	751.2	802.4	855.8	894.8
(% Ch)	4.8	7.1	7.8	8.0	7.7	7.6	7.2	6.8	6.7	4.6
(Bil. 2005\$)	427.6	449.6	475.5	504.8	536.0	567.9	598.8	629.9	662.3	682.2
(% Ch)	3.2	5.1	5.8	6.2	6.2	6.0	5.4	5.2	5.1	3.0
Consumer Prices (% Ch)	1.7	2.0	2.2	2.0	1.8	1.8	1.7	1.6	1.6	1.4
	Employment and Labor Force (Household Survey, % Change)									
Employment	2.0	2.8	3.1	3.1	2.9	2.2	1.5	1.3	1.3	1.4
Labor Force	0.4	1.9	2.4	1.8	1.5	1.6	1.3	1.1	1.1	1.2
Unemployment Rate (%)	10.7	9.8	9.2	8.1	6.8	6.3	6.1	5.9	5.7	5.6
U.S.	9.3	8.7	8.1	7.7	7.2	6.7	6.3	6.0	5.7	5.3
	Nonfarm Employment (Payroll Survey, % Change)									
Total Nonfarm	1.8	2.9	3.2	3.2	2.9	2.2	1.4	1.1	1.2	1.2
Calif.	1.8	2.9	3.2	3.2	2.9	2.2	1.4	1.1	1.2	1.2
U.S.	1.6	2.3	1.9	1.4	1.2	1.1	1.0	0.9	0.8	0.8
Construction	2.5	4.5	7.9	7.4	5.4	4.1	3.8	2.5	2.4	2.0
Manufacturing	0.8	1.7	2.3	2.3	1.9	1.0	-0.2	-0.3	-0.3	-0.5
Nondurable Goods	0.7	0.8	1.3	1.8	1.9	0.5	-0.3	-0.2	-0.2	-0.1
Durable Goods	0.8	2.2	2.9	2.6	1.9	1.3	-0.2	-0.4	-0.4	-0.8
Trans. Warehousing & Util	3.4	1.9	2.8	3.3	3.2	2.6	1.6	2.5	3.0	3.7
Trade	2.8	3.9	5.0	5.1	4.5	3.7	1.9	1.1	1.0	1.1
Information	3.3	4.5	4.1	3.7	3.7	2.4	1.3	0.9	0.7	0.5
Financial Activities	1.0	3.7	4.0	2.0	0.7	0.4	-0.1	-0.5	-0.1	0.3
Professional Busi. Serv.	4.8	4.5	4.5	4.1	3.4	2.4	1.6	1.2	1.3	1.3
Edu. & Health Serv.	1.8	1.5	1.0	1.9	2.3	1.8	1.5	1.6	1.9	2.1
Leisure & Hospitality	2.2	2.4	2.0	2.9	3.4	2.7	2.2	1.4	0.8	0.5
Other Services	1.4	4.1	4.5	3.9	4.0	3.2	2.1	1.8	1.9	1.3
Federal Gov't	0.2	1.4	1.5	1.5	1.7	1.1	0.8	0.9	0.7	0.7
State & Local Gov't	-2.0	1.2	1.1	1.0	1.1	0.5	0.5	1.1	1.4	1.8
	Nonfarm Employment (Payroll Survey, Thous.)									
Total Nonfarm	14167	14571	15031	15508	15959	16306	16539	16728	16924	17133
Construction	578	604	652	700	738	768	798	818	838	855
Manufacturing	1253	1273	1303	1333	1358	1372	1369	1364	1360	1353
Nondurable Goods	472	476	482	490	500	502	501	500	499	498
Durable Goods	780	798	821	842	858	869	868	864	861	854
Trans. Warehousing & Util	480	489	503	520	536	550	559	573	590	612
Trade	2196	2282	2397	2519	2634	2732	2785	2816	2844	2876
Information	468	489	509	527	547	560	567	572	576	579
Financial Activities	789	818	850	867	873	877	876	871	870	873
Professional Busi. Serv.	2166	2264	2366	2463	2547	2608	2650	2682	2717	2753
Edu. & Health Serv.	1807	1833	1851	1885	1928	1962	1993	2025	2063	2107
Leisure & Hospitality	1526	1563	1594	1640	1695	1741	1780	1805	1819	1828
Other Services	482.3	502.3	524.9	545.5	567.1	585.1	597.4	607.9	619.4	627.3
Federal Gov't	250.8	254.2	258.1	261.8	266.3	269.2	271.5	273.9	275.8	277.9
State & Local Gov't	2144.3	2169.4	2192.7	2213.7	2238.4	2250.2	2261.5	2287.0	2319.4	2360.7
	Population and Migration									
Net Inmigration(Thous)	85	118	162	192	196	209	210	211	218	230
Population (Thous)	39262	39663	40101	40585	41089	41607	42131	42657	43185	43719
(% Ch)	1.0	1.0	1.1	1.2	1.2	1.3	1.3	1.2	1.2	1.2
	Construction Activity									
Residential Building										
Permits (Thous. Un.)	126.0	152.6	153.8	151.0	148.0	146.5	145.0	143.6	142.1	140.5
Nonres. Const. (Mil. 2005\$)	10156	12815	14415	16230	17815	18904	19914	20897	21793	22812

Table 1. Summary of the UCLA Forecast for California

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
	Personal Income, Taxable Sales, and Price Inflation (%Change)									
Personal Income (Bil. \$)	2899.1	3001.8	3107.5	3223.5	3338.7	3461.2	3601.1	3741.3	3883.5	4028.8
Calif. (% Ch)	3.8	3.5	3.5	3.7	3.6	3.7	4.0	3.9	3.8	3.7
U.S. (% Ch)	4.5	5.3	5.3	5.3	5.3	5.3	5.2	5.1	5.0	5.0
Pers. Income (Bil. 2005\$)	2176.3	2215.5	2253.2	2294.7	2331.9	2370.3	2417.6	2462.6	2505.3	2547.2
Calif. (% Ch)	2.2	1.8	1.7	1.8	1.6	1.6	2.0	1.9	1.7	1.7
U.S. (% Ch)	2.6	3.0	3.0	2.9	2.9	2.9	2.8	2.7	2.7	2.7
Taxable Sales (Bil. \$)	929.2	963.3	999.9	1042.1	1089.4	1136.1	1184.2	1235.4	1289.3	1344.4
(% Ch)	3.8	3.7	3.8	4.2	4.5	4.3	4.2	4.3	4.4	4.3
(Bil. 2005\$)	697.5	710.9	725.0	741.8	760.9	778.0	795.0	813.2	831.7	850.0
(% Ch)	2.2	1.9	2.0	2.3	2.6	2.3	2.2	2.3	2.3	2.2
Consumer Prices (% Ch)	1.4	1.6	1.8	1.9	1.9	2.0	2.0	2.0	2.0	2.0
	Employment and Labor Force (Household Survey, % Change)									
Employment	1.4	1.5	1.5	1.4	1.4	1.3	1.3	1.3	1.3	1.3
Labor Force	1.4	1.5	1.6	1.6	1.4	1.4	1.4	1.4	1.4	1.4
Unemployment Rate (%)	5.6	5.6	5.7	5.9	5.9	6.0	6.2	6.3	6.3	6.3
U.S.	5.3	5.3	5.3	5.3	5.3	5.2	5.2	5.2	5.2	5.1
	Nonfarm Employment (Payroll Survey, % Change)									
Total Nonfarm	1.3	1.4	1.4	1.3	1.3	1.3	1.2	1.3	1.3	1.3
Calif.	1.3	1.4	1.4	1.3	1.3	1.3	1.2	1.3	1.3	1.3
U.S.	0.7	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.0
Construction	1.3	1.1	1.2	1.6	1.5	1.4	1.9	2.0	1.9	1.8
Manufacturing	0.4	1.1	0.8	0.5	0.7	0.7	0.6	0.6	0.6	0.6
Nondurable Goods	0.3	0.7	0.4	0.3	0.7	0.4	0.2	0.2	0.2	0.2
Durable Goods	0.5	1.3	1.0	0.7	0.7	0.8	0.8	0.8	0.8	0.8
Trans. Warehousing & Util	3.2	3.1	2.9	2.7	2.4	2.2	1.9	1.7	1.7	1.7
Trade	1.3	1.8	1.6	1.5	1.5	1.3	1.0	1.2	1.3	1.3
Information	0.4	-0.1	-0.2	0.8	1.3	1.6	1.0	1.3	1.0	0.9
Financial Activities	0.8	1.2	1.3	1.4	1.4	1.3	1.3	1.3	1.3	1.2
Professional Busi. Serv.	1.1	1.3	1.3	1.3	1.3	1.3	1.4	1.3	1.3	1.4
Edu. & Health Serv.	2.0	1.6	1.6	1.7	1.7	1.5	1.5	1.6	1.6	1.6
Leisure & Hospitality	0.4	0.2	0.2	0.1	0.2	0.3	0.3	0.5	0.6	0.6
Other Services	1.3	1.8	1.7	1.5	1.2	1.0	1.1	1.5	1.6	1.6
Federal Gov't	0.9	0.9	0.7	0.6	0.6	0.5	0.5	0.4	0.4	0.4
State & Local Gov't	1.8	2.3	2.1	2.0	1.7	1.8	1.6	1.5	1.6	1.6
	Nonfarm Employment (Payroll Survey, Thous.)									
Total Nonfarm	17351	17601	17839	18078	18313	18546	18769	19006	19248	19495
Construction	866	876	887	901	914	926	944	962	981	998
Manufacturing	1359	1374	1384	1391	1401	1410	1419	1427	1436	1444
Nondurable Goods	500	503	505	507	510	512	513	514	515	516
Durable Goods	859	870	879	885	891	898	905	913	920	928
Trans. Warehousing & Util	632	651	670	689	705	721	734	747	760	773
Trade	2914	2965	3013	3058	3104	3145	3177	3217	3258	3299
Information	581	581	580	584	592	601	608	616	622	627
Financial Activities	880	891	903	915	927	939	952	964	976	988
Professional Busi. Serv.	2782	2818	2855	2892	2929	2967	3010	3048	3089	3133
Edu. & Health Serv.	2150	2185	2219	2256	2294	2327	2361	2398	2435	2474
Leisure & Hospitality	1836	1840	1843	1845	1848	1854	1859	1867	1878	1889
Other Services	635.8	647.2	658.4	668.6	676.9	683.9	691.6	701.9	712.8	723.9
Federal Gov't	280.2	282.8	284.9	286.6	288.3	289.7	291.1	292.4	293.6	294.8
State & Local Gov't	2403.8	2458.6	2510.6	2559.6	2602.2	2650.3	2692.6	2734.3	2776.8	2820.0
	Population and Migration									
Net Inmigration(Thous)	244	247	252	259	266	269	270	277	277	276
Population (Thous)	44260	44799	45332	45859	46380	46891	47389	47877	48362	48852
(% Ch)	1.2	1.2	1.2	1.2	1.1	1.1	1.1	1.0	1.0	1.0
	Construction Activity									
Residential Building										
Permits (Thous. Un.)	140.1	140.7	141.3	141.9	142.3	143.7	145.2	145.2	144.7	144.8
Nonres. Const. (Mil. 2005\$)	23746	24402	24877	25337	25871	26506	27124	27706	28257	28693

Table 1. Summary of the UCLA Forecast for California

	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
	Personal Income, Taxable Sales, and Price Inflation (%Change)									
Personal Income (Bil. \$)	4181.4	4338.6	4496.9	4656.3	4816.8	4978.5	5141.2	5305.6	5471.4	5637.2
Calif. (% Ch)	3.8	3.8	3.6	3.5	3.4	3.4	3.3	3.2	3.1	3.0
U.S. (% Ch)	4.9	4.8	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.5
Pers. Income (Bil. 2005\$)	2591.7	2636.6	2680.2	2721.2	2759.6	2795.1	2828.5	2860.3	2891.3	2921.2
Calif. (% Ch)	1.7	1.7	1.7	1.5	1.4	1.3	1.2	1.1	1.1	1.0
U.S. (% Ch)	2.6	2.5	2.4	2.4	2.4	2.4	2.3	2.4	2.4	2.3
Taxable Sales (Bil. \$)	1399.1	1452.8	1506.4	1559.9	1613.3	1666.7	1720.1	1773.6	1827.0	1880.4
(% Ch)	4.1	3.8	3.7	3.6	3.4	3.3	3.2	3.1	3.0	2.9
(Bil. 2005\$)	867.2	882.9	897.8	911.6	924.3	935.8	946.3	956.2	965.5	974.4
(% Ch)	2.0	1.8	1.7	1.5	1.4	1.2	1.1	1.0	1.0	0.9
Consumer Prices (% Ch)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9
	Employment and Labor Force (Household Survey, % Change)									
Employment	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.2
Labor Force	1.3	1.3	1.3	1.2	1.1	1.1	1.2	1.2	1.1	1.1
Unemployment Rate (%)	6.4	6.4	6.4	6.3	6.2	6.1	6.0	6.0	5.9	5.9
U.S.	5.1	5.0	5.0	5.0	5.1	5.1	5.1	5.1	5.1	5.1
	Nonfarm Employment (Payroll Survey, % Change)									
Total Nonfarm	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.1
Calif.	1.0	1.0	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8
U.S.	1.8	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.5	1.5
Construction	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Nondurable Goods	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Durable Goods	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7
Trans. Warehousing & Util	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.5	1.4
Trade	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.1
Information	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.1	1.0	1.0
Financial Activities	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Professional Busi. Serv.	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.1
Edu. & Health Serv.	1.6	1.6	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.4
Leisure & Hospitality	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Other Services	1.6	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.4
Federal Gov't	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
State & Local Gov't	1.6	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.2
	Nonfarm Employment (Payroll Survey, Thous.)									
Total Nonfarm	19742	19989	20238	20486	20735	20985	21235	21487	21739	21983
Construction	1016	1034	1051	1069	1086	1104	1122	1139	1157	1175
Manufacturing	1452	1461	1469	1477	1486	1494	1502	1511	1519	1528
Nondurable Goods	517	518	519	520	521	522	523	524	525	526
Durable Goods	935	942	950	957	964	972	979	987	994	1001
Trans. Warehousing & Util	786	800	813	826	840	853	867	880	894	906
Trade	3341	3382	3424	3465	3507	3548	3590	3632	3674	3716
Information	633	639	645	650	657	663	670	677	684	691
Financial Activities	1000	1012	1024	1035	1047	1059	1070	1082	1094	1106
Professional Busi. Serv.	3176	3218	3261	3304	3347	3390	3433	3476	3518	3558
Edu. & Health Serv.	2513	2552	2592	2631	2671	2710	2750	2790	2830	2870
Leisure & Hospitality	1900	1911	1922	1933	1944	1956	1967	1979	1991	2003
Other Services	735.2	746.5	757.9	769.2	780.6	792.0	803.5	815.1	826.7	838.2
Federal Gov't	296.0	297.2	298.4	299.5	300.7	301.9	303.0	304.2	305.4	306.5
State & Local Gov't	2863.9	2907.8	2951.9	2995.9	3039.9	3084.0	3128.1	3172.5	3216.9	3256.9
	Population and Migration									
Net Inmigration(Thous)	278	280	279	282	280	279	281	278	277	278
Population (Thous)	49348	49846	50345	50845	51344	51843	52342	52840	53336	53833
(% Ch)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9
	Construction Activity									
Residential Building										
Permits (Thous. Un.)	144.9	145.1	145.2	145.3	145.4	145.4	145.4	145.5	145.5	145.6
Nonres. Const. (Mil. 2005\$)	28972	29328	29603	29845	30027	30194	30358	30502	30655	30807

BNTV@LA	BLDG. PERMITS VALUE, NONRESIDENTIAL
BNTVR@CA	BLDG. PERMITS VALUE, NONRESIDENTIAL IN REAL DOLLARS
BNTVR@LA	BLDG. PERMITS VALUE, NONRESIDENTIAL IN REAL DOLLARS
BRTU@CA	BLDG. PERMIT UNITS, TOTAL DWELLINGS
BRTU@LA	BLDG. PERMIT UNITS, TOTAL
CD	CONSUMER SPENDING ON DURABLE GOODS
CN	CONSUMER SPENDING ON NONDURABLE GOODS
CPI	CONSUMER PRICE INDEX
CPIU@CA	CONSUMER PRICE INDEX
CPIU@LA	CONSUMER PRICE INDEX
EC@LA	EMPLOYMENT IN CONSTRUCTION
EEA@LA	EMPLOYMENT IN NONAGRICULTURAL ESTABLISHMENTS
EEHS@CA	EMPLOYMENT IN EDUCATIONAL & HEALTH SERVICES
EEHS@LA	EMPLOYMENT IN EDUCATIONAL & HEALTH SERVICES
EFA@CA	EMPLOYMENT IN FINANCIAL ACTIVITIES
EFA@LA	EMPLOYMENT IN FINANCIAL ACTIVITIES
EG@LA	EMPLOYMENT IN TOTAL GOVERNMENT
EGF@CA	EMPLOYMENT IN FEDERAL GOVERNMENT
EGF@LA	EMPLOYMENT IN FEDERAL GOVERNMENT
EGOODS@LA	EMPLOYMENT IN GOODS PRODUCING SECTORS
EGSL@LA	EMPLOYMENT IN STATE & LOCAL GOVERNMENT
EHH@LA	EMPLOYED HOUSEHOLD SURVEY
EI@CA	EMPLOYMENT IN INFORMATION
EI@LA	EMPLOYMENT IN INFORMATION
ELH@CA	EMPLOYMENT IN LEISURE & HOSPITALITY
ELH@LA	EMPLOYMENT IN LEISURE & HOSPITALITY
EM@LA	EMPLOYED IN MANUFACTURING
EMD@CA	EMPLOYMENT IN DURABLE MANUFACTURED GOODS
EMD@LA	EMPLOYMENT IN DURABLE MANUFACTURED GOODS
EMN@CA	EMPLOYMENT IN NONDURABLE MANUFACTURED GOODS
EMN@LA	EMPLOYMENT IN NONDURABLE MANUFACTURED GOODS
ENRM@CA	EMPLOYMENT IN NATURAL RESOURCES & MINING
ENRM@LA	EMPLOYMENT IN NATURAL RESOURCES & MINING
EPBS@CA	EMPLOYMENT IN PROFESSIONAL & BUSINESS SERVICES
EPBS@LA	EMPLOYMENT IN PROFESSIONAL & BUSINESS SERVICES
ERESID@LA	RESIDUAL BETWEEN TOTAL PAYROLL & HOUSEHOLD EMPLOYMENT
ESV@LA	EMPLOYMENT IN SERVICES INDUSTRIES
ESVOTH@CA	EMPLOYMENT IN OTHER SERVICES
ESVOTH@LA	EMPLOYMENT IN OTHER SERVICES
ET@LA	EMPLOYMENT IN WHOLESALE & RETAIL TRADE
ETR@LA	EMPLOYMENT IN RETAIL TRADE

@LA = L.A. County endogenous variables

@CA = California exogenous variables

All others are U.S. exogenous variables

ETW@LA	EMPLOYMENT IN WHOLESALE TRADE
ETWU@CA	EMPLOYMENT IN TRANSPORTATION, WAREHOUSING & UTILITIES
ETWU@LA	EMPLOYMENT IN TRANSPORTATION, WAREHOUSING & UTILITIES
JPIFNRES	CHAINED PRICE INDEX--NONRESIDENTIAL CONSTRUCTION\2005=100
LC@LA	CIVILIAN LABOR FORCE
LFPR@CA	LABOR FORCE PARTICIPATION RATE
LFPR@LA	LABOR FORCE PARTICIPATION RATE
NINMIG@CA	NET IMMIGRATION
NINMIG@LA	NET IMMIGRATION
NJULY@CA	TOTAL POPULATION AS OF JULY 1
NJULY@LA	TOTAL POPULATION AS OF JULY 1
NNATINC@CA	NATURAL INCREASE
NNATINC@LA	NATURAL INCREASE
PC@CA	ESTIMATE OF IMPLICIT PRICE DEFLATOR OF PERSONAL CONSUMP. EXP.
PC@LA	ESTIMATE OF IMPLICIT PRICE DEFLATOR OF PERSONAL CONSUMP. EXP.
RESADJ@LA	RESIDENCE ADJUSTMENT
RU@LA	UNEMPLOYMENT RATE
RW@CA	DERIVED AVG. ANNUAL SALARY TOTAL
RW@LA	DERIVED AVG. ANNUAL SALARY TOTAL
RWC@LA	DERIVED AVG. ANNUAL SALARY IN CONSTRUCTION
RWEHS@LA	DERIVED AVG. ANNUAL SALARY IN EDUCATION & HEALTH SERVICES
RWFA@LA	DERIVED AVG. ANN SALARY IN FINANCIAL ACTIVITIES
RWG@LA	DERIVED AVG. ANNUAL SALARY IN GOVERNMENT
RWI@LA	DERIVED AVG. ANNUAL SALARY IN INFORMATION
RWLH@LA	DERIVED AVG. ANNUAL SALARY IN LEISURE & HOSPITALITY
RWM@LA	DERIVED AVG. ANNUAL SALARY IN MANUFACTURING
RWNRM@LA	DERIVED AVG. ANNUAL SALARY IN NATURAL RESOURCES & MINING
RWPBS@LA	DERIVED AVG. ANNUAL SALARY IN PROFESSIONAL & BUSINESS SERVICES
RWSVOTH@LA	DERIVED AVG. ANNUAL SALARY IN OTHER SERVICES
RWT@LA	DERIVED AVG. ANNUAL SALARY IN TRADE
RWTWU@LA	DERIVED AVG. ANNUAL SALARY IN TRANSPORTATION, WAREHOUSING & UTILITIES
ST@LA	TAXABLE SALES
STR@LA	REAL TAXABLE SALES
TWPER@LA	PER CONTR. FOR SOCIAL INSURANCE NEG. PLACE OF WORK
TWPERF@CA	PER CONTR. FOR SOCIAL INSURANCE NEG. PLACE OF WORK
V@LA	TRANSFER PAYMENTS, PLACE OF RESIDENCE
VF@CA	TRANSFER PAYMENTS, PLACE OF RESIDENCE
WSD@LA	WAGE & SALARY DISBURSEMENTS - TOTAL
WSDC@LA	WAGE & SALARY DISTRIB. IN CONSTRUCTION

@LA = L.A. County endogenous variables

@CA = California exogenous variables

All others are U.S. exogenous variables

WSDEHS@LA	WAGE & SALARY DISTRIB. IN EDUCATION & HEALTH SERVICES
WSDFC@CA	WAGE & SALARY DISTRIB. PLACE OF WORK
WSDFA@LA	WAGE & SALARY DISTRIB. IN FINANCIAL ACTIVITIES
WSDG@LA	WAGE & SALARY DISTRIB. IN GOVERNMENT
WSDI@LA	WAGE & SALARY DISTRIB. IN INFORMATION
WSDLH@LA	WAGE & SALARY DISTRIB. IN LEISURE & HOSPITALITY
WSDM@LA	WAGE & SALARY DISTRIB. IN MANUFACTURING
WSDNRM@LA	WAGE & SALARY DISTRIB. IN NATURAL RESOURCES & MINING
WSDPBS@LA	WAGE & SALARY DISTRIB. IN PROFESSIONAL BUSINESS SERVICES
WSDSVOTH@LA	WAGE & SALARY DISTRIB. IN OTHER SERVICES
WSDT@LA	WAGE & SALARY DISTRIB. IN WHOLESALE & RETAIL TRADE
WSDTWU@LA	WAGE & SALARY DISTRIB. IN TRANSPORTATION, WAREHOUSING & UTIL.
YENT@CA	PROPRIETOR'S INCOME - TOTAL
YENT@LA	PROPRIETOR'S INCOME - TOTAL
YENTAFF@CA	PROPRIETOR'S INCOME, FARM
YENTEAFF@CA	PROPRIETOR'S INCOME, NONFARM
YP@LA	PERSONAL INCOME - TOTAL
YPF@CA	PERSONAL INCOME TOTAL
YPOTHER@LA	OTHER PERSONAL INCOME
YPOTHER@CA	OTHER PERSONAL INCOME
YPPROP@LA	PROPERTY INCOME
YPPROP@CA	PROPERTY INCOME
YPR@LA	REAL PERSONAL INCOME - TOTAL

@LA = L.A. County endogenous variables

@CA = California exogenous variables

All others are U.S. exogenous variables

Los Angeles County Forecast Tables

Summary of the UCLA Forecast for Los Angeles County by Calendar Year

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Personal Income, Taxable Sales, and Price Inflation (%Change)										
Personal Income (Billion \$)	194.7	202.5	201.2	205.7	213.1	222.8	232.4	253.5	264.0	279.8
(% Change)	0.4	4.0	-0.6	2.2	3.6	4.5	4.3	9.1	4.1	6.0
Real Personal Income (Bil 2000\$)	277.9	278.9	270.3	272.6	278.2	285.5	293.2	315.3	320.8	329.1
(% Change)	-3.6	0.4	-3.1	0.8	2.1	2.6	2.7	7.6	1.7	2.6
Taxable Sales (Billion \$)	75.4	74.6	73.0	76.9	79.0	82.6	86.4	90.2	97.2	106.7
(% Change)	-6.1	-1.0	-2.2	5.3	2.8	4.5	4.5	4.4	7.8	9.7
Real Taxable Sales (Bil 2000\$)	107.6	102.8	98.1	101.8	103.2	105.9	109.0	112.2	118.1	125.5
(% Change)	-9.8	-4.4	-4.6	3.8	1.3	2.6	2.9	2.9	5.3	6.2
Consumer Prices (% Ch)	4.1	3.6	2.5	1.4	1.5	1.8	1.6	1.4	2.4	3.3
Employment and Labor Force - (Household Survey, %Change)										
Employment	-3.7	-2.3	-2.4	-0.3	1.0	0.8	3.8	3.1	1.5	2.6
Labor Force	-1.4	-0.3	-2.2	-1.1	-0.3	1.0	2.3	2.7	0.8	2.1
Unemployment Rate (%)	8.0	9.9	10.0	9.3	8.0	8.2	6.9	6.6	5.9	5.4
Nonfarm Employment (Payroll Survey, %Change)										
Total Nonfarm	-3.7	-4.5	-2.5	-0.2	1.2	1.1	2.0	2.0	1.5	1.8
Natural Resources & Min.	-17.0	-12.2	-9.3	-21.9	-2.4	-6.6	-9.7	-0.2	-1.7	-1.5
Construction	-9.9	-14.0	-8.7	6.2	3.9	-4.0	1.7	7.6	6.6	3.8
Manufacturing	-7.4	-7.1	-6.7	-3.7	0.1	0.7	0.9	0.8	-2.9	-2.1
Nondurable Goods	-0.6	-1.2	-1.3	0.4	2.8	0.9	-0.2	-0.6	-2.4	-0.9
Durable Goods	-11.0	-10.5	-10.2	-6.5	-1.9	0.5	1.8	1.9	-3.3	-3.0
Trans., Warehousing & Ut	-0.5	-3.9	-1.9	0.3	2.2	1.0	2.9	4.5	2.6	1.3
Trade	-2.8	-4.9	-3.5	-0.8	1.1	1.0	2.1	1.2	1.4	2.0
Information	-2.8	-6.9	0.6	4.8	7.5	5.8	6.3	0.1	10.1	3.0
Financial Activities	-5.3	-6.4	-3.1	-3.6	-3.4	-3.0	1.5	1.7	1.2	-1.0
Professional & Busi. Srv	-5.4	-4.2	1.3	1.9	1.9	2.6	4.3	4.4	-0.3	3.0
Edu. & Health Services	-2.9	-2.7	-0.6	1.7	1.3	3.4	0.3	2.3	1.8	3.6
Leisure & Hospitality	0.6	-1.8	-0.4	1.1	1.5	2.5	2.9	1.5	1.3	2.6
Other Services	0.2	-3.1	-1.4	-2.7	3.2	-0.5	0.2	3.2	1.3	2.3
Federal Gov't	-4.3	0.5	-3.5	-2.7	-2.2	-3.5	-5.4	-2.9	1.7	1.5
State and Local Gov't	0.7	-0.2	-1.2	0.9	0.7	-0.1	1.4	1.3	4.1	3.7
Nonfarm Employment (Payroll Survey, Thous.)										
Total Nonfarm	3978.1	3798.3	3704.0	3698.2	3743.0	3784.6	3861.2	3939.7	3998.5	4072.2
Natural Resources & Min.	6.8	6.0	5.4	4.2	4.1	3.9	3.5	3.5	3.4	3.4
Construction	130.7	112.4	102.6	109.0	113.3	108.7	110.6	119.0	126.9	131.7
Manufacturing	751.7	698.5	651.4	627.4	628.1	632.6	638.5	643.7	625.2	612.2
Nondurable Goods	277.1	273.9	270.2	271.1	278.7	281.2	280.7	279.0	272.3	269.9
Durable Goods	474.6	424.6	381.2	356.3	349.4	351.4	357.8	364.7	352.8	342.3
Trans., Warehousing & Ut	160.2	154.0	151.1	151.4	154.7	156.3	160.8	168.0	172.4	174.5
Trade	616.0	585.8	565.1	560.5	566.5	571.9	583.9	591.0	599.3	611.4
Information	180.9	168.4	169.4	177.6	190.9	201.9	214.8	214.9	236.6	243.7
Financial Activities	265.2	248.2	240.5	231.8	223.9	217.3	220.5	224.2	226.8	224.6
Professional & Busi. Serv	507.8	486.7	493.1	502.5	512.2	525.6	548.2	572.6	571.0	588.0
Edu. & Health Services	373.5	363.5	361.4	367.5	372.2	385.1	386.3	395.0	402.3	416.7
Leisure & Hospitality	308.4	303.0	301.9	305.3	309.9	317.7	326.9	331.9	336.2	344.8
Other Services	136.9	132.6	130.7	127.2	131.3	130.6	130.9	135.1	136.8	140.0
Federal Gov't	68.7	69.1	66.7	64.9	63.4	61.2	57.9	56.2	57.1	57.9
State and Local Gov't	471.1	470.2	464.7	468.8	472.2	471.8	478.5	484.9	504.6	523.3
Construction Activity and Population										
Residential Building Permits (Thous. Units)	16.3	12.0	7.5	7.4	8.6	8.9	10.3	11.6	14.2	17.2
Nonresidential Construction Real (Mil. 2000\$)	5051.3	3955.5	3860.9	3918.1	3272.7	3411.3	3484.7	4606.6	5325.1	4556.7
Nominal (Mil. \$)	2752.7	2155.7	2164.9	2276.0	1982.3	2120.3	2249.0	3108.3	3708.2	3292.5
Net Immigration (Thous.)	-47	-36	-107	-100	-122	-104	-29	-19	30	84
Population (Thous.)	8934	9044	9091	9116	9119	9116	9172	9249	9357	9526
(% Change)	1.0	1.2	0.5	0.3	0.0	-0.0	0.6	0.8	1.2	1.8

Los Angeles County Forecast Tables

Summary of the UCLA Forecast for Los Angeles County by Calendar Year

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Personal Income, Taxable Sales, and Price Inflation (%Change)										
Personal Income										
(Billion \$)	303.6	311.4	322.6	338.0	357.5	385.6	402.1	413.3	409.0	418.7
(% Change)	8.5	2.6	3.6	4.8	5.8	7.8	4.3	2.8	-1.1	2.4
Real Personal Income										
(Bil 2000\$)	345.5	344.9	348.3	353.1	357.5	369.8	373.4	370.8	369.8	373.5
(% Change)	5.0	-0.2	1.0	1.4	1.3	3.4	1.0	-0.7	-0.3	1.0
Taxable Sales										
(Billion \$)	107.4	108.7	113.6	122.5	130.6	136.1	137.9	132.0	112.6	113.9
(% Change)	0.7	1.2	4.5	7.8	6.7	4.2	1.3	-4.2	-14.7	1.2
Real Taxable Sales										
(Bil 2000\$)	122.3	120.4	122.7	128.0	130.6	130.6	128.0	118.5	101.8	101.6
(% Change)	-2.5	-1.5	1.9	4.3	2.1	-0.0	-1.9	-7.5	-14.1	-0.2
Consumer Prices (% Ch)	3.4	2.8	2.6	3.3	4.5	4.3	3.3	3.5	-0.8	1.4
Employment and Labor Force - (Household Survey, %Change)										
Employment	1.1	-1.2	-0.5	0.5	2.1	1.1	1.1	-1.3	-5.0	-0.9
Labor Force	1.4	0.0	-0.3	0.0	0.9	0.5	1.4	1.3	-0.6	-0.4
Unemployment Rate (%)	5.7	6.8	7.0	6.5	5.3	4.8	5.1	7.5	11.6	12.0
Nonfarm Employment (Payroll Survey, %Change)										
Total Nonfarm	0.0	-1.2	-1.1	0.3	0.7	1.7	0.7	-1.2	-5.9	-1.1
Natural Resources & Min.	13.1	-2.7	2.7	-0.9	-2.2	9.1	9.3	-0.8	-5.7	-2.6
Construction	3.9	-1.7	0.1	4.1	6.1	6.0	0.1	-7.9	-19.8	-11.8
Manufacturing	-5.6	-7.5	-6.5	-3.3	-2.5	-2.1	-2.7	-3.3	-10.4	-4.4
Nondurable Goods	-6.4	-6.8	-5.0	-3.6	-3.5	-1.9	-2.9	-3.6	-10.0	-4.6
Durable Goods	-5.0	-8.0	-7.7	-3.0	-1.6	-2.3	-2.5	-3.1	-10.7	-4.2
Trans., Warehousing & Ut	0.6	-4.8	-3.4	-0.2	0.4	2.1	0.2	-1.5	-7.0	-1.4
Trade	0.5	0.2	-0.3	1.2	2.1	2.4	0.6	-1.9	-7.7	-1.1
Information	-7.2	-8.4	-2.4	4.7	-2.0	-1.0	2.0	0.3	-7.9	10.2
Financial Activities	2.0	1.6	3.1	0.8	1.0	2.0	-1.1	-4.2	-6.6	-1.6
Professional & Busi. Srv	0.0	-2.2	-2.6	0.4	2.4	3.9	1.1	-3.8	-9.3	-1.4
Edu. & Health Services	3.7	4.2	2.2	1.4	0.9	1.6	2.5	2.7	2.1	1.1
Leisure & Hospitality	1.1	1.6	2.4	2.8	1.3	2.9	2.4	0.9	-4.4	0.1
Other Services	2.3	1.7	-0.1	-0.5	-0.3	0.7	1.3	-0.7	-5.6	-1.7
Federal Gov't	-6.2	-0.4	2.5	-2.0	-1.6	-2.1	-2.4	0.0	-2.1	0.4
State and Local Gov't	3.9	1.5	-1.5	-2.0	-0.5	1.3	1.4	1.5	-0.6	-2.6
Nonfarm Employment (Payroll Survey, Thous.)										
Total Nonfarm	4073.8	4026.9	3982.8	3996.2	4023.7	4092.1	4121.9	4070.9	3829.7	3788.5
Natural Resources & Min.	3.8	3.7	3.8	3.8	3.7	4.0	4.4	4.4	4.1	4.0
Construction	136.8	134.5	134.6	140.2	148.7	157.5	157.6	145.2	116.6	102.8
Manufacturing	577.9	534.8	500.0	483.6	471.6	461.6	449.2	434.4	389.2	372.2
Nondurable Goods	252.6	235.5	223.8	215.7	208.2	204.3	198.3	191.2	172.1	164.2
Durable Goods	325.4	299.3	276.2	267.8	263.4	257.3	250.9	243.2	217.1	208.1
Trans., Warehousing & Ut	175.5	167.2	161.5	161.1	161.7	165.2	165.5	163.1	151.7	149.6
Trade	614.2	615.4	613.3	620.4	633.6	648.9	652.9	640.3	590.9	584.2
Information	226.3	207.3	202.3	211.8	207.5	205.5	209.7	210.2	193.7	213.5
Financial Activities	229.0	232.6	239.8	241.6	244.0	248.8	246.0	235.7	220.2	216.7
Professional & Busi. Serv	588.2	575.1	560.0	562.4	576.0	598.8	605.4	582.7	528.2	520.8
Edu. & Health Services	432.0	450.3	460.3	467.0	471.3	478.7	490.4	503.5	513.9	519.7
Leisure & Hospitality	348.5	354.2	362.6	372.8	377.7	388.5	397.9	401.5	383.9	384.1
Other Services	143.1	145.6	145.4	144.6	144.2	145.2	147.1	146.1	137.9	135.6
Federal Gov't	54.4	54.1	55.5	54.4	53.5	52.3	51.1	51.1	50.0	50.2
State and Local Gov't	543.9	551.9	543.7	532.7	530.2	537.1	544.7	552.7	549.5	535.1
Construction Activity and Population										
Residential Building										
Permits (Thous. Units)	18.4	19.1	21.3	27.1	26.1	26.1	20.5	13.9	5.8	8.0
Nonresidential Construction										
Real (Mil. 2000\$)	4673.4	3664.1	3566.0	3569.1	3826.0	3458.3	3873.7	3635.4	2190.4	2300.4
Nominal (Mil. \$)	3549.3	2906.4	2930.7	3158.2	3823.5	3902.4	4701.6	4540.5	2691.0	2740.1
Net Immigration (Thous.)	64	65	36	8	-27	-59	-57	-4	-22	6
Population (Thous.)	9692	9852	9992	10102	10180	10222	10250	10326	10398	10481
(% Change)	1.7	1.6	1.4	1.1	0.8	0.4	0.3	0.7	0.7	0.8

Los Angeles County Forecast Tables

Summary of the UCLA Forecast for Los Angeles County by Calendar Year

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Personal Income, Taxable Sales, and Price Inflation (%Change)										
Personal Income (Billion \$)	440.2	467.3	495.1	522.1	548.0	574.6	600.5	627.0	653.6	680.2
(% Change)	5.1	6.2	6.0	5.4	5.0	4.8	4.5	4.4	4.2	4.1
Real Personal Income (Bil 2000\$)	386.1	401.5	415.5	427.9	438.5	449.2	459.0	469.5	479.7	489.6
(% Change)	3.4	4.0	3.5	3.0	2.5	2.4	2.2	2.3	2.2	2.1
Taxable Sales (Billion \$)	120.3	129.1	138.0	147.5	158.1	168.9	179.8	190.9	202.2	214.9
(% Change)	5.6	7.3	6.9	6.9	7.2	6.8	6.5	6.2	5.9	6.3
Real Taxable Sales (Bil 2000\$)	105.5	110.9	115.8	120.9	126.5	132.0	137.4	143.0	148.4	154.7
(% Change)	3.8	5.1	4.4	4.4	4.6	4.3	4.1	4.0	3.8	4.3
Consumer Prices (% Ch)	1.7	2.1	2.4	2.4	2.5	2.4	2.3	2.1	2.0	2.0
Employment and Labor Force - (Household Survey, %Change)										
Employment	2.6	2.6	2.6	2.5	1.8	1.4	1.4	1.3	1.2	1.2
Labor Force	0.5	1.0	1.1	1.2	1.1	1.1	1.0	1.0	1.0	1.0
Unemployment Rate (%)	10.3	8.9	7.6	6.4	5.8	5.4	5.1	4.8	4.6	4.4
Nonfarm Employment (Payroll Survey, %Change)										
Total Nonfarm	2.0	2.4	2.5	2.3	1.8	1.6	1.5	1.3	1.2	1.1
Natural Resources & Min.	6.1	4.2	2.6	1.3	1.2	1.2	1.1	1.1	1.0	1.0
Construction	3.7	4.3	3.0	2.7	3.2	3.4	3.2	2.7	2.3	1.6
Manufacturing	1.6	3.4	2.5	1.6	0.6	0.7	0.6	0.2	0.5	0.8
Nondurable Goods	-0.1	1.9	1.9	1.8	1.7	2.0	1.7	1.2	1.5	1.5
Durable Goods	2.9	4.7	2.9	1.4	-0.1	-0.3	-0.2	-0.6	-0.3	0.1
Trans., Warehousing & Ut	2.6	1.8	3.2	3.7	2.8	2.2	2.1	2.0	1.7	1.2
Trade	3.1	2.3	2.3	2.4	2.3	2.1	2.0	1.8	1.4	1.1
Information	2.1	3.6	3.6	2.0	1.3	1.0	1.2	1.3	1.2	1.3
Financial Activities	2.3	3.6	3.6	2.7	2.2	2.4	1.5	1.3	0.8	0.8
Professional & Busi. Srv	3.3	2.6	2.9	3.3	2.0	1.5	1.6	1.4	1.3	1.2
Edu. & Health Services	1.1	1.5	1.9	2.2	2.0	1.6	1.5	1.3	1.4	1.5
Leisure & Hospitality	1.8	2.2	1.9	1.7	1.7	1.6	1.6	1.4	1.2	1.0
Other Services	1.3	1.8	1.8	2.1	2.0	1.7	1.6	1.4	1.0	0.8
Federal Gov't	-4.1	1.2	2.1	2.5	2.1	0.9	1.1	1.1	1.0	1.2
State and Local Gov't	0.8	2.0	2.0	1.5	1.3	1.2	1.0	0.9	1.0	1.0
Nonfarm Employment (Payroll Survey, Thous.)										
Total Nonfarm	3863.7	3958.1	4055.1	4147.1	4222.7	4290.1	4354.1	4411.0	4463.1	4513.1
Natural Resources & Min.	4.3	4.4	4.5	4.6	4.7	4.7	4.8	4.8	4.9	4.9
Construction	106.6	111.2	114.5	117.6	121.4	125.5	129.5	133.0	136.1	138.3
Manufacturing	378.1	391.2	400.8	407.1	409.7	412.6	415.1	416.0	418.1	421.2
Nondurable Goods	164.0	167.1	170.3	173.4	176.2	179.8	182.8	184.9	187.6	190.5
Durable Goods	214.1	224.1	230.5	233.8	233.5	232.8	232.3	231.0	230.4	230.7
Trans., Warehousing & Ut	153.5	156.2	161.3	167.2	171.9	175.7	179.4	183.0	186.2	188.4
Trade	602.2	616.2	630.2	645.5	660.5	674.3	687.4	699.5	709.1	717.0
Information	218.0	225.8	233.8	238.5	241.6	244.0	246.9	250.3	253.3	256.5
Financial Activities	221.7	229.7	238.0	244.4	249.7	255.6	259.6	262.8	265.0	267.1
Professional & Busi. Serv	538.2	552.1	568.0	586.7	598.4	607.3	616.7	625.4	633.3	641.1
Edu. & Health Services	525.2	533.1	543.4	555.1	566.0	575.2	583.8	591.1	599.2	608.3
Leisure & Hospitality	391.0	399.6	407.3	414.3	421.4	428.1	435.1	441.2	446.3	450.7
Other Services	137.4	139.9	142.4	145.4	148.4	150.8	153.2	155.3	156.8	158.1
Federal Gov't	48.1	48.7	49.7	50.9	52.0	52.5	53.1	53.7	54.2	54.8
State and Local Gov't	539.3	549.9	561.1	569.7	577.0	583.8	589.6	594.9	600.7	606.6
Construction Activity and Population										
Residential Building Permits (Thous. Units)	13.1	15.0	17.1	18.7	20.0	21.4	22.6	23.2	23.6	23.8
Nonresidential Construction Real (Mil. 2000\$)	2478.2	2844.4	3141.6	3350.6	3519.9	3652.8	3748.4	3821.0	3867.8	3913.5
Nominal (Mil. \$)	2934.8	3431.8	3920.8	4346.9	4729.2	5065.8	5359.4	5628.6	5865.7	6102.7
Net Immigration (Thous.)	16	23	24	23	22	19	19	19	20	21
Population (Thous.)	10576	10671	10762	10848	10929	11004	11077	11148	11220	11291
(% Change)	0.9	0.9	0.9	0.8	0.8	0.7	0.7	0.6	0.6	0.6

Los Angeles County Forecast Tables

Summary of the UCLA Forecast for Los Angeles County by Calendar Year

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
	Personal Income, Taxable Sales, and Price Inflation (%Change)									
Personal Income (Billion \$)	707.0	733.4	761.3	790.5	819.7	849.2	880.9	914.1	947.2	981.2
(% Change)	3.9	3.7	3.8	3.8	3.7	3.6	3.7	3.8	3.6	3.6
Real Personal Income (Bil 2000\$)	499.4	509.2	520.6	532.9	544.5	555.2	566.4	576.5	585.9	595.5
(% Change)	2.0	2.0	2.2	2.4	2.2	2.0	2.0	1.8	1.6	1.6
Taxable Sales (Billion \$)	226.3	237.7	249.4	261.6	274.3	286.9	299.6	312.7	325.6	337.9
(% Change)	5.3	5.0	4.9	4.9	4.8	4.6	4.4	4.4	4.1	3.8
Real Taxable Sales (Bil 2000\$)	159.9	165.1	170.5	176.4	182.2	187.6	192.6	197.3	201.4	205.1
(% Change)	3.3	3.3	3.3	3.4	3.3	3.0	2.7	2.4	2.1	1.8
Consumer Prices (% Ch)	1.9	1.7	1.5	1.4	1.5	1.6	1.7	1.9	2.0	1.9
	Employment and Labor Force - (Household Survey, %Change)									
Employment	1.1	0.9	0.9	1.0	0.9	0.9	0.9	0.8	0.8	0.8
Labor Force	1.0	1.0	1.2	1.1	1.1	1.1	1.0	1.0	1.0	0.9
Unemployment Rate (%)	4.4	4.5	4.7	4.9	5.0	5.1	5.3	5.4	5.6	5.6
	Nonfarm Employment (Payroll Survey, %Change)									
Total Nonfarm	1.0	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Natural Resources & Min.	1.0	0.8	0.7	0.6	0.6	0.7	0.7	0.6	0.6	0.6
Construction	1.2	1.1	1.1	1.1	1.0	1.0	1.1	1.1	1.1	0.9
Manufacturing	0.5	0.4	0.4	0.5	0.5	0.6	0.7	0.8	0.7	0.7
Nondurable Goods	0.9	0.5	0.5	0.7	0.7	0.8	0.9	1.0	0.9	0.6
Durable Goods	0.1	0.2	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.7
Trans., Warehousing & Ut	1.0	1.1	1.4	1.4	1.3	1.0	0.9	1.0	1.0	1.1
Trade	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Information	1.2	1.0	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8
Financial Activities	0.9	0.9	0.9	0.8	0.7	0.7	0.6	0.5	0.5	0.5
Professional & Busi. Srv	1.2	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.8
Edu. & Health Services	1.2	0.7	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.8
Leisure & Hospitality	0.6	0.7	0.6	0.6	0.7	0.7	0.8	0.8	0.7	0.7
Other Services	0.9	0.9	0.8	0.8	0.8	0.7	0.6	0.5	0.5	0.6
Federal Gov't	1.5	1.1	0.8	0.7	0.6	0.6	0.6	0.5	0.5	0.5
State and Local Gov't	1.1	1.0	1.0	1.1	1.0	1.0	1.0	1.0	1.0	1.0
	Nonfarm Employment (Payroll Survey, Thous.)									
Total Nonfarm	4556.7	4595.7	4634.4	4673.7	4712.1	4751.1	4790.7	4828.9	4867.4	4905.4
Natural Resources & Min.	5.0	5.0	5.0	5.1	5.1	5.1	5.2	5.2	5.2	5.3
Construction	140.0	141.6	143.2	144.7	146.2	147.7	149.3	151.0	152.7	154.1
Manufacturing	423.2	424.7	426.6	428.9	431.2	433.8	436.9	440.3	443.5	446.4
Nondurable Goods	192.2	193.1	194.1	195.5	196.7	198.3	200.2	202.1	204.0	205.3
Durable Goods	231.1	231.6	232.4	233.4	234.4	235.5	236.8	238.1	239.5	241.1
Trans., Warehousing & Ut	190.4	192.4	195.1	197.7	200.4	202.4	204.3	206.2	208.2	210.4
Trade	723.0	729.0	735.2	741.3	747.3	753.3	759.5	765.6	771.7	777.7
Information	259.5	262.0	264.5	266.8	268.9	271.0	273.1	275.3	277.4	279.6
Financial Activities	269.5	272.0	274.4	276.5	278.4	280.3	281.9	283.2	284.7	286.0
Professional & Busi. Serv	648.7	655.5	662.1	668.7	675.3	682.1	688.9	694.8	701.0	706.6
Edu. & Health Services	615.5	620.0	624.0	628.3	632.5	636.9	641.6	646.0	650.5	655.7
Leisure & Hospitality	453.6	456.7	459.6	462.5	465.7	469.1	472.7	476.2	479.8	483.2
Other Services	159.5	160.9	162.2	163.5	164.8	165.9	167.0	167.8	168.7	169.6
Federal Gov't	55.7	56.3	56.7	57.1	57.4	57.8	58.1	58.4	58.7	59.0
State and Local Gov't	613.1	619.5	626.0	632.6	639.0	645.6	652.2	658.8	665.3	671.7
	Construction Activity and Population									
Residential Building Permits (Thous. Units)	24.1	24.3	24.4	24.5	24.8	25.0	25.3	25.5	25.8	26.0
Nonresidential Construction Real (Mil. 2000\$)	3914.9	3922.5	3939.3	3945.4	3910.6	3908.5	3928.8	3949.2	3969.5	3989.9
Nominal (Mil. \$)	6349.4	6662.8	7006.0	7344.4	7620.1	7969.7	8374.7	8790.5	9221.4	9672.8
Net Immigration (Thous.)	22	24	25	25	25	26	25	25	23	22
Population (Thous.)	11363	11436	11509	11584	11659	11733	11808	11882	11953	12024
(% Change)	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6

Los Angeles County Forecast Tables

Summary of the UCLA Forecast for Los Angeles County by Calendar Year

	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Personal Income, Taxable Sales, and Price Inflation (%Change)										
Personal Income (Billion \$)	1016.4	1050.8	1086.2	1122.7	1160.5	1198.7	1237.1	1274.3	1311.6	1350.0
(% Change)	3.6	3.4	3.4	3.4	3.4	3.3	3.2	3.0	2.9	2.9
Real Personal Income (Bil 2000\$)	605.5	614.3	622.8	631.3	639.7	647.6	654.9	661.1	667.7	674.2
(% Change)	1.7	1.4	1.4	1.4	1.3	1.2	1.1	1.0	1.0	1.0
Taxable Sales (Billion \$)	349.4	361.6	374.5	388.1	401.2	414.8	429.0	442.7	456.5	471.3
(% Change)	3.4	3.5	3.6	3.6	3.4	3.4	3.4	3.2	3.1	3.2
Real Taxable Sales (Bil 2000\$)	208.2	211.4	214.8	218.2	221.2	224.1	227.1	229.7	232.4	235.3
(% Change)	1.5	1.5	1.6	1.6	1.3	1.3	1.4	1.1	1.2	1.3
Consumer Prices (% Ch)	1.9	1.9	2.0	2.0	2.0	2.0	2.1	2.0	1.9	1.9
Employment and Labor Force - (Household Survey, %Change)										
Employment	0.8	0.8	0.8	0.8	0.7	0.6	0.6	0.6	0.6	0.6
Labor Force	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6
Unemployment Rate (%)	5.6	5.5	5.4	5.3	5.3	5.3	5.3	5.3	5.3	5.3
Nonfarm Employment (Payroll Survey, %Change)										
Total Nonfarm	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.6	0.7	0.6
Natural Resources & Min.	-0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1
Construction	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Manufacturing	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Nondurable Goods	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Durable Goods	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Trans., Warehousing & Ut	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.0
Trade	0.8	0.8	0.8	0.8	0.7	0.6	0.7	0.7	0.7	0.7
Information	0.8	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6
Financial Activities	0.5	0.5	0.5	0.6	0.6	0.4	0.3	0.3	0.4	0.3
Professional & Busi. Srv	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4
Edu. & Health Services	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Leisure & Hospitality	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Other Services	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Federal Gov't	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
State and Local Gov't	0.9	0.9	0.9	0.9	0.8	0.8	0.7	0.7	0.7	0.7
Nonfarm Employment (Payroll Survey, Thous.)										
Total Nonfarm	4942.6	4979.8	5016.4	5052.6	5087.6	5121.4	5155.0	5188.5	5222.8	5256.0
Natural Resources & Min.	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
Construction	155.5	156.7	157.9	159.1	160.3	161.6	162.9	164.1	165.4	166.6
Manufacturing	448.9	451.4	453.9	456.4	459.0	461.6	464.2	466.8	469.4	472.0
Nondurable Goods	205.8	206.3	206.9	207.4	208.0	208.5	209.0	209.6	210.1	210.7
Durable Goods	243.1	245.0	247.0	249.0	251.0	253.1	255.1	257.2	259.2	261.3
Trans., Warehousing & Ut	213.0	215.6	218.2	220.7	223.3	225.8	228.4	230.9	233.4	235.8
Trade	784.1	790.6	796.8	802.9	808.5	813.8	819.2	824.6	830.2	835.7
Information	281.7	283.7	285.8	287.7	289.4	291.1	292.9	294.7	296.5	298.1
Financial Activities	287.3	288.7	290.2	291.8	293.6	294.7	295.5	296.5	297.5	298.3
Professional & Busi. Serv	710.4	714.2	717.9	721.7	725.4	729.0	732.7	736.3	739.9	743.2
Edu. & Health Services	662.1	668.4	674.8	681.1	687.4	693.7	699.9	706.2	712.5	718.7
Leisure & Hospitality	486.6	490.0	493.1	496.2	499.0	501.8	504.7	507.8	510.9	514.0
Other Services	170.6	171.5	172.5	173.4	174.4	175.3	176.2	177.2	178.1	179.0
Federal Gov't	59.3	59.5	59.7	59.9	60.2	60.4	60.6	60.8	61.0	61.2
State and Local Gov't	677.9	684.1	690.2	696.2	701.8	707.4	712.6	717.4	722.8	728.1
Construction Activity and Population										
Residential Building Permits (Thous. Units)	26.3	26.5	26.6	26.8	27.0	27.2	27.4	27.6	27.9	28.1
Nonresidential Construction Real (Mil. 2000\$)	4010.3	4030.6	4051.0	4071.3	4091.7	4112.0	4132.4	4152.7	4173.1	4193.4
Nominal (Mil. \$)	10146.0	10632.5	11128.2	11648.0	12194.1	12767.2	13360.6	13966.9	14578.6	15195.6
Net Immigration (Thous.)	21	20	19	18	17	17	16	16	15	15
Population (Thous.)	12092	12160	12225	12290	12354	12418	12482	12545	12607	12669
(% Change)	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

Los Angeles County Forecast Tables

Summary of the UCLA Forecast for Los Angeles County by Quarter

	2010:2	2010:3	2010:4	2011:1	2011:2	2011:3	2011:4	2012:1	2012:2	2012:3	2012:4
Personal Income, Taxable Sales, and Price Inflation (%Change)											
Personal Income											
(Billion \$)	416.1	420.0	424.9	430.7	436.7	443.4	450.0	457.2	463.8	470.7	477.4
(% Change)	2.4	3.8	4.8	5.6	5.7	6.3	6.1	6.6	5.9	6.0	5.9
Real Personal Income											
(Bil 2000\$)	372.5	374.3	377.4	380.7	384.1	387.9	391.8	396.1	399.7	403.4	406.9
(% Change)	3.2	1.9	3.4	3.5	3.6	4.0	4.1	4.4	3.7	3.7	3.5
Taxable Sales											
(Billion \$)	113.4	114.0	115.0	116.7	119.0	121.6	123.8	125.8	127.9	130.3	132.3
(% Change)	0.4	2.2	3.4	6.3	8.1	9.0	7.6	6.5	7.1	7.5	6.4
Real Taxable Sales											
(Bil 2000\$)	101.5	101.6	102.1	103.2	104.7	106.4	107.8	109.0	110.3	111.7	112.8
(% Change)	1.1	0.4	2.0	4.2	5.9	6.7	5.5	4.3	4.9	5.1	4.1
Consumer Prices (% Ch)	-0.8	1.8	1.3	2.0	2.0	2.1	1.9	2.0	2.1	2.2	2.3
Employment and Labor Force - (Household Survey, %Change)											
Employment	3.4	1.9	2.3	2.6	2.7	2.8	2.7	2.4	2.5	2.5	2.6
Labor Force	2.5	0.4	0.8	0.2	0.1	0.4	1.2	1.3	1.2	1.1	1.2
Unemployment Rate (%)	12.2	11.9	11.6	11.0	10.5	9.9	9.6	9.4	9.1	8.7	8.4
Nonfarm Employment (Payroll Survey, %Change)											
Total Nonfarm	-0.1	1.0	2.3	2.2	2.4	2.4	2.4	2.4	2.5	2.4	2.5
Nat. Resources & Mining	9.8	4.7	8.4	4.8	6.3	4.7	5.1	3.4	2.4	6.7	2.2
Construction	-5.5	4.3	4.6	4.4	2.3	6.2	6.4	3.0	4.9	2.8	3.2
Manufacturing	-4.2	-0.5	-0.2	2.0	3.7	4.3	4.0	3.5	2.7	2.8	3.3
Nondurable Goods	-8.8	-0.9	-0.5	0.1	1.4	2.1	2.5	1.8	1.2	1.7	2.4
Durable Goods	-0.3	-0.1	-0.0	3.5	5.5	6.0	5.1	4.8	3.8	3.6	4.0
Trans., Warehousing & Util.	1.7	3.8	3.9	2.4	2.1	1.3	1.4	1.8	2.1	2.1	2.2
Trade	-0.4	3.3	3.4	3.8	3.6	2.3	2.5	2.6	1.8	2.0	1.8
Information	5.5	0.9	1.1	1.8	2.8	2.6	2.7	3.7	4.4	4.4	4.4
Financial Activities	-0.2	1.3	1.9	2.2	3.3	3.6	3.3	3.2	4.2	4.2	3.2
Professional & Busi. Svcs.	-1.9	4.7	5.7	2.8	2.7	3.3	3.2	2.5	2.2	1.8	2.4
Edu. & Health Services	-1.8	1.3	1.3	1.3	1.3	1.2	1.0	1.6	1.9	1.8	1.9
Leisure & Hospitality	0.5	2.2	2.3	1.6	1.9	1.5	1.6	2.5	2.8	2.4	2.5
Other Services	0.4	0.9	0.7	1.5	1.8	1.8	2.0	1.6	1.8	1.8	1.8
Federal Gov't	87.3	-47.8	-0.7	0.2	0.9	1.0	1.0	1.4	1.0	1.3	2.0
State and Local Gov't	-2.1	-0.4	0.6	1.3	1.2	1.5	1.7	1.8	2.4	2.6	2.5
Nonfarm Employment (Payroll Survey, Thous.)											
Total Nonfarm	3778.3	3787.3	3808.5	3829.3	3852.0	3875.1	3898.2	3921.9	3946.2	3969.8	3994.5
Nat. Resources & Mining	4.0	4.0	4.1	4.2	4.2	4.3	4.3	4.4	4.4	4.5	4.5
Construction	101.6	102.6	103.8	104.9	105.5	107.1	108.8	109.6	110.9	111.7	112.6
Manufacturing	371.5	371.1	370.9	372.7	376.1	380.0	383.8	387.1	389.7	392.3	395.6
Nondurable Goods	163.4	163.1	162.9	162.9	163.5	164.3	165.4	166.1	166.6	167.3	168.3
Durable Goods	208.1	208.0	208.0	209.8	212.6	215.7	218.4	221.0	223.1	225.0	227.3
Trans., Warehousing & Util.	148.7	150.1	151.6	152.5	153.3	153.8	154.3	155.0	155.8	156.6	157.5
Trade	580.4	585.1	590.0	595.6	600.9	604.4	608.1	611.9	614.7	617.8	620.5
Information	213.8	214.3	214.9	215.8	217.3	218.8	220.2	222.2	224.6	227.0	229.4
Financial Activities	216.0	216.8	217.8	218.9	220.7	222.7	224.5	226.3	228.6	231.0	232.8
Professional & Busi. Svcs.	515.4	521.4	528.6	532.3	535.8	540.2	544.4	547.8	550.7	553.2	556.5
Edu. & Health Services	517.9	519.5	521.2	522.9	524.5	526.1	527.4	529.4	531.9	534.3	536.8
Leisure & Hospitality	382.6	384.8	387.0	388.5	390.3	391.7	393.3	395.8	398.6	400.9	403.3
Other Services	135.4	135.7	136.0	136.5	137.1	137.7	138.4	138.9	139.6	140.2	140.8
Federal Gov't	56.5	48.0	47.9	48.0	48.1	48.2	48.3	48.5	48.6	48.8	49.0
State and Local Gov't	534.4	533.9	534.7	536.5	538.1	540.2	542.5	544.9	548.2	551.6	555.1
Construction Activity and Population											
Residential Building											
Permits (Thous. Units)	4.7	7.2	12.5	12.3	13.4	13.3	13.5	14.8	14.5	14.7	15.8
Nonresidential Construction											
Real (Mil. 2000\$)	2439.7	2335.3	2311.6	2334.1	2428.5	2548.9	2601.3	2693.7	2805.6	2900.0	2978.3
Nominal (Mil. \$)	2916.3	2772.4	2727.9	2756.0	2870.9	3020.2	3092.1	3217.2	3369.9	3508.0	3632.2
Net Immigration (Thous.)	4	10	15	15	16	17	18	21	23	24	24
Population (Thous.)	10469	10493	10517	10541	10564	10588	10611	10635	10659	10683	10706
(% Change)	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9

D) Bus Fleet Management Plan

Appendix D provides the Metro Bus Fleet Management Plan, dated July 2011.

FINAL DRAFT 1.2

BUS FLEET MANAGEMENT PLAN

July 2011



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INTRODUCTION

Metro is responsible for the continuous improvement of an efficient and effective transportation system for Los Angeles County. Metro serves as the county's transportation planner and coordinator, designer, builder and operator for one of the country's largest, most populous counties. More than 9.6 million people, nearly one-third of California's residents, live, work, and play within its 1,433-square-mile service area.

Metro is governed by a 13-member Board of Directors comprised of:

- Five Los Angeles County Supervisors;
- The Mayor of Los Angeles;
- Three Los Angeles mayor-appointed members;
- Four city council members representing the other 87 cities in Los Angeles County; and
- The Governor of California appoints one non-voting member

Metro decentralized its bus operations in 2002, dividing them into five localized service sectors each overseen by their respective Governance Council. In 2010, Metro restructured and established a centralized organization (Figure 1), while maintaining the role and responsibility of the five Metro Governance Councils, now referred to as Metro Service Councils (MSC), to help coordinate service changes. The MSC recommend and approve changes to bus service that impact their respective geographical area as shown in Figure 2 on page 8.

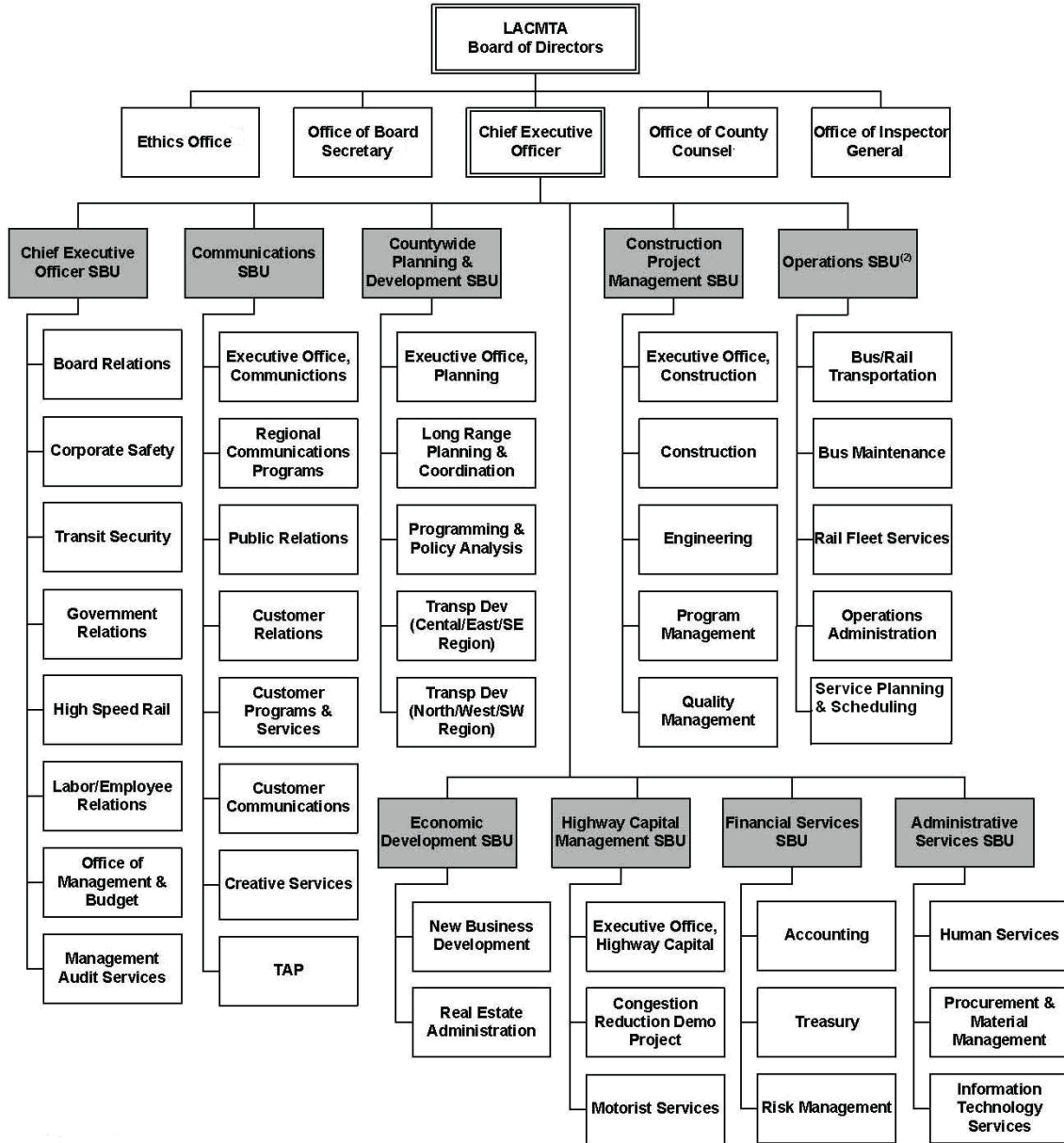
These community-based councils provide the following role and responsibilities:

- Greater community involvement: Regionalized outreach gives residents more opportunities for direct input into service issues in their communities.
- Improved service: Local service evaluation to better understand passenger needs and recommend the appropriate response.
- Sub-regional perspective: Advise and approve the planning and implementation of service within their area; call and conduct public hearings; evaluate Metro bus programs related to their service area; review proposed service changes; and make policy recommendations to the Metro Board.

Metro's goal is to continuously strive to improve existing services and develop new services that addresses ridership growth, continues to meet customer expectations, improves seamless mobility throughout Los Angeles County, and provides existing and new services in the most cost effective and safe manner. Supporting this effort is Metro's 2009 Long Range Transportation Plan (LRTP), Metro's 2011 Transit Service Policy (TSP), and Measure R and 30/10 Initiative.

Figure 1

Metro Organizational Chart
(As of May 19, 2010)



2009 Long Range Transportation Plan (LRTP) - Metro's vision for future bus service is outlined in the recently adopted 2009 LRTP. Due to the passage of Measure R in November of 2008, the 2009 LRTP identifies future projects and programs. Measure R funds specific projects at specific times. It provides additional funding for bus operations.

2011 Transit Service Policy (TSP) - Metro's 2011 Transit Service Policy was Board approved in March 2011. The TSP provides a set of performance criteria and standards, quantitative tools to evaluate the system, and service design guidelines to ensure that the transit system is developed consistent with policy guidance approved by the Metro Board of Directors. It serves as the blueprint for creating a better transit system. The TSP defines the roles of Metro Bus, Metro Rail, and municipal operations, identifies and prioritizes essential service quality attributes, provides guidance on service coordination, bus rail integration, and prioritizes the reduction of duplicative services. The TSP is reviewed on an annual basis and updated if needed.

Measure R and the 30/10 Initiative - In November 2008, Los Angeles County voters approved Measure R, a half-cent sales tax. The measure is expected to generate \$40 billion for countywide transportation projects over the next 30 years. In April 2010, Metro's Board of Director adopted the 30/10 Initiative to use the revenue from Measure R as collateral for long-term bonds and a federal loan, which will allow Metro to build 12 major transit projects in 10 years instead of 30 years. Part of the funds from Measure R will be used to expand Metro Rail projects throughout the region and changes to Metro's bus system will be implemented accordingly to reduce duplication and facilitate better connections between the two. Projected Metro rail projects funded by Measure R are:

- Gold Line Foothill Extension to Azusa
- Exposition Line – Phase II
- Crenshaw/LAX Extension
- Regional Transit Corridor connecting the Blue, Exposition, and Gold Lines
- Purple Line Extension to Westwood
- Gold Line Eastside Extension from East Los Angeles – Phase II
- Green Line Extension to LAX
- Green Line Extension – South Bay

The following is an update to the Bus Fleet Management Plan issued on April 30, 2010. It details how Metro will acquire, maintain and operate its bus fleet through Fiscal Year 2020. Its four primary purposes are:

- Describe and evaluate existing bus operations.
- Describe new transit projects and other factors that impact bus operations.
- Describe fleet management and maintenance practices.
- Provide a framework for vehicle procurement and facility planning.

1.0 METRO'S TRANSIT OPERATIONS

Metro operates bus, BRT, light rail, and heavy rail with an annual operating budget of approximately \$922 million for its bus system and \$257 million for rail. Metro operates approximately 1,900 peak buses on weekdays. As of June 2011 the Metro bus system (Directly Operated and Contract Services) spans 172 routes and provides more than 6.8 million revenue service hours annually with an average of 1.1 million boarding daily at approximately 16,000 bus stops. See Appendix 1 for more details on Metro's bus system.

The Metro rail system consists of 275 light and heavy rail cars on five lines serving 72 stations across approximately 78.1 route miles in heavily congested travel corridors. Metro's light rail serve 56 stations along 60.7 miles of track and its heavy rail serves 16 stations along 17.4 miles of track. Metro rail provides connections to many multi-modal transportation hubs and accounts for approximately 300,000 weekday boardings.

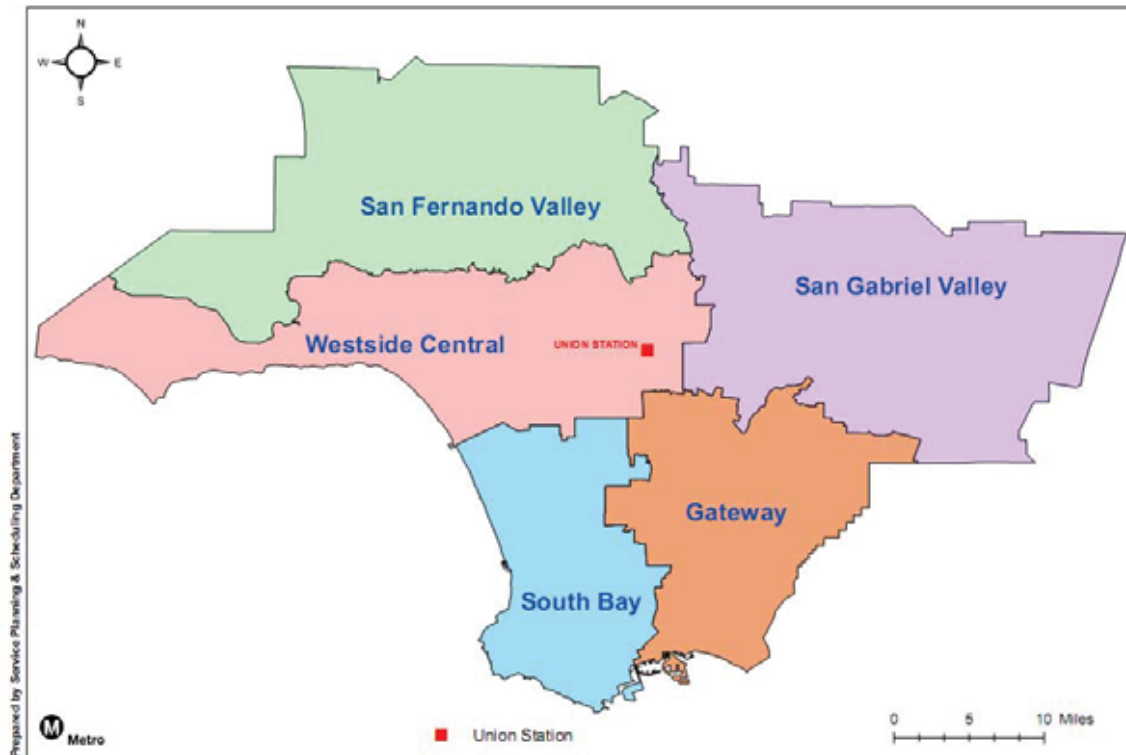
In addition to operating its own service, Metro funds 16 municipal bus operators and funds a wide array of transportation projects including bikeways and pedestrian facilities, local roads and highway improvements, goods movement, Metrolink, and the Freeway Service Patrol and Call Boxes.

Metro's Service Area

Metro's bus operations are divided into five geographic regions (Figure 2): Gateway Cities, San Fernando Valley, San Gabriel Valley, South Bay, and Westside/Central. Each region's MSC is responsible for approving and evaluating service change proposals and conducting public hearings within their respective service areas.

Figure 2

Metro Service Areas



The following appendices provide additional information:

- Appendix 1 Lists weekday bus system data (directly operated and contract).
- Appendix 2 Lists municipal boundaries by service area.
- Appendix 3 Lists municipal & community transit operators by service area.

Service Planning & Scheduling Department

The Service Planning & Scheduling Department is divided into seven sections:

- Document Production
- Operations Planning
- Scheduling
- Schedule checking
- Service Performance & Analysis
- Stops and Zones
- Strategic Planning

Service Planning & Scheduling Department's main function is bus and rail operations planning and scheduling activities associated with bi-annual service changes. Major activities associated with service changes are:

- Analysis and adjustments to service levels;

- Cancellation or restructuring of bus lines;
- Developing new services; and
- Developing basic operating schedules, workruns, rostering, maps of routes, and timetables.

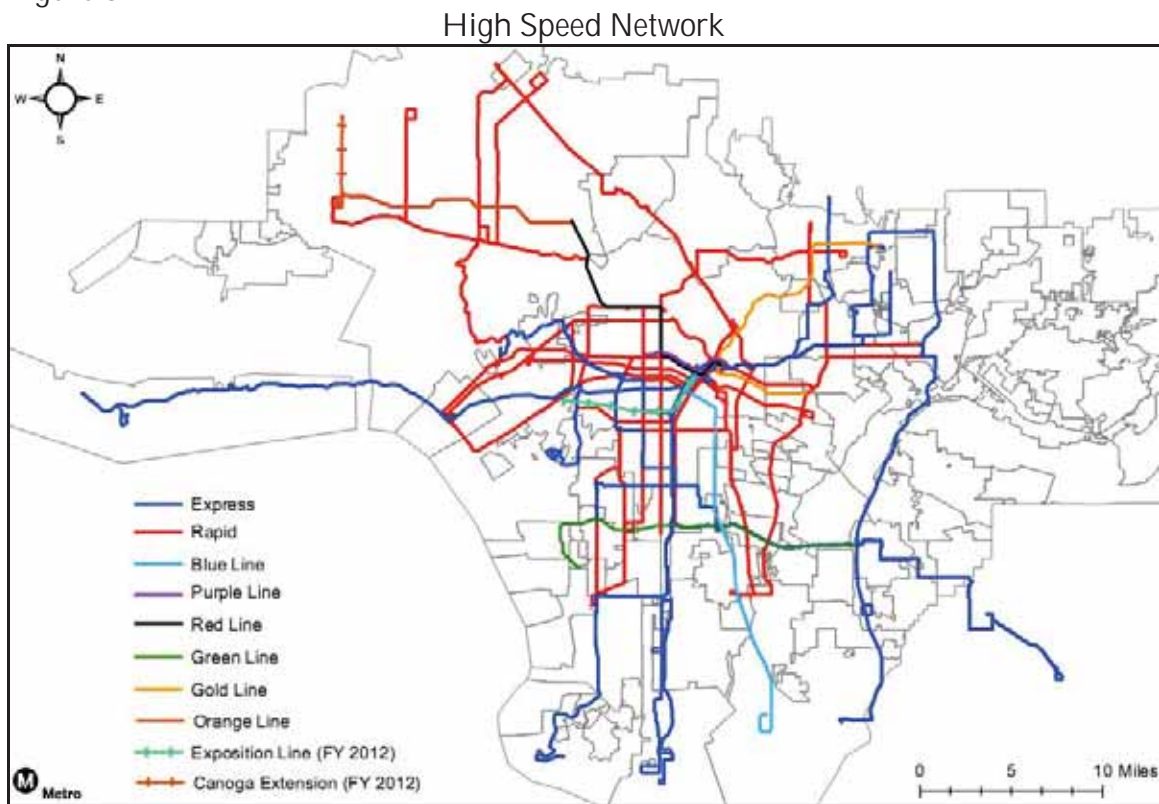
The department also coordinates service changes with other municipal operators within the region’s transit network, develops system service performance standards, monitors system service performance, and develops transit service policies and guidelines, updates the Bus Fleet Management Plan, and develops the Short Range Transit Plan. In addition, the department reports system data and performance measures to the National Transit Database.

1.1 METRO PUBLIC TRANSIT SERVICES

Metro operates six types of bus services (Metro Liner, Metro Rapid, Metro Express, Metro Local, Metro Limited, and Contract Services) and two types of rail services (Light Rail and Heavy Rail) to better match the transit mode with specific passenger demand and needs.

Metro’s high-speed network consists of Metro Rail, Metro Liner, Metro Rapid, and Express Services.

Figure 3



Metro Rail

Metro Rail services operate along a dedicated right-of-way, serves full scale transit stations, and is powered by electricity. The rail system serves as a backbone of public transportation in the greater Los Angeles Region, linking many key multi-modal transportation centers and destinations.

Service operates in high-demand travel corridors and is offered in two forms – heavy rail and light rail. Metro’s heavy rail is the subway system served by the Red and Purple Lines. Metro’s three light rail lines – Blue, Gold and Green – use shorter trains than heavy rail, and generally operate at slower speeds powered by overhead wires. Unlike heavy rail, the light rail lines run along a right-of-way ranging from complete grade separation to at grade in mixed flow traffic. Rail routes are designated with route numbers between 800 and 899.

Metro Liner

Metro Liner service is expedited BRT service operated on its own exclusive right-of-way on either arterials or freeways with dedicated transit stations. As a form of BRT, Metro incorporates a series of design features to reduce delays, increase reliability and improve passenger comfort such as high-capacity buses, dedicated bus lanes, transit signal priority, Park ‘N’ Ride Facilities, bus shelters, and improved fare collections.

Metro operates two Metro Liner routes: Metro Orange Line and Metro Silver Line. Metro Liner services are numbered between 900 and 910. In October 2005, Metro Orange Line began service in the San Fernando Valley. The Orange Line operates on its own right-of-way providing rail like service between the Warner Center Transit Hub (Owensmouth Ave. & Oxnard St.) to the North Hollywood Red Line Station (Lankershim Blvd. & Chandler Blvd.). This line is assigned the Metro Liner designation Line 901. In December 2009, the Metro Silver Line was implemented to connect the El Monte Station and the Artesia Transit Center via El Monte Busway (I-10), Downtown, Harbor Transitway (I-110). This line replaced Express Lines 444, 446/447, 484, and 490, which continue to serve their respective on-street local segments.

Metro Rapid

Metro Rapid service is expedited arterial bus service operating on heavily traveled corridors. Time reductions are achieved through the use of fewer bus stops, transit signal priority, and peak period bus lanes. Metro Rapid buses use specially branded buses. Metro Rapid Lines are designated with route numbers between 700 and 799.

In June 2000, Metro implemented two Metro Rapid demonstration bus lines: Line 720 (Whittier/Wilshire Corridor) and Line 750 (Ventura Blvd. Corridor). Both demonstration lines were implemented with six of the eleven key attributes such as: unique vehicles, station “branding”, signal priority, fewer stops than local lines, and

more frequent service. To date Metro has incorporated six of these design features and the remaining five may be incorporated in the near future.

Table 1

Rapid Key Attributes

Key Attributes	Implemented
1. Simple Route Layout	Yes
2. Frequent Service	Yes
3. Less Frequent Stops	Yes
4. Level Boarding and Alighting	Yes
5. Color Coded Buses and Stations	Yes
6. Station Stops	No
7. Bus Signal Priority	Yes
8. Exclusive Bus Lanes	No
9. Higher-Capacity Buses	No
10. Fare Prepayment	No
11. Feeder Network	No

Metro will be operating a total of 19 Metro Rapid Lines when Metro's Expo Light Rail Line is implemented in 2012.

- Line 704 (Santa Monica Blvd.)
- Line 705 (La Cienega Blvd. & Vernon Ave.)
- Line 710 (Crenshaw Blvd.)
- Line 720 (Wilshire Blvd. & Whittier Blvd.)
- Line 728 (Olympic Blvd.)
- Line 734 (Sepulveda Blvd.)
- Line 740 (Hawthorne Blvd)
- Line 741 (Reseda Blvd.)
- Line 745 (South Broadway)
- Line 750 (Ventura Blvd.)
- Line 751 (Soto St.)
- Line 754 (Vermont Ave.)
- Line 757 (Western Ave.)
- Line 760 (Long Beach Blvd)
- Line 761 (Van Nuys Blvd.)
- Line 762 (Atlantic Blvd.)
- Line 770 (Cesar E Chavez Ave. & Garvey Ave.)
- Line 780 (Colorado Blvd.)
- Line 794 (San Fernando Rd.)

Other municipal operators have implemented the following Rapid Lines:

Santa Monica Big Blue Bus:

- Rapid 3 (Lincoln Blvd.)
- Rapid 7 (Pico Blvd.)

- Proposes a new Rapid 12 to operate between Expo’s Culver City Station and Westwood (UCLA)

Culver CityBus:

- Rapid 6 South Sepulveda Blvd.

Torrance Transit plans to implement a new rapid bus line on Carson St. Implementation date has yet to be determined.

Metro Express

Metro Express service is used for longer distance trips with fewer stops. These services typically become more localized near the end of their routes. Metro Express service usually operates from a collector area, such as a Park ‘N’ Ride location, directly to a specific destination or in a particular corridor with stops en-route at major transfer points or activity centers. In addition, it generally operates a major portion of its routing on freeways either in mixed flow traffic, HOV lanes, or dedicated bus lanes. This service type charges a premium fare and is designated with route numbers between 400 and 599. Express services in the downtown area are given a 400 route number, while those that do not go downtown are given a 500 route number.

In June 2005, Metro Line 450X was implemented and provided a point-to-point service from the Artesia Transit Center serving Metro Green Line (light rail) and Downtown Los Angeles. In June 2012, Lines 445 and 450X were scheduled as one service operating as local service from San Pedro to the Artesia Transit Service and a point-to-point service from Artesia Transit Center to Downtown during peak periods on the Harbor -110- Transitway.

In June 2006, Metro Line 577X provided a point-to-point service from El Monte Bus Station serving Long Beach California State University & the Veterans Medical Hospital. In June 2007, Metro Line 577X was extended to serve the Long Beach Transit Mall connecting with Metro’s Blue Line (light rail). In June 2011, Metro Line 577X no longer served Downtown Long Beach and was returned to its original implemented route.

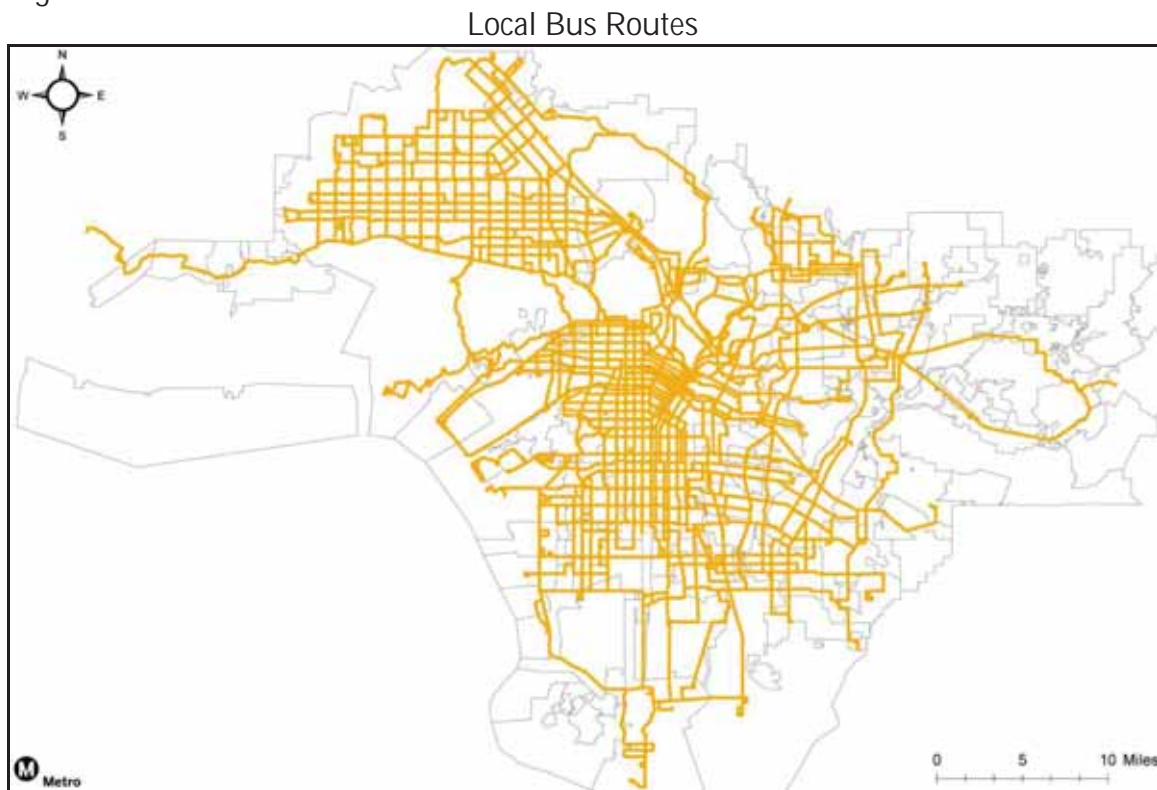
When Metro’s Expo Light Rail Line is implemented in 2012 Metro will be operating a total of 8 express lines:

- Line 450X - Artesia Transit Center to Downtown LA via Harbor Transitway
- Line 460 - Disneyland to Downtown LA via Harbor Transitway
- Line 485 – Pasadena to Downtown LA via El Monte Busway
- Lines 487 - Sierra Madre Villa Station to Downtown LA via El Monte Busway
- Line 489 - Temple City to Downtown LA via El Monte Busway
- Line 534 - Malibu to Downtown LA via I-10 Freeway
- Line 550 - San Pedro to West Hollywood via Harbor Transitway
- Line 577X El Monte Station to Long Beach via I-605 Freeway

Metro Local

Metro Local services provide the bulk of Metro's transit service and ridership. Metro local bus services operate on city streets featuring frequent stops so passengers can board and alight close to their destinations. Some local routes operate limited stop service, which is an accelerated service that does not serve all stops in a specified segment of the line. Another subset of local bus operations are shuttle routes. Metro shuttle routes usually provide community circulation and act as feeders to major bus lines, rail, and transit centers. Typically shuttle bus services carry less than 2,000 passengers a day. Local routes are designated with route numbers between 1 and 299. Limited stop routes are designated with route numbers between 300 and 399. Shuttle routes are designated with route numbers between 600 and 699.

Figure 4



1.2 METRO CONTRACT SERVICE ROUTES

Metro contracts 18 of its bus routes with three private operators (refer to Figure 4). Of the 18 contract lines 13 are local lines, 4 are shuttle routes, and one is an express route. The current contract routes and service providers are:

- a) MV Transportation
 - Line 125 (Rosecrans Avenue)
 - Line 128 (Alondra Boulevard)
 - Line 130 (Artesia Boulevard)

- Line 205 (Willowbrook-Harbor City-San Pedro)
- Line 232 (Pacific Coast Highway)
- Line 607 (Windsor Hills – Inglewood Shuttle)
- Line 625 (Aviation Metro Green Line Station Shuttle)

b) Southland Transit, Inc. (STI)

- Line 177 (La Canada Flintridge - Sierra Madre Villa Station)
- Line 254 (Willowbrook - Huntington Park-Lorena St.)
- Line 256 (Eastern Ave. – Ave. 64-North Hill Ave.)
- Line 266 (Lakewood Blvd. - Rosemead Blvd.)
- Line 270 (Monrovia-El Monte-Norwalk)
- Line 577X (El Monte Station – Long Beach VA Hospital)
- Line 605 (Grande Vista St. - USC Hospital Shuttle)

c) Veolia Transportation

- Line 96 (L.A.-Burbank)
- Line 167 (Plummer St. - Coldwater Canyon Ave.)
- Line 218 (Cedars Sinai Medical Center - Studio City via Laurel Canyon Blvd.)
- Line 603 (Glendale Galleria – Grand Station)

The Palos Verdes Peninsula Transportation Authority (PVPTA) operates Line 225/226 (Aviation Blvd. - Palos Verdes Peninsula) with partial funding from Metro. These lines are not included as part of the 18 contract lines.

The City of Los Angeles Department of Transportation (LADOT) operates three routes with partial funding from Metro. These lines are not included as part of the 18 contract lines.

a) LADOT

- Line 422 (USC/Downtown LA/Hollywood/Sherman Oaks/Warner Center/ Thousand Oaks)
- Line 601 (Pico Union/Echo Park)
- Line 602 (El Sereno/City Terrace)

Figure 5

Contract Service Routes



1.3 METRO BUS SERVICE TYPE FEATURES AND LINE IDENTIFICATION

Each bus service type has a set of features that differentiates them from one another and unique numerical identifiers that indicate their service type and primary route direction. Table 2 summarizes each service type's general characteristics and key features and Table 3 summarizes their numerical identifier as well as their color scheme.

Table 2

Bus Service Type and features

FEATURES	BUS SERVICE TYPES				
	Shuttle	Local/ Limited	Express	Rapid	Metro Liner
Right of Way	Local Streets	Major Arterials	Major Arterials and Fwys	Major Arterials	Dedicated Right-of-Way
Average Stop Spacing	¼ mile	¼ - ½ mile	1+ mile	.7 mile	1+ mile
Target Travel Market	Neighborhood	Inter-Community	Inter-Community Regional	Inter-Community	Inter-Community
Vehicle Type	40-foot bus or smaller	40/60-foot bus	40-foot bus	40/60-foot bus	60-foot bus
Color Coded Buses	California Poppy	California Poppy	Business Blue	Rapid Red	Silver
Communities Served	1 - 2	Multiple	Multiple	Multiple	Multiple
Signal Priority	No	No	No	Yes	Yes
Fare Collection	On board	On board	On Board	On Board	On Board/Pre Pay
Passenger Amenities	Benches and Shelters	Benches and Shelters	Shelters and Stations	Shelters and Stations	Shelters and Stations
Real-time Passenger Info	No	No	No	Yes	Yes
Route Number Designations	600-699	1-399	400-599	700-799	900-910

Table 3

Bus Line Identification, Route Numbering and Color Conventions
(Applicable to both Directly Operated and Purchased Transportation)

Service Type	Numbering	Primary Route Direction	Color Scheme
Local	1-99	Serves Downtown LA - counterclockwise from NW quadrant.	California Poppy
	100-149	Primarily EW operation in areas S of LACBD	California Poppy
	150-199	Primarily EW operation in areas N of LACBD	California Poppy
	200-249	Primarily NS operation in areas W of LACBD	California Poppy
	250-299	Primarily NS operation in areas E of LACBD	California Poppy
Limited	300-399	Branch of local line.	California Poppy
Express	400-499	Serves Downtown LA -- numbered counterclockwise from NW quadrant.	California Poppy / 450X Blue
	500-599	Does not serve LACBD.	California Poppy / 577X Blue
Shuttles & Circulators	601-649	Generally circuitous routing within service area.	California Poppy
	650-659	Generally scheduled service operating point-to-point.	California Poppy
	660-699	Generally serves a rail line within service area.	California Poppy
Rapid Bus	700-799	Usually operated in combination with an underlying local line.	Red
Specialized Services	901	Metro Liner: Orange Line (BRT)	Silver
	910	Metro Liner: Silver Line. El Monte Busway (ExpressLanes) / Downtown LA/Harbor Transitway (ExpressLanes)	California Poppy

Operating different size buses and using various color schemes has a direct impact on bus operations by limiting interlining opportunities preventing full optimization

of Metro's bus operations. One, Metro schedules a bus line's level of service to maintain and not exceed its policy load factor ratio based on both demand and bus size capacity. To substitute a lower capacity bus on a line scheduled for a higher capacity bus may cause overloads to occur. Two, a length of a stop zone must be able to accommodate the size of bus used on a bus line. For example, articulated bus can only be operated on a bus line in which every bus zone can accommodate its longer length. Lastly, different color schemes represent a different type of service. In keeping with Metro's branding policy, local buses are painted California Poppy, Rapid buses are painted red, some express buses are painted blue, and Metro Liner buses are painted silver. Under normal conditions, only lines that share the same color scheme are interlined with one another. Lost interline opportunities reduces the ability to maximize operational efficiencies increasing operational costs and fleet requirements.

1.4 TRANSIT PROGRAMMED SERVICES & PROJECTS

Metro currently has a number of programmed bus and rail projects. When completed and implemented these new services will provide greater mobility, better access, and faster services improving transit service for current customers and to attract new riders.

Metro Orange Line Canoga Extension (2012) – Metro Orange Line (BRT) is a 14-mile East/West route with 13 stations implemented with articulated buses in October 2005. It operates in the San Fernando Valley along its own right-of-way between North Hollywood Metro Red Line Station and Warner Center in Woodland Hills. Existing bus service along the corridor was enhanced and now operates as a feeder service to the Orange Line.

In 2012, Metro Orange Line will be extended four miles from Canoga Station to the Chatsworth Metrolink Station. This dedicated busway will offer improvements to north-south mobility in the Western San Fernando Valley by connecting activity centers along the corridor and connecting the Metro Orange Line with Metrolink. Metro Orange Line Extension features will include:

- A four-mile northern extension of the Metro Orange Line, extending from the Canoga Station to the Chatsworth Metrolink Station.
- Four new stations to be located at Sherman Way, Roscoe Blvd., Nordhoff St. and the Chatsworth Metrolink Station. New platforms to be added at Canoga Station.
- New bikeway and pedestrian path will run parallel to the dedicated busway
- Similar landscaping as the existing Metro Orange Line.
- New park and ride lot at Sherman Way Station.
- Additional parking at Chatsworth Station.

Figure 6

Orange Line Canoga Extension



Exposition Light Rail Transit (2012) – The Exposition Light Rail (EXPO) will be built in two phases; Phase 1 (A & B) and Phase 2. The first phase of the Exposition Transit Corridor to Culver City is currently being built under the management of the Exposition Construction Authority. Metro is providing the funding for the 8.5 mile Corridor project, which, when completed, will be the first to connect Downtown LA with the Westside and Culver City. Construction of Phase 1 began in the fall of 2006. Service on Phase 1 to Culver City is expected to be completed during FY 2012.

Ten new stations will be sited along the Metro-owned Exposition right-of-way from the existing Metro Rail station at 7th/Metro Center in Downtown LA to the Venice/Robertson intersection in Culver City. Although the alignment will be primarily at-grade some sections include aerial stations located at Expo/La Brea, La Cienega/Jefferson and Culver City.

Figure 7

Exposition Light Rail Project Phase 1 to Culver City



When the Exposition Light Rail Line opens to the public, it will join the Metro rail system which will offer 80 stations and over 87 miles of rail to destinations across L.A. County. Riders will be able to connect with other Metro Light Rail Lines Blue, Purple, and Red at 7th/Metro Center in Downtown LA and Metro Bus lines at every station (Table 4).

Table 4

Bus Lines Serving Exposition Light Rail Stations

Stations	Metro Bus Routes Serving the Exposition Light Rail Stations	Other Municipal Operator Bus Lines Serving the Exposition Light Rail Stations
7th Street/Metro Center	20, 51/52/352, 60, 450, 460, 487, 760, Silver Line	Antelope Valley Transit Authority 785; Commuter Express 409, 422, 423, 437, 438, 448, 534; DASH A, B, E, F; Foothill Transit 493, 497, 498, 499, 699, Silver Streak; Orange County Transportation Authority 701, 721; City of Santa Clarita Transit 799
Pico	30/330, 81, 460, Silver Line	Commuter Express 419, 422, 423, 438, 448; DASH F; Orange County Transportation Authority 701, 721
*23rd Street	37, 81, 460, 603, Silver Line	DASH F, King-East; Orange County Transportation Authority 701, 721
*Jefferson / USC	38, 81, 200	DASH F
*Expo Park / USC	550	DASH F, Southeast
*Expo / Vermont	204, 550, 754	DASH F, Southeast
*Expo / Western	42, 207, 757	
*Expo / Crenshaw	210, 710, 740	DASH Midtown
*Farmdale	38	
*Expo / La Brea	38, 212/312	
*Jefferson / La Cienega	38, 105, 217, 705	Culver CityBus 4
*Culver City	33, 220, 534, 733	Culver CityBus 1, 5, 7; Big Blue Bus 6, 12, Super 12

*New Light Rail Stations

The original Exposition Light Rail Bus/Rail Interface Plan was developed in 2010. The November 2010 draft plan (Appendix 4) assumes Expo would operate only to Crenshaw Station due primarily to construction delays affecting the new Farmdale Station and La Cienega Station. However, some of the operating assumptions and service proposals have changed as a result of the public hearing process and other circumstances. The revised plan was approved by the Board/Councils earlier this year. Discussed below are the modifications to the original plan, which involves restructuring bus lines that intersect and/or duplicate portions of the line. See Appendix 5 for operational data on bus lines impacted by Metro’s Exposition Light Rail Bus/Rail Interface Plan.

Bus Line Changes (Revised Plan)

Line 30

The original proposal was modified. The revised plan cancels Rapid Line 730 and replaces it with new Limited Line 330, which will replace Line 305 trips along San Vicente Blvd. to West Hollywood. The 305 line will be canceled as originally proposed.

Line 102

The original proposal to cancel the entire route was modified. The approved plan eliminates the existing route between the Baldwin Hills Area and Jefferson Station. The remaining route east of Jefferson Station is to be replaced partially by the extension of Line 200.

Line 217

The original proposal for this line is unchanged, however, the original implementation date was moved up and is now included in Phase 1-A.

Line 439

The original proposal for this line is unchanged, however, the original implementation date was moved up and is now included in Phase 1-A.

Line 550

The original proposal was modified. All northbound trips were proposed to end at the Artesia Transitway. However, due to public input peak trips were approved to operate as far north as Exposition Park on weekdays only. At other times, all trips will operate only between the Artesia Transit Center and San Pedro.

Phase 1-B to Culver City Station (2012)

The final station to open under Phase1 is Culver City Station.

Line 220

No changes to route.

Line 534

The original proposal has been modified. Service will serve the Culver City Station but will continue to terminate at the Washington/Fairfax Transit Hub.

Phase 2 to Santa Monica (2015)

A Bus/Rail Interface Plan for Phase 2 has not been developed yet.

Metro ExpressLanes - The US Department of Transportation awarded a \$210 million grant to Los Angeles County to implement a Congestion Pricing demonstration project. This is a pilot, one-year demonstration program overseen by Metro, Caltrans and several other mobility partners that have joined forces to develop a package of solutions to improve traffic flow and provide enhanced travel options on the I-10 and I-110 Freeways in Los Angeles County.

The solution package includes the introduction of congestion pricing by converting High Occupancy Vehicle (HOV) lanes to High Occupancy Toll (HOT) lanes, the improvement of transit service and other alternatives to driving, the updating of transit facilities, and the implementation of a more effective parking management system in downtown Los Angeles.

Metro ExpressLanes features include:

- Conversion of the I-10 El Monte Busway HOV lanes (I-605 to Alameda St.) to HOT lanes
- Conversion of the I-110 Harbor Transitway HOV lanes (Artesia Transit Center to Adams Blvd.) to HOT lanes
- Enhanced transit services such as Metro's New Silver bus that provides service from the Artesia Transit Center through Downtown Los Angeles to El Monte Station via the I-110 Harbor Transitway and I-10 Busway.
- El Monte Station Expansion
- New Transit Station at Patsaouras Plaza
- Harbor Transitway Park & Ride Upgrades
- Metrolink Pomona Station Expansion
- Transit Signal Priority Expanded in Downtown LA
- 100 New Metro Vanpools
- New expansion bicycle lockers at the Artesia Transit Center & bicycle station at El Monte Station
- Express Park
- New Bus Maintenance Facility in Downtown LA
- Budget - \$290 million

The project is currently under construction and will be implemented into two phases:

- Phase I (I-110 Transitway) is projected to be implemented in October 2012.
- Phase II (I-10 Busway) is projected to be implemented in January 2013.

Wilshire Bus Rapid Transit Project (2013) - Wilshire Blvd. is the heaviest traveled bus corridor in Los Angeles County with about 80,000 boardings on the average weekday. About 24,000 people currently are traveling in 20,000 cars on Wilshire during the combined peak periods and 29,000 people are riding Metro buses. With the project, the number of Metro passengers in the corridor during peak times could rise to 33,000 to 35,000.

The Wilshire BRT Project is intended to improve the passenger travel times, service reliability, and ridership of the existing bus service along Wilshire Boulevard. Once implemented, passenger travel times are expected to improve by an average of 24 percent within the affected segments of the corridor. Based on the travel time improvements and associated ridership increases experienced with the Metro Rapid Program to-date, transit ridership along the Wilshire corridor is anticipated to grow significantly as a result of the proposed project.

Figure 8

Wilshire Bus Rapid Transit Project

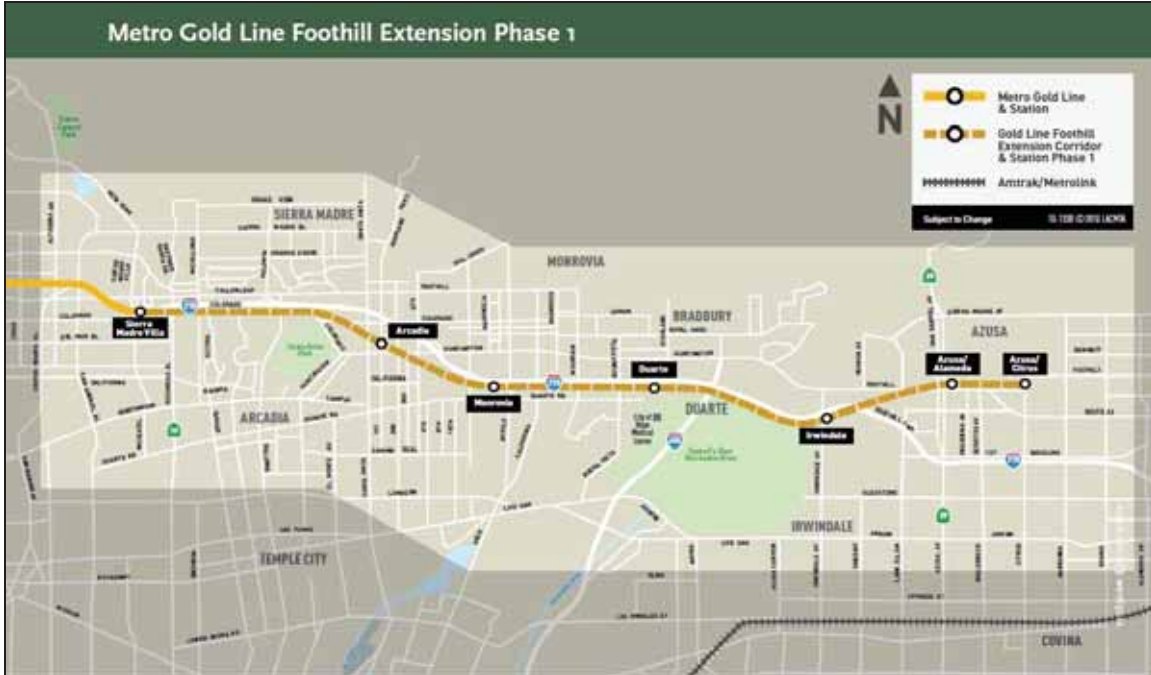


A majority of the project falls within the mid-western area of the City of Los Angeles, and includes 9.7 miles of peak period curbside bus lanes. A small portion of the project, between Veteran Avenue and Federal Avenue (approximately 0.8 miles), near the Veterans Administration facilities, is within Los Angeles County jurisdiction. A number of general improvements are required as part of the proposed project, including:

- Restriping of traffic lanes, as necessary;
- Conversion of existing curb lanes to peak period bus lanes in each direction;
- Upgrade of the existing transit signal priority system;
- Selective street widening;
- Curb lane reconstruction/resurfacing in select areas; and
- Installation of traffic/transit signage and pavement markings, as necessary.

Metro Gold Line Foothill Extension (2014) - The Metro Gold Line Foothill Extension Phase I is an 11.5-mile extension of the Gold Line traveling east from Pasadena to Azusa adding six stations in the cities of Arcadia, Monrovia, Duarte, Irwindale, and Azusa. The city of Azusa will have two stations – one at Alameda Avenue, in downtown; and one at Citrus Avenue, near Citrus College and Azusa Pacific University (the Pasadena to Azusa terminus). Construction of Phase 1 began in June 2010.

Figure 9



The new Metro Rail extension will offer an alternative transportation. Riders will be able to make easy connections with Metro and municipal bus lines, other Metro Rail lines, Metrolink commuter rail lines and other regional transportation services.

Metro staff met the Metro Gold Line Foothill Extension Construction Authority on May 4, 2011, to discuss an initial bus/rail interface plan. Metro bus services will interface and serve the following three stations:

Figure 10

Gold Line Arcadia Station: Lines 79 & 487



Figure 11

Gold Line Monrovia Station: Lines 264 & 270

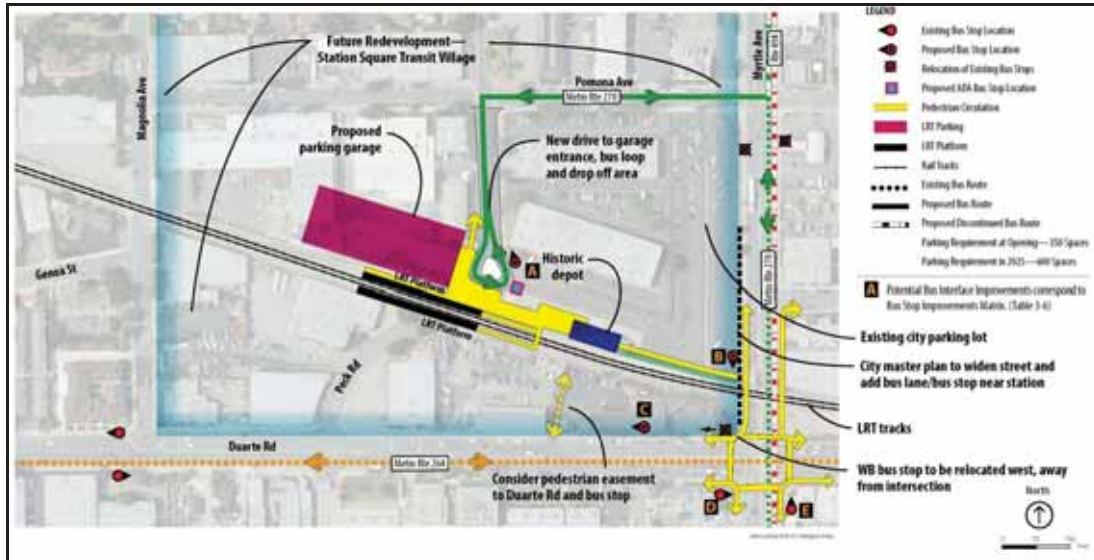
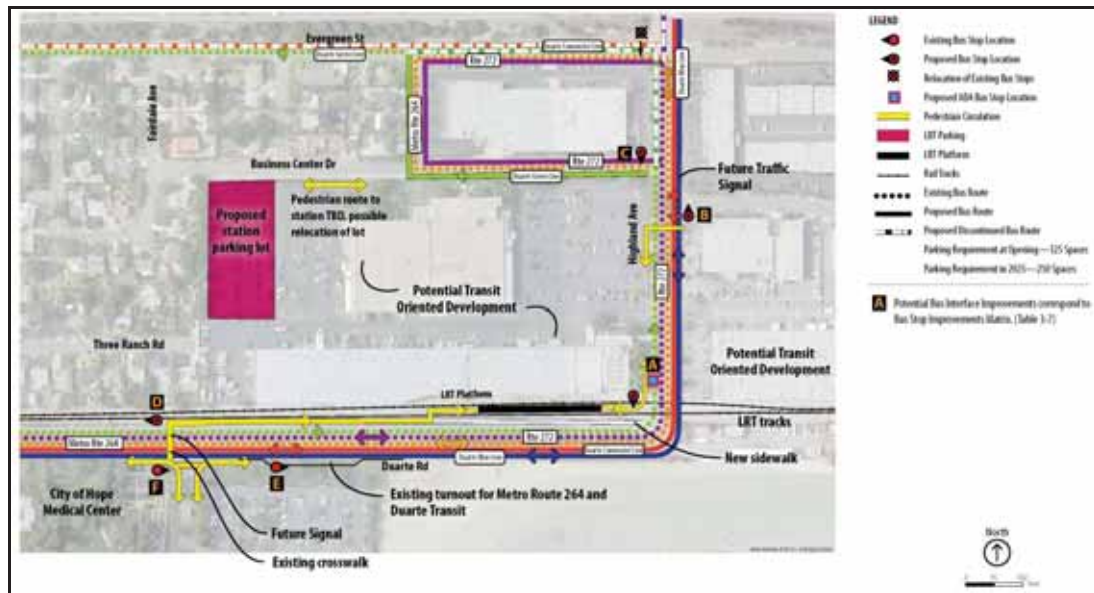


Figure 12

Gold Line Duarte Station: Line 264



The details of the initial bus/rail interface plan are discussed in a letter to the Metro Gold Line Foothill Extension Construction Authority in Appendix 6.

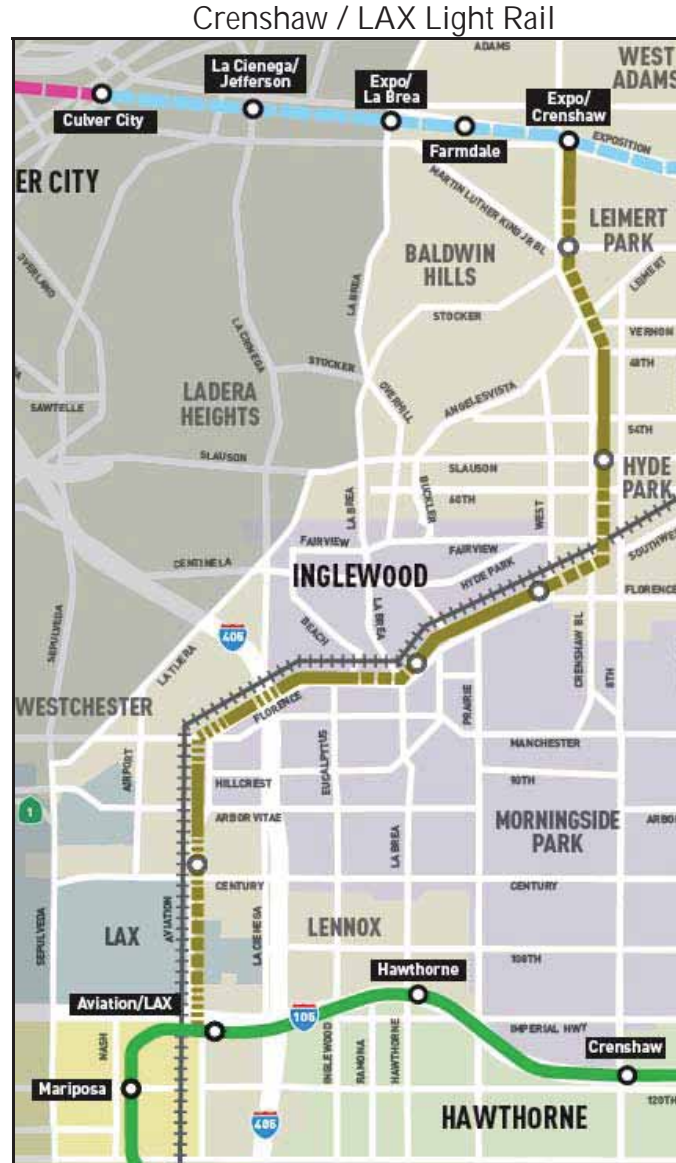
A planned second phase will continue from East Azusa over 12 miles with stops in the cities of Glendora, San Dimas, La Verne, Pomona, Claremont and Montclair. Funding is currently being sought for the second phase. To date there is no funding for the second phase extension.

Crenshaw / LAX Light Rail (2018) – The Crenshaw/LAX light rail is 8.5 miles and travels along Crenshaw Blvd. and the Harbor Subdivision right-of-way connecting both the Green Line and the Expo Light rail line. This line will operate at-grade and grade-separated along portions of its route. While the northern terminus will be at the Exposition Light Rail Line there will be no physical connections between the two rail lines. The southern end of the project will provide a direct rail connection to the Metro Green Line. Its purpose is to improve access and regional mobility linking the Green Line and Expo Line and major connections with the Los Angeles International Airport (LAX) as well as the countywide bus network.

New stations include:

- Exposition/Crenshaw
- Crenshaw/Martin Luther King Jr.
- Crenshaw/Vernon (optional)
- Crenshaw/Slauson
- Florence/West
- Florence/La Brea
- Aviation/Manchester (optional)
- Aviation/Century

Figure 13

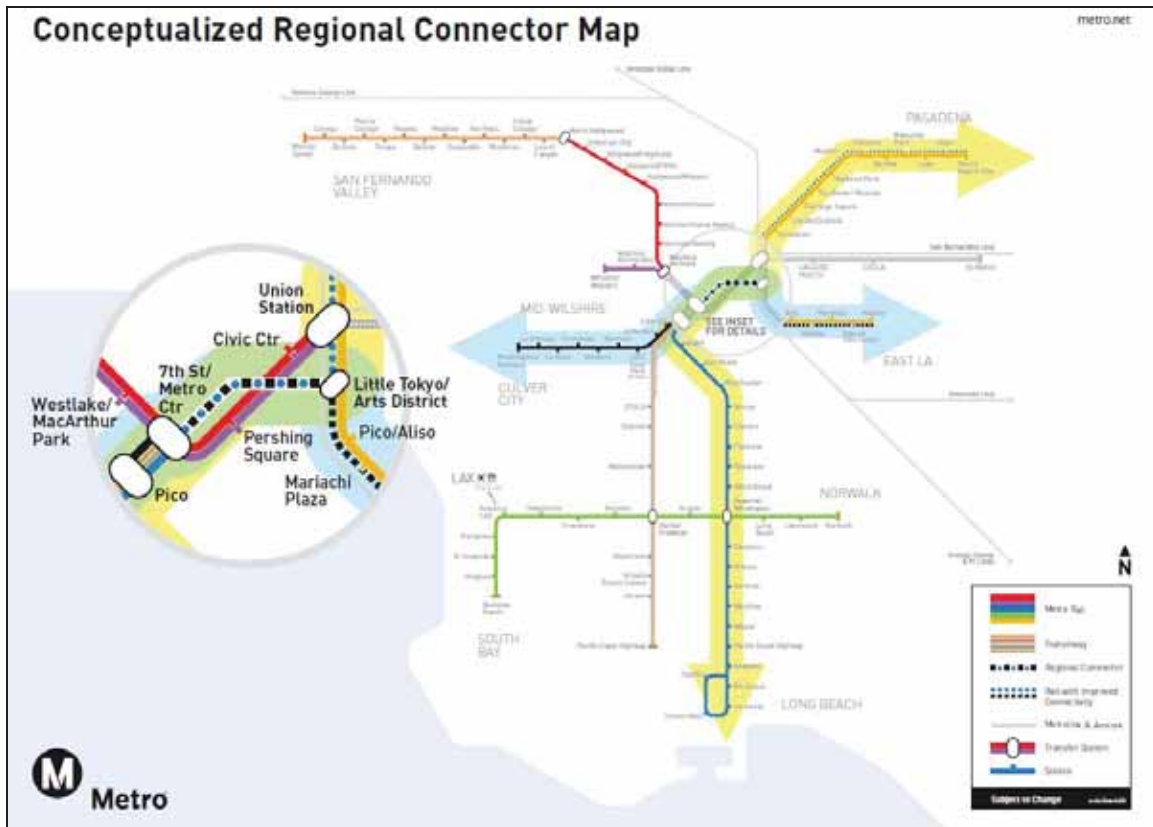


Regional Connector (2019) - The Regional Connector is a 1.7 mile light rail line that will connect the 7th/Flower Blue Line station to the Little Tokyo / Arts Distric Station. The Regional Connector will connect the Metro Gold Line, Blue Line and Expo Lines enabling passengers to travel from Azusa to Long Beach (north/south LRT) and from East Los Angeles to Santa Monica (east/west LRT) as a "one seat ride". By providing continuous through service between these lines, the Regional Connector will improve access to both local and regional destinations and greatly improve the connectivity of the transportation network for the region. It will:

- Provide access to 90,000 passengers daily, including approximately 17,000 new transit riders.

- Minimize the need for transfers and reduce one-way light rail trip times across the County by 10 - 20 minutes or more.
- Improve 11 intersections, including at 1st/Alameda Sts. which will improve the performance and reduce congestion at these intersections.
- Provide 3 new stations and access to downtown attractions as well as regional destinations, and
- Reduce the region's congestion and improve air quality.

Figure 14



There are no plans to develop a bus/rail interface plan since the regional connector is located in the downtown region where a concentrated number of bus routes operate today.

Westside Subway Extension – Metro is one step closer to extending the Purple Line to the Westside. On October 28, 2010 the Metro Board of Directors approved the Draft Environmental Impact Statement/Environmental Impact Report (Draft EIS/EIR) and selected the Locally Preferred Alternative (LPA) for the Westside Subway Extension. Metro has plans to extend its Purple Line 9-miles west of Downtown Los Angeles to Westwood. The construction phase is scheduled to begin in 2013. When built, it will provide a high-capacity, high-speed, dependable alternative for riders who currently use Metro's Local Line 20 and Metro's Metro Rapid Line 720 to travel along the Wilshire Corridor. This extension will make key destination stops such as Miracle Mile, Beverly Hills, Century City, and Westwood/VA near the UCLA campus. Over

300,000 people travel into the Westside every day for work from areas throughout the County.

The project could be implemented in phases and includes seven new stations at the following locations:

- Wilshire/La Brea
- Wilshire/Fairfax
- Wilshire/La Cienega (2022)
- Wilshire/Rodeo
- Century City (2022-2026)
- Westwood/VA (2036)
- Westwood/VA Campus

There are two alignment options between the Wilshire/Rodeo and Century City stations still under study.

Figure 15



The project is now undergoing final environmental review through the preparation of a Final Environmental Impact Statement/Final Environmental Impact Report (Final EIS/EIR). It will connect the Westside to the region's growing rail transit network and improve mobility for everyone who lives, works and plays throughout Los Angeles County.

1.5 METRO TAP PROGRAM

In April 2008, Metro introduced a new Transit Access Pass (TAP), which is a part of the Universal Fare System (UFS). UFS is a regional effort to integrate transit fares.

The project involves the installation of new fare technology on the regional bus and rail system. This technology includes new fare boxes and ticket vending machines (TVMs), as well as the use of smart cards.

The fare medium is a wallet-sized Smart Card (TAP) embedded with a computer chip, which can be programmed to store cash for use on public transit or other goods and services through partnerships with entities near bus and rail stations (e.g., schools, parking lots, retailers). Some of the advantages of this technology are as follows:

- Enables single card access to all LA County participants.
- Grants regional transfers automatically.
- Provides 24-hour regional customer service.
- Incorporates convenient features like balance protection and auto load.
- Harnesses data for countywide service planning, marketing and accounting.

The UFS electronic technology will eliminate the need for cash, passes and tokens on Metro buses, participating Municipal buses and Metro Rail. By simplifying the fare collection process the goal is reduce dwell time by boarding passengers more quickly, which will result in faster and more efficient service.

1.6 ADVANCED TRANSPORTATION MANAGEMENT SYSTEM (ATMS)

Installed on Metro's entire bus fleet is the Advanced Transportation Management System (ATMS). Known in the industry as "*Smart Bus*" technology, ATMS is a high-tech system composed of hardware and software communication and fleet management tools. The components provide the following functions:

- Voice and Data Radio System enables bus operators to communicate much more quickly with dispatchers and receive faster roadside assistance by having the option of using a voice or data radio. The latter tool includes a driver control module with numerical keys representing numerous categories of emergencies.
- Automatic Vehicle Locator enables dispatchers and law enforcement officials to be guided to the exact location of a bus in distress with the aid of global positioning satellites. Locations are displayed on dispatch center monitors.
- Automatic Passenger Counter provides transit planners the ability to make immediate short- and long-term service adjustments by analyzing information about passengers loads and ridership patterns recorded by on board infrared beam sensors that is relayed to an on board processor and then downloaded at day's end.
- Video Surveillance System allows bus operators to see activity on the exterior of the bus by looking at an on board monitor which shows live images

transmitted by outside cameras. Also included are the interior cameras that record operator and passenger behavior. A hard drive stores 72 hours of images, which are later downloaded on a central processor.

- Computer Aided Dispatch enables immediate priority response to any type of emergency on board a Metro bus, streamlines data collection, and updates database.
- Voice Annunciation System using global positioning satellites, activates bilingual computerized voices that greet customers, announces all stops, and makes safety messages. In addition, this system is fully ADA-compliant, using both audio (public address system) and visual (electronic message sign) announcements.

ATMS enables Metro to improve its transit services, increase efficiencies, reduce operating costs, and enhance safety by providing a more comprehensive, accurate, and detailed data for routine analysis.

2.0 VEHICLE PROCUREMENT

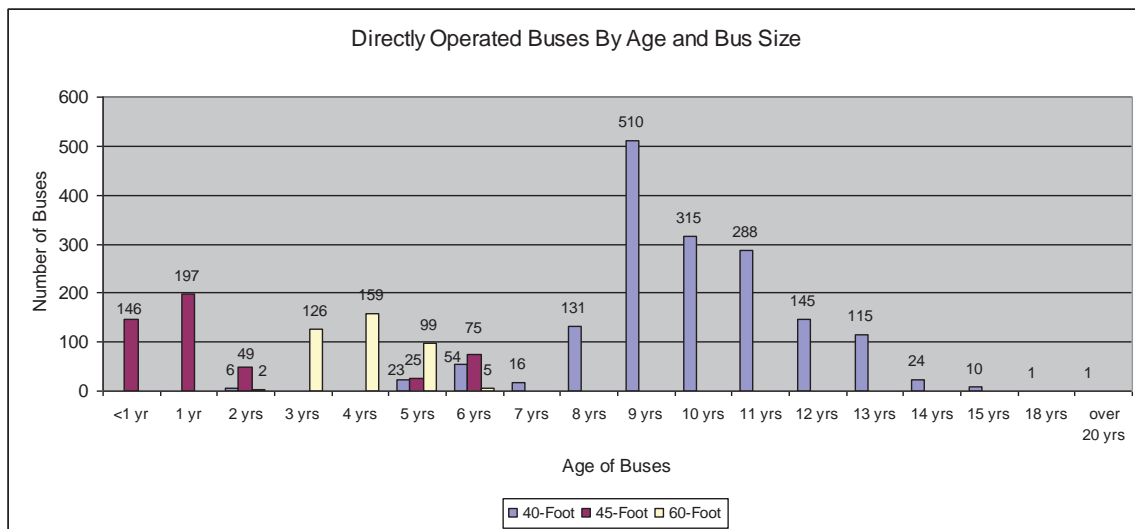
The Federal Transit Administration replacement guideline is that buses are retirement eligible at 12-years/500,000 miles. Procurement of buses by type and size is dependent upon the direction from Metro’s Board of Directors, California Air Resources Board (CARB), South Coast Air Quality Management District (SCAQMD), and bus service requirements. Metro’s Vehicle Technology Department objective is to develop a bus procurement plan that takes into account alternative fuel requirements, fleet replacement cycle, rail expansion, and bus procurement policy.

General Fleet Statistics

Metro operates three different size buses; 40-foot bus (40 seats), 45-foot CNG Compo bus (46 seats), and 60-foot CNG articulated bus (57 seats). Metro operates four color schemes; California poppy, red, blue, and silver. Each color scheme differentiates service types as discussed in Section 1.1. In 2004, Metro began deploying higher capacity buses. These higher capacity buses allowed Metro to maintain peak seats and provide the same level of service with fewer resources.

As of June 2011 the Metro’s average bus fleet age is 7.2 years. The projected average of Metro’s bus fleet is expected to vary between 5 and 7 years throughout the life of this plan.

Figure 16



Source: Metro’s Fleet Management & Support Services - as of June 2011

According to Metro’s June 2011 4-12 Semi-Annual Report Metro owns 2,585 buses (Table 5). Metro maintains 2,437 buses and its contract operators maintain 148 buses. Currently Metro operates 492 45-foot CNG Compo buses and 391 were 60-foot CNG articulated buses. The rest of the fleet consists of 40-foot buses.

Table 5

Bus Fleet Summary
Effective June 2011

*Directly Operated	Alt. Fuel	Diesel	Total
Total Scheduled Peak Service	1,814	0	1,814
Spares - Peak Scheduled	321	0	321
Total Division Assignments	2,135	0	2,135
 Contracted & leased Services			
Total Scheduled Peak Service	68	55	123
Spares - Peak Scheduled	14	11	25
Total Contracted Assignments	82	66	148
 Total Active Fleet Assigned			
Total Scheduled Peak Service	1,882	55	1,937
Spares - Peak Scheduled	335	11	346
Total Active Fleet Assignments	2,217	66	2,383
 Inactive Fleet			
Pending Evaluation For Sale	147	6	153
Training Buses	0	0	0
Not Yet Assigned	81	0	81
Approved For Sale (none)	55	13	68
Total Inactive	283	19	302
Total Fleet	2,500	85	2,585

Source: June 2011 Semi-Annual 4-12 Report

Notes:

1. Six Directly Operated 42-foot Hybrid Buses are not reflected in the 4-12 Report. These buses are demonstration buses used in-service.
2. Twelve Contract Operated 40-foot buses are not reflected in the 4-12 Report. These buses are used exclusively to operate Metro's Dodger Express Service from the Union Station to Dodger Stadium on game days only. This service is funded through a grant provided by the Mobile Source Review Committee (MRSC).

2.1 ALTERNATIVE FUELS

Metro has long been a leader in the deployment of state-of-the-art alternative fuel buses. Based on discussions with the public, meetings with members of the

environmental community, and discussions among Metro's Board of Directors, it was apparent that maintaining the environmental leadership role is important to the organization and the Los Angeles community as a whole. Therefore a decision was made that all future bus procurements will be alternative fuel powered.

In October 1993, the Metro Board made a decision to procure compressed natural gas buses (CNG). Large scale deployment of CNG bus service began in 1995. Metro now operates the nation's largest alternative fuel transit bus fleet. All of Metro's directly operated bus fleet is now CNG powered. Out of the 148 buses contract operated 66 are diesel buses. Metro plans to replace these diesel buses with alternative fueled buses when they are retired.

In February 2000, the California Air Resources Board (CARB) adopted several statewide regulations that require public agencies to start purchasing zero emission buses by 2010. CARB later pushed this requirement back to 2012 and again to 2015 at which time CARB may enact new ZEB requirements.

2.2 MEASURE R AND THE 30/10 INITIATIVE

Metro will continue to expand its bus and rail network across the region under Measure R and the 30/10 Initiative. In November 2008, Los Angeles County voters approved Measure R, a half-cent sales tax. Measure R went into effect on July 1, 2009. The measure is expected to generate \$40 billion for countywide transportation projects over the next 30 years.

In April 2010, Metro's Board of Directors adopted the 30/10 Initiative to use the revenue from Measure R as collateral for long-term bonds and a federal loan, which will allow Metro to build 12 major transit projects in 10 years instead of 30 years. Measure R will help fund dozens of transit projects such as:

- Rail expansion
- Increase bus to rail station connections
- Rapid, Express, and local bus improvements
- Expand community based shuttles

2.3 FUTURE CONSIDERATIONS

Major contributors to future bus procurements are higher air quality standards, changes in bus ridership, rail expansion, bus replacement cycle, and vehicle replacement policy.

Zero Emission Vehicles – Current regional air quality regulations require that 15 percent of the buses purchased will need to meet zero emission standards beginning in Fiscal Year 2015. However, as in the past, this is subject to change given its feasibility based on technological advances. Currently ZEV costs are considerably higher than CNG and hybrid buses, which will impact Metro's procurement budget.

Rail Expansion – Metro continues to expand its rail system. As the Metro Rail system expands, schedule adjustments are made to the bus system to improve access to rail stations, take advantage of new transfer facilities, and reduce bus and rail service duplication.

- Competing limited stop and express service that parallel the rail corridor will be discontinued when duplication exists.
- Bus routes that run parallel to a rail line may be diverted to a station.
- Bus routes that end within one mile of a rail station will be extended to terminate at the station.
- New rail feeder service will be considered as part of the service change process if a need is demonstrated and if funding is available as part of the service change process.

Service Change Adjustment – Metro implements bi-annual service changes. Based on line specific schedule analysis (running time and ridership levels) and operational planning decisions (bus line restructuring and bus line cancellation) service change adjustments are implemented impacting both peak vehicle requirements and revenue service hours.

Vehicle Replacement Policy - The majority of Metro’s bus fleet consists of 40-foot standard CNG buses. Current proposed policy is to replace Metro’s high-capacity buses with standard 40-foot CNG buses in an effort to standardize Metro’s bus fleet. As stated earlier, Metro currently operates 492 45-foot CNG Compo buses and 391 were 60-foot CNG Articulated buses. This plan assumes no 45-foot CNG Compo buses will be retired, but this plan does assume a total of 300 60-foot CNG Articulated buses will be retired between 2018 through 2020. In an effort to maintain peak seats this replacement plan is a seat-for-seat replacement plan. It will take approximately 428 40-foot buses to replace 300 60-foot articulated buses. The net result is an additional 128 buses will be added to the active fleet as shown in Table 6.

Table 6

Articulate Bus Replacement Plan					
Bus Size	Seats	FY18	FY19	FY20	Total
60-foot	57	30	170	100	300
40-foot	40	43	242	143	428
Net Increase		13	72	43	128

Should this proposed policy be adopted it will have a significant impact on operational cost as a result of increasing both peak bus requirements and revenue service hours as shown in Table 7.

Table 7

Metro's 10-Year Fleet Forecast (FY 2011 - FY 2020)											
Revenue Service Hours	*FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	
DO RSH	6,627,312	6,246,976	6,102,855	6,091,142	6,091,142	6,091,142	6,091,142	6,091,142	6,092,075	6,279,069	
PT RSH	494,756	449,249	451,605	451,605	451,605	451,605	451,605	451,605	451,605	451,605	
Orange Line RSH	98,614	95,386	106,886	106,886	106,886	106,886	106,886	106,886	106,886	106,886	
Total RSH	7,220,682	6,792,111	6,660,346	6,649,633	6,649,633	6,649,633	6,649,633	6,649,633	6,617,566	6,837,560	
RSH Adjustments											
Dec 2010 DO Svc Change	(112,592)										
Dec 2010 PT Svc Change	(46,251)										
Dec 2010 Orange Line Change	(5)										
Jun 2011 DO Svc Change	(127,944)										
Jun 2011 PT Svc Change	(80,257)										
Jun 2011 Orange Line Change	(1,222)										
Exposition Light Rail (Phase 1)(Dec 2011)	(72,527)										
Other Dec 2011 Service Change	(60,738)										
Orange Line Carriage Extension(Jan 2012)	11,500		(10,713)		0						
Wilshire BRT											
Gold Line Foothill Extension											
Exposition Light Rail (Phase 2)											
Crenshaw/LAX Light Rail											
Regional Rail Connector											
60-foot Bus Replacement											
Total RSH Adjustment	(438,572)	(121,265)	(10,713)	0	0	0	0	(90,000)	219,994	131,423	
IN-SERVICE BUSES	*FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	
40' (40 seats)	1,438	1,111	1,034	1,034	1,034	1,034	1,034	1,034	1,070	1,272	
ZEV 40' (40 seats)											
45' (46 seats)	294	381	382	382	382	382	382	382	382	382	
60' (57 seats)	323	322	319	319	319	319	319	319	294	152	
Total DO Operated Buses	2,055	1,814	1,738	1,735	1,735	1,735	1,735	1,735	1,746	1,806	
PT Operated Buses	146	123	119	119	119	119	119	119	119	119	
Total Buses	2,201	1,937	1,857	1,854	1,854	1,854	1,854	1,854	1,865	1,925	
SPARES											
DO Spares (17.7%)	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	
42' Hybrid Demonstration Buses	257	197	184	184	184	184	184	184	190	226	
45' Hybrid Demonstration Buses	6	6	6	6	6	6	6	6	6	6	
45'	52	67	67	67	67	67	67	67	67	67	
60'	57	57	57	56	56	56	56	56	52	27	
Total DO Spares	372	327	314	313	313	313	313	313	315	326	
Contract Spares (20%)	26	25	24	24	24	24	24	24	24	24	
**Contract Operated Dodge Express	11	12	12	12	12	12	12	12	12	12	
Total Spares	409	364	350	349	349	349	349	349	351	362	
Total Active Fleet	2,610	2,301	2,207	2,203	2,203	2,203	2,203	2,203	2,216	2,287	
SCHEDULED PEAK SEATS											
	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	
60'	94,288	84,391	81,225	81,054	81,054	81,054	81,054	81,054	81,069	81,055	
BUS PROCUREMENT SCHEDULE											
	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	
60'											
45'	91	200	250	250	250	100	100	130	240	130	
40' CNG		10	10	10	+	+	+	+	+	+	
ZEB/SLEB 40'											
Contract Service 12'			15	75							
Total Planned Procurement	91	210	275	335	250	100	100	130	240	130	
Costs (\$Millions)	114	310	195	200	107	104	107	107	107	107	
Funded (\$Millions)	114	310	105	110	107	104	107	107	107	107	
Shortfall (\$Millions)											
Revised Funding Estimate (FY12-18)	60	112	144	172	118	49	50	66	771	771	
Variance	54	(6)	51	28	(11)	55	57	89	771	771	
AVERAGE AGE OF ACTIVE FLEET	7.6	7.2	6.9	6.4	5.6	4.9	5.3	5.8	6.1	6.0	

*As of June 2010 Service Change
 **These buses are in operation on game days and funded through a grant provided by the Mobile Source Review Committee (MSRC).

3.0 FLEET MANAGEMENT & SUPPORT SERVICES

The Fleet Management and Support Services Department develops, revises, and implements a dynamic fleet deployment plan. In addition, this group is responsible for field mechanical assistance and major component overhauls.

Each service change Fleet Management and Support Services Department prepares an Equipment Assignment report known internally as the 4-12 Report. It is based on the guidelines set forth in the Equipment Update Report; a semi-annual report distributed by the Scheduling Department defining bus line and bus type requirements at each operating division. This report provides clear instructions to the operating divisions on the buses moving into and/or out from their respective divisions.

3.1 FLEET ASSIGNMENT

Fleet Management directs bus moves between divisions, assigns buses to the appropriate divisions, repairs divisions' buses which have major mechanical or cosmetic defects, provides divisions with backfill buses, and determines which buses to decommission.

Given the challenge that Metro operates different sized buses painted in a variety of color schemes and assigned by a specific service type, it is a complex task to correctly assign buses. Moreover, Fleet Management and Support Services Department must plan for the necessary bus relocations to fully utilize Metro's limited resources and minimize operating costs. In this effort, Fleet Management and Support Services Department attempts to limit the number of bus types to two bus types per division. This strategy minimizes the number of required parts a bus division maintenance unit must maintain in its inventory.

The Fleet Management and Support Services Department is also responsible for placement of the new buses. When a new bus is delivered by the vendor to the Metro Support Services Center (MSSC), the Vehicle Technology Department inspects the vehicle for potential defects and determines if they are going to accept or reject the equipment. Upon acceptance of the new bus, the Quality Assurance Team prepares the buses for duty.

Upon acceptance of the bus, the Fleet Management and Support Services Department enters the new equipment information into the Maintenance and Material Management System (M3) and Fleet Watch. In consideration of the bus requirement at each division, they determine the best home for the new bus. There may be times a new bus will not be released to service until the next Service Change. These extra buses will be stored, until needed, at the surplus lot at Division 4 located in Downey.

When a new bus or reconditioned bus is assigned to a division, the division must use it to replace an old bus. The Fleet Management and Support Services Department

will direct the divisions to move the old bus to Metro's non-operating division (Division 12). These buses will either be used during special projects, emergencies or later be sold in public auctions.

Contingency Rail Plan - In the event of an emergency (i.e. unexpected power outage, accident, etc.) or scheduled single tracking (planned rail repairs, upgrades, etc.) Rail Operations Control will coordinate with Bus Operations Control or Scheduling to implement a bus bridge and turn-backs. Depending on the location of the emergency the appropriate bus division will be contacted to supply buses from their spares and extra-board or Voluntary Call Back, (VCB) bus operators to operate the bus bridge. Both Rail Transit Operations Supervisors and Bus Transit Operations Supervisors will be dispatched to coordinate and direct on-street operations. Temporary schedules will be developed for events known ahead of time (i.e. single tracking due to maintenance, special events, etc.).

3.2 ROAD CALLS

Fleet Management and Support Services provide mechanical roadside assistance to buses en-route and at layover zones. The group responsible for this task is known as Field Equipment Technicians (FET). The FET group responds to as many as 2,000 road calls per month. They make field repairs to buses when feasible to prevent response by Service Sector Division Mechanic.

Road calls are defined as a bus mechanical failure during revenue service which requires removing the bus from service. Road calls are tracked and reported annually to the Federal Transit Administration (FTA).

Metro performs a more detailed internal road call measurement. Metro's measure of road calls is the mean miles between mechanical failures (MMBMF). Certain road calls are excluded from the count to improve the value of the data. Excluded instances are the following:

- Authorized bus change.
- Dirty interior or exterior.
- Passenger caused.
- When another road call is requested for the same problem on the same bus within two hours. For example, a bus stalling @ 14:00 and a bus stalling @ 15:00 would be counted as one road call. However, a bus stalling @ 14:00 and transmission not shifting @ 15:00 would be counted as two road calls.
- No-response road calls. This is a new category. If a bus has a broken fare box, head sign, bike rack, or camera it is not taken out of service when reported. These types of failures will not put a bus out of service; however the BOCC

generates an incident so the problem can be addresses once the bus completes its daily assignment.

Metro measures its performance against its stated system goal of 3,500 Mean Miles between Mechanical Failure. Over the last three fiscal years, systemwide Metro has achieved an average of 3,260 MMBMF. Table 8 shows MMBMF performance by Bus Division. Additional details are provided in Appendix 7.

Table 8

Mean Miles between Mechanical Failures (MMBMF)

<u>Fiscal Year</u>	<u>Hub Miles</u>	<u>Failures</u>	<u>MMBMF</u>
2009	101,593,861	32,384	3,137
2010	100,255,637	31,115	3,222
2011*	78,261,236	22,438	3,488

*Partial data to date

3.3 MID-LIFE & RE-POWER BUS PROGRAMS

Metro can retire a bus that has been running for a minimum of 12 years or 500,000 miles. Prior to retirement eligibility Metro has two different type of bus programs to maintain optimal vehicle performance over the course of its service life. The mid-life and re-power programs are managed and performed by the Fleet Management and Support Services Department.

1. Mid-Life - Midlife is a generic term that references the approximate middle of the 12 year / 500,000 mile minimum life expectancy of the bus. Fleet Management and Support Services evaluates the bus series over all fleet condition and plans on a course of action to repair, replace, upgrade, reconfigure, or remove those components that wear out and would require heavy maintenance not normally performed at a Division. This includes a new paint job, new or re-built front and rear suspension assembly, power plant (or now a re-power), cosmetic repairs such as lights, new dash panels, etc. Approximately 400 buses are scheduled for mid-life.
 - Current 40-foot buses average mid-life cost is \$154,000
 - 45-foot Bus is expected to have less structural and component work during mid-life.
 - 60-foot articulated mid-life is assumed to be 33% more expensive than 40-foot buses.

2. Re-Power - When circumstances dictate, a re-power is conducted. This involves removal of the existing engine and replacing it with a different manufacturer and/or type of engine. Re-powers usually require additional wiring, hard mounts, exhaust, and cooling packages. Currently Fleet

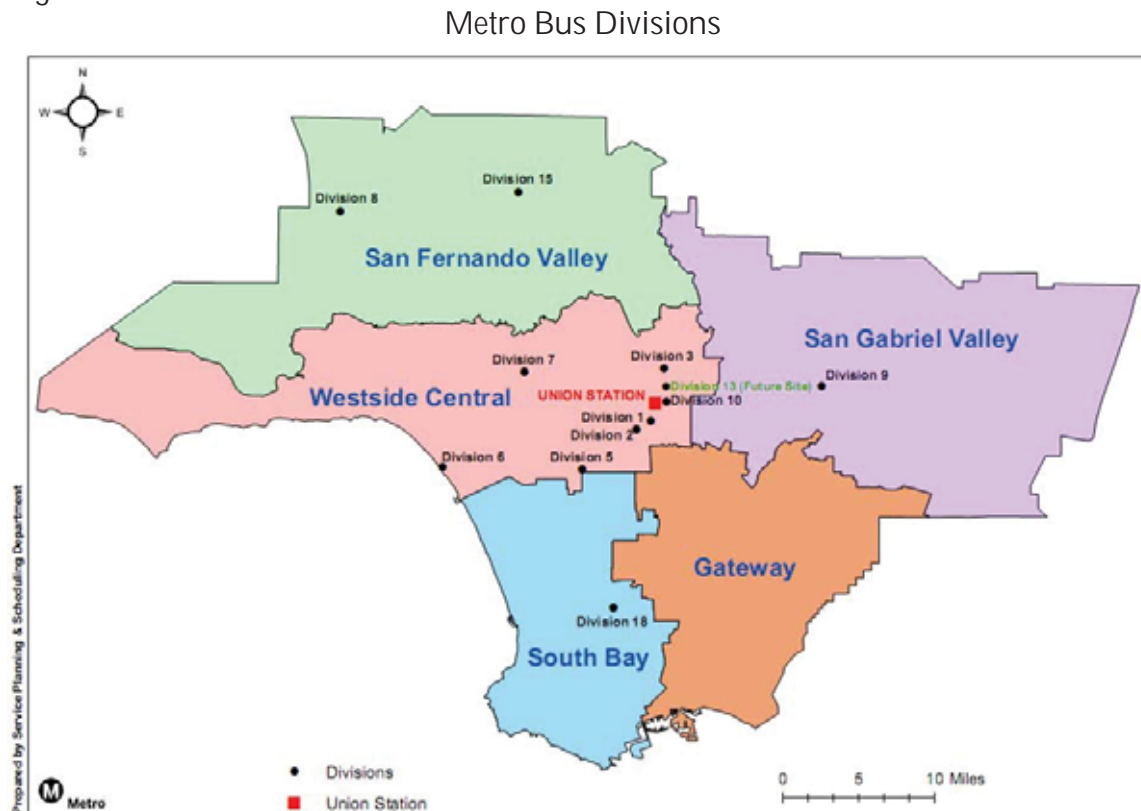
Management and Support Services are removing the Detroit Diesel Series 50 engine and replacing it with a Cummins Engine Company ISL engine with the same power and torque rating. This re-power was commissioned to reduce emissions and eliminate an engine that has limited parts availability.

4.0 DIVISION MAINTENANCE

Metro owns and operates 11 bus-operating divisions. Each division's maintenance unit performs routine maintenance, preventive maintenance, running repairs, and minor bus overhauls. All divisions are staffed 24 hours a day seven days a week to ensure buses meet specifications for in-service operation, except for Division 6. Division 6 is closed on Saturdays, Sundays and major holidays. Figure 17 displays how Metro's division is distributed throughout the County.

Each bus division has a maintenance unit headed by a Maintenance Manager who reports to the Service Sector General Manager. Collectively all maintenance units are responsible for the upkeep of nearly \$6 billion dollars in facilities, systems, and other equipment used in transit service operation.

Figure 17



4.1 MAINTAINANCE OPERATIONAL GOALS AND GUIDANCE

Metro has set a number of specific goals for maintenance staff. These goals include maintaining an acceptable level of vehicle life and serviceability, minimizing number road failures, and minimizing cost of the maintenance function through training and improved productivity. Each year Metro staff prepares budgets and Management Action Plans (MAPs) reflecting, in a measurable way, staff's commitment to performance objectives. The Metro Maintenance Department objectives are as follows:

1. To operate a safe, clean, convenient and efficient mass transportation system for the general public and visitors to the Los Angeles Metropolitan region.
2. To develop and maintain an integrated bus and rail system incorporating the strengths of other service providers into the fabric of the Metro system.
3. To improve the productivity of the transportation, maintenance and management sectors of Metro.
4. To protect and enhance the public's investment in the public transportation system.

In order to provide more specific guidance, the maintenance organization has included the following objectives in its MAPs:

1. Provide a minimum 100% on-time pullout rate for buses.
2. Increase the MMBMF to 3,500 miles.
3. Maintain fleet size in accordance with the Board-Adopted Fleet Mix Policy.
4. Ensure that all securement devices, doors, radios, and other disabled service items are in good working order at all times.
5. Operate and maintain Metro owned CNG facilities and meet the requirements of the CNG development program.

4.2 REVENUE SERVICE VEHICLE MAINTENANCE PLAN

The Maintenance Department is guided by a Revenue Service Vehicle Maintenance Plan, which was developed to preserve and maintain the agency's capital assets (rolling stock), ensure that all revenue and non-revenue vehicles are operable in a safe and effective condition, and establish reasonable standards and practices necessary to meet these objectives. The Revenue Service Vehicle Maintenance Plan was revised and updated in June 2005 and consists of the following major components.

- Maintenance Plan
- Bus Assignment (Active) and Replacement Plan
- Maintenance Department Organizational Structure
- Bus Procurement/Inspection Policy
- Maintenance Directives
- Preventive Maintenance Program (PMP) Schedule
- Technical Training Courses
- QA Inspection Program
- Bus Warranty Processing Procedures
- Injury and Illness Prevention (IIP) Program

- Personal and Protective Equipment (PPE)

The Revenue Service Vehicle Maintenance Plan is reviewed annually and periodically updated to ensure adequate documentation of current maintenance practices and procedures.

5.0 QUALITY ASSURANCE & MAINTENANCE MONITORING

The Quality Assurance and Maintenance Monitoring Group consist of Contract Administration, Environmental Compliance, Non-Revenue Equipment, Electric Technology, Stops & Zones, and CHP Compliance.

5.1 CONTRACT ADMINISTRATION

The Contract Administration Section manages numerous contracts for goods and services and provides contract project management to ensure compliance with related requirements set forth by federal, state and local agencies. Of the 20 contracts, managed the two largest are the tire lease contract, with a current annual budget of approximately \$4,000,000, and the liquid waste disposal contract amounting to \$600,000 per year.

5.2 ENVIRONMENTAL COMPLIANCE

Environmental Compliance Section ensures Metro operations comply with federal, state and local environmental laws. It also oversees the accumulation and disposal of various liquid wastes, solid wastes, and waste streams. They are responsible for hazardous material spill response, both liquid and solid, handling abandoned hazardous waste on Metro owned right-of-way, and approval of all new cleaning chemicals to be used at operating facilities.

5.3 NON-REVENUE EQUIPMENT

Non-Revenue Equipment Section manages the maintenance of non-revenue equipment. They operate from nine locations throughout the greater Los Angeles area. Managed by two Equipment Maintenance Supervisors, the Non-Revenue Section Department is responsible for the following functions:

- Maintain and service approximately 1,800 different pieces of non-revenue equipment throughout the agency,
- Maintain 25 emergency generators that support Metro’s telecom repeaters, rail substations, and main facilities,
- Perform all required smog tests,
- Perform all required smoke opacity tests on regulated vehicles,
- Maintains all rail hi-gear equipment,
- Provide non-revenue towing throughout the agency,
- Coordinate and manage sale of retired vehicles,
- Procure expansion and replacement vehicles, and
- Specs new equipment for all MTA departments.

5.4 ELECTRONIC TECHNOLOGY

Metro’s Radio/Farebox Shop provides depot level maintenance of fareboxes and ATMS units for all divisions. They install new radio systems in non-revenue vehicles

and on new buses. In addition, they tests new/warranty sub-components of the ATMS radio and processes radio and fareboxes for warranty. The Headsign Shop is responsible for maintenance, repair, and programming of headsigns.

5.5 STOPS & ZONES / METRO CLEAN

Stops and Zones/Metro Clean are entrusted with Metro's inventory of approximately 16,000 bus stops and zones throughout Los Angeles County, and portions of Orange, Ventura and San Bernardino Counties. Stops and Zones Unit expertise consists of planning, installing, and maintenance of both Metro's bus stops and rail stations related to fixtures and hardware. They also perform complaint resolution regarding existing or proposed stops or zones. The Metro Clean Section focuses on the cleaning of bus stops/zones and inactive rail right-of-way. Metro Clean employs community service workers from two sources; 1) contracting with the Los Angeles County Probation Department and 2) daily in-house operation of community service worker crews.

5.6 CHP COMPLIANCE

Quality Assurance also performs ongoing simulated CHP Motor Carrier (bus) Inspections on regulated equipment at the operating divisions, Stores Department and Facility Maintenance Department. Metro has developed more stringent criteria than the CHP for their own quarterly inspections. Each facility is inspected for vehicle condition, maintenance records, and driver log books. At the conclusion of each inspection the facility manager is briefed as to the overall condition of the fleet based on a random sample of the inspected buses.

6.0 FACILITIES OPERATIONS

Facilities Operations develop and deliver quality projects from inception to close-out on time, within scope, and budget. This group is responsible to:

- Manage grants
- Develop project scope of authorized capital projects
- Oversee facility project design
- Manage aspects of engineering and construction projects.
- Review contract documents
- Prepare change notices
- Negotiates change orders.
- Ensure operating specifications and requirements are established before making a substantial investment.

6.1 FACILITIES OVERVIEW

Facilities Operations must ensure Metro’s infrastructure continues to support fleet size, fleet type, and new technologies. Included in this responsibility are eleven bus divisions that support and operate an active fleet size of over 2,400 directly operated buses throughout the County of Los Angeles. Table 9 identifies where these bus divisions are located, their parking capacity, and their capabilities.

Table 9

Metro Bus Operating Divisions – Facility Profile

Division	Location	Year Built Transportation (T) Maintenance (M)	Design Capacity	Service Bays						Bus Lifts			Bus Fuel Capabilities
				Maint. Bldg.	Steam Clean	Tire Shop	Fueling Station	Dino Shop	Paint Shop	Maint. Bldg.	Steam Clean	Tire Shop	
1	Central Los Angeles (Soutwest)	1981 (T) 1987 (M)	245	16	1	2	3	0	0	12	1	0	CNG Diesel
2	Central Los Angeles (Southeast)	1987(T) 1930(M)	195	26	2	1	8	0	0	0	0	0	CNG Diesel
3	Cypress Park	1984(T) 1977(M)	210	18	2	1	8	1	0	12	0	0	CNG Diesel
5	South Central Los Angeles	1979(T) 1984(M)	247	18	2	2	8	1	0	10	1	0	CNG Diesel
6	Venice	1930(T/M)	79	10	1	1	2	0	0	0	0	0	Diesel Only
7	West Hollywood	1977(T/M)	248	20	2	2	8	1	0	12	0	0	CNG Diesel
8	Chatsworth	1982(T/M)	238	22	2	2	8	1	1	16	1	2	CNG Diesel
9	El Monte	1975(T/M)	235	16	2	1	8	1	0	2	0	0	CNG Diesel
10	Central Los Angeles (Northeast)	1984(T/M)	259	18	2	4	4	1		12	1	0	CNG Diesel
15	Sun Valley	1982(T/M)	262	22	2	2	8	1	1	16	1	2	CNG Diesel
18	Carson	1984(T/M)	280	18	2	2	8	0	0	9	1	0	CNG Diesel
System Total			2498	204	20	20	73	7	2	101	6	4	

In addition to the maintenance divisions, Metro has other facilities located throughout Los Angeles County.

- **Division 4:** Located in the City of Downey, this facility is currently equipped to provide non-revenue vehicle maintenance for Metro automobiles, trucks and vans. In addition, new vehicles are prepared for service at this facility. This can include the installation of radios, lights, customized racks, equipment and decals. This facility also houses the auto salvage storage area. Although the facility was formerly a bus maintenance facility, there are currently no fueling or vehicle servicing capabilities. In September 2002, the Gateway Cities Service Sector moved to Division 4.
- **Division 12:** Located in Long Beach. This division is used to store buses ready for retirement, buses to be sold, and new buses prior to their deployment. This facility is due to be decommissioned when construction at Metro Support Services Center (MSSC) is completed.
- **Location 14:** South Park Shops are located in South Los Angeles. This is a large industrial-use facility, which houses bulk storage for large or slow-moving parts and supplies, storage of salvage equipment and other materiel scheduled for disposal or sale, and flammable materiel storage. It also houses various facilities maintenance functions, such as carpentry, sign printing, and large maintenance equipment.
- **Location 29:** The Cash Counting Facility is located at Division 2. Cash and tokens collected through bus and rail revenue operations are counted at this site.
- **Location 30:** The Metro Support Services Center (MSSC) is located in the northeast portion of Downtown Los Angeles, one block from Metro headquarters building at Gateway Center. This central maintenance facility is recognized as one of the most advanced and efficient bus repair operations facilities of its kind in the world and contains the following functions:

Electronic fare box repair	Emissions testing
Alternate fuels testing	Body shop
Bus painting	Unit repair
Heavy maintenance bus support	Central Stores

The MSSC also serves as the primary site for the Transportation and Maintenance Departments' Central Instruction function. All training for new operators, mechanics, and service attendants occur at this facility, as well as refresher training classes for existing operators, mechanics, and service attendants.

- **Location 33:** San Gabriel Valley Service Sector Office is located adjacent to Division 9 in El Monte.
- **Location 34:** Vernon Yard is located south of Downtown Los Angeles in the City of Vernon. Personnel of the Rail Facilities Maintenance section primarily

occupy this facility. Additionally, the fare box and rail ticket vending machine (TVM) maintenance section is located here. Training for Class A licenses for mechanics and bus familiarization for new service attendants are conducted here.

- **Location 35:** San Fernando Valley Sector Office is located 1.2 miles northwest of Division 8 in Chatsworth.
- **Location 36:** South Bay Sector Office is located about 1 mile east of the City of Torrance at 680 Knox St., Los Angeles, CA 90248.

Metro bus operating division's design capacity is based on the standard 40-foot bus. Because Metro operates different size buses Metro uses a 40-foot equivalency factor to evaluate system wide storage capacity. For purposes of the parking evaluation, the following factors are used: a 60-foot articulated bus equates to 1.5 40-foot buses and a 45-foot bus equates to 1.125 40-foot buses. Table 11 shows Metro's distribution of its bus fleet by division. Despite service reduction in peak vehicle requirements Table 10 still shows Metro is operating at close to capacity (96%) which leaves no room for operational flexibility and strains efficient management of bus operations.

Table 10

Directly Operated Total Bus Fleet and Division Assignments
As of the June 2011 Service Change

Division	Current Storage Capacity	40'	45'	60'	Actual	Current Fleet in 40' Equivalence	Operating Storage (Under)/Overage	Operating Storage Capacity
1	245	144	26	39	209	232	-13	95%
2	195	181	0	0	181	181	-14	93%
3*	210	150	23	16	189	200	-10	95%
5	247	98	0	82	180	221	-26	89%
6	79	0	21	0	21	24	-55	30%
7	248	184	13	33	230	249	1	100%
8	238	15	133	34	182	216	-22	91%
9	235	209	28	0	237	241	6	103%
10	259	103	0	100	203	253	-6	98%
15	262	74	123	42	239	276	14	105%
18	280	147	81	36	264	293	13	105%
Total	2,498	1,305	448	382	2,135	2,386	-112	96%

*Division 3 houses 6 42-foot hybrid demonstration buses not reflected in table.

6.2 FACILITY CONSTRAINTS

Metro is currently housing buses approximately 4% under systemwide capacity. However, Divisions 9, 15, and 18 are operating over their design storage capacity as shown in Table 13. Current space constraints at these bus operating divisions result in:

- Poor circulation of buses
- Inadequate parking and building space

In addition, reduced garage capacity increases “deadhead” costs because some buses are not stored in the yard nearest the route on which they operate and despite service reductions in peak bus requirements it has not resulted in any significant dent in deadhead which is still close to 10% as represented in Table 11.

Table 11

**Directly Operated Scheduled Changes:
Ratio of Non-Revenue Hours to Total Vehicle Hours.**

Service Change	Non- Revenue Vehicle Hours	Revenue Vehicle Hours	Total Vehicle Hours	Non- Revenue Hours to total Vehicle Hours
June 2005	2,301	21,889	24,190	9.5%
December 2005	2,315	22,145	24,460	9.5%
June 2006	2,390	22,303	24,693	9.7%
December 2006	2,379	22,685	25,064	9.5%
June 2007	2,459	22,418	24,877	9.9%
December 2007	2,426	22,421	24,847	9.8%
June 2008	2,448	22,146	24,594	10.0%
December 2008	2,457	22,233	24,690	10.0%
June 2009	2,493	22,138	24,631	10.1%
December 2009	2,530	21,369	23,899	10.6%
June 2010	2,469	20,916	23,385	10.6%
December 2010	2,302	20,255	22,556	10.2%
June 2011	2,141	21,832	23,973	9.8%

Source: Metro's 4-24 Report (June 2005 through June 2011)

Metro has plans to repurpose Division 2 and expand the Central Cash Counting Facility and house the Office of Central Instruction as indicated in Table 15 and will

need to replace it with another centrally located bus division in an effort to minimize deadhead cost. This is addressed in Section 6.4

60-foot CNG Articulated Bus Support

All bus divisions have been redesigned and updated to house and support 60-foot CNG articulated buses, with the exception of Divisions 2 and 6. The current configuration of Divisions 2 and 6 do not allow for maintenance and operation of articulated buses. Key features required to support articulated buses at a division are:

- Division reconfiguration to accommodate parking and turning movements,
- Maintenance building modifications (drive through bays preferred),
- Extra bus lifts (ground hoists),
- Vacuum, fueling, and washing equipment retrofits, and
- Extension of maintenance pits where required

Division 9 currently does not operate articulated buses. All operating bus divisions can support 45-foot CNG Compo Buses. Currently Divisions 2, 5, and 10 do not operate 45-foot CNG Compo Buses. Metro’s planned new downtown division will be built to support both 45-foot CNG Compo Buses and 60-foot articulated CNG Compo Buses. Metro’s goal is to support the maintenance ratio of 15 articulated buses per articulated capable bus bay. The current average system wide ratio is 16 articulated buses per a bus bay capable of maintaining these larger buses. However, this ratio is much higher at some divisions as indicated in Table 12.

Table 12

Articulated Bus Assignments
Effective June 2011 Service Change

DIVISION	60-FOOT BUSES	60-FOOT MAINTENANCE BAYS	BUSES PER MAINTENANCE BAY
1	36	2	18
2	0	0	0
3	19	1	19
5	80	5	16
6	0	0	0
7	29	1	29
8	35	2	18
9	0	2	0
10	94	6	16
15	43	2	22
18	42	4	11
TOTAL	378	25	15

6.3 MODIFICATIONS TO EXISTING BUS DIVISIONS

A variety of Metro Bus Division rehabilitation projects have been identified and funded as part of Metro’s Capital Improvement Program. These projects are being undertaken in order to keep the bus divisions in working order. For example, in Fiscal Year 2012 Metro’s Total Capital Program (CP) budget is over \$1 billion and \$76.4 million is allocated to bus division improvements or approximately 6.71% as shown in Table 13, Overall bus division improvements are still a proportionately small percentage of the budget. Metro is in early stages of conceptual design for future facility expansion projects, which are not currently funded (Table 14).

Table 13

Metro Capital Program for Bus Division Improvements
(\$ in millions)

Element	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12
Capital Program	686	630	645	691	754	2,669	1,138
Bus Division Improvements	45.4	55.1	35.6	47.5	97.2	90.05	76.4
	6.62%	8.75%	5.52%	6.87%	12.89%	3.39%	6.71%

Table 14

Potential Bus Division Expansions

Division	Potential to Expand	Approximate New Storage Spaces	Notes	Estimate (2007 Costs)
1	No	0	Recently expanded under eminent domain action.	N/A
2	Yes	105	Currently developing site master plan scope of work to repurpose division and expand the Central Cash Counting Facility and house the Office of Central Instruction.	\$85,000,000
3	Yes	37	Requires property acquisition of community park/land exchange or construction of a parking deck over a public park at significant cost for very little expansion. Also may be politically undesirable.	\$65,000,000
5	Yes	53	Recent replacement proposal rejected. Under consideration for accepting gasoline/electric hybrids and also for closure.	\$10,000,000
6	No	0	Under consideration reduced service and operate as a Division 7 satellite facility for Westside Service.	N/A
7	No	0	Currently in a joint-development agreement.	N/A
8	No	0	Rearrangement of yard could potentially result in additional spaces.	N/A
9	No	0	Recently reconstructed with new building with planned joint-development; in environmental process for parking areas.	N/A
10	Yes	100	Expansion considered up to 100 additional buses over Metro's operating principle. Not optimal and expansion would require eminent domain action of an adjacent property who is an unwilling seller.	\$80,000,000
15	No	0	Currently houses buses retired from fleet.	N/A
18	Yes	20	Expansion would be upward with a two story parking structure that could provide room for an additional 40 buses, if needed.	\$10,000,000

Source: Metro's Facility Operations

Note: Metro is proposing to replace the Maintenance Building at Division 9 at a cost of \$25M for the current State of Good Repair grant and proposing to build a new Patsaouras Plaza Busway Station for \$15M to support bus lines that will operate on the I-10 Freeway HOT Lanes. Currently these proposed projects are unfunded and will be part of a grant submittal.

6.4 NEW BUS DIVISION

Metro’s system wide 40-foot bus designed parking capacity is 2,498. On June 2011, Metro stored 1,305 40-foot buses, 6 42’ buses, 448 45-foot buses, and 3820 60-foot buses totaling 2,135 actual buses. Using a 40-foot bus equivalence factor this equates to 2,386 40-foot buses, which is approximates 4% under Metro’s current 40-foot bus parking design capacity. There is a proposed plan to repurpose Division 2 (Table 15) and it will be imperative that Metro build a new centrally located bus division in Downtown Los Angeles in order to maintain current parking capacity and continue to minimize deadhead costs.

According to Facilities Operations proposed Division 13 is fully funded with a project budget of \$95 million as shown in Table 15. The proposed location is owned by Metro and the project is already in the environmental process. Division 13 is proposed to be constructed on existing LACMTA properties (Terminal 31 and the Metro Support and Services Center). The project’s site has an area of 327,592 square feet (7.5 acres) and is planned to accommodate 200 40-foot CNG buses. Figure 18 shows the proposed layout of Division 13 and Figure 19 is a view of the proposed Bus Operations Administrative Building.

Table 15

Division 13 Project Costs						
Division 13	Previous Years	FY 11	FY 12	FY 13	FY 14	Total
Forecast	\$9.3M	\$3.8M	\$36M	\$36.9M	\$9M	\$95M

Division 13 will comprise the following three major facilities:

- Chassis Wash and Non-revenue Vehicle Fueling and Washing Facility: a 2,800 square-foot facility to clean the underside of buses and fuel non-revenue vehicles.
- Bus Operations Administration Building: a 16,300 square-foot two-story office building.
- Bus Maintenance Building and Parking Structure: a 500,000 square-foot (355,000 square-foot covered) facility, including a three-story parking structure and a two-story bus maintenance building that will allow for bus fueling, washing, and brake inspection.

Figure 18

Division 13: Project Site and Proposed Layout



Figure 19

Division 13: View of the Proposed Bus Operations Administrative Building



7.0 SUMMARY

Metro operates approximately 1,900 peak buses providing six types of bus service (BRT, Rapid, Express, Limited, Local, and shuttle bus service) and two types of rail service (Light and Heavy Rail Lines) to better match the transit mode with specific passenger demand and needs. Metro's current bus system (Directly Operated and Contract Services) spans 172 routes and provides more than 6.7 million revenue service hours annually with an average boarding of 1.1 million boarding per a weekday and serves approximately 16,000 bus stops. The Metro rail system consists of 275 light and heavy rail cars on five lines to 70 stations across approximately 76.7 route miles in heavily congested travel corridors. Metro's light rail serve 56 stations along 60.7 miles of track and its heavy rail serves 16 stations along 17.4 miles of track. Metro rail provides connections to many multi-modal transportation hubs and accounts for approximately 300,000 weekday boardings.

The majority of Metro's bus fleet consists of 40-foot CNG buses. In addition Metro currently operates 492 45-foot CNG Compo buses and 391 60-foot CNG Articulated buses. In an effort to standardize Metro's bus fleet current policy direction is to eventually replace these higher capacity buses with a standard 40-foot bus as these buses are retired. During the life of this plan no 45-foot CNG Comp buses are scheduled for retirement. However, 300 60-foot Articulated CNG buses are scheduled for retirement from FY 2018 through FY 2020 and to be replaced by a standard 40-foot CNG bus on a seat-for-seat basis. This will increase Metro's peak bus requirements, increase revenue service hours, and increase cost significantly. Additionally, it is unclear at the present time whether or not CARB will enact new ZEB requirements in 2015. Presently these buses are much more expensive than CNG buses and will have a considerable financial impact.

Metro will continue to expand its bus and rail network across the region under Measure R and the 30/10 Initiative. In November 2008, Los Angeles County voters approved Measure R, a half-cent sales tax. The measure is expected to generate \$40 billion for countywide transportation projects over the next 30 years. In April 2010 Metro's Board of Director adopted the 30/10 Initiative to use the revenue from Measure R as collateral for long-term bonds and a federal loan, which will allow Metro to build 12 major transit projects in 10 years instead of 30 years. During the life of this plan several transit projects will be implemented:

- Exposition Light Rail Line (2012)
- Metro Orange Line Canoga Extension (2012)
- Wilshire Bus Rapid Transit Project (2013)
- Metro Gold Light Rail Line Foothill Extension (2014)
- Crenshaw / LAX Light Rail (2018)
- Regional Connector (2019)

A bus/rail interface plan has been developed for the Exposition Light Rail Line. A preliminary bus/rail interface plan has been initiated for the Metro Gold Line Foothill Light Rail Extension and a bus/rail interface plan has yet to be developed for the

Crenshaw/LAX Light Rail Line. The Regional Connector will connect the Metro Gold Line, Blue Line and Expo Line enabling passengers to travel from Claremont to Long Beach (north/south LRT) and from East Los Angeles to Santa Monica (east/west LRT) as a "one seat ride". All planned transit project will improve access to both local and regional destinations and greatly improve the connectivity of the transportation network for the region.

In 2008, the US Department of Transportation awarded a \$210 million grant to Los Angeles County to implement a Congestion Pricing one-year demonstration project to convert High-Occupancy Vehicle (HOV) Lanes on the I-10 El Monte Busway and the I-110 Harbor Transitway into High-Occupancy Toll (HOT) lanes by December 2010. Key elements are increased transit service levels and infrastructure improvements on both the I-10 and I-100 freeways. In preparation Metro implemented a new Metro Liner service in December 2009 known as the Silver Line. This express service operates from Artesia Transit Center to El Monte Transit Center via the I-110 Harbor Transitway through Downtown Los Angeles and the I10 El Monte Busway.

Fleet Management & Support Service direct bus moves, maintains a fair distribution of buses among the divisions, provides field support and on-street bus maintenance, repairs buses with major mechanical and cosmetic defects, and implements a mid-life and re-power program to keep Metro's buses operational. Maintenance units minimize road calls through a preventative maintenance program and in making minor repairs. In addition, they insure the required number of buses is available for in-service operations.

Metro is currently housing buses approximately 4% under systemwide capacity. Due to facility constraints a variety of Metro Bus Division rehabilitation projects have been identified and funded as part of Metro's Capital Improvement Program. These projects are being undertaken in order to keep the bus divisions in working order. With the planned repurpose of Division 2 Metro plans to build a new bus division centrally located in Downtown Los Angeles in order to maintain current parking capacity and continue to minimize deadhead costs.

Metro's Bus Fleet Management Plan encapsulates all of the above to establish their impact on Metro's bus fleet over the next 10 years.

APPENDIX 1
Metro Weekday Bus System Data
Effective June 26, 2011

Line	Routes	Line Name	Service Type	Direction	Service Area	FY 2009				FY 2010				FY 2011				FY 2012			
						Peak Buses	Est. Daily Boardings	Revenue Service Hours	Boardings Per Hour	Peak Buses	Est. Daily Boardings	Revenue Service Hours	Boardings Per Hour	Peak Buses	Est. Daily Boardings	Revenue Service Hours	Boardings Per Hour	Peak Buses	Est. Daily Boardings	Revenue Service Hours	Boardings Per Hour
2	2, 302	Downtown LA - Pacific Palisades via Sunset Bl	Local	E/W	W/C	52	24,047	502.6	44.1	49	21,875	496.5	44.1	45	20,037	455.9	42	n/a	440.4		
4	4	Downtown LA - West LA - Santa Monica via Santa Monica Bl	Local	E/W	W/C	30	25,124	387.2	53.4	28	20,873	390.6	53.4	29	19,314	377.0	29	n/a	388.8		
10	10, 48	10 Downtown LA - West Hollywood via Temple St & Melrose Av 48 Downtown LA - Avalon Station via Main St & South San Pedro St	Local	E/W	W/C	31	14,867	277.4	48.5	31	13,510	278.7	48.5	30	12,291	267.5	30	n/a	262.5		
14	14, 37	14 Downtown LA - Beverly Hills via Beverly Bl 37 Downtown LA - Fairfax/Washington via Adams Bl	Local	N/S	W/C	39	17,554	267.1	53.8	28	16,011	314.3	53.8	27	16,755	294.3	40	n/a	350.8		
16	16, 316	Downtown LA - Century City via 3rd St	Local	E/W	W/C	56	29,162	423.5	63.4	47	26,731	421.3	63.4	50	25,408	428.6	39	n/a	386.8		
18	18	Wilshire Center - Morehelo via Sixth St & Whittier Bl	Local	E/W	G	38	28,822	354.5	74.5	38	26,970	361.8	74.5	39	25,001	347.2	31	n/a	325.9		
20	20	Downtown LA - Santa Monica via Wilshire Bl	Local	E/W	W/C	43	19,140	361.9	49.1	31	17,257	361.5	49.1	29	16,762	328.0	26	n/a	301.9		
26	26, 51, 52, 352	Hollywood - Compton - Artesia Transit Center via Avalon Bl	Local	E/W	G	47	28,735	423.8	63.3	48	27,640	436.5	63.3	46	27,890	426.4					
28	28	Downtown LA - Century City via Olympic Bl	Local	E/W	W/C	21	10,564	193.8	48.6	19	9,362	192.5	48.6	20	8,267	169.8	15	n/a	160.0		
30	30, 31	Pico-Rimpau - East LA College via Pico Bl & East 1st St	Local	E/W	W/C	24	20,232	283.2	64.3	24	16,668	259.2	64.3								
30	30	Pico-Rimpau - Indiana Station via Pico Bl & East 1st St	Local	E/W	W/C									19	13,032	210.4	19	n/a	197.9		
33	33, 333	Downtown LA - Santa Monica via Venice Bl	Local	E/W	W/C	61	26,131	502.1	46.0	51	23,209	504.4	46.0								
33	33	Downtown LA - Santa Monica via Venice Bl	Local	E/W	W/C									20	11,453	234.6	22	n/a	240.9		
35	35, 335	Downtown LA - Fairfax/Washington via Washington Bl	Local	E/W	W/C	11	9,910	152.2	60.1	11	9,098	151.3	60.1	13	8,255	129.7					

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						Peak Buses	Est. Daily Boardings	Revenue Service Hours	Boardings Per Hour	Peak Buses	Est. Daily Boardings	Revenue Service Hours	Boardings Per Hour	Peak Buses	Est. Daily Boardings	Revenue Service Hours	Boardings Per Hour	Peak Buses	Est. Daily Boardings	Revenue Service Hours	Boardings Per Hour		
35	35, 38	35 Downtown LA - Fairfax/Washington via Washington Bl 38 Downtown LA - Fairfax/Washington via Jefferson Bl	Local	N/S	W/C													15	n/a	199.2			
38	38	17th/Broadway - Fairfax/Washington via Jefferson Bl	Local	E/W	W/C	12	6,440	115.1	52.3	10	5,982	114.3	52.3	17	5,644	103.6							
40	40	South Bay Galleria - Union Station via Hawthorne Bl, Crenshaw Bl & M.L. King Bl	Local	N/S	SB	33	20,492	312.1	56.3	36	17,718	314.9	56.3	32	17,431	291.1							
40	40, 42, 42A	Downtown LA - LAX - South Bay Galleria via King - La Tijera - Hawthorne	Local	N/S	SB													39	n/a	422.2			
42	42, 42A	LAX - Downtown LA via LAX City Bus Center, La Tijera Bl, Stocker St & M.L. King Bl	Local	N/S	SB	13	5,492	122.7	40.1	17	4,904	122.4	40.1	13	4,623	115.6							
45	45	Lincoln Heights - Rosewood via Broadway	Local	N/S	G	28	21,609	295.1	66.2	31	20,974	316.7	66.2	31	21,171	314.8	30	n/a	309.6				
51	51, 52, 352	Downtown LA - Compton - Artesia Transit Center via Avalon Bl	Local	N/S	G													47	n/a	402.3			
53	53	Downtown LA - CSU Dominguez Hills via Central Av	Local	N/S	G	21	12,014	181.5	61.1	21	10,588	173.4	61.1	19	10,662	171.1	22	n/a	220.8				
55	55, 355	Downtown LA - Imperial Station via Compton Av	Local	N/S	G	28	11,674	234.1	45.4	25	10,442	229.8	45.4	27	9,808	210.1	32	n/a	193.4				
60	60	Downtown LA - Artesia Station via Long Beach Bl	Local	N/S	G	33	19,845	302.4	57.3	34	17,625	307.4	57.3	36	18,117	303.2	35	n/a	326.8				
62	62	Downtown LA - Hawaiian Gardens via Telegraph Rd	Local	E/W	G	10	4,696	145.8	29.3	11	4,327	147.6	29.3	11	4,749	146.6	13	n/a	148.2				
66	66, 366	Wilshire Center - Montebello via Olympic Bl & 8th St	Local	E/W	G	51	26,140	371.0	64.6	50	23,120	361.1	64.6										
66	66	Wilshire Center - Montebello via Olympic Bl & 8th St	Local	E/W	G													38	20,633	293.7	33	n/a	269.6
70	70, 71	Los Angeles - El Monte via Garvey Av	Local	E/W	SCV	19	14,136	258.5	51.3	19	13,518	263.5	51.3										
70	70	Los Angeles - El Monte via Garvey Av	Local	E/W	SCV									15	11,970	216.4	18	n/a	222.7				

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71	71	Downtown LA - Cal State LA via Wabash Av & City Terrace Dr	Local	E/W	SCV									3	1,604	49	7	n/a	50.7		
76	76	El Monte - Downtown LA via Valley Bl	Local	E/W	SCV	22	11,519	219.4	47.5	21	10,744	226.3	47.5	18	10,567	219.4	16	n/a	201.8		
78	78, 79, 378	Arcadia - Los Angeles via Huntington Dr & Las Tunas Dr	Local	E/W	SCV	26	12,532	257.9	42.5	26	11,490	270.4	42.5	26	11,450	269.4	26	n/a	263.3		
81	81	Eagle Rock - Exposition Park via Figueroa	Local	N/S	SCV	30	19,059	349.5	48.3	32	17,116	354.4	48.3	30	16,235	326.5	29	n/a	306.0		
83	83	Eagle Rock - Downtown LA via York	Local	N/S	SCV	15	6,606	174.4	33.0	15	5,744	174.3	33.0	12	4,777	148.8	9	n/a	113.3		
84	68, 84	Eagle Rock Bl - Downtown LA - Morrisbello via Eagle Rock Bl & Cesar Chavez Av	Local	N/S	SCV	16	11,611	211.7	48.4	15	9,515	196.7	48.4	15	8,736	186.0	17	n/a	189.9		
90	90, 91	Los Angeles - Sunland via Foothill Bl, Catalina Bl and Glendale Av	Local	N/S	SFV	18	6,479	152.5	40.8	18	6,156	150.7	40.8	15	6,067	144.3	13	n/a	139.4		
92	92	Burbank to Downtown Los Angeles via Glendale Bl, Brand Bl, Glendale Bl, Temple St, Spring St and Main St	Local	N/S	SFV	15	5,616	139.8	34.9	23	5,791	166.0	34.9	18	5,813	153.5	14	n/a	142.7		
94	94	Sylmar - Downtown LA via San Fernando Bl & Hill St	Local	N/S	SFV	23	10,657	224.5	36.1	24	6,891	191.1	36.1	18	6,183	164.8	12	n/a	158.5		
96	96	Downtown LA - Sherman Oaks via Griffith Pk Dr & Riverside Dr (Contract)	Local	N/S	SFV	8	2,927	123.9	20.4	8	2,522	123.9	20.4	8	2,712	123.4					
96	96	Downtown LA - Burbank Station via Griffith Pk Dr & Riverside Dr (Contract)	Local	N/S	SFV												6	n/a	91.1		
102	102	Baldwin Village - South Gate via Coliseum St	Local	E/W	G	7	2,196	56.4	34.8	5	1,981	56.9	34.8	3	1,463	46.7	3	n/a	47.0		
105	105	West Hollywood - Vernon via La Cienega Bl & Vernon Av	Local	N/S	G	17	11,915	190.8	59.0	15	11,332	192.1	59.0	15	11,777	190.7	16	n/a	197.2		
108	108, 358	Marina Del Rey - Pico Rivera via Shanon Av	Local	E/W	SB	31	18,544	291.0	57.3	28	16,406	286.2	57.3	29	16,536	284.7	31	n/a	295.0		
110	110	Playa Vista - Bell Gardens via Jefferson Bl - Gage Av	Local	E/W	SB	23	11,111	218.3	44.2	23	9,615	217.6	44.2	24	9,260	206.4	22	n/a	202.1		
111	111	LAX to Norwalk via Florence Av	Local	E/W	SB	27	16,836	257.5	56.8	26	14,586	256.9	56.8	28	14,363	238.8					

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154	154	Tarzana - Burbank via Burbank Bl & Oxnard St	Local	E/W	SFV	3	991	40.6	4	889	39.3	22.6	6	961	39.7	3	n/a	40.8							
155	155	Sylmar/San Fernando Metrolink Station - Universal City Station via Glensaks Bl & West Alameda Av	Local	E/W	SFV	6	642	19.8	5	605	20.0	30.3	5	602	21.1										
155	155	Sherman Oaks - Burbank Station via Riverside Dr, Olive Av	Local	E/W	SFV	6										11	n/a	56.8							
156	156, 656	Van Nuys - Hollywood; Panorama City - Hollywood Owl	Local	E/W	SFV	9	2,622	95.6	8	2,256	89.1	25.3	6	2,082	79.2	5	n/a	72.5							
158	158	Chatsworth Metrolink Station - Sherman Oaks via Devonshire St & Woodman Av	Local	E/W	SFV	10	2,379	55.3	9	2,149	54.6	39.4	11	2,174	55.0	9	n/a	52.3							
161	161	Thousand Oaks - Agoura Hills - Calabasas - Warner Center	Local	E/W	SFV	9	1,558	61.4	9	1,379	61.5	22.4	8	1,462	61.0	8	n/a	59.6							
163	163, 363	West Hills - Sun Valley via Sherman Way	Local	E/W	SFV	24	11,924	192.8	26	10,846	196.3	55.3	23	10,341	178.3	19	n/a	171.7							
164	164	West Hills - Burbank via Victory Bl	Local	E/W	SFV	29	8,442	177.5	29	7,938	172.6	46.0	30	7,763	175.4	22	n/a	156.7							
165	165	West Hills - Burbank via Varowen St	Local	E/W	SFV	29	9,856	181.2	29	8,991	184.0	48.9	28	8,688	186.4	26	n/a	171.4							
166	166, 364	Chatsworth - Pacoima via Northhoff St & Osborne St	Local	E/W	SFV	33	7,485	154.8	30	6,968	157.2	44.3	31	6,878	152.0	26	n/a	143.4							
167	167	Chatsworth Metrolink Sta - Studio City via Plummer St & Goldwater Cyn Av (Contract)	Local	E/W	SFV	8	2,475	89.2	8	2,142	89.1	24.0	8	2,684	89.1	6	n/a	86							
168	168	Chatsworth - Pacoima via Lassen St & Paxton St	Local	E/W	SFV	2	300	16.2	3	243	16.5	14.7	2	289	16.8										
169	169	West Hills - Surland via Saticoy St and Surland Bl	Local	E/W	SFV	10	2,467	59.8	10	2,206	59.6	37.0	11	2,358	59.0	9	n/a	59.4							
175	175	Silver Lake - Hollywood via Hyperion Av & Fountain Av	Local	E/W	SGV	8	761	14.5	8	753	14.6	51.6	8	609	14.6	7	n/a	14.2							
176	176	El Monte - Highland Park via Mission 176 El Monte - Highland Park via Mission 287 El Monte Station - The Shops at Montebello via Tyler Av & Rush St	Local	E/W	SGV	3	1,122	36.9	3	1,180	36.9	32.0	4	1,131	36.4										
176	176, 287	Montebello via Tyler Av & Rush St	Local	E/W	SGV											5	n/a	73.5							

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177	177	La Cañada - Sierra Madre Villa via I-210 & California Bl & Walnut St (Contract)	Local	E/W	SGV	3	420	41.1	3	286	22.3	12.8	3	356	22.3	2	n/a	8.8			
180	180, 181	Pasadena - Hollywood via Colorado Bl and Hollywood Bl	Local	E/W	SGV	18	11,684	265.9	17	10,793	248.3	43.5	16	10,420	237.4	17	n/a	243.5			
183	183	Sherman Oaks - Glendale via Magnolia Bl	Local	E/W	SFV	6	2,219	72.5	8	2,224	72.7	30.6	6	2,268	70.5	7	n/a	68.9			
190	190, 194	El Monte Station - Cal Poly Pomona via Ramona Bl & Valley Bl	Local	E/W	SFV								21	8,163	210.9	21	n/a	225.2			
200	200	Echo Park - Exposition Park via Alvarado St & Hoover St	Local	N/S	G	21	15,794	181.4	21	14,918	182.5	81.7	20	14,816	183.5	17	n/a	178.5			
201	201	Glendale - Koreatown via Silver Lake Bl	Local	N/S	SGV	3	1,153	41.6	3	1,215	44.1	27.6	3	1,110	44.1	3	n/a	43.7			
202	202	Willowbrook to Wilmington via Alameda	Local	N/S	SB	4	424	26.9	4	380	27.0	14.1	4	342	27.7	3	n/a	20.2			
204	204	Athens - Hollywood via Vermont Ave	Local	N/S	SB	24	33,131	293.1	24	29,657	292.6	101.4	24	28,126	289.7	24	n/a	286.3			
205	205	Imperial/Wilmington Sta. - San Pedro via Wilmington Av, Vermont Av & Western Av (Contract)	Local	N/S	SB	10	5,053	132.8	10	4,652	138	33.7	10	4,822	138	12	n/a	136.2			
206	206	Athens - Hollywood via Normandie Ave	Local	N/S	SB	27	17,217	235.4	25	14,762	220.5	66.9	23	14,081	203.8	19	n/a	200.9			
207	207	Athens - Hollywood via Western Ave	Local	N/S	SB	34	29,031	329.1	34	26,336	331.7	79.4	33	25,084	321.0	21	n/a	241.1			
209	209	Athens - Washburn Center via Van Ness Ave & Arlington Ave	Local	N/S	SB	4	936	43.4	3	855	42.6	20.1	3	912	43.7	3	n/a	41.7			
210	210	South Bay Galleria - Hollywood via Crestshaw Bl	Local	N/S	SB	27	14,558	226.4	26	13,593	228.3	59.5	23	13,414	219.0	21	n/a	228.4			
211	211, 215	South Bay Galleria - Redondo Beach via Prairie Av, Inglewood Av	Local	E/W	SB	5	809	33.7	9	717	34.3	20.9	6	572	30.4	7	n/a	30.6			
212	212, 312	Hawthorne - Hollywood via La Brea	Local	N/S	SB	32	14,434	228.5	30	13,086	226.4	57.8	30	12,427	212.2	25	n/a	227.1			
214	214	Harbor/1105 - Artesia Transit Center via Broadway & Main St (Contract)	Local	N/S	G	4	520	27.9	4	432	27.5	15.7	4	496	27.5						

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217	217	Vermont/Sunset - Fairfax/Washington via Fairfax Av & Hollywood Bl	Local	N/S	W/C	25	11,716	186.5	59.0	19	10,922	185.2	59.0	21	9,775	161.9	59.0	21	n/a	126.5	
218	218	Studio City - Beverly Hills via Laurel Canyon Bl (Contract)	Local	N/S	W/C	5	1,120	51.3	23.6	5	1,212	51.3	23.6	5	1,430	51.3	23.6	4	n/a	48	
220	220	West Hollywood - Culver City via Robertson Bl	Local	N/S	W/C	2	501	27.1	18.7	2	507	27.1	18.7	1	271	13.8	18.7	1	n/a	13.8	
222	222	Sun Valley - Hollywood via Hollywood Way	Local	N/S	SFV	7	1,499	64.2	21.7	8	1,434	66.1	21.7	6	1,365	52.3	21.7	5	n/a	48.7	
224	224	Sylmar-Universal City via San Fernando Rd, Lanarkshire Bl	Local	N/S	SFV	13	7,572	127.5	52.9	21	11,110	210.2	52.9	16	10,173	171.4	52.9	14	n/a	156.9	
230	230, 239	230 San Fernando - Studio City via Laurel Canyon Bl 239 Encino - Sylmar/San Fernando Metrolink Station via White Oak Av, Rinaldi St	Local	E/W	SFV	15	6,389	131.2	45.0	14	5,980	133.0	45.0	15	5,455	125.2	45.0	9	n/a	92.7	
232	232	Long Beach - LAX via Pacific Coast Hwy & Sepulveda Bl (Contract)	Local	N/S	SB	15	7,420	175.3	40.8	15	7,152	175.3	40.8	15	7,041	175.1	40.8	15	n/a	179.4	
233	233	Lake View Terrace - Sherman Oaks via Van Nuys Bl	Local	N/S	SFV	19	18,836	215.0	77.4	20	17,235	222.6	77.4	14	11,962	156.9	77.4	15	n/a	195.9	
234	234	Sherman Oaks - Sylmar via Sepulveda Bl & Brand Bl	Local	N/S	SFV	13	6,483	111.8	55.3	15	6,159	111.3	55.3	13	6,225	107.5	55.3	10	n/a	109.8	
236	236, 237	Sylmar/Encino via Hallock Bl / Encino-Sherman Oaks via Balboa Bl, Woodley Av	Local	E/W	SFV	14	2,680	71.3	34.2	12	2,389	69.9	34.2	13	2,459	72.4	34.2	13	n/a	69.3	
239	239	Encino - Sylmar/San Fernando Metrolink Station via White Oak Av, Rinaldi St	Local	E/W	SFV													6	n/a	37.7	
243	242, 243	Porter Ranch - Woodland Hills via Tampa Av. & Winneka Av.	Local	E/W	SFV	7	2,418	65.2	34.4	7	2,231	64.9	34.4	8	2,207	61.1	34.4	7	n/a	52.8	
245	244, 245	Woodland Hills - Chatsworth via Topanga Canyon Bl & De Soto Av	Local	E/W	SFV	15	4,507	77.0	50.7	15	3,962	78.2	50.7	19	3,798	78.9	50.7	14	n/a	76.0	
246	246, 247	San Pedro - Artesia Transit Center via Avalon Bl	Local	N/S	SB									8	3,099	103.7		8			

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305	305	UCLA - Willowbrook via Sunset, San Vicente & Western	Local	N/S	SB	8	3,012	101.3	8	2,760	105.2	26.2	8	2,897	105.2	8	n/a	92.2							
344	344	Artesia Transit Center - Palos Verdes via Hawthorne Bl	Local	N/S	SB									8	1,952	72.8	8	n/a	62.2						
439	439	Aviation Station - Downtown LA/Union Station via LAX, Westchester, Culver City & Los Angeles	Express	N/S	SB	10	1,006	66.7	7	954	66.2	14.4	7	1,116	70.7										
439	439	Downtown LA - Culver City Transit Center via I-10 Fwy	Express	N/S	SB												6	n/a	33.6						
442	442	Hawthorne - Union Station via Hawthorne Bl, La Brea Av, Manchester Bl. & Harbor Transitway	Express	N/S	SB	5	282	14.8	5	220	12.3	17.9	4	213	11.6	5	n/a	50.2							
444	444	Rancho Palos Verdes - Union Station via Hawthorne Bl/Artesia Bl - Harbor Expressway	Express	N/S	SB	11	3,246	100.7	11	2,983	102.2	29.2													
445	445	San Pedro - Union Station via Pacific Av, First St, Harbor Beacon Park Ride Lot & Harbor Transitway	Express	N/S	SB	9	1,424	54.7	8	1,139	54.9	24.4	7	1,199	54.7										
446	446, 447	San Pedro - Union Station via Pacific Av, Avalon Bl, Harbor Expressway	Express	N/S	SB	20	4,515	150.0	18	4,147	151.3	27.4													
450X	450X	Artesia Transit Center - Downtown LA via Harbor Transitway	Express	N/S	SB	4	858	18.1	5	804	19.9	40.4	5	786	20.7										
450X	450X	Downtown LA - San Pedro via Harbor Transitway	Express	N/S	SB												10	n/a	50.2						
460	460	Downtown LA - Disneyland via Harbor Transitway & I-105 Fwy	Express	N/S	G	17	4,185	160.1	18	4,333	166.1	26.1	18	4,404	166.7	11	n/a	168.9							
484	484	Pomona - Downtown LA via Valley Bl & El Monte Busway	Express	E/W	SCV	28	7,949	207.4	25	7,128	211.2	31.8													
485	485	Alhambra - Downtown LA via Lake Av & El Monte Busway	Express	N/S	SCV	10	3,350	113.0	10	2,949	109.6	26.9	7	2,417	91.8										
485	485	Downtown LA - Alhambra via Fremont Av & Lake Av	Express	N/S	SCV												5	n/a	54.3						
487	487	Sierra Madre Villa Station - Downtown LA via San Gabriel Bl & El Monte Busway	Express	N/S	SCV				19	3,965	138.4	28.6	18	3,621	138.1	20	n/a	136.0							

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487	487, 489	Sierra Madre Villa Station - Downtown LA via San Gabriel Bl & El Monte Busway	Express	N/S	SGV	12	2,126	80.9													
489	489	Temple City - Downtown LA via Rosemead Bl & El Monte Busway	Express	N/S	SGV	7	813	14.7													
490	490	Pomona - Downtown LA via Ramona Bl & El Monte Busway	Express	E/W	SGV	24	6,156	154.8	24	5,822	156.3	37.2									
534	534	Malibu - Fairfax/Washington via Pacific Coast Hwy	Express	E/W	W/C	23	3,156	130.1	14	3,085	131.9	23.4	13	2,992	127.9	16	n/a	124.3			
550	550	San Pedro - West Hollywood via Harbor Transitway	Express	N/S	SB	14	2,983	105.5	10	2,836	109.7	25.9	11	3,037	108.9	9	n/a	97.5			
577X	577X	El Monte Station - Downtown Long Beach via I-605 Fwy (Contract)	Express	N/S	G	6	1,020	91	7	892	91.1	9.8	7	937	91.1						
577K	577K	El Monte Station - Long Beach VA Medical Center via I-605 Fwy (Contract)	Express	N/S	G											5	n/a	60.8			
603	603	Glendale Galleria - Grand Station via Hoover St. & Rampart Bl (Contract)	Express	N/S	W/C	15	6,639	185.6	16	6,397	191.3	33.5	16	7,724	191.1	16	n/a	181.5			
605	605	LAC/USC Medical Ctr - Boyle Heights via Soto St, 4th St & Lorena St (Contract)	Express	N/S	SGV	6	3,153	57.2	6	2,863	57.2	50.1	6	2,849	57.2	6	n/a	57.9			
607	607	Windsor Hills - Inglewood Shuttle (Contract)	Express	CW / CCW	SB	3	151	20.1	3	145	20.1	7.2	3	174	20.1	1	n/a	8.9			
608	608	Crenshaw Connection (Contract)	Shuttle	CW	SB	1	84	11.9	1	75	11.9	6.3	1	122	11.9						
611	611	Huntington Park Shuttle	Shuttle	CW / CCW	G	5	3,308	80.0	5	2,635	73.3	35.9	4	2,353	67.3	4	n/a	59.4			
612	612	South Gate Shuttle	Shuttle	CW / CCW	G	7	2,244	75.8	7	2,143	75.6	28.3	7	1,910	69.4	3	n/a	55.7			
620	620	Boyle Heights via Cesar Chavez Av & Stair St	Shuttle	CCW	SGV	5	933	39.0	5	722	41.6	17.4	5	719	41.7	1	n/a	14.8			
625	625	Green Line Shuttle - World Way West (Contract)	Shuttle	CCW	SB	2	511	18.2	2	249	18.4	13.5	2	272	18.4	2	n/a	17.9			
626	626	LAX - Green Line Shuttle (Contract)	Shuttle	CW	SB	3	n/a	22.4	3	188	22.4	8.4	3	210	22.4						
634	634	Mission College - Sylmar Station via Hubbard St (Contract)	Shuttle	N/S	SPV	1	331	12	1	442	12	36	1	555	12	1					

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645	645	Woodland Hills - West Hills via Valley Circle Bl. & Mulholland Dr.	Shuttle	E/W	SFV	6	442	23.6	20.9	9	501	24.0	20.9	9	471	24.0	24.0	6	n/a	24.0	24.0				
665	665	Cal State LA - City Terrace Shuttle	Shuttle	N/S	SGV	3	844	31.0	27.4	2	849	31.0	27.4	2	725	24.8	24.4	5	n/a	24.4	24.4				
685	685	Glendale - Glassed Park via Verdugo Rd.	Shuttle	N/S	SGV	2	684	29.8	21.2	3	632	29.8	21.2	3	554	29.6	29.8	2	n/a	29.8	29.8				
687	687	Altadena - Pasadena - Colorado Bl & Allen Av; Los Robles Av & Fair Oaks Av	Shuttle	N/S	SGV	7	2,218	85.9	26.0	5	2,261	86.8	26.0	5	1,743	62.0	62.0	5	n/a	62.0	62.0				
704	704	Downtown LA - Santa Monica via Santa Monica Bl	Shuttle	E/W	W/C	26	33,488	252.4	53.7	25	32,710	236.7	53.7	25	32,149	223.6	214.8	28	n/a	214.8	214.8				
705	705	West Hollywood - Vernon via La Cienega Bl & Vernon Av	Shuttle	N/S	G	16	8,548	154.4	50.9	16	7,806	153.3	50.9	16	7,951	139.4	135.7	16	n/a	135.7	135.7				
710	710	South Bay Galleria - Wilshire Center via Greenwich Bl	Rapid	N/S	SB	16	7,295	155.3	48.8	17	7,530	154.3	48.8	17	7,464	136.0	129.4	16	n/a	129.4	129.4				
711	711	Inglewood TC - Bell Gardens via Florence Av	Rapid	E/W	SB	12	6,020	125.7	39.2	12	4,926	125.7	39.2	12	4,641	109.2									
714	714	Downtown LA - Beverly Hills via Beverly Bl	Rapid	E/W	W/C	14	4,657	133.9	37.4	11	3,924	104.8	37.4	11	3,310	91.6									
715	715	LAX - Southgate via Manchester Av and Firestone Bl	Rapid	E/W	SB	11	3,973	121.1	32.0	14	4,252	133.0	32.0	14	4,456	120.7									
720	720	Santa Monica - Commerce via Wilshire Bl & Whittier Bl	Rapid	E/W	W/C	51	41,554	601.8	63.0	57	38,393	609.2	63.0	57	37,862	606.0	662.0	64	n/a	662.0	662.0				
724	724	San Fernando - North Hollywood via San Fernando Rd., Lankershim Bl.	Rapid	N/S	SFV	15	3,689	101.0																	
728	728	Downtown LA - Century City via Olympic Bl	Rapid	E/W	W/C	19	8,989	176.2	48.6	16	8,638	177.9	48.6	16	8,094	155.1	122.5	13	n/a	122.5	122.5				
730	730	Downtown LA - Pico-Rimpau via Pico Bl	Rapid	E/W	W/C	12	5,836	118.3	41.3	12	5,096	117.6	41.3	12	4,759	102.3	91.5	8	n/a	91.5	91.5				
733	733	Downtown LA - Santa Monica via Vernice Bl	Rapid	E/W	W/C					25	12,541	265.3		25	12,541	265.3	228.3	21	n/a	228.3	228.3				
734	734	Sherman Oaks - Sylmar/San Fernando Station via Sepulveda Bl. - Brand Bl. - Truman St.	Rapid	N/S	SFV	14	5,183	90.5	40.8	11	3,957	88.2	40.8	11	3,957	80	72.1	9	n/a	72.1	72.1				

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740	740	South Bay Galleria - Downtown L.A. via Hawthorne Bl., Crenshaw Bl & M. L. King Bl	Rapid	N/S	SB	20	10,041	195.1	47.5	19	9,264	194.9	47.5	19	8,618	172.5	47.5	17	n/a	163.6	
741	741	Tarzana - Northridge via Roseda Bl.	Rapid	N/S	SPV	7	3,648	74.8	44.2	6	2,677	60.6	44.2	5	2,678	56.3	44.2	5	n/a	54.4	
745	745	Downtown Los Angeles - Harbor Freeway Station via Broadway	Rapid	N/S	G	21	8,780	172.3	48.2	21	8,048	166.9	48.2	21	7,204	163.4	48.2	22	n/a	140.7	
750	750	Warner Center - Universal City via Ventura Bl	Rapid	E/W	SPV	22	8,094	180.1	38.1	16	6,416	168.6	38.1	16	5,627	152	38.1	18	n/a	135.4	
751	751	Cypress Park - Huntington Park via 50th Street	Rapid	N/S	SCV	11	7,138	121.7	50.7	10	6,178	121.8	50.7	10	6,234	96.8	50.7	9	n/a	99.6	
753	753	Downtown LA - Imperial Station via Central Av	Rapid	N/S	G	11	2,959	119	27.7	9	3,116	112.5	27.7	9	2,847	95.3	27.7				
754	754	Athens - Hollywood via Vermont Ave	Rapid	N/S	SB	24	23,837	232.4	92.4	26	21,577	233.5	92.4	26	21,351	231.8	92.4	26	n/a	227.8	
757	757	Hawthorne - Hollywood via Western Av	Rapid	N/S	SB	14	12,531	168.1	66.8	15	11,348	169.9	66.8	15	10,853	151.7	66.8	18	n/a	165.7	
760	760	Downtown LA - Artesia Station via Long Beach Bl	Rapid	N/S	G	15	9,862	167.3	52.4	15	8,675	165.7	52.4	15	8,767	173	52.4				
760	760	Downtown LA - Lynwood via Long Beach Bl	Rapid	N/S	G													13	n/a	122.1	
761	761	Pacoima - Westwood via Van Nuys Bl	Rapid	N/S	SPV	21	13,655	214.9	51.9	21	11,200	215.8	51.9	21	11,393	214.1	51.9	20	n/a	209.8	
762	762	Pasadena - Artesia Blue Line Station via Fair Oaks & Atlantic	Rapid	N/S	SCV	17	5,501	157.8	34.6	11	5,592	161.4	34.6	11	5,010	142.2	34.6	10	n/a	128.8	
770	770	Los Angeles - El Monte via Cesar E Chavez Av & Garvey Av	Rapid	E/W	SCV	18	9,359	226.4	49.0	17	9,494	193.7	49.0	17	9,038	182.9	49.0	17	n/a	179.8	
780	780	Pasadena - West Los Angeles via Colton Blvd & Hollywood Bl	Rapid	E/W	SCV	20	12,477	230.9	45.0	20	10,450	232.4	45.0	20	10,114	205	45.0	20	n/a	195.4	
794	794	Downtown Los Angeles - Burbank Station via San Fernando Rd, Brand Bl	Rapid	N/S	SPV	17	3,837	150.3	36.0	20	6,306	175.2	36.0	20	5,674	149.7	36.0	13	n/a	139.7	
901	Orange Line	Metro Orange Line - Warner Center - North Hollywood	Metro Liner	E/W	SPV	27	26,661	309.5	69.6	29	21,938	315.4	69.6	29	22,864	308.5	69.6	28	n/a	304.7	

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902	902	Pacifica - North Hollywood via Van Nuys Bl & Burbank Bl	Local	N/S	SFV									12	3,987	66										
910	Silver Line	Metro Silver Line: El Monte - Los Angeles - Artesia Transit Center	Metro Liner	N/S	SGV									23	7,571	184.3					n/a		217.7			
920	920	Santa Monica - Wilshire/Vermont via Wilshire Bl	Rapid Express	E/W	W/C									19	3,942	110.2				17	3,347	91.2		18	2,960	87.1

Bus lines that did not exist, were canceled, or restructured

APPENDIX 2
Los Angeles County: Respective Cities in Each Metro Service Areas

Gateway	San Fernando Valley	San Gabriel Valley	Southbay	Westside Central
Avalon	Agoura Hills	Alhambra	Carson	Beverly Hills
Artesia	Burbank	Arcadia	El Segundo	Culver City
Bell	Calabasas	Azusa	Gardena	Los Angeles
Bell Gardens	Glendale	Baldwin Park	Hawthorne	Malibu
Bellflower	Hidden Hills	Bradbury	Hermosa Beach	Santa Monica
Cerritos	La Canada-Flintridge	Claremont	Inglewood	West Hollywood
Commerce	Los Angeles	Covina	Lawndale	
Compton	San Fernando	Diamond Bar	Lomita	
Cudahy	Westlake Village	Duarte	Los Angeles	
Downey		El Monte	Manhattan Beach	
Hawaiian Gardens		Glendora	Palos Verdes Estates	
Huntington Park		Irwindale	Ranch Palos Verdes	
Industry		La Puente	Redondo Beach	
La Habra Heights		La Verne	Rolling Hills	
La Mirada		Los Angeles	Rolling Hills Estates	
Lakewood		Monrovia	Torrance	
Long Beach		Montebello		
Los Angeles		Monterey Park		
Lynwood		Pasadena		
Maywood		Pomona		
Norwalk		Rosemead		
Paramount		San Dimas		
Pico Rivera		San Gabriel		
Santa Fe Springs		San Marino		
Signal Hill		Sierra Madre		
South Gate		South El Monte		
Vernon		South Pasadena		
Whittier		Temple City		
		Walnut		
		West Covina		

APPENDIX 3
Municipal and Community Transit Service by Metro Service Areas

Gateway

Bell Gardens Town Trolley (562) 806-8777	Long Beach Transit (562) 591-2301
Bellflower Bus & Dial-A-Ride (562) 865-RIDE	LADOT (213) 808-2273
Cerritos-On-Wheels (COW) & Dial-A-Ride (562) 928-4269	Lynwood Trolley Company (310) 603-0220 ext 287
Commerce Municipal Bus Lines (323) 887-4419	Metrolink (800) 371-LINK
Compton Renaissance Transit System (310) 605-5505	Norwalk Transit System (562) 929-5550
Cudahy Area Rapid Transit (323) 772-5143 ext.233	Paramount Easy Rider Shuttle Dial-A-Ride (562) 220-2121
Downey Link (562) 529-LINK	Sante Fe Springs Metro Express Shuttle (562) 929-5550
Huntington Park Dial-a-Ride (323) 583-2163	Whittier Transit/ Whittier Dial-A-Ride (562) 698-2131
La Mirada Transit & Dial-A-Ride (562) 943-6776	

APPENDIX 3 (Continued)
Municipal and Community Transit Service by Metro Service Areas

San Gabriel Valley

City of Arcadia Transit & Dial-A-Ride (626) 445-2211	LADOT (213) 808-2273
Alhambra Community Transit (626) 289-1220	Metrolink (800) 371-LINK
Azusa Transit (626) 969-4287	Montebello Bus Lines (323) 887-4600
Baldwin Park Transit (626) 813-5215	Monrovia Transit (310) 358-3538
Children's Court Shuttle (626) 458-3956	Monterey Park Spirit (626) 307-7842
Claremont Dial-A-Ride (909) 596-7664	Pasadena Area Rapid Transit System (ARTS) (626) 740-4055
Duarte Mini Transit System (626) 357-7931 ext. 246	Pomona Valley Transportation Authority (909) 596-7664
El Sol Shuttle (626) 485-3596	Rosemead Shopping Express (818)572-4099
El Monte Trolley Company (626) 443-7384	Sierra Madre Dial-A-Ride (626) 355-3873
Foothill Transit (800-RIDE-INFO)	Temple City Dial-A-Ride (626) 286-2456
Glendora Transit (Metrolink Shuttle) (626) 914-8233	West Covina Shuttle & Dial-A-Ride (626) 939-8491
La Puente Link (626) 855-1500	

APPENDIX 3 (Continued)
Municipal and Community Transit Service by Metro Service Areas

San Fernando Valley

Agoura Hills Dial-A-Ride
(818) 707-2005

Burbank Local Transit (BLT)
(818) 246-4258

Calabasas Dial-A-Ride/ Calabasas
Trolley
(818) 878-4242

Glendale Bee Line
(818) 548-3960

LADOT
(213) 808-2273

Metrolink
(800) 371-LINK

South Bay

Carson Circuit & Dial-A-Ride
(310) 352-3250

El Segundo Dial-A-Ride
(310) 524-2704

Gardena Municipal Bus Lines
(310) 324-1475

Inglewood Shopper's Shuttle
(310) 412-4378

The Lawndale Beat
(310) 973-3270

LADOT
(213) 808-2273

Palos Verdes Peninsula Transit
(310) 544-7108

Redondo Beach Wave
(310) 372-1171 Ext. 2670

Torrance Transit
(310) 618-6266

APPENDIX 3 (Continued)
Municipal and Community Transit Service by Metro Service Areas

Westside Central

Culver CityBus
(310) 253-6500

Hahn Trolley/ Shuttle
(562) 563-5639 or (626) 458-3968

LADOT
(213) 808-2273

Santa Monica Big Blue Bus
(310) 451-5444

West Hollywood Cityline
(323) 583-6095

APPENDIX 4
DRAFT (November 1, 2010)
MASTER PLAN EXPOSITION BUS/RAIL
INTERFACE

BACKGROUND

In February 2006 the Federal Transit Administration signed a Record of Decision (ROD) certifying that the Expo Project met all requirements of the National Environmental Policy Act (NEPA), thereby completing the environmental clearance for the Project. This action cleared the way for the award of contract to design/build the Project, and the use of federal dollars to help fund it.

The Expo Line is planned to operate between downtown Los Angeles and the City of Santa Monica by way of Culver City, a distance of approximately 16.2 miles. Nineteen stations will be served along the alignment. **Figure 1** illustrates the proposed rail alignment and each of the stations to be served when the line is fully operational.

**FIGURE 1
METRO EXPO LINE CORRIDOR**



The initial segment of the Expo Line, known as Phase 1, will operate between downtown Los Angeles and Culver City. This segment has already cleared state and federal environmental requirements and is presently under construction. The remaining segment, Phase 2, will operate from Culver City to Santa Monica and is projected to be open by June 2015. The environmental assessment required for Phase 2 (California Environmental Quality Act (CEQA)) was completed and approved earlier this year; the Project is now in its preliminary engineering phase.

Phase 1 was originally scheduled to begin revenue service in June 2011, however, construction delays at the Expo Culver City Station, La Cienega Station, La Brea Station and more recently, the Farmdale Station, have forced the construction agency (Expo Authority) to push back the start date. In order to provide more flexibility in the implementation schedule, a phasing plan was subsequently developed to better manage the project. By the summer of 2010 the first phase of the project was divided into two parts--- Phase 1-A and Phase 1-B.

Phase 1-A, was proposed to operate from downtown Los Angeles to La Cienega Station, a distance about 7.5 miles. This was the initial operating segment Metro had planned to open by September 2011. It assumed construction of the rail stations at La Cienega, La Brea and Farmdale would be completed as well as the required revenue testing. This segment of the line would operate exclusively within the City of Los Angeles from the downtown Central Business District to the Mid-Cities area. Eleven rail stations would be served. The principle corridors served included Flower St, Exposition Blvd and the Exposition Right-a-Way. The east terminal would be located at 7th & Metro Station; the central connection point for the Metro Red Line and Blue Line. The west terminal would be located at the La Cienega Station.

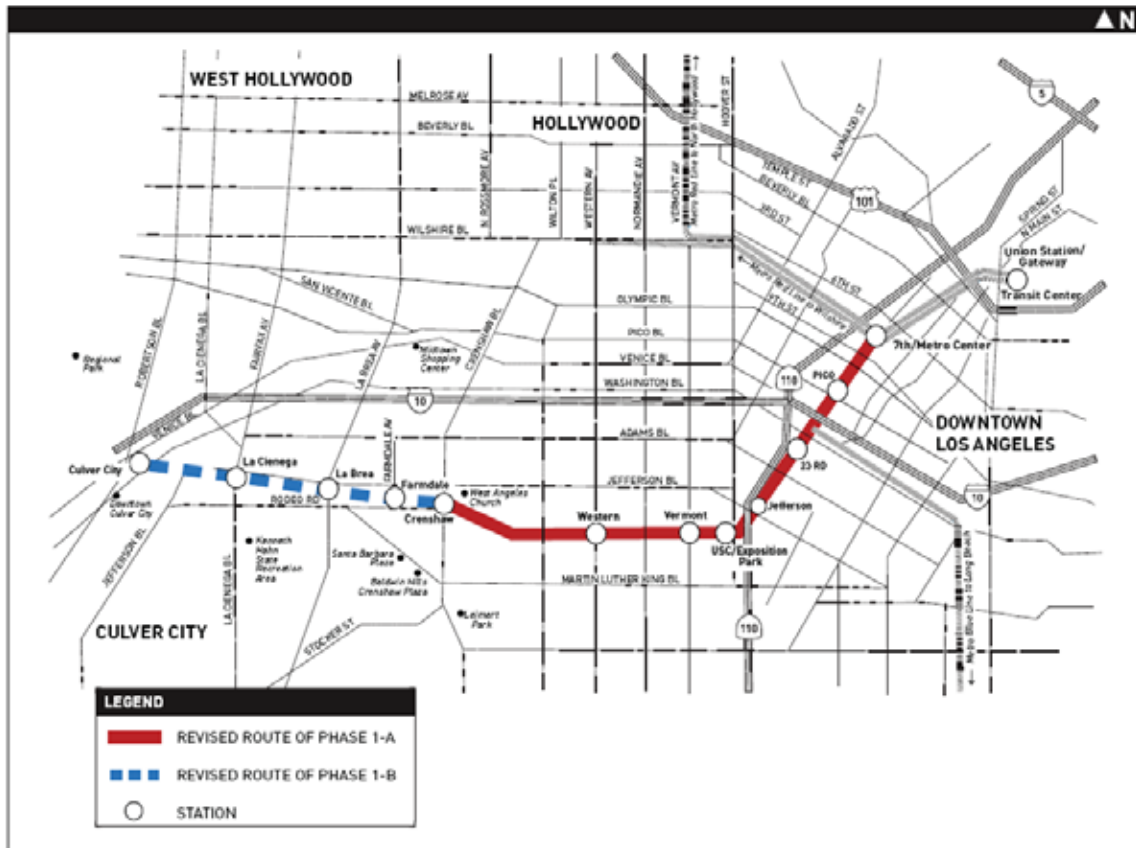
The operating assumptions underlying this phase were ultimately compromised when it was learned in late August 2010 that the Farmdale Station would not be ready in time for the planned opening, because the Expo Authority was required to implement additional mitigation measures at this station as part of a recent legal settlement with a neighborhood activist group. Until these safety measures are in place, the rail line cannot operate west of Crenshaw Station, because the Farmdale Station is located between the Crenshaw Station and La Brea Station.

By September 2010 staff had revised the Expo implementation plan to offset the construction problems noted above. At that time a shorter route was developed for the first phase of the project. As currently planned the revised initial operating segment (Phase 1-A) would run from the 7th & Metro Station in downtown Los Angeles to the Crenshaw Station, a distance of about 5.5 miles. This shorter route would serve eight rail stations along the alignment, and is planned to begin operation on or about September 2011, but not later than December 2011.

Phase 1-B of the Expo line is proposed to be implemented in June 2012. At issue is whether this phase of the project should be implemented as originally proposed, which is to extend the rail line from La Cienega Station to the Culver City Station, or whether it should also include the remaining three stations west of Crenshaw Station. In other words, once Phase 1-A is implemented in September or December 2011, should Metro proceed to extend the rail line westward in the spring of 2012 as each station is completed, or wait until the June Shakeup and open the remaining four stations at that time? From a management perspective, it may be wise to modify Phase 1-B and open the remaining four stations at the same time.

Figure 2 illustrates the completed rail alignment to be operated once Phase 1 is implemented in its entirety. A total of twelve rail stations would be served.

FIGURE 2
METRO EXPO LINE PHASE 1 REVISED



EXPO LINE BUS/RAIL INTERFACE PLAN

Master Plan

The bus/rail interface plan discussed in this report is intended to serve as both the master plan as well as an interim phasing plan for the project. The master plan was developed based on Metro's Board-adopted Bus/Rail Interface Guidelines. Details of the master plan are contained in **Attachment A**, which identifies the Metro bus lines that will eventually serve the Expo Line and its nineteen stations when fully operational. Also shown is a list of bus lines operated by the regions municipal carriers and the affected stations they are proposed to serve. The latter list is tentative and subject to further review and approval by the affected municipal operators.

Initially the master plan identified 45 Metro bus lines that could potentially serve the new rail line. However, after additional review and analysis, the initial interface

plan was subsequently reduced in scope because some services like local Lines 206 (Normandie Ave) and 209 (Van Ness Ave) could not be modified within the adopted guidelines, because the required reroute would exceed the maximum allowance for added travel time. Several other lines were withdrawn because staff felt they could be better addressed as part of the downtown restructuring plan, which is currently under development.

A review of the master plan shows that most of the bus interface at Expo stations east of, and including the Culver City Station, will be provided by Metro. In fact, many bus lines that operate in this portion of the rail corridor today need little to no modification, because existing routes already operate by or near the rail stations now under construction. Moreover, of those services that will need to be modified, most would be implemented under Phase 1-A, as revised.

Phase 1-A (Revised)

Thirty-one Metro bus lines are proposed to serve the Expo Line under Phase 1-A. The following information provides details of the proposed phasing plan. Most of these lines already serve the rail stations directly and require no further modification to their routes or schedules. Others, however, will require some type of modification in order to do so. Described below are five general categories or types of changes that staff employed in developing the interface plan. Also discussed are the specific bus lines affected by them:

- Line Restructuring
- Line Cancellation
- Added Service
- Service Monitoring
- Status Quo

Line Restructuring

Four bus lines are proposed to be restructured in order to more effectively serve the new rail line. The route of Local Line 42 and Rapid Line 740, for example, are proposed to be rerouted and truncated at the Western Station and Crenshaw Station, respectively. In addition, the route of Express Line 550 is proposed to be shortened and converted to operate as new Limited-stop Line 350 from the San Pedro area to the Artesia Transitway Station. Finally, Local Line 30 is proposed to be extended along San Vicente Blvd in West Los Angeles to ensure replacement service along this corridor for affected riders of Lines 305 and 550,

Line Cancellation

Two lines that now operate in the rail corridor are proposed to be cancelled. They include Local Line 102 and Limited-stop Line 305. Most of the western route of Line 102, for example, operates on Exposition Blvd or near the adjacent Right of Way, duplicating portions of other bus lines and the new rail line. The eastern portion of

the route is also heavily duplicated by other Metro services.

Limited-stop Line 305 is a cross-town route that duplicates over 21 bus lines between South Los Angeles and UCLA, including portions of the Expo Corridor. It is important to note that Lines 102 and 305 are poor performing routes based on Metro's Board-adopted Line Performance Index.

Added Service

Three lines are proposed to operate additional service when the rail line opens. Service on Local Line 40, for example, will be augmented to offset the proposed truncation of Local Line 42 and Rapid Line 740. Similarly, additional service will be added to Local Line 30 and Transitway Line 910 to offset the cancellation of Limited-stop Line 305, and the restructuring of Express Line 550 described earlier.

Service Monitoring

Five additional bus lines in the interface plan are proposed to be monitored closely once the rail line begins operation. The monitoring program is necessary because four of them closely parallel the rail alignment, and some passenger deflection is expected to occur as riders shift their mode of travel from the bus to the train. The four lines in question include Local Lines 35 (Washington Blvd), 37 (Adams Blvd), 38 (Jefferson Blvd) and Limited-stop Line 335 (Washington Blvd). Rapid Line 710, a north-south service, will also be monitored closely to ensure its effectiveness.

Status Quo

Eighteen bus lines round out the proposed interface plan. This group includes 10 local lines, two limited-stop lines and six rapid bus services as shown in the table. No changes are proposed for these lines as of this writing as most appear to provide adequate service levels to ensure balanced passenger loading.

Attachment B identifies the specific bus lines included under Phase 1-A of the interface plan, the type of service modification under consideration, and the rail station(s) they are proposed to serve. Line maps illustrating the proposed change to each of the services noted above is contained in **Attachment C**. The routings shown are not final, particularly the turnaround operations.

Phase 1-B (Revised)

Under Phase 1-B Metro Express Line 439 is proposed to be canceled. In addition, Express Line 534 is proposed to be shortened to terminate at the Culver City Station. By contrast, Local Line 33 and Rapid Line 733 already serve this station with their existing routes. Finally, Local Line 217 is proposed to be extended to serve the La Cienega Station and the Culver City Transit Center.

Phase 2

By contrast with Phase 1-A, few Metro lines are impacted under Phase 1-B and Phase 2 since Metro does not operate as much bus service on the Westside of Los Angeles compared to its municipal partners. Chief among these are Santa Monica Municipal Bus Lines and Culver City Bus.

Metro's interface plan for Phase 2 calls for Express Line 534 to be shortened again; truncated at 4th St & Colorado Blvd in Santa Monica, the west terminal for the Expo Line. Rapid Lines 704 and 720 are also proposed to serve the west terminal since they operate nearby and require little modification.

BUDGET IMPACT

Table 1 provides an estimate of the overall budget impact to implement Phase 1-A and Phase 1-B of the Expo Bus/Rail Interface Plan. As shown in the table, the proposed service modifications listed under both phases are estimated to save nearly 80,000 annual revenue hours, or about \$8 million in operating costs. The lion's share of this saving are proposed to be realized under Phase 1-A, much of it coming from the cancellation of Lines 102, 305 and the restructuring of Lines 42, 550 and 740.

TABLE 1
EXPO BUS/RAIL INTERFACE PLAN
ESTIMATED REVENUE HOUR IMPACT FOR PHASE 1-A & PHASE 1-B

Line	EXPO Bus/Rail Interface - Phase 1-A Crenshaw	Est Rev Hrs	Total RVH Saved Phase 1-A	COMMENTS
			(78,957)	To be implemented 9-1-2011 or later
30	Extend via route of former Line 305 to Sunset/San Vicente; augment service for former Line 305 & 550 riders	11,820		
40	Reinvest service for diverted riders from 42/740	11,567		
42	Move north terminal to Expo Western Station	(18,028)		
102	Cancel line	(16,716)		
206	Reroute to serve Expo Western Station			5,109 - Not conforming to guidelines
209	Reroute to serve Expo Western Station			723 - Not conforming to guidelines
305	Reinvest service for diverted riders from 550			was 4,099 - See Line 30
305	Cancel line	(33,646)		
550	Move north terminal to Artesia TC. Renumber as Line 350- San Pedro to Artesia	(20,575)		
740	Move north terminal to Expo Crenshaw Station	(16,082)		
910	Reinvest service for diverted riders from 550	2,703		
Line	EXPO Bus/Rail Interface - Phase 1-B-Culver City	Est. Rev Hrs	Total RVH Saved Phase 1-B	COMMENT S
			(851)	To be implemented 9-1-12 or later
217	Move south terminal to Culver City TC-peak only	6,496		
439	Cancel line	(6,069)		
534	Move east terminal to Expo Culver City Station	(1,278)		
Line	EXPO Bus/Rail Interface - Phase 2 [FUTURE]	Est. Rev Hrs	Total RVH Saved Phase 2	COMMENT S
			N/A	To be determined
534	Move east terminal to Santa Monica CBD		FUTURE	

EQUIPMENT IMPACT

It is estimated that the proposed modifications identified in Phase 1 of the Expo Bus/Rail Interface Plan will result in a saving of about 26 peak buses.

CONCLUSION

Collectively, the interface plan described in this report will enhance the effectiveness of the transit system in Los Angeles by expanding travel opportunities for the public

through improved connectivity. In addition, these changes will improve the efficiency of transit operations by eliminating excessive duplication of bus service now provided along the rail corridor, nearby corridors and in downtown Los Angeles.

NEXT STEPS

The Expo Interface Plan will undergo additional internal review over the next few months. Early next year the Plan will undergo a public hearing to receive input from the community (February 2011). Board action is anticipated by late spring (March 2011) with start-up operation proposed for September 2011 or later.

ATTACHMENT

A---Master Plan for Exposition Line

B---Expo Bus Rail Interface Plan: Phase 1-A C---Line Maps

ATTACHMENT A
EXPO MASTER BUS/RAIL INTERFACE PLAN (Revised October, 2010)

EXPO RAIL STATION	Existing Conditions		* Open September 2011	**Open June 2012	***Open June 2015
	MINIMUM ACCESS (STATUS QUO)	INTERMEDIATE ACCESS (PHASE 1-A) *	(PHASE 1-B) **	MAXIMUM ACCESS (PHASE 2)***	
7 TH & METRO (Phase 1A)	20, 28, 51, 52, 352, 439, 720, 728, 910	20, 28, 51, 52, 352, 439, 720, 728, 910	20, 28, 51, 52, 352, 439, 720, 728, 910	20, 28, 51, 52, 352, 439, 720, 728, 910	20, 28, 51, 52, 352, 720, 728, 910
PICO	30, 33, 81, 439, 730, 733, 910	30, 33, 81, 439, 730, 733, 910	30, 33, 81, 439, 730, 733, 910	30, 33, 81, 439, 730, 733, 910	30, 33, 81, 730, 733, 910
23 RD ST	35, 37, 81, 335, 603, 910	35, 37, 81, 335, 603, 910	35, 37, 81, 335, 603, 910	35, 37, 81, 335, 603, 910	35, 37, 81, 335, 603, 910
JEFFERSON	38, 81, 102, 200, 910	38, 81, 102, 200, 910	38, 81, 200, 910	38, 81, 200, 910	38, 81, 200, 910
USC / TROUSDALE	81, 102, 200, 381, 550, 910	81, 102, 200, 381, 550, 910	81, 200, 381, 910	81, 200, 381, 910	81, 200, 381, 910
VERMONT	102, 204, 550, 754	102, 204, 550, 754	204, 754	204, 754	204, 754
WESTERN	102, 207, 550, 757	102, 207, 550, 757	42, 207, 757	42, 207, 757	42, 207, 757
CRENSHAW	38, 210, 305, 710	38, 210, 305, 710, 740	38, 210, 710, 740	38, 210, 710, 740	38, 210, 710, 740
FARMDALE (Phase 1B)	38	38	38	38	38
LA BREA	38, 212, 312	38, 212, 312	38, 212, 312	38, 212, 312	38, 212, 312
LA CIENEGA	Metro 38, 105, 439, 705; CC 4, 5	Metro 38, 105, 439, 705; CC 4, 5	Metro 38, 105, 439, 705; CC 4, 5	38, 105, 217, 439, 705; CC 4, 5	38, 105, 217, 705
VENICE / ROBERTSON	Under Construction	Under Construction	Under Construction	33, 220, 534, 733	33, 220, 733
NATIONAL / PALMS (Phase 2)					SM 6 & 12
WESTWOOD					SM 8 & 12; CC3; DOT 431
SEPULVEDA					SM 4, 7 & 707; CC6 & 706
BUNDY					SM 5, 10 & 14
OLYMPIC / 26 TH ST					SM 5 & SM Sunset
COLORADO / 17 TH ST					SM 5, 6 & SM Sunset
COLORADO / 4 TH ST					Metro 534, 704, 720 & 733; SM 1, 4, 5, 7-10, 703, 704 & 707

Lines 42, 217, 220, 534, AND 740 are rerouted to rail line. Lines 102, 305, and 439 are canceled. Line 550 renumbered to Limited Line 350 and removed from rail corridor. Municipal operator plan is tentative only and will be modified.

Note: Phase 1-A to operate only to Crenshaw Station instead of La Cienega Station. Changes to Line 217 & 439 deferred until Phase 1-B.

**ATTACHMENT B
EXPOSITION BUS/RAIL INTERFACE: PHASE 1-A CORRIDOR LINES**

LINE	EXPOSITION STATION(S) SERVED			Proposed Service Modification
	Existing Service Within 0.25' From Station Location	Proposed Station(s) to be Served	Proposed Service Modification	
20	7 th & Metro	7 th & Metro	None	None
28	7 th & Metro	7 th & Metro	None	None
30	Pico	Pico	Extend route from Pico Rimpau to Sunset/San Vicente to replace 305/550 change; augment service	Extend route from Pico Rimpau to Sunset/San Vicente to replace 305/550 change; augment service
35-335	23 rd St	23 rd St	Monitor service	Monitor service
37	23 rd St	23 rd St	Monitor service	Monitor service
38	Jefferson, Crenshaw, Farmdale, La Brea, La Cienega	Jefferson, Crenshaw, Farmdale, La Brea, La Cienega	Monitor service	Monitor service
40	None	None	Augment service to offset 42-740 change	Augment service to offset 42-740 change
42	None	Western Station	End line at Western Station	End line at Western Station
81-381	USC, Jefferson, 23rd St, Pico	USC, Jefferson, 23rd St, Pico	None	None
102	Jefferson, USC, Vermont, Western	None	Cancel line	Cancel line
105	La Cienega	La Cienega	None	None
200	Jefferson, USC	Jefferson, USC	None	None
204	Vermont	Vermont	None	None
207	Western	Western	None	None
210	Crenshaw	Crenshaw	None	None
212-312	La Brea	La Brea	None	None
305	Crenshaw	Crenshaw	Cancel line; Line 30 replaces San Vicente trips	Cancel line; Line 30 replaces San Vicente trips
550	USC, Vermont, Western	None	Discontinue route north of Artesia Transit Center; renumber as Limited Line 350	Discontinue route north of Artesia Transit Center; renumber as Limited Line 350
603	23 rd St	23 rd St	None	None
705	La Cienega	La Cienega	None	None
710	Crenshaw,	Crenshaw,	Monitor service	Monitor service
720	7 th & Metro	7 th & Metro	None	None
728	7 th & Metro	7 th & Metro	None	None
730	Pico	Pico	None	None
740	None	Crenshaw	End northbound route at Crenshaw Station	End northbound route at Crenshaw Station
754	Vermont	Vermont	None	None
757	Western	Western	None	None
910	USC, Jefferson, 23 rd St, Pico, 7 th Metro	USC, Jefferson, 23 rd St, Pico, 7 th Metro	Augment service north of Artesia Transit Center to offset 550 change	Augment service north of Artesia Transit Center to offset 550 change

ATTACHMENT C DRAFT

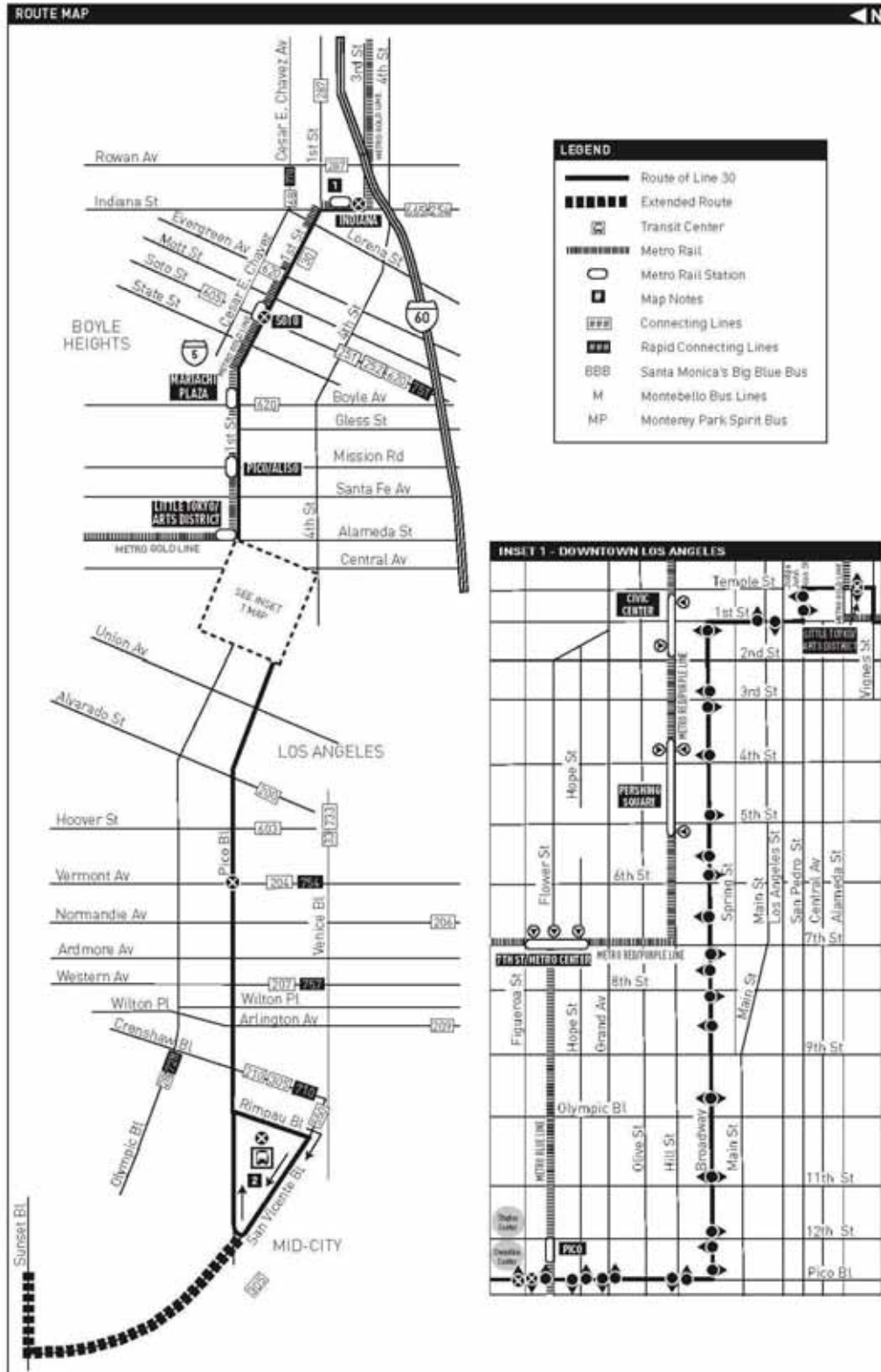
PHASE 1-A BUS/RAIL INTERFACE PLAN

LINE MAPS

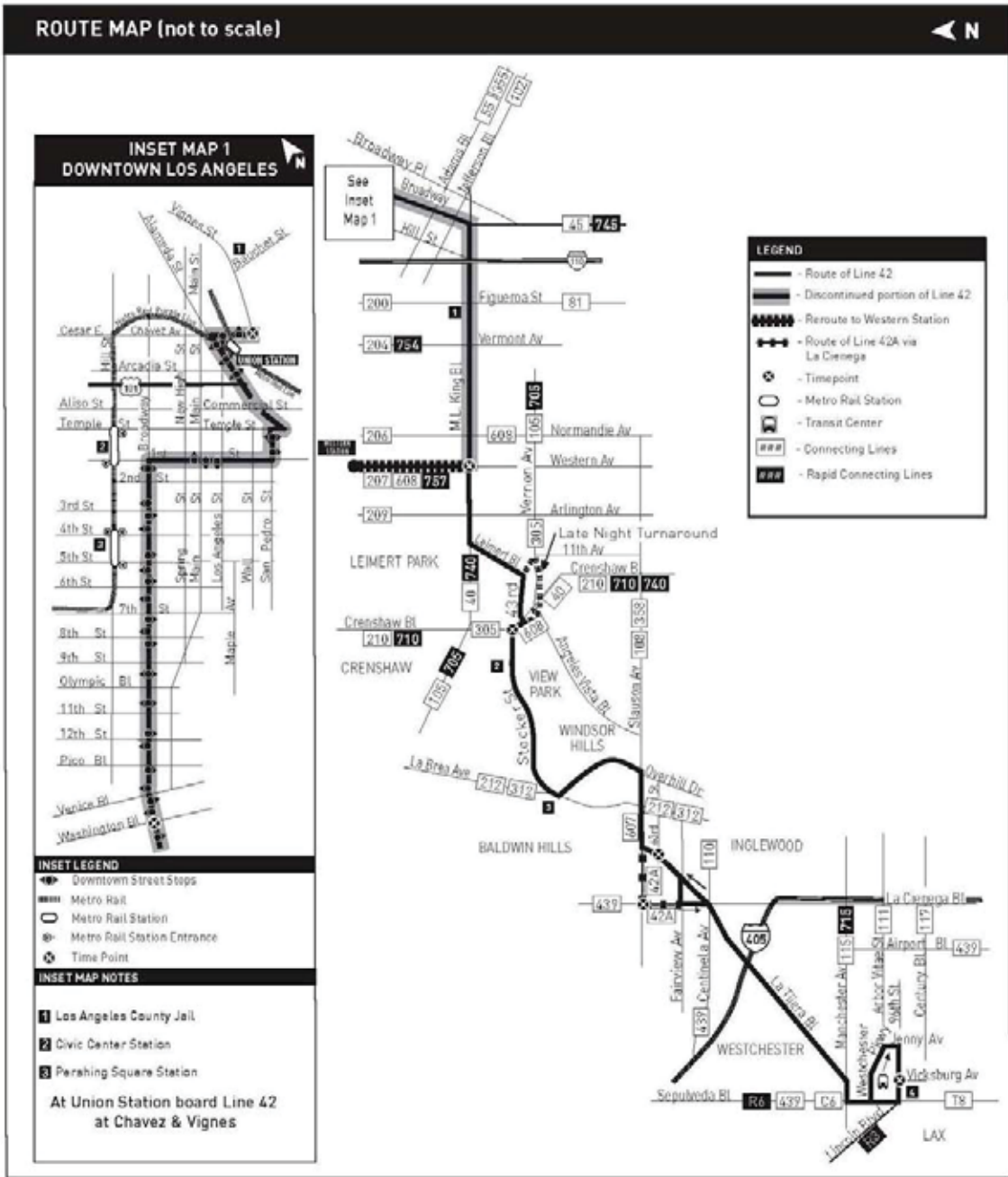
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RESTRUCTURED LINES

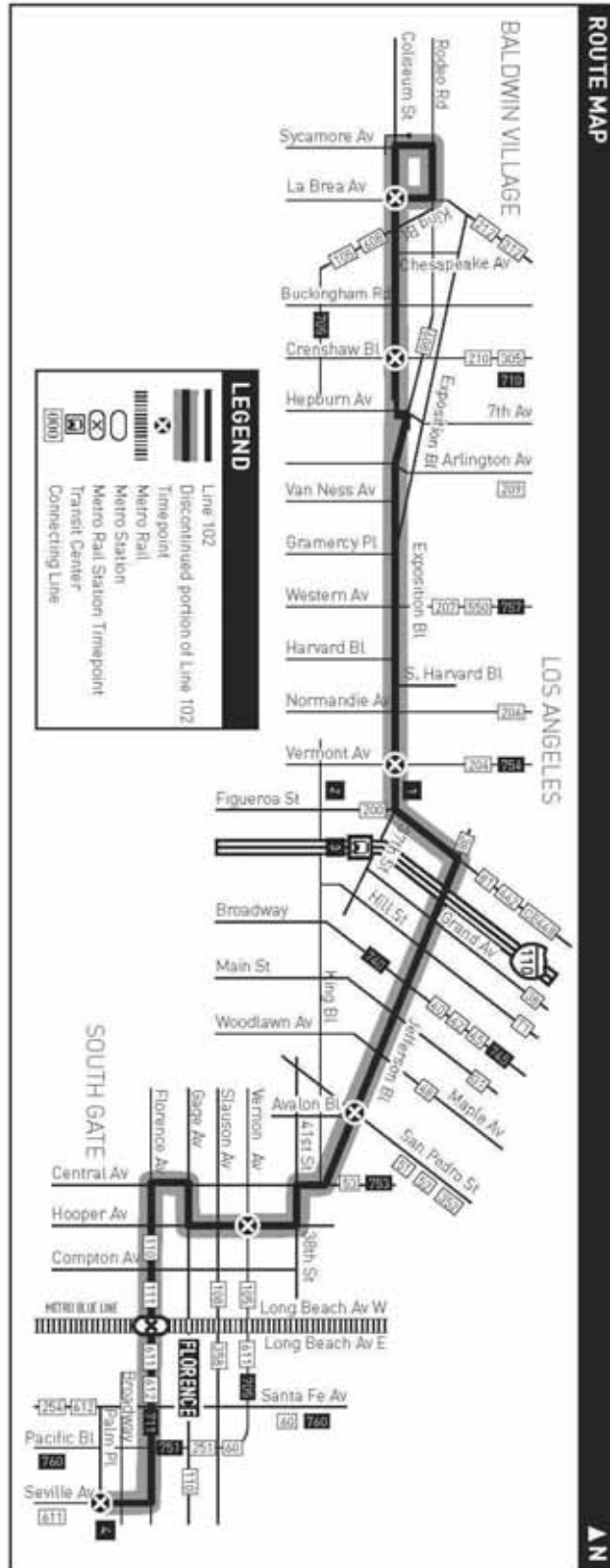
EXPOSITION LINE BUS/RAIL INTERFACE PLAN LINE 30 EXTENDED VIA SAN VICENTE BL TO SUNSET BL



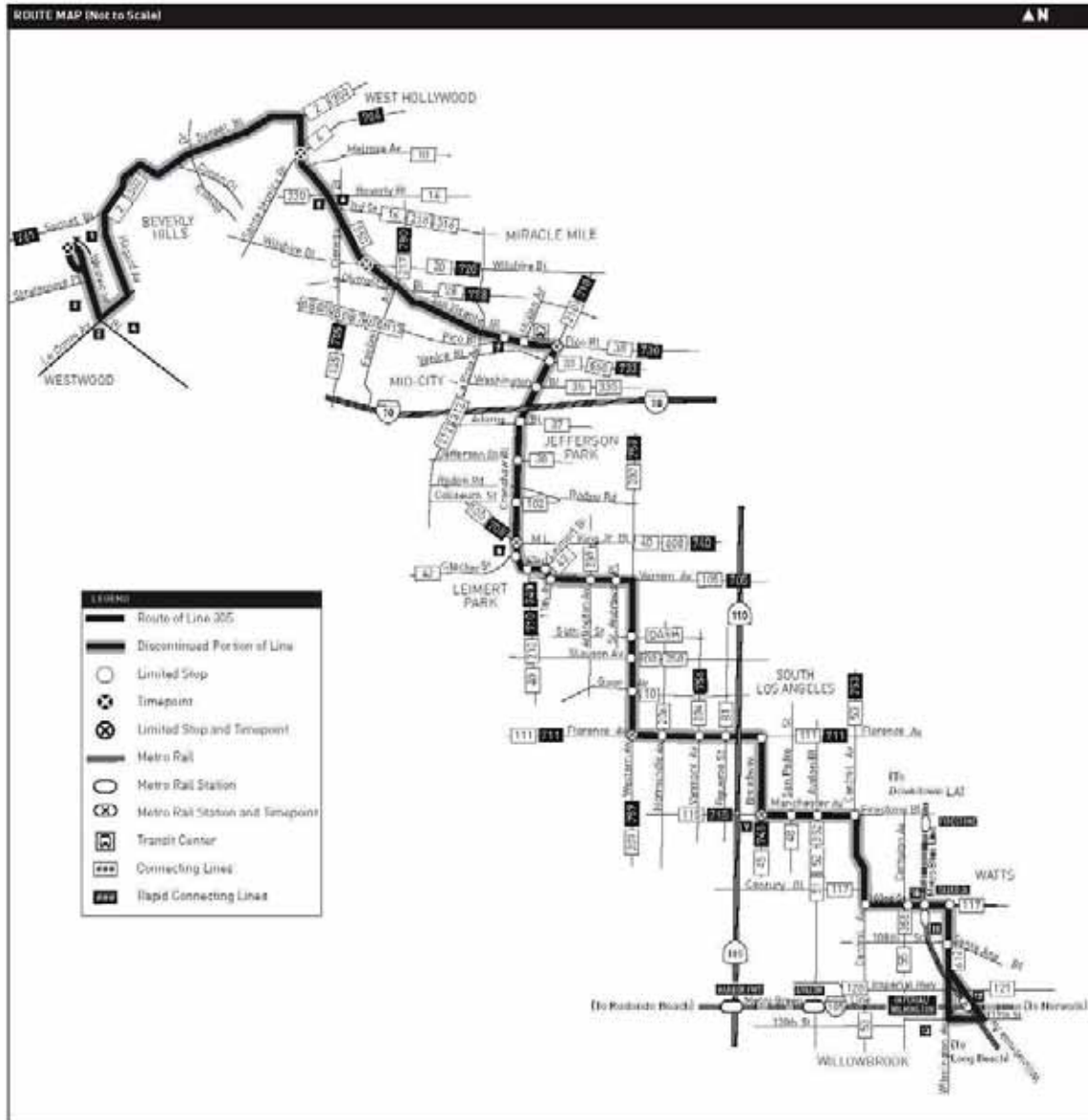
EXPOSITION LINE BUS/RAIL INTERFACE PLAN LINE 42 TRUNCATED AT WESTERN STATION



EXPOSITION LINE BUS/RAIL INTERFACE PLAN LINE 102 DISCONTINUED



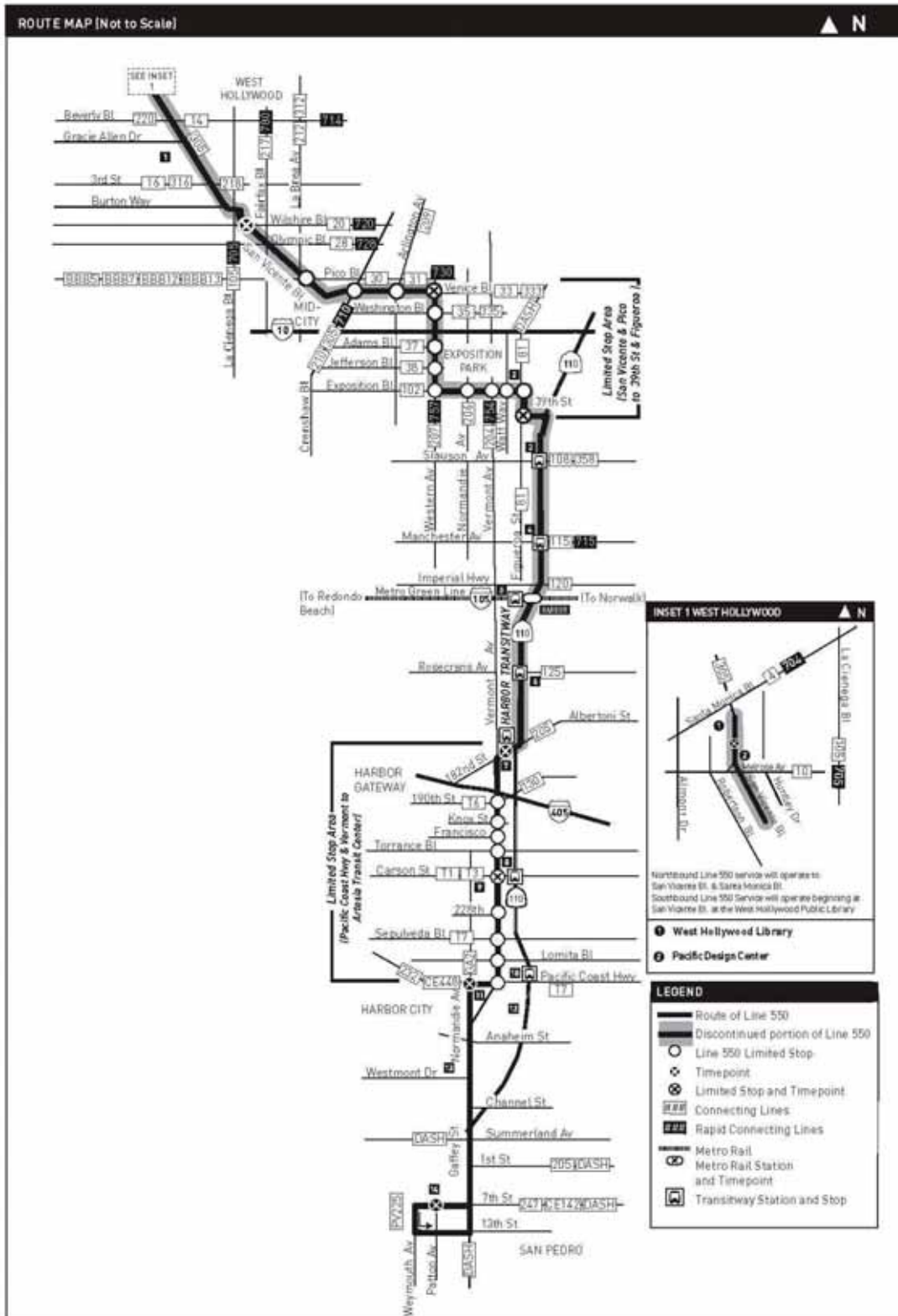
EXPOSITION LINE BUS/RAIL INTERFACE PLAN LINE 305 DISCONTINUED



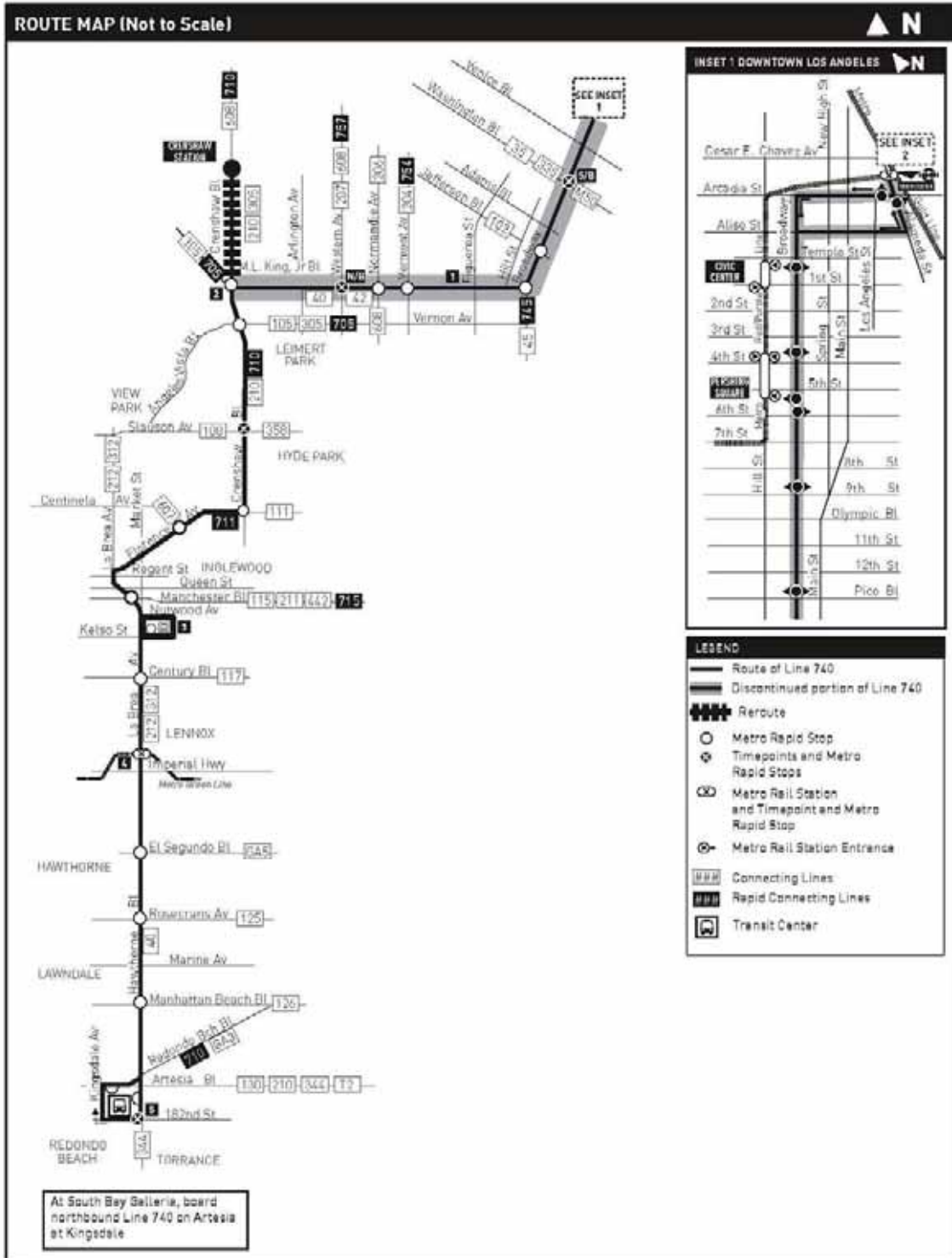
EXPOSITION LINE BUS/RAIL INTERFACE PLAN

LINE 550 DISCONTINUED NORTH OF ARTEISA TRANSIT CENTER

REMAINING SERVICE RENUMBERED AS LIMITED LINE 350



EXPOSITION LINE BUS/RAIL INTERFACE PLAN LINE 740 DISCONTINUED EAST OF CRENSHAW STATION



APPENDIX 5
Exposition Light Rail Bus/Rail Interface Impacts

BUS LINE IMPACTED		FY09				FY10				FY11 (Q3)				FY12 (EXPO Opening)				
Line	Service Type	Direction	Peak Buses	Weekday Boardings	Weekday Revenue Service Hours	Brdgs. Per RSH	Peak Buses	Weekday Boardings	Weekday Revenue Service Hours	Brdgs. Per RSH	Peak Buses	Weekday Boardings	Weekday Revenue Service Hours	Brdgs. Per RSH	Peak Buses	Weekday Boardings	Weekday Revenue Service Hours	Brdgs. Per RSH
30	Local	E/W	23	20,232	283.2	71.4	24	16,668	259.2	64.3	19	13,078	204.5	64.0	22	15,778	233.9	67.5
40	Local	N/S	24	20,492	312.1	65.7	29	17,718	314.9	56.3	40	23,840	420.1	56.7	35	25,040	389.7	64.3
42	Local	N/S	9	5,492	122.7	44.8	9	4,904	122.4	40.1	*	*	*	*	*	*	*	*
102	Local	E/W	7	2,196	56.4	38.9	5	1,981	56.9	34.8	3	1,634	46.7	35.0	0	0	0	0
217	Local	N/S	16	11,716	186.5	62.8	18	10,922	185.2	59.0	18	15,212	179.1	84.9	19	15,502	188.1	82.4
200	Local	N/S	21	15,794	181.4	87.1	21	14,918	182.5	81.7	17	9,341	160.7	58.1	18	9,641	175.9	54.8
305	Local	N/S	8	3,012	101.3	29.7	8	2,760	105.2	26.2	8	2,553	90.8	28.1	0	0	0	0
439	Express	N/S	6	1,006	66.7	15.1	6	954	66.2	14.4	6	450	32.8	13.7	0	0	0	0
534	Express	E/W	18	3,156	130.1	24.3	14	3,085	131.9	23.4	13	2,729	127.8	21.4	13	2,729	127.8	21.4
550	Express	N/S	12	2,983	105.5	28.3	10	2,836	109.7	25.9	9	3,003	95.8	31.3	3	2,303	42.6	54.1
730	Rapid	E/W	12	5,836	118.3	49.3	12	5,096	117.6	43.3	8	4,947	93.5	52.9	0	0	0	0
740	Rapid	N/S	20	10,041	195.1	51.5	19	9,264	194.9	47.5	18	8,571	171.2	50.1	13	7,071	140.0	50.5

Lines Cancelled

*Line 42 bus requirements are shared with Line 40.

Notes:

1. Ridership on cancelled bus lines will be absorbed by other restructured bus lines and the Exposition Light Rail.
2. Boardings and RSH beyond FY 2012 are expected to be relatively stable for the next several fiscal years.

APPENDIX 6
GOLD LINE FOOTHILL EXTENSION

Ms. Tanya Patsaouras
Station Coordinator
Metro Gold Line Foothill Extension
Construction Authority
406 E. Huntington Drive, Suite 202
Monrovia, CA 91016-3633

May 11, 2011

Dear Ms. Patsaouras:

We appreciated the opportunity to meet with you and your consultants on May 4, 2011, to review possibilities for bus rerouting in support of the Foothill Extension Phase 2A of the Metro Gold Line. Our comments and concerns regarding the three stations served by Metro buses (Arcadia, Monrovia, and Duarte) follow.

Arcadia Station

Two Metro bus lines operate in the vicinity of this station: Line 79 operates via Huntington Dr. Eastbound, Left 2nd Ave., and Left St. Joseph St. where it lays over on the north curb. Westbound service resumes from that location to a stop at St. Joseph and 1st Ave., then Left on 1st Ave. to a stop at Santa Clara St., then Right to a stop on Huntington Dr. Line 487 operates in both directions on Santa Anita Ave. through the station area with stops at Colorado St, Santa Clara St, and Huntington Dr.

The rerouting proposed by the Authority's consultant for Line 79 would operate via Huntington Dr. Eastbound, Left 1st Ave., Left Santa Clara St. to a layover stop on the north curb at the light rail station. Westbound service would operate to Left Santa Anita Ave. and Right Huntington Dr. The existing bus stops on the affected segments would no longer be served. The following table shows daily stop activity for Line 79:

	Daily		Saturday		Sun. & Hol.	
	Ons	Offs	Ons	Offs	Ons	Offs
Huntington Dr/1 st Ave EB	16	70	7	34	6	21
St Joseph St/2 nd Ave WB	81	68	68	59	51	33
St Joseph St/1 st Ave WB	7	0	1	0	2	0
1 st Ave/Santa Clara St SB	1	0	0	0	0	0
Huntington Dr/1 st Ave WB	91	2	52	0	38	2

None of these stops would be served by the proposed reroute of Line 79. However, all are within a reasonable walking distance of the proposed station entrance at 1st Ave. and Santa Clara St. The Huntington Dr./1st Ave. stops are about .15 mile away, and the St. Joseph St./2nd Ave. layover is .25 mile away.

The proposed rerouting of Line 487 would operate via Southbound Santa Anita Ave., Left Colorado St., Right 1st Ave., Right Huntington Dr., and Left to Santa Anita Ave. for Eastbound trips. Westbound trips would follow the reverse path. The stop activity is shown in the following table for Line 487:

	Daily		Saturday		Sun. & Hol.	
	EB	WB	EB	WB	EB	WB
Santa Anita Av/Colorado St	11/8	5/16	3/5	2/8	1/2	0/5
Santa Anita Av/Santa Clara St	7/7	4/11	2/1	1/4	1/1	0/1
Santa Anita Av/Huntington Dr	99/23	22/88	74/19	17/71	57/11	5/46

The Southbound Santa Anita/Colorado stop would have to be relocated to Colorado St after the left turn. Northbound and Southbound stops would have to be established on 1st Ave., north of Santa Clara St., to directly serve the light rail station (this would be .17 mile from the existing Santa Anita/Santa Clara stops). The Northbound Santa Anita/Huntington Dr stop would have to be shared with the existing Line 79 stop on Eastbound Huntington Dr. (after the right turn from Santa Anita Ave.).

All of the turning movements proposed for the rerouted buses will be signal controlled, and appear to have adequate geometrics to support the 40-foot, or 45-foot, buses that could be used on these services. We understand that a signal is proposed to control the intersection of 1st Ave. and Santa Clara St. and would want to ensure that adequate time is made available to permit northbound, left turning buses on Line 79 to clear the grade crossing should a train arrive.

Monrovia Station

Two Metro bus lines would serve this station: Line 264 would operate past the station on Duarte Rd. Line 270 operates past the station on Myrtle Ave. on its way to a terminal in downtown Monrovia at Primrose Ave. and Foothill Blvd..

Line 264 would not be altered. However, the westbound bus stop at Myrtle would need to be relocated further west. This will slightly increase the walking distance to the station entrance on Myrtle Ave. unless a desired pedestrian easement through an existing Duarte frontage property is obtained.

A turn-around and layover space is proposed for Line 270 as part of the station plaza design. This would only be used if the City of Monrovia were to institute a proposed local shuttle bus operation that substantially serves the existing Line 270 corridor through Monrovia. Line 270 operates Monday through Saturday serving 198 passengers on weekdays north of the light rail station, and 80 Saturday passengers north of the station.

Duarte Station

Only Metro bus line 264 serves the Duarte station. Presently, eastbound buses layover immediately east of the City of Hope driveway. When they depart, they operate Left

on Highland Ave., Left on Business Center Dr., Right on Denning Ave., Right on Evergreen Ave., Right on Highland Ave., and Right on Duarte Rd. There is one bus stop on Business Center Dr. immediately after the left turn from Highland Ave. Passengers wishing to travel west from City of Hope board the bus before it leaves its layover as there is no sidewalk, and therefore no bus stop, opposite the City of Hope driveway. The Business Center Dr. stop serves 6 daily, 2 Saturday, and 1 Sunday passenger.

The proposed station improvements would add a bus stop southbound on Highland Ave. immediately north of the station entrance. While this would serve passengers who wish to travel west on Line 264, eastbound arriving passengers would have to alight at the City of Hope, cross the street, and use a planned new sidewalk to access the station (approximately a .15 mile walk). This would be preferable to sitting through a layover before being carried directly to the eastern station entrance. A possible bus stop on the north side of Duarte Rd., opposite the City of Hope driveway, would be unnecessary as passengers from the City of Hope could board buses departing from the existing south side layover as they do now.

Additionally, we noted in reviewing the materials which you provided that Line 187 is proposed to be reconfigured into three separate routes to reduce duplication with the Gold Line extension, and presumably to improve schedule adherence which is a common problem with longer bus lines. The westernmost of the three routes (proposed Line Foothill 186) would operate via Huntington Dr. and Baldwin Ave. to Colorado Blvd. and into East Pasadena. We are concerned because this would duplicate services provided by Metro on both Huntington Dr. (Line 79) and Baldwin Ave. (Line 268), and abandon service along Colorado Place leaving no alternative service for residents along that street.

Sincerely,

Dana Woodbury
Strategic Planning Manager

cc: Reky Hiramoto, Metro Gold Line Foothill Extension Construction Authority
Philbert Wong, Metro
Scott Page, Metro

APPENDIX 7
Mean Miles between Mechanical Failures (MMBMF)
FY09 - FY11

Month	FY	Failures	Hub Miles	MBMF
Jul-08	FY09	2,719	8,613,073	3,168
Aug-08	FY09	2,743	8,682,428	3,165
Sep-08	FY09	2,787	8,424,561	3,023
Oct-08	FY09	2,893	8,863,177	3,064
Nov-08	FY09	2,403	8,080,112	3,363
Dec-08	FY09	2,522	8,496,907	3,369
Jan-09	FY09	2,795	8,518,342	3,048
Feb-09	FY09	2,670	7,843,063	2,937
Mar-09	FY09	2,738	8,626,691	3,151
Apr-09	FY09	2,674	8,525,641	3,188
May-09	FY09	2,804	8,466,641	3,019
Jun-09	FY09	2,636	8,453,225	3,207
Jul-09	FY10	3,022	8,775,886	2,904
Aug-09	FY10	3,064	8,476,177	2,766
Sep-09	FY10	2,986	8,330,682	2,790
Oct-09	FY10	2,851	8,650,571	3,034
Nov-09	FY10	2,475	8,330,015	3,366
Dec-09	FY10	2,539	8,682,284	3,420
Jan-10	FY10	2,322	8,144,447	3,508
Feb-10	FY10	2,451	7,620,604	3,109
Mar-10	FY10	2,548	8,545,660	3,354
Apr-10	FY10	2,267	8,287,802	3,656
May-10	FY10	2,292	8,183,902	3,571
Jun-10	FY10	2,298	8,227,607	3,580
Jul-10	FY11	2,353	8,196,292	3,483
Aug-10	FY11	2,535	8,265,687	3,261
Sep-10	FY11	2,590	7,952,460	3,070
Oct-10	FY11	2,377	8,186,396	3,444
Nov-10	FY11	2,221	7,875,794	3,546
Dec-10	FY11	2,356	7,936,817	3,369
Jan-11	FY11	2,031	7,579,976	3,732
Feb-11	FY11	1,833	7,002,339	3,820
Mar-11	FY11	2,162	7,821,401	3,618
Apr-11	FY11	1,980	7,444,074	3,760

APPENDIX 8 GLOSSARY OF TERMS

BRT – Bus Rapid Transit is a bus service operated on exclusive rights-of-way (busway), HOV and on short stretches of street lanes designated for bus use.

Bus/Rail Interface Plan –The integration of bus and rail services at rail stations. Generally the integration of a bus lines that travel near or cross a rail corridor, which may require a reroute of the line to connect with a rail station.

Signal Priority – A system of traffic controls in which buses are given priority under certain conditions over other forms of transportation.

CARB – The California Air Resources Board was established by the California Legislature in 1967 to attain and maintain healthy air quality, conduct research into the causes of and solutions to air pollution, and systematically attack the serious problem caused by motor vehicles, which are the major causes of air pollution in the State. Since its formation CARB has worked with the public, the business sector, and local governments to protect public health, the economy, and state ecological resources through cost-effective reduction of air pollution.

SCAQMD –The South Coast Air Quality Management District, formerly called Air Pollution Control District, has authority for control of emissions from stationary sources within the Los Angeles region. The control includes restrictions on use of paints and solvents by site. Through extension of the agency's on-site emission control the SCAQMD sets extensive requirements on employers for ride sharing encouragement.

CNG – Is Compressed Natural Gas fuel that is becoming an alternative to the diesel fuel commonly used in transit buses. The attraction of CNG is due to its ability to meet the low emission regulations being imposed upon the transit industry and the abundant supply of the fuel in the United States. CNG is pressurized to 3600psi and stored in carbon fiber containment vessels aboard the vehicles.

Congestion Pricing – Congestion pricing is the concept of charging for the use of a transportation facility, such as a roadway, based on the level of congestion. The greater the level of congestion, usually occurring during morning and evening rush hours, the higher the cost to use the facility.

Deadhead – The movement of a transit vehicle without customers aboard, often to and from a terminal or from one route to another.

High Capacity Vehicle – Any bus that provides seating for more than 40 passengers. Includes double deck, 45-foot and articulated buses.

HOV Lanes – High-Occupancy Vehicle Lanes are lanes in streets and highways set aside for High Occupancy Vehicles (vehicles with multiple occupants). Such lanes are also called "diamond" or carpool lanes and rules for their use are posted.

HOT Lanes – High-Occupancy Toll lanes are designated lanes that motorists driving alone can use if they pay a toll, allowing them to avoid traffic delays in the adjacent regular lanes. HOT lanes are usually combined with high-occupancy-vehicle (HOV or carpool) lanes that have enough capacity to handle more vehicles. Toll-paying drivers and toll-free carpools/vanpools share the lane, increasing the number of total vehicles using the HOV/HOT lane and generating revenues that can be used for transportation improvements.

MSRC – The Mobile Source Air Pollution Reduction Review Committee whose sole mission is to fund projects that reduce air pollution from motor vehicles within the South Coast Air District in Southern California. Grants fund the implementation of programs to reduce air pollution from motor vehicles pursuant to air quality plans and provisions of the California Clean Air Act.

M3 – The Maintenance & Material Management system is a material, equipment, and facilities management system that automates the control, planning, acquisition and distribution of inventory and tracking of maintenance activities.

NTD – The Federal Transit Administration (FTA) collects and disseminates data on the state of mass transportation via the National Transit Database (NTD) program. Over 600 of the nation's transportation providers submit data to the NTD annually. Both the public and private sectors use this data to assess the current state of mass transit and plan for the future.

The National Transit Database is the mechanism through which the Federal Transit Administration collects uniform data needed by the Secretary of Transportation to administer Department programs. The data collected consists of selected financial and operating data that generally describe mass transportation characteristics.

Pull-in – The trip from the end of revenue service back to the Division.

Pull-out – The trip from the Division to the point where revenue service begins.

Route Performance Indicator – A quantitative measure of how well an activity, task, or function is being performed. In transportation systems, it is usually computed by relating a measure of service output or use to a measure of service input or cost

Service Duplication – When two or more services operate along the same streets, during the same hours of the day and serve common origins and destinations.

ZEB – Zero Emission Bus is a vehicle that emits no tailpipe pollutants from the onboard source of power.

One Gateway Plaza
Los Angeles, CA 90012-2952

213.922.6000
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E) Rail Fleet Management Plan

Appendix E includes the LACMTA FY 2012-FY 2035 Draft Rail Fleet Management Plan, dated August 2011.

Los Angeles County Metropolitan Transportation Authority

Rail Fleet Management Plan FY 2011 to FY 2035

Draft

August 23, 2011



Rail Fleet Management Plan

Revision History

Revision	Date	Changes	Notes
Initial	June 23, 1997	All	
1	February 25, 2004	All	
2	June 5, 2009	All	Final
3	October 8, 2010		
4	August 23, 2011	Update	Draft

Rail Fleet Management Plan

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- Appendix 5 – Projected Vehicle Distribution by Line
- Appendix 6 – Projected Vehicle Distribution by Maintenance Facility

Acronyms

AC.....	Alternating Current
AL.....	Subway Track Alignment Left (from Union Station Westbound)
AR.....	Subway Track Alignment Right (from Union Station Eastbound)
CPUC.....	California Public Utilities Commission
DC.....	Direct Current
Expo.....	Exposition Line
FTA.....	Federal Transit Administration
FY.....	Fiscal Year
HRV.....	Heavy Rail Vehicle
HVAC.....	Heating-Ventilation-Air Conditioning System
LACMTA (Metro).....	Los Angeles County Metropolitan Transportation Authority
LAX.....	Los Angeles International Airport
LRTP.....	Log Range Transportation Plan
LRV.....	Light Rail Vehicle
MMBF.....	Mean Miles between Failures
OSR.....	Operating Spare Ratio
PMP.....	Preventive Maintenance Program
PVR.....	Peak Vehicle Requirement
RFMP (Plan).....	Rail Fleet Management Plan
RFS.....	Rail Fleet Services
ROCC.....	Rail Operations Control Center
VDC.....	Voltage – Direct Current

1.0 INTRODUCTION

The Los Angeles County Metropolitan Transportation Authority (LACMTA or Metro) has determined the current and future rail vehicle fleet requirements, vehicle fleet spare percentage and maintenance practices, based on guidelines set forth by the Federal Transit Administration (FTA). This document has been developed according to the requirements of FTA Circular 5200.1A and in accordance with the March 2, 1999 FTA Guidance for Rail Fleet Management Plans. The scope of this document includes the Metro's rail services currently operating and those planned to begin operation before the conclusion of FY 2022.

Beginning with this revision, the Rail Fleet Management Plan (RFMP or Plan) is considered a living document to be reviewed annually and updated as necessary. The timeframe covered in this issue is FY 2011 through FY 2035, which satisfies the minimum 10-year coverage period required by the FTA Guidance. Unless otherwise stated, all information related to Fiscal Years (FY) noted on tables and appendices should be considered as ending June 30 of the year in reference.

Future events or occurrences that may require an update to the Plan include (but are not limited to):

1. New vehicle procurements
2. Retirement of existing vehicles
3. Rebuild, rehabilitation or overhaul programs
4. Fleet configuration changes or manufacturer modifications
5. System changes
6. Service delivery changes that impact peak vehicle requirements, vehicle mileage or passenger load factors
7. Changes to the spare ratio

The Plan has three primary purposes: 1) to describe and evaluate Metro's existing rail operations and maintenance facilities; 2) to identify and outline the current and future revenue vehicle fleet and facility requirements; and 3) to become a source for capital and operating budget preparation.

Presentation of future fleet size requirements and maintenance practices enables LACMTA to effectively and efficiently plan and budget for, and the Federal Transit Administration to clearly oversee, the mid and long term vehicle procurement needs necessary to support revenue service. Vehicle requirement projections allow associated procurement processes to be initiated in timely fashion to allow for adequate vehicle availability when service expansions or new projects are expected to be operational, in turn maintaining high quality rail transit service delivery.

2.0 GLOSSARY

Provided in this section is brief list of transportation terms and phrases used in this plan, and appropriate definitions.

30/10 Initiative – Is an initiative advanced to leverage future Measure R sales tax receipts to secure low-interest loans and build and operate each of the rail transit projects identified in the LRTP. Essentially, 30/10 Initiative proposes to build 30 years worth of projects in the next 10 years.

Active Fleet - That portion of the transit operator's total fleet which is operable for service, including the peak vehicle requirement, ready reserve and maintenance spares.

California Public Utilities Commission - Is a State department responsible for, among other regulatory responsibilities, regulating rail system safety.

Consist - In rail systems, the makeup or composition (number and specific identity) of individual units (or cars) of a train.

Cycle Time - The time the train needs during revenue service to make one cycle, including travel time in each direction of travel, and any necessary recovery time.

Dwell Time - The time required between the arrival and departure of a train at non-terminal station to allow for alighting and boarding of passengers.

Federal Transit Administration (FTA) - FTA is a part of the U.S. Department of Transportation (DOT). FTA administers the federal program of financial assistance for public transportation.

Gap Train / Ready Reserve Train - A train stationed at a terminal or maintenance facility that is ready to enter into revenue service to provide consistent delivery of service. LACMTA uses these trains to fill-in service when another train is delayed or incurs a mechanical problem.

Grade Crossing/Separation - A highway or railroad crossing separated from other traffic using an underpass or overpass.

Headway - The time interval between vehicles moving in the same direction on a particular route.

Heavy Maintenance Facility (Yard) - A support location for a system used for vehicle maintenance and large scale repair (including body work /painting), storage and staging.

Heavy Rail Vehicle (HRV) - Rail cars with motive capability, driven by electric power taken from overhead lines or third rails, configured for passenger traffic and are usually operated on exclusive right-of-way (ROW). LACMTA Heavy Rail Vehicles take power from a third rail.

Light Maintenance Facility (Yard) - A support location for a system used for vehicle maintenance and light repairs, storage and staging.

Light Rail Vehicle (LRV) - A transit mode that typically is an electric railway with a light volume traffic capacity compared to heavy rail (HR). It is characterized by passenger rail cars operating singly (or in short trains, usually up to three-cars) on fixed rails in shared or exclusive right-of-way (ROW), low or high platform loading, and vehicle power drawn from an overhead electric line via a trolley or a pantograph. LACMTA light rail vehicles utilize high platform boarding, operate in trains up to three cars in length and draw power from a overhead catenary system using a pantograph.

Load Factor - The ratio of passengers actually carried versus the total passenger seating capacity of a vehicle. A load factor of greater than 1.0 indicates that there are standees on that vehicle.

Los Angeles County Metropolitan Transportation Authority (LACMTA) – Is the regional transportation planning agency and public transit operator for Los Angeles County. LACMTA operates light rail and heavy rail transit systems, as well as a full range of bus services. This Plan refers only to the rail fleet and supporting infrastructure.

Maximum Load Point - The location(s) along a route where the vehicle passenger load is the greatest. The maximum load point(s) generally differ by direction and may also be unique to each of the daily operating periods. Long or complex routes may have multiple maximum load points.

Measure R – Is a half-cent sales tax measure approved by Los Angeles County voters on November 2008 and took effect in July 2009. Measure R will provide funding for transportation improvements over the next 30 years. Among improvements are a host of rail extensions and new lines. Some of these projects are anticipated to initiate service prior to the horizon year of Plan.

Overhead Catenary System - The overhead catenary system (OCS) is the electric traction power supply contact wires suspended over the track, for current collection by trains through their pantographs, and the support system for the contact wires.

Pantograph - Is the device used atop vehicles to draw power from an overhead catenary system. LACMTA uses pantographs on light rail vehicles.

Peak Direction - The direction of travel with the heaviest transit usage.

Peak Hour - A single hour during the morning or afternoon period when transit riding is heaviest.

Pocket Track – Storage track situated between two revenue tracks with access from either track, allowing a vehicle or train to be taken off the primary revenue tracks for staging or emergency maintenance. Can also be used as a crossover between the two revenue tracks.

Preventive Maintenance - Preventative Maintenance (PM) are programmed inspection and maintenance activities done on a fixed time or mileage basis, designed to improve vehicle, system, or equipment reliability and to minimize in-service failures.

Pre-Revenue Service - The period prior to the beginning of revenue service on a new line or line extension. LACMTA commonly refers to pre-revenue service as the time following construction, after

successful systems testing, when non-revenue scheduled service is tested prior to the beginning of revenue service. Typically, the period of time for pre-revenue testing is approximately 8 weeks, however, could be longer depending on special or unusual circumstances.

Revenue Service - When a revenue vehicle is in operation over a route and is available to the public for transport.

Revenue Vehicle Service Hour - The measure of scheduled hours of service available to transport passengers. It is equivalent to one transit vehicle traveling one hour in revenue service. As such, a three-car train in revenue service for 1 hour equals a total of three Revenue Vehicle Service Hours. Recovery/layover time is included, and deadhead hours are excluded from the calculation.

Right-of-way (ROW) - The land over which a public road or rail line is built. An exclusive right-of-way is a road, lane, or other right-of-way designated exclusively for a specific purpose or for a particular group of users, such as light rail vehicles or buses.

Revenue Operations / Non-Revenue Operations - Revenue Operations includes the time when a vehicle is available to the general public and there is an expectation of carrying passengers. Revenue service includes layover / recovery time. Non-Revenue Operations include all other times, typically deadheading between the last revenue station and the maintenance yard.

Run Time, or Running Time - The time the vehicle travels on the route in passenger service, typically from the beginning to the end of a route. It includes all travel and station dwell time required to go from the point of the first passenger station to the last passenger station on a specific trip.

Siding Track – Storage track situated outside of two revenue tracks with access from the adjacent track (and the distant track via an additional set of crossovers), allowing a vehicle or train to be taken off the primary revenue tracks for staging or emergency maintenance.

Spare Ratio / Spare Vehicle Ratio - The proportion of the vehicle fleet maintained to meet routine and heavy maintenance requirements, meet unexpected vehicle breakdowns or accidents, and thereby preserve scheduled service operations. The spare ratio is the ratio between the portion of the fleet not required to meet the peak vehicle need, with the peak vehicle requirement.

Storage and Inspection Facility – A support location that is used only for vehicle cleaning, inspection and storage.

Tail Track – Non-revenue tracks at the end of a terminal station, allowing a vehicle or train to be taken off the primary revenue tracks for staging or emergency maintenance.

Third Rail - Is an electrically powered rail running parallel to standard rail tracks. The LACMTA subway system heavy rail vehicles draw power from the third rail.

Transitway - A transit-only guideway used by public transit vehicles. Transitways can be grade separated and provide prioritization over regular traffic when shared with other modes.

Travel Time – The time required to travel between two stations.

3.0 SYSTEM DESCRIPTION

Metro's rail system is currently comprised of three light rail and two heavy rail lines. Combined, there is more than 76 miles of revenue service track, with 73 stations (including four transfer stations), servicing 305,000 weekday boardings and 94 million annual boardings.

3.1 Light Rail – Lines in Revenue Service

- **Blue Line** – service between Downtown Long Beach and Downtown Los Angeles; 21.3 miles, 22 stations (1 side platform station), 3-car platforms; double track – tunnel, street run, private right-of-way with grade crossings, aerial structures; transfer stations to Green, Red, Purple Lines; 22-hour span of service; 81,000 weekday and 25.4 million annual boardings.
- **Green Line** – service between North Redondo Beach and Norwalk; 19.6 miles, 14 stations, 10 stations with 3-car platforms, 4 stations with 2-car platforms; double track – aerial structures, fully grade-separated private right-of-way; transfer station to Blue Line; 22-hour span of service; 40,500 weekday and 12.5 million annual boardings.
- **Gold Line** – service between East Los Angeles and East Pasadena; 19.4 miles, 21 stations (5 side platform stations), 3-car platforms; double track – tunnel, street run, private right-of-way with grade crossings, aerial structures; transfer station to Red, Purple Lines; 21-hour span of service; 36,000 weekday and 11.2 million annual boardings.

See **Appendix 1 – Metro Rail System Projected Ridership Assumptions / Proposed Scheduled Peak Service Headway** for peak hour scheduled service and projected ridership by line for FY 2010-22.

See **Appendix 2 – Metro Rail System Running and Cycle Time – Current and Projected** for travel time and peak schedule cycle time by line.

3.2 Heavy Rail – Lines in Revenue Service

- **Red Line** – subway service between Los Angeles Union Station and Los Angeles North Hollywood District; 15.0 miles, 14 stations (6 shared with Purple Line), 6-car platforms; double track – subway; transfer stations to Purple, Blue, Exposition, Gold Lines; 21-hour span of service; 150,000 weekday (combined with Purple Line) and 46.9 million annual boardings (combined with Purple Line).
- **Purple Line** – subway service between Los Angeles Union Station and the Los Angeles Wilshire Center District; 5.0 miles (3.9 shared with the Red Line), 8 stations (6 shared with Red Line), 6-car platforms; double track – subway; transfer stations to Red, Blue, Gold Lines; 20-hour span of service.

See **Appendix 1** for peak hour scheduled service and projected ridership by line for FY 2010-22.

See **Appendix 2** for travel time and peak schedule cycle time by line.

3.3 System Map



This map shows Metro’s existing rail system along with projects currently under construction or have commitments to begin construction within the next 6 months. Metro Bus Transitways, as well as the Rail Maintenance Facilities and connecting Metrolink / Amtrak lines are also shown.

3.4 Light Rail Maintenance Facilities

Metro currently has a total of three light rail maintenance facilities.

The Long Beach Maintenance Facility (Division 11) provides vehicle storage, inspection, cleaning and all major, light and running repair functions for all vehicles assigned to the **Blue Line**. The facility is located 15 miles south of Downtown Los Angeles, adjacent to the Blue Line right-of-way between the Del Amo and Wardlow Stations in North Long Beach. Total capacity at this facility is 86 vehicles.

The Hawthorne Maintenance Facility (Division 22) provides vehicle storage, inspection, cleaning, light and running repair functions for all vehicles assigned to the **Green Line**. The facility located at the far west end of the line and is adjacent to the Green Line right-of-way, between Douglas/Rosecrans and Marine/Redondo Beach stations. Future plans call for painting and body repair capabilities, which would be funded by the Exposition Phase II project. The facility does not have provisions for heavy repair, overhauls / reconditioning and structural repairs. Currently, when such repairs are necessary, Green Line vehicles are moved via rail to the Blue Line Maintenance Facility. A non-revenue connector track at Imperial/Wilmington Station connects the Green and Blue Lines. Total capacity at this facility is 39 vehicles.

The Midway Maintenance Facility (Division 21) provides vehicle storage, inspection, cleaning, light and running repair functions for all vehicles assigned to the **Gold Line**. The facility is located 1.5 miles north of Union Station, adjacent to the Los Angeles River and the Gold Line right-of-way, between Chinatown and Lincoln Heights/Cypress Park stations. Maintenance Facilities to handle heavy repairs, painting, and overhauls are currently in construction and anticipated to be operational in FY 2012. Total capacity of Division 21 is 50 vehicles.

3.5 Light Rail Vehicles

Metro's light rail fleet currently consists of 167 vehicles; however, will increase to 171 by the end of 2011 and consistent with an existing procurement. The earliest model introduced and currently in use are 20.9 years old while the newest were only recently put into revenue service. Each vehicle is designed to accommodate a crush load of 175 passengers; however, are scheduled to reasonably accommodate up to 133 passengers (76 seated) during peak service hours.

The following describes each fleet and is described and arranged by the service they are currently assigned.

Sumitomo P865 & P2020

There are 69 Sumitomo LRVs: 54 Sumitomo P865 vehicles are the oldest in the fleet, averaging 20.9 years (date of acceptance) and 15 Sumitomo P2020 vehicles average 16 years (date of acceptance). Despite their average age difference, each of the 69 LRVs currently has more than 1.13 million operating miles. These vehicles will be replaced beginning in FY 2018.

The vehicles are designed for high-level platform boarding and operated in one, two, or three car consists. Each vehicle is approximately 90 feet long, 8 feet – 8 ¾ inches wide and 11 feet – 6 inches tall, weighing 94,000 pounds empty and is capable of operating up to 55 miles per hour. Power is

collected via a pantograph mounted on the roof at one end of the vehicle, using DC chopper propulsion equipment operating at a nominal voltage of 750 VDC. Each vehicle has a Train Operator cab at each end and has an articulation structure in the center of the vehicle.

These vehicles are currently assigned exclusively to the **Blue Line**; however, upon implementation of the Expo Line in FY 2012, they will be integrated into one operational unit and subject to assignment on either line.

Siemens P2000

There are 52 Siemens P2000 vehicles with an average age of 9.0 years (date of acceptance). Each has operated more than 600,000 miles. These vehicles are scheduled to undergo a mid-life overhaul program in FY 2017 and FY 2018.

These six-axle vehicles are capable of operating up to 65 miles per hour and are designed for high-level platform boarding. They can be operated in one, two, or three car consists. Each vehicle is approximately 90 feet long, 8 feet – 8 ¾ inches wide and 11 feet – 6 inches tall, weighing 99,000 pounds empty. Power is collected via a pantograph mounted on the roof at one end of the vehicle, using AC propulsion equipment operating at a nominal voltage of 750 VDC. Each vehicle has a Train Operator cab at each end and has an articulation structure in the center of the vehicle.

These vehicles are currently assigned to the **Green Line**, **Gold Line** and the **Blue Line**. Upon implementation of the Expo Line in FY 2012, vehicles currently assigned to the Blue Line will be integrated into one operational unit and subject to assignment on either line.

Ansaldo-Breda P2550

There are 50 AnsaldoBreda P2550 vehicles on the property in the fleet used for revenue service with an average age of 1-3 years and fewer than 75,000 miles operated. Two vehicles are on property and currently undergoing testing and commissioning. . All 50 vehicles are expected to be available for revenue service prior to the end of Fiscal Year 2012.

These six-axle vehicles are capable of operating up to 65 miles per hour. The vehicles are designed for high-level platform boarding and are operated in one, two, or three car consists. Each vehicle is primarily built with stainless steel and is approximately 90 feet long, 8 feet – 8 inches wide and 11 feet – 6 inches tall, weighing 108,000 pounds empty. Power is collected via a pantograph mounted on the roof near the mid-point of the vehicle, using AC propulsion equipment operating at a nominal voltage of 750 VDC. Each vehicle has a Train Operator cab at each end and has an articulation structure in the center of the vehicle. These vehicles are currently assigned to the **Gold Line**.

Procurement P3010

LACMTA is currently implementing procurement for up to 235 light-rail vehicles. Of these 235 vehicles, 78 will be the initial ‘base-buy’ to support FY 2015 and FY 2016 project implementations. The next 88 vehicles will be necessary to support following planned new lines, extensions, and service adjustments. The remaining 69 are an ‘option-buy’ and would be for vehicle replacements. This

RFMP assumes that all vehicle options will be exercised. All vehicles in this procurement will be assigned to all lines. The timeframe for this procurement requires that initial vehicles arrive and be ready for revenue service beginning in FY 2015.

Table 3.1 depicts the LACMTA light-rail fleet.

Table 3.1: Light-Rail Vehicle Fleet

Manufacturer	Model	No. of Vehicles	Year Placed in Service
Sumitomo	P865	54	July, 1990
Sumitomo	P2020	15	1995
Siemens	P2000	52	2002
Ansaldo-Breda	P2550	43 [50]	2009-2011
TBD	P3010	78 [166-235]	2014

3.6 Heavy Rail Maintenance Facilities

Metro currently has one heavy rail maintenance facility serving the **Red and Purple Lines**. Vehicle storage, inspection, and repair occur at the Heavy Rail Maintenance Facility (Division 20), 1 mile south of Union Station in Downtown Los Angeles. All activities associated with the maintenance of the Heavy Rail Vehicle Fleet are supported at this facility. Total capacity at this facility is 200 vehicles with respect to current layout and configuration.

3.7 Heavy Rail Vehicles

There are 104 Breda A650 vehicles providing service for the **Red and Purple Lines**. The first 30 have an average age of 18.0 years (date of acceptance), with an average of more than 600,000 operating miles per car. The remaining 74 HRVs have an average age of 12.3 years (date of acceptance), with more than 800,000 operating miles per car. These vehicles are capable of operating up to 70 miles per hour.

Each vehicle is designed to accommodate a crush load of 175-200 passengers; however, are scheduled to reasonably accommodate up to 131 passengers (55 seated) during peak service hours.

The vehicles are designed for high-level platform boarding and are operated in two, four, or six car consists. Each vehicle is primarily built with a stainless steel shell, approximately 75 feet long, 10 feet – 4 inches wide and 12 feet – 7 inches tall, weighing 80,000 pounds empty. Power is collected from an energized third rail via a contact shoe on the truck, leading to DC propulsion equipment operating at a nominal voltage of 750 VDC. Two vehicles are combined into a permanent married pair, with shared vital systems. Each vehicle has one Train Operator cab, opposite to the end that is permanently connected with the other car.

LACMTA plans to begin an overhaul program of this fleet beginning in FY 2013. No more than 12 vehicles from the fleet will be unavailable during this overhaul program and should be completed in early FY 2016.

To support the Purple Line Extension from Wilshire/Western to Westwood planned for FY 2021 opening, LACMTA will need to initiate procurement for additional heavy-rail vehicles. The procurement would need to be initiated no later than FY 2013 in order to assure their availability for revenue service prior to the Westside Subway Extension project implementation. Given typical rates of production and delivery, LACMTA would anticipate receiving vehicles in FY 2016 through FY 2019. A procurement should be initiated no later than FY 2013.

Table 3.2: Heavy-Rail Vehicle Fleet

Manufacturer	Model	No. of Vehicles	Year Placed in Service
Breda	A650	30	1993
Breda	A650	74	1999
TBD	TBD	[78]	FY 2016 – FY 2019

4.0 SYSTEM EXPANSION PLANS

The Los Angeles County Metropolitan Transportation Authority is currently active in numerous expansion efforts of the rail network and services. Currently, three new rail line are under construction, , three lines are undergoing Preliminary Engineering, three lines are in advanced planning phases, and two lines are undergoing Alternatives Analysis. Each of these is identified in Measure R and the LACMTA 30-Year LRTP.

Further, LACMTA is actively engaged in an initiative to advance each new project to be completed within the next 10 years. Initially, this was called the “30-10 Initiative”. However, after it was embraced as a model to be replicated nationally, it has since been rebranded as “Fast Forward America”. This RFMP is consistent with the 30/10 Initiative / America Fast Forward.

Although the 30/10 Initiative / America Fast Forward identifies two new projects, the Santa Ana Branch Corridor and the I-405/Sepulveda Pass Corridor, their modes have not been selected and therefore they are not adequately defined for this plan. Projects that are included in this plan are discussed in this section.

4.1 Light Rail – Lines in Construction Phase

- **Exposition Line** (Phase I - Segment 1 & 2) – Service between Downtown Los Angeles and Los Angeles Crenshaw District; 8.6 miles, 12 stations (share 2 Blue Line Stations), 3-car platforms (5 side platform stations); double track – tunnel, aerial, trench, street run, private right-of-way with grade crossings; transfer stations to Blue, Red, Purple Lines; projected 14,000 weekday boardings initial year. FY 2020 projected ridership projected at 43,600 Operations projected to start in FY 2012.
- **Exposition Line** (Phase II) – Service extended from Culver City to Downtown Santa Monica; 6.6 miles, 7 stations, 3-car platforms; double track – aerial structures, private right-of-way with grade crossings and street run. Projected ridership 17,700 initial year. When combined with Exposition I segments 1 and 2, projected ridership is 52,250 for initial year and 80,000 in FY 2030. Operations projected start date is FY 2016.
- **Gold Line** (Foothill Extension – Phase 2A) – Service extended from East Pasadena to Azusa; 11.3 miles, 6 stations, 3-car platforms; double track – private right-of-way with grade crossings, aerial structures; projected 5,100 weekday boardings initial year. Operations projected to start in FY 2016.

4.2 Light Rail – Lines in Final Design/Engineering

- **Crenshaw/LAX** – New service between Exposition/Crenshaw and the Metro Green Line Redondo Beach Station; 8.3 miles, 7 stations, 3-car platforms; double track – private right-of-way with grade crossings, aerial structures, tunnels, street-run, and Metro Green Line; projected 12,650 weekday boardings initial year. The Crenshaw/LAX Line will join the Green Line west of the Imperial/Aviation Station and continue to the Redondo Beach Station. This

RFMP also assumes Crenshaw/LAX Line will serve the South Bay segment to Torrance. Additionally, upon implementation, the Green Line will be re-aligned to operate through a new junction and terminate at the new Aviation/Century Station. Initial weekday boardings are approximately 19,850. In conjunction with other network changes, the Crenshaw Line is projected to have approximately 35,000 average daily boardings in FY 2035. For purposes of this RFMP, revenue operations are projected to start in FY 2018.

- **Regional Connector** – Service extended from 7th/Metro Center through downtown Los Angeles, connecting with Gold Line in Little Tokyo; 1.6 miles, 3 stations, 3-car platforms; double track – private right-of-way in a tunnel. Operations of the Blue Line, Exposition Line and Gold Line to be reconfigured from a 3-line operation to a 2-line cross county operation. This reconfiguration will connect Santa Monica to East Los Angeles via Downtown Los Angeles, and Long Beach to the San Gabriel Valley, also via Downtown Los Angeles. Projected weekday boardings at downtown stations is 19,200 initial year and 24,000 in FY 2035. For purposes of this RFMP, revenue operations are projected to start in FY 2019.

4.3 Light Rail – Lines in Advanced Planning/Design Phase

- **South Bay Extension** – Service extended from Redondo Beach Station to Torrance; 4.6 miles, 4 stations, 3-car platforms; double track – private right-of-way with grade crossings, aerial structures, street-run. For purposes of this RFMP, it is assumed that the Crenshaw/LAX Line will provide the service with revenue operations are projected to start in FY 2018.
- **Green Line Extension to LAX** – Service extended from vicinity of the new Aviation/Century Station (Crenshaw Line), into Los Angeles International Airport. This project is formally in an Alternatives Analysis planning phase. If pursued as a light-rail line, the system will be 1-3 miles, have 1-3 stations, and double tracked. Because design details remain to be determined, fleet characteristics are not included in this RFMP. Implication to fleet is anticipated to be minor. If pursued, revenue operations are anticipated to begin in FY 2018 as an extension of the Green Line.
- **Gold Line (Foothill Extension – Phase 2B)** – Service extended from Azusa to Claremont; 12.4 miles, 5 stations, 3-car platforms; double track – private right-of-way with grade crossings, aerial structures; projected 2,350 weekday boardings initial year and 4,695 in FY 2035. For purposes of this RFMP, revenue operations are projected to start in FY 2020.
- **Gold Line (East Los Angeles Extension – Phase 2)** – Service extended from Atlantic to South El Monte or Whittier; 7-10 miles, 4 or 6 stations, 3-car platforms; double track – private right-of-way with grade crossings, aerial structures, street-run; projected 6,500 weekday boardings initial year and 13,000 in FY 2035. For purposes of this RFMP, revenue operations are projected to start in FY 2020.

The RFMP makes certain assumptions concerning the alignment of light-rail services made possible by network changes. They include the following:

- Effective with the Crenshaw Line and South Bay openings, the Crenshaw Line would operate from Crenshaw/Exposition to the Torrance Regional Transit Center. This line would assume service planned as part of the South Bay Extension. The Green Line would be reconfigured at Imperial/Aviation to the Century/Aviation Station (and possible LAX Station). Therefore, the Crenshaw Line will assume service currently provided by the Green Line at Mariposa, El Segundo, Douglas and Redondo Beach stations. Additionally, the Century/Aviation Station would be served by both the Crenshaw and Green Lines.
- Effective with the Regional Connector opening, the Blue Line would be realigned to assume service to Gold Line stations from Little Tokyo to the Azusa/Citrus Station. The Exposition Line would be reconfigured to assume service from Little Tokyo to Atlantic/Pomona. The Gold Line would cease; however, the line naming designation, either as the Exposition Line or as the Gold Line, or any other designation, has not been determined.

4.4 Light Rail Maintenance Yards

A number of facility expansions will occur to support routine vehicle maintenance needs for lines currently in the construction or planning/design phase. Their purpose and descriptions are provided below.

- To support the increased exposure associated with extended street run sections on the **Gold Line** Eastside Extension, a new Body Shop is currently under construction at Division 21. When complete, it will provide adequate facilities to support vehicle need and greatly reduce the need to move vehicles via truck and trailer to Division 11 for major repairs. This project is expected to be completed in FY 2012.
- The **Expo Construction Authority** is a separate autonomous public agency from LACMTA and charged with planning, design and construction of the **Expo Line Phase I and II**. There is no maintenance facility being constructed for the **Expo Line** Phase I. Vehicle storage track will be built next to the Blue Line at Washington Bl. and Long Beach Ave., approximately 1.8 miles east of the Expo Line. The facility will have capacity for 12 cars and be operational in FY 2012. In the event that storage track is not functionally ready when needed, over-night storage is available for up to 18 cars at the 7th/Metro Center terminal, which is a secure facility. All maintenance and repair work will occur at the Blue Line Maintenance Facility (Division 11), approximately 15 miles south of the Expo Line.

The Expo Authority will construct a new maintenance facility in Santa Monica adjacent to the Exposition Line. This facility, tentatively designated as Division 12, will include: vehicle storage, inspection, cleaning, light and running repair functions for all vehicles assigned to the **Expo Line**. This proposed site would also support vehicles stored at the Washington Storage Track. It is noted that the current proposal for the facility does not have heavy repair, paint or bodywork shops. The only light rail maintenance facility that can currently address these

functions is Division 11, which is near capacity for these specific tasks. Facilities for heavy repairs, such as painting and bodywork will be constructed as part of the project at the Hawthorne Division 22. The proposed facility will have storage capacity for up to 48 vehicles.

- The **Foothill Construction Authority**, working in cooperation with LACMTA, will construct a new maintenance facility located adjacent to the right-of-way in Monrovia. It is tentatively designated Division 14. The maintenance facility will provide vehicle storage, inspection, cleaning and all major, light and running repair functions for vehicles assigned to the **Gold Line**. The proposed facility will have storage capacity for no less than 84 vehicles.

The **Crenshaw Line** project will include a new 18.5 acre storage and maintenance facility located at the southwest quadrant of Arbor Vitae and the Crenshaw right-of-way. This facility is tentatively designated as the Southwest Maintenance Facility, or Division 23, and will work in tandem with Division 22 that currently supports the Green Line. Division 22 is 4.3 miles to the south and will be directly along the ROW for the Crenshaw Line. Division 23 will provide vehicle storage, inspection, cleaning, light and some heavy repair functions. The proposed facility will have storage capacity to support no less than 70 vehicles. Sufficient storage capacity is available to support other project in the immediate vicinity, such as the South Bay Extension.

- The Gold Line Eastside Phase II and Regional Connector projects do not currently plan new maintenance facilities. Instead, Metro plans to use existing facilities for storage and maintenance purposes. Some facilities may be expanded or have fleets re-assigned. With the implementation of the Regional Connector project in FY 2019, four (4) maintenance facilities and one storage area will be directly linked to each other. It will then be possible to leverage functions and available capacity among these facilities to provide operational flexibility where needed.

For the purposes of the RFMP, all proposed rail facilities are assumed to be constructed and available to meet the operational, maintenance and storage needs of Metro. Over the life of this Plan, it will be revised as needed to adjust for project revisions, decisions concerning service expansion, and support facilities.

4.5 Heavy Rail – Lines in Construction Phase

Currently there are no heavy rail lines or extensions in the construction phase.

4.6 Heavy Rail – Lines in Planning / Design Phase (in progress or completed)

Westside Subway Extension – extends service from the terminus of the Purple Line at Wilshire/Vermont Station to Westwood (UCLA and Veteran’s Administration Hospital); 9 miles, 7-8 stations, 6-car platforms; double track – private right-of-way completely within tunnel; projected 31,500 weekday boardings initial year. For purposes of this RFMP, revenue operations are projected to start in FY 2021.

4.7 Heavy Rail Maintenance Yards

LACMTA has one maintenance yard for HRV's, Division 20. Under the current layout and configuration, Division 20 has capacity for 200 HRV's. At present, 104 HRV's are maintained at Division 20.

The Westside Subway Extension will expand upon the length of the railway, increase the number of stations served, and, assume a 4-minute headway. A 2-minute headway would be operated in the trunk segment shared with the Purple Line. The fleet requirement will be 272 vehicles based upon known planning and design information. This assumes 6-car operations on both the Red and Purple Lines and 4-minute headways on each branch. This vehicle requirement would require an additional yard, or an expansion to Division 20.

Advanced preliminary engineering efforts have identified how Division 20 can be expanded, as well as include expansion to shop and maintenance areas. The proposed facility would expand storage capacity from 200 HRV's currently, to 284 HRV's. Additionally, the existing maintenance building shop areas would have the number of maintenance bays expanded from 36 to 52.

This RFMP assumes a lower level of service necessary to provide the initial year service capacity; 4-car consists one 4-minute headways for each branch. Although numerous items affecting travel time remain to be verified, and with possible implications to the necessary fleet size, the present analysis indicates a total fleet size of 182 HRV's would be sufficient to provide the service capacity. As such, the initial year of operation does not require changes to Division 20 in order to initiate service; however, improvements would be necessary to maximize the line capacity in future years.

4.8 New Rail Projects

The November 2008 passage of Los Angeles County Measure R, a ½-cent sales tax measure resulted in several additions to Metro's 30-year rail project timeline. Among the revisions include the advancement of current and introduction of new rail service projects. Affected projects are discussed in sections 4.1 through 4.7.

Subsequent to passage of Measure R, the LACMTA Board of Directors adopted a "30/10 Initiative", which has since been rebranded as "America Fast Forward", calling for funding to accelerate 30 years worth of projects to completion within the next approximate 10 years. The 30/10 Initiative also introduces two possible new rail projects. Although planning efforts have essentially just begun, they are not adequately defined to include in this RFMP. Planning teams are currently evaluating need, mode, and possible alignments. They include:

- I-405/Sepulveda Pass Transit Corridor – This corridor connects the Westside of Los Angeles to the San Fernando Valley. No mode has been selected for this proposal, as such, development of the corridor remains to be determined.
- West Santa Ana Transit Corridor – This corridor runs from the city of Paramount to Santa Ana, Orange County, approximately 22 miles in a northwest to southeasterly direction. Although the

corridor is within a historic railroad corridor, the preferred mode has not been selected, nor has LACMTA committed to a project.

In addition to the above two projects, and noted in section 4.3, Metro recently begun studying a transit connection to the Los Angeles International Airport (LAX). The planning study is in a similar phase as the ones noted above; the need, mode, and possible alignments are being considered. Because of this, this possible project is also not included in this RFMP.

As the projects are committed by LACMTA, as well as planning and construction and revenue operations dates are established, the Draft RFMP will be updated accordingly.

4.9 System Vehicle Requirements

Metro's fleet consists of 171 light-rail vehicles and 104 heavy rail vehicles at the end of FY 2012. Over the next 12-24 years, Metro will expand each fleet to support the operational needs of the proposed projects, as well as to accommodate anticipated growth in ridership and for coordination among lines.

Table 4.1 depicts the light-rail and heavy-rail vehicle fleet requirements over the life of the RFMP as planned at this time. Fleet size requirement is related to implementation of new lines and extensions identified in Section 4.0, as well as capacity adjustments necessary for anticipated passenger growth. Additionally, some vehicles will undergo a Rebuild Program to extend their useful lives.

It is noted that ridership projections, particularly those beyond 10 years from now, are subject to much variability. As such, projected vehicle requirements are subject to change. Future updates to this plan will revisit projections and contrast them with current observations and trends.

Consistent with this approach, noted is that due to a ridership projections, this RFMP introduces a need for additional light-rail vehicles beginning in FY 2025, however, does not include the implementation of a fleet expansion or complimentary efforts concerning maintenance facilities. These decisions will be addressed in future updates to this RFMP.

Elsewhere, Operations staff notes that ridership modeling for FY 2035 provided for the Westside Subway Extension assumes nominal average weekday growth, however, relatively high peak period gains. Future updates to this RFMP will make necessary revisions as the latest ridership trends are taken into account.

Table 4.1: Light-Rail & Heavy-Rail Fleet Size over Time

	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22 - FY24	FY25 - FY35
Light-Rail Fleet Size	171	171	171	211	259	307	337	337	337	337	337	337
<i>Unavailable/Rebuild</i>					14	14						
<i>Available</i>	171	171	171	211	245	293	337	337	337	337	337	337
Heavy-Rail Fleet Size	104	104	104	104	128	152	176	182	182	182	182	182
<i>Unavailable/Rebuild</i>		12	12	12	8							
<i>Available</i>	104	92	92	92	120	152	176	182	182	182	182	182

Note: The Heavy Rail fleet will have up to 12 vehicles unavailable for revenue service due to a mid-life 'rebuild' program.

Vehicle requirement for each start-up and capacity adjustment is based on the process outlined in Section 5.0 of this Rail Fleet Management Plan. Vehicle requirements for individual lines are discussed in Section 6.0.

5.0 DEMAND FOR REVENUE VEHICLES

The demand for revenue vehicles has been estimated for the previously stated scope of this document. Using the process outlined by the FTA's 1999 Guidance, the following eight-step methodology has been applied to the Metro's rail system:

- Step 1: Determine peak-hour/peak direction ridership load.
- Step 2: Define service standards for vehicle loading
- Step 3: Determine vehicle run times.
- Step 4: Determine the number of vehicles required to meet the service standards for vehicle loading and frequency at the peak hour/peak direction load point.
- Step 5: Determine peak vehicles required based on headway and consist size to meet vehicle loading criteria
- Step 6: Determine the requirements for reserve trains and add them to the vehicles required for revenue service to calculate the Peak Vehicle Requirement.
- Step 7: Define and determine the target maintenance fleet and calculate the spare vehicles required.
- Step 8: Determine the total fleet demand and operating spare ratio

This process has been specifically applied to meet the needs of Metro's rail system and relies on actual vehicle loading observations, boarding estimates derived from ride checks, boarding projections, maintenance data and estimates, actual and projected run times. This Plan will be revised as appropriate and will include additional operating and planning data as it becomes available.

5.1 Peak Hour / Peak Loading

Ridership information is collected by the Service Performance Analysis Section of the Service Planning and Development Department. Schedule Checkers are assigned to count boardings and alightings at least once on every rail car and every revenue trip over the course of a year, using a random sampling method. The data is then entered into a rolling database that is updated monthly, reflecting the collected data from the previous month. Ticket Vending Machine receipts are then used to verify the most recent results of the data collection.

Over the past year, several field observations were completed during the morning peak hours by Rail Operations Service Planning & Project Development Department personnel to establish a passenger loading percentage of total estimated boardings at peak points on each line.

Projected line boardings are generated from current boarding estimates, historical trends, future system improvements and new project ridership modeling. The peak hour ridership percentage is then applied to projected line boardings to determine the projected number of passengers traveling during the peak hour in the peak direction.

The results of these actual counts and projections are shown for each line in the ridership tables in **Appendix 1**. The tables show, for each year, both the weekday average passenger load and the

maximum Peak Hour / Peak Direction passenger count that is used for calculating maximum hourly vehicle need to meet the rail passenger loading standards that are described in Sub-Section 5.2.

5.2 Peak Period Service Loading Standard

Passenger loading standards are used to determine scheduled service requirements respective to the number of people that can be expected to board each rail car. Typically, this includes a fully seated passenger load, along with a significant number of standing passengers. The number is expressed in terms of percentage in excess of a seated load or as a “Load Factor.”

Standards have been established by Metro for the light rail and heavy rail vehicles, based on observation of peak period loading and an assessment involving the safe and efficient egress and ingress of passengers at door locations. The disparity in light and heavy rail vehicle loading, shown below, is due primarily to the width and configuration of vehicles, with the heavy rail vehicles having fewer seats more useable space for standees.

Light Rail

Over the past few years, passenger riding habits have changed to include more traveling accessories, related to changing lifestyle. Noticeable increases in large items, such as rolling briefcases, suitcases, large/multiple backpacks, small rolling carts, folding bicycles, personal mobility devices, etc. have eroded the standing capacity within the rail vehicles, increased dwell times, and, more importantly, created a number of safety concerns due to blocked ingress and egress. The Load Factor takes these accommodations into account, once again reflecting field observations. The peak period light rail Load Factor standard is 175% (Load Factor of 1.75), yielding 133 (76 seated and 57 standing) passengers per vehicle.

Heavy Rail

In response to the same concerns described above for Light Rail, and other space use concerns, Metro initially experimented by removing 2 seats from all heavy rail vehicles. This allowed for increases in the overall room available for passenger accessories. The Load Factor for heavy rail remains at 2.30, but the overall capacity per vehicle is slightly reduced from 135 to 131 passengers (55 seated and 76 standing).

Table 5.1: Peak Hour Load Factors and Passengers per Vehicle

Mode	Load Factor	Seated Passengers	Standees	Total Passengers
Light Rail	1.75	76	57	133
Heavy Rail	2.30	55	74	131

Peak Hour load factors are shown for each line in the ridership tables in **Appendix 1**, “Vehicles required – 133” row for light rail and “Red vehicles required – 131 for heavy rail row. Load Factors are used to determine the vehicles required to meet peak period ridership demand described in Section 5.4.

5.3 Cycle Times

Minimum train cycle time is calculated from terminal to terminal directional run times and the minimum required turn-around time at each terminal. System-wide travel times and peak period cycle times are affected by various system design characteristics involving train control, terminal crossover design and location, security, platform design issues, and the need for operators to relocate to the opposite ends of a train at terminals.

Track layouts at terminals provide an additional parameter in determining cycle times. These are highlighted below:

Light Rail

- **Blue Line-Exposition Line** 7th St./Metro Center – with the addition of the Exposition Line, the two-platform terminal will be required to cycle trains (includes alighting, security sweep, logistical move from Platform 2 to Platform 1 via tail tracks, boarding) an average of every 3 minutes.
- **Gold Line** Sierra Madre Villa Station / Atlantic Station – distant crossover placement restrict train movement with various scheduled headway combinations. Atlantic Station has two-car tail tracks. When three-car trains are eventually placed into service, the train movement will be further restricted.
- **Exposition Line** La Cienega Station – temporary terminal with distant crossover placement will restrict train movement.
- **Exposition Line** Culver City Station – distant crossover placement, combined with no tail tracks will restrict train movement with various scheduled headway combinations.
- **Exposition Line** Santa Monica – crossover placement, combined with low speed curve into station and no tail tracks will restrict train movement with short headway combinations.
- **Crenshaw Line Exposition Station** – center platform without rear crossover and tail tracks, combined with traffic signal coordination along Crenshaw, will restrict train movement with various schedule headway combinations.
- **Green Line** Redondo Beach Station – lack of tail tracks will restrict train movement with various scheduled headway combinations.

Heavy Rail

- **Red Line-Purple Line** Union Station – the terminal will be required to cycle trains (includes alighting, security sweep, logistical move from Platform AL to Platform AR via Yard Lead tail tracks, boarding) an average of every 3 minutes through the life of the RFMP.
- **Red Line-Purple Line** Division 20 Turnback – the terminal will be located in Division 20 Yard area via a set of non-revenue track leads on an existing alignment. The Turnback terminal will need to cycle trains every 2 minutes per estimated planned 2035 build-out year service levels.
- **Red Line** North Hollywood Station – the terminal will be required to cycle trains (includes alighting, security sweep, boarding), without support of complete tail track crossovers, an average of every 6 minutes through the life of the RFMP. The terminal will need to cycle

trains operating on 4 and 6 minute headways per estimated planned 2035 build-out year service levels.

- **Purple Line** Wilshire/Western Station – the terminal will be required to cycle trains (includes alighting, security sweep, boarding), without tail tracks, an average of every 6 minutes.
- **Purple Line** Westwood – the terminal will be required to cycle trains operating every 4 minutes through the life of the RFMP. For the FY 2035 build-out year, the terminal will need to cycle trains operating on 2 minute headways per planned 2035 build-out year service levels.

The calculated run and terminal turnaround times, taking the above factors into account, are shown for each line in the Run Time Tables in **Appendix 2**. It should be noted that while the Northbound and Southbound run and terminal turn times shown in the tables will add up to the minimum needed cycle time, the actual cycle time shown for each line is that minimum time rounded up to the nearest multiple of the headway for the last year of the Plan. Lines not currently in service are subject to adjustment during the various project phases leading up to revenue service.

5.4 Vehicles Required to Meet Peak Hour Demand

Using the peak hour/peak direction ridership from **Appendix 1** and the maximum passengers per car for the Load Factors in Sub-Section 5.2, the number of vehicles required to pass the maximum load point in the peak hour is calculated. This calculated number is shown in the tables in **Appendix 1** in the “Vehicles Req. (133 Per Veh.)” row in the light rail tables and the “Red Veh. Reqd (131 Per Veh.)” row in the heavy rail table. These numbers represent the minimum vehicles required to meet demand for the provided load standard. As explained in Sub-Section 5.5, the actual number of vehicles operated is usually greater due to headway, interline logistics, and train length factors. Interline logistics may also affect service level and number of vehicles.

5.5 Peak Vehicles Required for Scheduled Service

The peak vehicle requirement is the total number of trains needed to complete the operational cycle on a given line multiplied by the number of cars assigned to the trains.

The peak hour headways are not only determined by a combination of passenger volume through the peak load point, but also running time / travel time cycles, line junctions, trunk line, terminal crossover configuration and terminal capacity.

Light Rail

Metro operates light rail trains in one, two and three-car consist configurations, depending on the time of the day and the day of the week and line.

All current or future light rail stations have or will have three-car platforms, with the exception of four stations on the west end of the **Green Line** – Redondo Beach, Douglas, Mariposa and Aviation. As such, Green Line trains may only be operated in two-car consists at this time. Implementation of the Crenshaw/LAX Line and South Bay Extension in FY 2018 will have the same two-car consist restriction.

It should be noted that the Long Range Transportation Plan identifies system infrastructure funding, that if so needed, will allow for modification to the stations to allow for operation of three-car consists.

Prior to Summer 2011 the **Blue Line** operated 19 trains in the AM peak hour, representing an average headway of about 5½ minutes. Operating all 3-car trains, this provided 33 cars in the peak hour, 8 more than the minimum requirement of 25. A total of 11 of the AM peak hour trains operated between Long Beach and 7th St./Metro Center and 8 trains operated between Willow and 7th St./Metro Center. However, due to the unusual headway, length and ridership characteristics of the line, combined with non-cycling peak tripper service, the actual schedule did not require as many trains as the cycle times would have indicated (a 120-minute / 10-minute Long Beach cycle would indicate the need for 12 trains and a 90-minute Willow cycle would indicate the need for 9 trains). With each train assigned 3-cars, a total of 57 vehicles were required to provide revenue service.

Effective in Summer 2011, the Blue Line was scheduled differently in preparation for the Exposition Line planned to begin pre-revenue service. The Blue Line peak period headway was expanded to 6 minutes due to train / motor vehicle movement restrictions at the Washington Blvd. / Flower St. Junction. The Willow Station to 7th/Metro Center Station short-line operation during peak times was retained. This schedule change reduced service levels from 63 cars in the peak hour to 60 cars. The number of trains is reduced to 18.

Using the data from **Appendix 1** for headways and from **Appendix 2** for cycle times, similar calculations are done for each year for all light rail lines, resulting in the data shown in the “Scheduled Trains-Revenue Operation” row in each table in **Appendix 3 – Metro Rail System-Projected Revenue Train/Consist/Vehicle Service Requirements**. Using this data with the data in the “Consist Length” rows of the tables, yields the data shown in the “Scheduled Vehicles-Revenue Operation” rows of the **Appendix 3** tables, which are the required vehicles by line and year to meet scheduled service requirements.

Heavy Rail

Heavy rail trains can be operated in two, four and six-car consists. All heavy rail station platforms allow for operation of six-car consists. Effective in FY 2012, Metro will operate the Red and Purple Line at 7/8-minute headways as 4-car consists during peak periods. Using the methodology described above for light rail, the calculated train requirement for the Red and Purple Line scheduled service in FY 2012 is 14 trains, resulting in a need for 56 vehicles for scheduled service in FY 2012.

The Heavy Rail Table in **Appendix 3** depicts this level of service through FY 2018. Effective in FY 2019 and FY 2020, the Red and Purple Line will operate 6-minute headways, which will require more trains and cars. Lastly, the Purple Line will require more trains effective with the Westside Subway Extension in FY 2021.

5.6 Gap/Reserve Train Requirements

The vehicles required for scheduled service, calculated as described in Sub-Section 5.5, do not represent the full vehicle requirement for revenue service. As do most other transit systems, Metro stages Gap, or Reserve Trains at terminal stations, division yards, or sometimes both locations. The purpose of these staged trains is to quickly recover from the loss of a scheduled train or compensate for a delay in peak hour service. Location and the number of trains assigned are based on operating experience.

The number of trains staged at terminals for each line for each year is shown in the “Reserve Trains-Terminal” rows in the tables in **Appendix 3**, and the number of trains staged at Division yards is shown in the “Reserve Trains-Division” rows. Similarly, the vehicle numbers for terminals and yards are shown in the “Reserve Vehicles-Terminal” and “Reserve Vehicles-Division” rows in the tables in **Appendix 3**.

5.7 Spare Vehicle Requirements

In addition to vehicles needed for daily scheduled service and gap trains, vehicles are needed to replace those vehicles when they are required to undergo scheduled maintenance, repair (or unscheduled maintenance), overhaul, warranty work, or testing. These vehicles are usually referred to as operating spares and sometimes called the “maintenance fleet.” The operating spares are the total number of vehicles in the fleet above and beyond the peak vehicle requirement (scheduled plus gap), needed to maintain the peak vehicle requirement.

The number of operating spares required is determined by calculating those needed for scheduled maintenance procedures, overhaul programs, or other activities that can be scheduled, plus an estimate of those that will be needed to compensate for vehicles undergoing repair. Experience with both the light rail and heavy rail fleet has led Metro to determine the total number of vehicles needed by line. System-wide, for both light and heavy rail this has worked out to be approximately 20% of the peak vehicle requirement.

If authorized, Metro will under-take a full structural rebuild of the P2000 light rail vehicles. This involves 52 vehicles. Assuming up to 2 vehicles enter structural rebuild per month and no more than 14 unavailable at any one time, this structural rebuild will require 2 years to complete. The RFMP reflects this work in the assignment of 14 vehicles for “Structural Overhaul/Systems Rehabilitation” in the tables in **Appendix 4 – Metro Rail System-Projected Weekday Rail Fleet Category Allocation/Spare Ratios**.

The Blue Line and Expo Line vehicles will be managed as one fleet, due to the operational interlining that will occur. They are shown separately in **Appendix 3** and the other Appendices for this revision so the impact of the Expo service to the existing Blue Line service can be clearly seen. In the next RFMP update, or after implementation of the Exposition Line, they will be combined similar to the manner in which the Red and Purple Line are combined in this revision.

5.8 Total Fleet Demand and Operating Spare Ratio

The combination of the peak vehicle requirement (PVR), which consists of the peak scheduled vehicle requirement and gap vehicle, and the operating spare (maintenance fleet) requirement results in the total vehicle requirement, or Total Fleet Demand. The Total Fleet Demand is the minimum number of vehicles required to meet service and maintenance needs. The Total Fleet is comprised of any all operational vehicles available and may be lower or higher than the Total Fleet Demand. The Operating Spare Ratio (OSR) is calculated by subtracting the PVR from the Total Fleet and then dividing by the PVR.

The addition of the vehicles for scheduled service and gap vehicle requirement to yield the PVR for each line for each year is shown in the “Total Vehicles-Revenue Service” rows in **Appendix 3**. The PVR is carried over as the top row in each table in **Appendix 4**, where it is added to the maintenance spares to obtain the Total Fleet Demand. This is shown in the “Vehicle Demand – Revenue Service / Maintenance” row in each line table in **Appendix 4**. The Tables for each line also show the actual or projected Total Fleet size for each year in the row labeled, “Fleet Size (on property / ordered),” row in each table in **Appendix 4**. Finally, the OSR is calculated and shown in the bottom row of each table labeled, “Operating Spare Ratio (All Vehicles).

6.0 SUPPLY OF REVENUE VEHICLES

Metro has a total of 171 light rail vehicles and 104 heavy-rail vehicles in service in FY 2012. Over the life of the RFMP, each fleet is required to increase to enable planned service increases and to implement new lines and extensions of service. Metro is currently in the process of initiating procurement for 235 new light rail vehicles with delivery beginning in FY 2015. Metro will need to initiate procurement for heavy rail vehicles no later than FY 2013 for the Westside Subway Extension, with delivery expected in FY 2016 through FY 2019.

Light Rail

Over the life of the RFMP, each fleet is required to increase to enable planned service improvements and to implement new lines and extensions of service. Metro is currently in the process of initiating procurement for 235 new light rail vehicles with delivery beginning in FY 2015 (78 base buy, 157 in 4 options).

The vehicle fleet will be adjusted to take advantage of “single vehicle type” assignment to the extent that is practical. The Gold Line, which has vehicles dispatched from Division 21, currently is assigned the AnsaldoBreda P2550. The Green Line, which has vehicles assigned from Division 22, currently is assigned the Siemens P2000.

Both the Blue and Expo lines will have trains assigned from Division 11. Vehicles include the Siemens P2000, and the Sumitomo P865 and P2000. The Washington Storage Track will not have specific vehicles assigned to it. Instead, Division 11 vehicles will be rotated through the Washington Storage Track and to support daily scheduled operations. Effective in FY 2016, additional vehicles will be assigned from a new yard in Santa Monica.

As newly procured vehicles are delivered, they will be assigned to the Gold Line in support of the Foothill Phase I Extension to Azusa/Citrus planned for implementation in FY 2016, and, for the combined Blue Line and Exposition Line fleet. The latter is in support of the Exposition Phase II implementation planned in FY 2016.

After fulfilling fleet requirements for the Blue, Exposition and Gold Lines, vehicles will be delivered for the Crenshaw Line implementation planned in FY 2018 and to the Gold Line Northeastern Maintenance Facility to be located in Monrovia. The latter is for the Regional Connector project planned to be implemented in FY 2019 and the extensions from Azusa/Citrus to Claremont and from Atlantic/Pomona to Whittier, each having planned implementations in FY 2020. Lastly, the Sumitomo P865 and P2000 vehicles used on the Blue and Expo lines will be replaced with new P3010 vehicles.

Of note, with the FY 2019 implementation of the Regional Connector project in downtown Los Angeles, Metro will create greater flexibility in assigning vehicles from multiple maintenance facilities, and for focusing certain maintenance activities at select sites.

Metro to under-take a full structural rebuild of the P2000 light rail vehicles. This involves 52 vehicles. Assuming up to 2 vehicles enter structural rebuild per month and no more than 14 unavailable at any

one time, this structural rebuild will require 2 years to complete. The RFMP reflects this work in the assignment of 14 vehicles for “Structural Overhaul/Systems Rehabilitation” in the tables in **Appendix 4 – Metro Rail System-Projected Weekday Rail Fleet Category Allocation/Spare Ratios**. Implications of this is additionally shown in **Appendix 5**.

Also shown in **Appendix 5** on the “Total Vehicles Needed – System” row, light rail vehicle shortages do not occur. The vehicle requirement is driven by system expansions and a reduction in vehicles due to a brief Rebuild program. Additionally, as many as two (2) vehicles at any one time may undergo a component replacement. Component replacements will be scheduled on an as-needed basis and subject to service requirements. However, no service adjustments involving reserve trains, gap trains, and maintenance spare ratios are assumed respective of the need to accommodate either program.

Table 6.1 – Light Rail Vehicle Availability and Service Requirement

	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20-24	FY25-FY35
Current Vehicles	171	171	171	171	171	171	153	105	102	102
New Vehicles (P3010)	0	0	0	40	88	136	184	232	235	235
Total Available	171	171	171	211	259	307	337	337	337	337
Appendix 5 Requirement	171	171	171	171	256	262	302	308	337	388
Shortage	-	-	-	-	-	-	-	-	-	-51

Heavy Rail

Metro currently has a total of 104 heavy rail vehicles in service. Over the life of the RFMP, the heavy-rail fleet is required to increase to enable the planned Westside Subway Extension. In support of this project, Metro will need to initiate procurement for vehicles no later than FY 2013 with delivery expected in FY 2016 through FY 2019. The current required estimate is 78 vehicles; however, is dependent upon continued planning, engineering, and design efforts that are currently underway.

Internal discussions are underway to develop a program to complete a structural remanufacture and component replacement of all Breda vehicles. Timelines have not been developed; however discussions involve initiating work in FY 2013 and to be completed in FY 2016.

Details of the specific fleet assignments are shown in **Appendix 5**, on the “Total Vehicles Needed – System” row, heavy rail vehicle shortages do not occur. The vehicle requirement is driven by the Westside Subway Extension in FY 2021 and a reduction in vehicles due to a Rebuild program. At this time, no service adjustments involving reserve trains, gap trains, and maintenance spare ratios are assumed respective of the need to accommodate the heavy-rail fleet Rebuild program.

Table 6.2 – Heavy Rail Vehicle New Procurement/Delivery Schedule

	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20-FY24	FY25-FY35
Current Vehicles	104	104	104	104	104	104	104	104	104	104
New Vehicles	0	0	0	0	24	48	72	78	78	78
Total Available	104	90	90	90	130	152	176	182	182	182
Appendix 5 Requirement	76	76	76	76	76	76	76	102	182	182
Shortage	-	-	-	-	-	-	-	-	-	-

7.0 MAINTENANCE AND RELIABILITY

Maintenance activities for the rail vehicle fleets are assigned to four locations:

- Blue Line Division 11 – Long Beach
- Green Line Division 22 – Hawthorne
- Gold Line Division 21 – Los Angeles Chinatown District
- Red/Purple Line Division 20 – Los Angeles Artist District

Metro will introduce additional light-rail maintenance facilities over the course of this RFMP and are reflective of requirements for each newly planned rail line or line extension. These facilities include the following:

- Blue/Exposition Washington Storage Track – Downtown Los Angeles
- Exposition Division 12 – Santa Monica
- Gold Line Division 14 – Monrovia
- Crenshaw/South Bay Division 23 – (In environmental review/study)

At this time, the RFMP does not reflect any necessary adjustments to the heavy-rail maintenance facility as the anticipated fleet size, at least with regard to initial year or two of operation, does not require expansion. However further study is required to address the necessity for a turn-back facility so that the proposed service levels can be operated. A turn-back facility would be located at Division 20 and would require the relocation of affected storage track areas.

Individual yard capacity, specific fleet assignments and number of vehicles are shown in Appendix 6 – Projected Vehicle Distribution by Maintenance Facility.

The Preventative Maintenance Program (PMP) consists of regularly scheduled activities that are necessary to maintain the performance level of the vehicle and its components. Examples of typical activities include complete lubrication, calibration adjustments as required, and replacement of consumables such as air filters, brake pads/shoes, Pantograph Carbon Strips (Light Rail), and Third Rail Current Collector Shoes (Heavy Rail). Additionally, many items are subject to visual inspection and if necessary, repair and/or replacement. Table 7.1 shows the intervals between inspections for light and heavy rail vehicles.

Table 7.1 Light and Heavy Rail Vehicle Inspection Intervals

Intervals	Sumitomo and Siemens LRVs	AnsaldoBreda LRVs	Breda HRVs
1	5,000	10,000	7,500
2	5,000	10,000	7,500
3	15,000	30,000	22,500
4	5,000	10,000	7,500
5	5,000	10,000	7,500
6	30,000	60,000	45,000
7	5,000	10,000	7,500
8	5,000	10,000	7,500
9	15,000	30,000	22,500
10	5,000	10,000	7,500
11	5,000	10,000	7,500
12	60,000	120,000	90,000

The specific activities for the various levels of PM inspections (i.e. 7,500; 15,000; 30,000 and 90,000 for Sumitomo/Siemens LRVs) are described in individual work order templates the M3 Maintenance Database, and are available as requested.

Fleet performance is measured by the Mean Miles Between Failures (MMBF) and on-time roll-out performance. Various categories, such as friction brake, propulsion, door, gearbox, circuit cards, Heat-Ventilation-Air Conditioning (HVAC) can be tracked in the M3 Data Management System, where trending can be monitored. Failure rates vary by vehicle type and line and are constantly monitored and addressed. Vehicle age, specific operating environment and systems technology each have impact on vehicle failure categories. The bottom line goal for RFS is to meet on-time roll-out for the Revenue Vehicle Service Requirement as indicated by line and shown in **Appendix 4**, on the “Revenue Vehicle Service Requirement” row.

Vehicle Requirement Compliance is monitored by the Rail Operations Control Center (ROCC) on a daily basis and reported to Rail Management on a daily basis, 99.99% is considered acceptable.

8.0 REVENUE VEHICLE DEMAND / SUPPLY BALANCE

As discussed in previous sections of this Plan it is necessary to expand the light rail and heavy rail fleets in order to meet future service requirements. Table 8.1 depicts the vehicle requirements and fleet size change over the life of this RFMP.

Table 8.1 – Baseline Vehicle Requirement

Light Rail	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20-FY24	FY25-FY35
Base Fleet	171	171	171	171	171	171	153	105	102	102
<i>Unavailable/Rebuild</i>						-14	-14			
<i>P3010 Procurement</i>				40	88	136	184	232	235	235
Total Available	171	171	171	211	259	321	351	337	337	337
Service Requirement	171	171	171	171	256	262	299	308	337	337
Excess / Shortage	0	0	0	40	3	59	52	29	0	0
Heavy Rail	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20-FY24	FY25-FY35
Base Fleet	104	104	104	104	104	104	104	104	104	104
<i>Unavailable/Rebuild</i>		14	14	14	8					
<i>Procurement</i>	0	0	0	0	24	48	72	78	78	78
Total Available	104	92	92	92	120	152	176	182	182	182
Service Requirement	76	76	76	76	76	76	76	102	182	182
Excess / Shortage	28	16	16	16	44	76	100	80	0	0

Details of the Metro fleet distribution by Maintenance Facility are depicted in Appendix 6.

Light Rail

The Metro Light Rail System does not have practical interchangeability between the between the Gold, Green and Blue / Exposition Lines. Issues include:

- The Gold Line is isolated from the remainder of the system (through FY 2019).
- The Green Line train control system is unique to the line.
- AnsaldoBreda P2550 vehicles have weight issues that may preclude them from operation on the Green Line due to some aerial structural weight restrictions.
- AnsaldoBreda P2550 vehicles are incompatible with Sumitomo or Siemens vehicles for coupling together to form a consist for revenue operations.

As such, once the system vehicle requirements are established and vehicles are assigned, each line is essentially a “single fleet,” with either a single vehicle type or multiple vehicle types.

Previously mentioned was the possibility that Metro may under-take a full structural rebuild of the P2000 light rail vehicles. This involves 52 vehicles. Assuming up to 2 vehicles enter structural rebuild per month and no more than 14 unavailable at any one time, this structural rebuild will require 5 years to complete. The RFMP reflects this work in the assignment of 14 vehicles for “Structural Overhaul/Systems in FY 2017 through FY 2018.

Tables 8.4 through 8.15 depict the fleet size over the life of the RFMP for each line.

The **Blue Line** will start out as a single line operation through FY 2012. With the addition of the **Exposition Line**, in three phases, and the trunked operation from the Washington and Flower Junction to 7th St./Metro Center, all operational facets of both lines will be combined, similar to the Heavy Rail Red and Purple Lines. Upon implementation of the Regional Connector in FY 2019, the Blue and Exposition lines will assume services presently provided by the Gold Line. At that point, each line will essentially double in size and be supported by multiple maintenance facilities.

Tables 8.2 and 8.3 present the individual fleet requirements for both the Blue Line and Exposition Line. Table 8.4 presents the combined fleet.

Table 8.2 – Blue Line Fleet Summary

	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20-FY24	FY25-FY35
Total Fleet Available	71	71	71	71	71	74	74	148	148	148
Total Fleet Requirement	71	71	71	71	71	71	71	139	148	148
Excess / Shortage	0	0	0	0	0	3	3	9	0	0

Table 8.3 – Exposition Line Fleet Summary

	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20-FY24	FY25-FY35
Total Fleet Available	21	21	21	61	74	74	74	123	123	123
Total Fleet Requirement	21	21	21	21	71	71	71	103	123	123
Excess / Shortage	0	0	0	40	3	3	3	20	0	0

Table 8.4 – Blue/Expo Line Combined Fleet Summary

	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20-FY24	FY25-FY35
Total Fleet Available	92	92	92	132	145	148	148	271	271	271
Total Fleet Requirement	92	92	92	92	142	142	142	242	271	271
Excess / Shortage	0	0	0	40	3	6	6	29	0	0

Table 8.5 presents the fleet maintenance locations either in service or being planned through FY 2022 and the assigned number of vehicles. The capacity of each is indicated after the Division number.

Table 8.5 – Blue/Expo Line Maintenance Facility Combined Summary

	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20-FY24	FY25-FY35
Total Fleet Available	92	92	92	132	145	148	148	271	271	271
Long Beach Div. 11 (86)	80	80	80	80	85	88	88	88	88	88
Washington Storage (12)	12	12	12	12	12	12	12	12	12	12
Santa Monica Div. 12 (48)	N/A	N/A	N/A	40	48	48	48	48	48	48
Midway Div. 21 (50)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	50	50	50
Monrovia Div. 14 (84)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	75	75	75
Available Storage Capacity	6	6	6	14	1	-2	-2	9	9	9

Appendix 5 presents the vehicle type assignment expected throughout the Plan and should be referenced to review specific fleet detail. In general, the fleet that will provide revenue service to the Blue and Exposition Lines will be a mix of all vehicle types – Sumitomo, Siemens, AnsaldoBreda, and P3010 vehicles.

Previously noted were coupling issues involving AnsaldoBreda vehicles. This, combined with parts storage for four fleets, training issues and multiple maintenance facilities, will make the day-to-day management of the operation the single largest operational challenge facing Metro’s rail system.

Additionally, from FY 2012 through FY 2015, some vehicles needed to support the Exposition Line will be assigned from the Washington Storage Track located at Washington/Long Beach Blvd., and Division 11 in Long Beach. Some vehicles will experience longer deadhead travel. This situation is significantly improved in FY 2015 when the Santa Monica Division 12 becomes available; however, as planned, the total vehicle capacity combined with the Exposition Line Phase II vehicle requirement effective in FY 2016 will still require some vehicles being assigned from the Washington Storage Track and Division 11 in Long Beach.

The larger fleet of the Blue and Exposition lines will also require additional facilities for more frequent heavy maintenance functions, such as a body and paint shop. The Santa Monica Division 12 and Washington Storage Track will not have provisions for heavy maintenance, body and paint issues. When necessary, vehicles requiring such work will have maintenance work scheduled at Division 11 in Long Beach. Effective in FY 2019 with the Regional Connector, additional heavy maintenance work could occur at the Monrovia Division 14 maintenance facility.

The Blue and Exposition Lines will experience a vehicle shortage. During those periods, this will be addressed by scheduling reserve trains into the peak revenue service, re-assigning available vehicles from other lines, and temporarily lowering the spare ratio on each light rail line to allow rescheduling of some preventive maintenance activities to avoid overlapping periods during the workday.

The **Gold Line** has two expansions, along with a capacity improvement to be implemented during the Draft RFMP timeframe. This will result in a significant increase in the vehicle requirements from the service provided today. In FY 2019, as mentioned above, once the Regional Connector is implemented, Gold Line services will be assumed by the Blue and Exposition Lines. This is discussed in more depth in the section above. Table 8.6 presents the fleet requirements. Table 8.7 presents the Maintenance Facilities combined capacity and the assigned number of vehicles.

Table 8.6 – Gold Line Summary

	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19 through FY35
Total Fleet Available*	50	50	50	50	85	91	119	See Table 8.4, 8.5 and 8.6
Total Fleet Requirement	50	50	50	50	85	91	91	
Excess / Shortage	0	0	0	0	0	0	28	

Table 8.7 – Gold Line Maintenance Facility Combined Summary

	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19 through FY35		
Total Fleet Available*	50	50	50	50	85	91	119	See Table 8.7		
Midway Div. 21 (50)	50	50	50	50	50	50	50			
Monrovia Div. 14 (84)	N/A	N/A	N/A	N/A	35	41	69			
Available Storage Capacity	0	8	8	74	50	41	9			

Appendix 5 presents the vehicle type assignment expected throughout the Plan and should be referenced to review specific fleet detail. In general, the fleet that will provide revenue service to the Gold Line is mix of vehicle types – Sumitomo, AnsaldoBreda, and procured vehicles.

A second maintenance facility will be constructed in Monrovia, designated as Division 14. It will have a capacity for 84 vehicles and will tentatively be assigned the P3010 vehicles. It is planned to be available to support Gold Line services as early as FY 2014. The first P3010 vehicles will be delivered in FY 2015.

The Gold Line will experience a vehicle shortage as depicted by a lower spare ratio. This is a result of re-balancing the fleet assignments to enable sufficient vehicles for the Exposition Phase II implementation. This one-year vehicle shortage expected will be addressed by scheduling reserve trains into the peak revenue service and temporarily lowering the spare ratio to allow rescheduling of some preventive maintenance activities to avoid overlapping periods during the workday.

The **Green Line** is expected to have a minor headway adjustment and a minor re-alignment of services, but essentially will maintain an operation similar to what is currently in service throughout the Draft RFMP timeframe. Table 8.8 presents the fleet requirements. Table 8.9 presents the Maintenance Facility capacity and the assigned number of vehicles.

Table 8.8 – Green Line Fleet Summary

	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20-FY24	FY25-FY35
Total Fleet Available	29	29	29	29	29	37	37	33	33	33
Total Fleet Requirement	29	29	29	29	29	29	33	33	33	33
Excess / Shortage	0	0	0	0	0	8	4	0	0	0

Table 8.9 – Green Line Maintenance Facility Summary

	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20-FY24	FY25-FY35
Total Fleet Available	29	29	29	29	29	37	37	33	33	33
Hawthorne Div. 22 (39)	29	29	29	29	29	37	37	33	33	33
Available Storage Capacity	10	10	10	10	10	2	2	6	6	6

Appendix 5 presents the vehicle type assignment expected throughout the Plan and should be referenced to review specific fleet detail. In general, the fleet that will provide revenue service to the Green Line will primarily be Siemens P2000 vehicles and P3010 procured vehicles.

A vehicle shortage in FY 2016 will be addressed by scheduling one reserve train into the peak revenue service adjusting to a lower spare ratio to allow rescheduling of some preventive maintenance activities to avoid overlapping periods during the workday.

Facility capacity is adequate to meet Green Line service requirements in the Plan. The Maintenance Facility will be expanded to include heavy maintenance, such as body /and paint repair to support the Blue Line / Exposition Line fleet, however increased deadhead operation would result. The Green Line has a connection to the Blue Line at Imperial/Wilmington Station via a non-revenue connector. A maintenance facility planned for the Crenshaw Line may provide similar flexibility.

The **Crenshaw/LAX Line** is a new line that is planned to be implemented in FY 2018. Once implemented, it will remain unchanged through the timeframe of the RFMP. The initial segment will operate between Crenshaw/Exposition and the planned Torrance Regional Transit Center. It will assume service currently provided by the Green Line at four stations and assume the alignment currently planned as part of the South Bay Extension (Green Line Extension).

Table 8.10 presents the fleet requirements. Table 8.11 presents the Maintenance Facility capacity and the assigned number of vehicles.

Table 8.10 – Crenshaw Line Fleet Summary

	FY12 through FY16	FY17	FY18	FY19	FY20-FY24	FY25-FY35
Total Fleet Available	In Planning, Final Design and Construction	31	33	33	33	33
Total Fleet Requirement		0	33	33	33	33
Excess / Shortage		31	0	0	0	0

Table 8.11 – Crenshaw Line Maintenance Facility Summary

	FY12 through FY16	FY17	FY18	FY19	FY20-FY24	FY25-FY35
Total Fleet Available	In Planning, Final Design and Construction	31	33	33	33	33
Crenshaw Div. 23 (70)		31	33	33	33	33
Available Storage Capacity		39	37	37	37	37

Appendix 5 presents the vehicle type assignment expected throughout the Draft RFMP and should be referenced to review specific fleet detail. The Crenshaw Line fleet will be operated with P3010 vehicles.

The alignment that would be operated by the Crenshaw/LAX Line is currently moving forward under two separate projects, the Crenshaw/LAX Line and the South Bay Extension. As such, two separate maintenance facilities are in conceptual planning and environmental review phases. The

Crenshaw/LAX facility is planned to support no less than 70 vehicles. These quantities will be sufficient to support Crenshaw Line service requirement through the timeframe of the RFMP, as well as the fleet requirement for operating 5-minute headways, which would be beyond the current plan. At this time, the RFMP assumes only the site studied for the Crenshaw/LAX Line will be available. Additionally, at this time, it is anticipated that any fleet needed for the South Bay Extension can be accommodated at the Crenshaw Line maintenance facility.

Light Rail Summary

In general, vehicle supply for the system and provisions for necessary maintenance are doable; however, a vehicle shortage in the middle years of this plan will require a reduction to reserve and gap trains and maintenance spare ratios. This shortage is due to aggressive schedules involving service expansions, a vehicle procurement, location of existing and planned maintenance facilities.

Heavy Rail

The **Red / Purple Lines** are expected to have some headway adjustments in FY 2012, and an expansion to Westwood in FY 2021.

As previously mentioned, internal discussions are underway to develop a program to complete a structural remanufacture and component replacement of all Breda vehicles. Timelines have not been developed; however discussions involve initiating work in FY12 and complete in FY 2016.

Table 8.12 presents the fleet requirements. Table 8.13 presents the Maintenance Facility capacity and the assigned number of vehicles.

Table 8.12 – Red/Purple Lines Vehicle Summary

	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20-FY24	FY25-FY35
Total Fleet Available	104	92	92	92	120	152	176	182	182	182
Total Fleet Requirement	76	76	76	76	76	76	76	102	182	182
Excess / (Shortage)	28	16	16	16	44	76	100	80	0	0

Table 8.13 – Red / Purple Lines Maintenance Facility Summary

	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20-FY24	FY25-FY35
Total Fleet Available	104	92	92	92	120	152	176	182	182	182
Los Angeles Div. 20 (200-284)	104	92	92	92	120	152	176	182	182	182
Available Storage Capacity	96	108	108	108	80	48	24	18	18	18

Appendix 5 presents the vehicle type assignment expected throughout the Plan and should be referenced to review specific fleet detail.

Heavy Rail Summary

The heavy-rail fleet will almost double over the course of this RFMP; however, sufficient time currently exists to initiate and complete a vehicle procurement in order to meet the planned implementation of the Westside Subway Extension in FY 2021. The existing maintenance facility is also of sufficient size to receive the necessary cars; however, provided is that the planned alignment and logistical moves do not require additional vehicles or the construction of a turn-back facility at Division 20. If they do, noted is that sufficient available land and expansion abilities exist.

Appendix 1

METRO RAIL SYSTEM PROJECTED RIDERSHIP ASSUMPTIONS / PROPOSED SCHEDULED PEAK SERVICE HEADWAY																										
LIGHT RAIL	FY11 Actual	FY12 * %	FY13	FY14	FY15 &	FY16	FY17	FY18 *	FY19 #	FY20 ^	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	
Rail - BRT Openings Other Items	Fare Incr. Bus Chngs	806 Civr City Bus Chngs				804 to Azusa 806 to SM.		807 Crnshw & Torrance 803 to Century	Reg' Conn' 801 to Azusa 806 to Atlntc 802/5 to Tmbck	801 to Cirmnt 806 to Whtr	805 to Wstwd															
Blue Line (Long Beach - Downtown Los Angeles)																										
Stations	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
Weekday Growth Rate	1.3%	4.4%	2.6%	1.0%	4.4%	1.0%	2.2%	1.6%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%
Daily Passengers - Max. Wkdy.	81,000	84,535	86,743	87,610	88,486	90,464	91,914	93,082	Effective FY 2019, the Regional Connector project results in a network change. Little Tokyo to Azusa is assumed by the Blue Line. Little Tokyo to Atlantic will be assumed by the Expo Line.																	
Passengers - Pk/Hr/Dir	3,168	3,184	3,200	3,216	3,232	3,248	3,264	3,281																		
Vehicles Req'd. (133 Per Veh.)	24	24	25	25	25	25	25	25																		
Sched. Veh. Pk/Hr/Dir	30	30	30	30	30	30	30	30																		
Schedule	6 min., all 3s	6 min., all 3s	6 min., all 3s	6 min., all 3s	6 min., all 3s	6 min., all 3s	6 min., all 3s	6 min., all 3s																		
Peak Schedule Shortline	7M - Willow	7M - Willow	7M - Willow	7M - Willow	7M - Willow	7M - Willow	7M - Willow	7M - Willow																		
Exposition Line (Santa Monica - Downtown Los Angeles)																										
Stations		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Weekday Growth Rate			51.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Daily Passengers - Max. Wkdy.		21,800	33,027	33,522	34,025	34,025	34,025	34,025	34,025	34,025	34,025	34,025	34,025	34,025	34,025	34,025	34,025	34,025	34,025	34,025	34,025	34,025	34,025	34,025	34,025	34,025
Passengers - Pk/Hr/Dir		1,243	1,883	1,911	1,939	2,424	2,939	3,109	Effective FY 2019, the Regional Connector project results in a network change. Little Tokyo to Azusa is assumed by the Blue Line. Little Tokyo to Atlantic will be assumed by the Expo Line.																	
Vehicles Req'd. (133 Per Veh.)		10	15	15	15	19	23	24																		
Sched. Veh. Pk/Hr/Dir		15	15	15	15	30	30	30																		
Schedule		12 min., all 3s	12 min., all 3s	12 min., all 3s	12 min., all 3s	6 min., all 3s	6 min., all 3s	6 min., all 3s																		
Peak Schedule Shortline		No	No	No	No	No	No	No																		
Gold Line (Azusa - Pasadena - East Los Angeles)																										
Stations	21	21	21	21	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
Wkdy. Growth Rate	12.5%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Daily Passengers - Max. Wkdy.	36,000	36,360	36,724	37,091	37,462	45,685	50,067	50,567	Effective FY 2019, the Regional Connector project results in a network change. Little Tokyo to Azusa is assumed by the Blue Line. Little Tokyo to Atlantic will be assumed by the Expo Line.																	
Passengers - Pk/Hr/Dir	1,744	1,761	1,779	1,797	1,815	2,213	2,425	2,450																		
Vehicles Req'd. (133 Per Veh.)	14	14	14	14	14	17	19	19																		
Sched. Veh. Pk/Hr/Dir	16	20	20	20	20	30	30	30																		
Schedule Summary	7.5 min., all 2s	6min., all 2s	6min., all 2s	6min., all 2s	6min., all 2s	6min., all 3s	6min., all 3s	6min., all 3s																		
Peak Schedule Shortline	No	No	No	No	No	Atf - SMV	Atf - SMV	Atf - SMV																		

RFMP Notes:
 * - FY12, Blue Line and Expo Line service will be integrated into one operational unit, similar to Red Line and Purple Line, including interlining.
 % - FY12, Expo I & 2 segments to Culver City.
 & - FY15, Expo II Segment to Colorado/4th.
 # - FY19, Regional Connector project, the downtown LRT subway, results in the Blue Line assuming the Gold Line from Little Tokyo to Azusa Citrus, and the Expo Line assuming the Gold Line from Little Tokyo to Atlantic/Pomona.

Appendix 1

METRO RAIL SYSTEM PROJECTED RIDERSHIP ASSUMPTIONS / PROPOSED SCHEDULED PEAK SERVICE HEADWAY																									
LIGHT RAIL	FY11 Actual	FY12	FY13	FY14	FY15	FY16	FY17	FY18 *	FY19 #	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
Rail - BRT Openings Other Items	Fare Incr. Bus Chngs	806 Civr City Bus Chngs 802 Frq Chng						804 to Azusa 806 to SM.	807 Crnshw & Torrance 803 to Century	Reg' Conn' 801 to Azusa 806 to Atlntc 802-5 to D20	801 to Cirmnt 806 to Whtr	805 to Wstwd													
Green Line (Norwalk - LAX Airport - Los Angeles)																									
Stations	14	14	14	14	14	14	14	14	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	
Weekday Growth Rate	5.4%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	-1.0%	0.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	
Daily Passengers - Max. Wkdy.	40,500	40,905	41,314	41,727	42,144	42,566	42,992	42,564	42,560	42,986	43,416	43,850	44,289	44,731	45,179	45,631	46,087	46,548	47,013	47,483	47,958	48,438	48,922	49,411	49,888
Passengers - Pk/Hr/Dir	1,776	1,794	1,812	1,830	1,848	1,867	1,885	1,866	1,866	1,885	1,904	1,923	1,942	1,962	1,981	2,001	2,021	2,041	2,062	2,082	2,103	2,124	2,145	2,167	2,188
Vehicles Req'd. (133 Per Veh.)	14	14	14	14	14	15	15	15	15	15	15	15	15	15	15	16	16	16	16	16	16	16	17	17	17
Sched. Veh. Pk/Hr/Dir	16	18	18	18	18	18	18	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Schedule	7.5 min., all 2's	6-7.5 min., all 2's	6-7.5 min., all 2's	6-7.5 min., all 2's	6-7.5 min., all 2's	6-7.5 min., all 2's	6 min., all 2's	6 min., all 2's	6 min., all 2's	6 min., all 2's	6 min., all 2's	6 min., all 2's	6 min., all 2's	6 min., all 2's	6 min., all 2's	6 min., all 2's	6 min., all 2's	6 min., all 2's	6 min., all 2's	6 min., all 2's	6 min., all 2's	6 min., all 2's	6 min., all 2's	6 min., all 2's	
Peak Schedule Shortline	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Crenshaw - South Bay Line (Crenshaw - Torrance)																									
Stations									14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	
Weekday Growth Rate									51.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	
Daily Passengers - Max. Wkdy.									19,844	29,964	30,264	30,567	30,872	31,181	31,493	31,808	32,126	32,447	32,772	33,099	33,430	33,765	34,102	34,443	34,788
Passengers - Pk/Hr/Dir									744	1,123	1,134	1,145	1,157	1,169	1,180	1,192	1,204	1,216	1,228	1,240	1,253	1,265	1,278	1,291	1,304
Vehicles Req'd. (133 Per Veh.)									6	8	9	9	9	9	9	9	9	9	9	9	9	10	10	10	10
Sched. Veh. Pk/Hr/Dir									20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Schedule									6 min., all 2's	6 min., all 2's	6 min., all 2's	6 min., all 2's	6 min., all 2's	6 min., all 2's	6 min., all 2's	6 min., all 2's	6 min., all 2's	6 min., all 2's	6 min., all 2's	6 min., all 2's	6 min., all 2's	6 min., all 2's	6 min., all 2's	6 min., all 2's	
Peak Schedule Shortline									No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
RFMP Notes:																									
* - FY18, Crenshaw Line and South Bay Extension implemented, resulting in one line from Crenshaw/Exposition to Torrance. Green Line re-aligned from Imperial/Aviation to Century/Aviation (LAX).																									
Blue Line (Long Beach - Los Angeles - Pasadena - Azusa - Claremont)																									
Stations										44	49	49	49	49	49	49	49	49	49	49	49	49	49	49	
Weekday Growth Rate										5.7%	4.1%	2.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	
Daily Passengers - Max. Wkdy.										138,573	146,412	152,355	155,396	156,950	158,520	160,105	161,706	163,323	164,956	166,606	168,272	169,954	171,654	173,370	175,104
Passengers - Pk/Hr/Dir										3,297	3,343	3,478	3,548	3,583	3,619	3,655	3,692	3,729	3,766	3,804	3,842	3,880	3,919	3,958	4,038
Vehicles Req'd. (133 Per Veh.)										25	26	27	27	27	28	28	28	29	29	29	29	30	30	30	31
Sched. Veh. Pk/Hr/Dir										30	30	30	30	30	30	36	36	36	36	36	36	36	36	36	36
Schedule Summary										6 min., all 3's	6 min., all 3's	6 min., all 3's	6 min., all 3's	6 min., all 3's	6 min., all 3's	5 min., all 3's	5 min., all 3's	5 min., all 3's	5 min., all 3's	5 min., all 3's	5 min., all 3's	5 min., all 3's	5 min., all 3's	5 min., all 3's	
Peak Schedule Shortline										SMV - Willow	SMV - Willow	SMV - Willow	SMV - Willow	SMV - Willow	SMV - Willow	SMV - Willow	SMV - Willow	SMV - Willow	SMV - Willow	SMV - Willow	SMV - Willow	SMV - Willow	SMV - Willow	SMV - Willow	
Expo Line (Santa Monica - East Los Angeles)																									
Stations										29	34	34	34	34	34	34	34	34	34	34	34	34	34	34	
Weekday Growth Rate										11.2%	7.9%	2.0%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	
Daily Passengers - Max. Wkdy.										94,546	105,158	113,420	115,652	116,230	116,811	117,395	117,982	118,572	119,165	119,761	120,360	120,962	121,566	122,174	122,785
Passengers - Pk/Hr/Dir										3,117	3,125	3,132	3,140	3,148	3,156	3,164	3,172	3,180	3,188	3,196	3,204	3,212	3,220	3,228	3,258
Vehicles Req'd. (133 Per Veh.)										24	24	24	24	24	24	24	24	24	24	25	25	25	25	25	25
Sched. Veh. Pk/Hr/Dir										30	30	30	30	30	30	36	36	36	36	36	36	36	36	36	36
Schedule Summary										6 min., all 3's	6 min., all 3's	6 min., all 3's	6 min., all 3's	6 min., all 3's	6 min., all 3's	5 min., all 3's	5 min., all 3's	5 min., all 3's	5 min., all 3's	5 min., all 3's	5 min., all 3's	5 min., all 3's	5 min., all 3's	5 min., all 3's	
Peak Schedule Shortline										No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	
RFMP Notes:																									
# - FY19, Regional Connector project, the downtown LRT subway, results with Blue Line assuming the Gold Line from Little Tokyo to Azusa/Citrus, and the Expo Line assuming the Gold Line from Little Tokyo to Atlantic/Pomona.																									
^ - FY20, Two Extensions: Blue Line to Azusa/Citrus and Expo Line to Whittier (to South El Monte remains an option).																									

Appendix 1

METRO RAIL SYSTEM PROJECTED RIDERSHIP ASSUMPTIONS / PROPOSED SCHEDULED PEAK SERVICE HEADWAY																									
HEAVY RAIL	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21 #	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
	Estimated																								
Rail - BRT Openings Other Items	Fare Incr. Bus Chngs	806 Civr City Bus Chngs 802 Frq Chng						804 to Azusa 806 to SM.		807 Crnshw & Torrance 803 to Century	Reg Conn' 801 to Azusa 806 to Atlntc 802-5 to D20	801 to Clrmt 806 to Whtr		805 to Wstwd											
Stations	16	16	16	16	16	16	16	16	16	16	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
Weekday Growth Rate	-3.3%	2.3%	1.3%	0.4%	0.4%	6.3%	3.2%	0.7%	2.5%	3.1%	18.6%	6.7%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	1.0%
Combined Proj. Psgrs. - Wkdy.	145,000	148,305	150,261	150,862	151,465	160,967	166,059	167,219	171,463	176,766	209,589	223,675	225,601	227,551	229,524	231,521	233,542	235,588	237,658	239,754	241,875	244,022	246,196	248,396	250,773
Red Line	109,400	110,928	111,916	112,364	112,813	118,393	121,430	122,164	123,987	126,564	128,845	129,878	130,398	130,919	131,443	131,969	132,497	133,027	133,559	134,093	134,629	135,168	135,708	136,251	136,735
Purple Line	35,600	37,377	38,344	38,498	38,652	42,574	44,628	45,055	47,476	50,201	60,874	93,796	95,203	96,631	98,081	99,552	101,045	102,561	104,099	105,661	107,246	108,855	110,487	112,145	114,038
Red Psgrs. - Pk/Hr/Dir	3,562	3,612	3,644	3,659	3,673	3,855	3,954	3,978	4,037	4,121	6,166	6,216	6,241	6,266	6,291	6,316	6,341	6,367	6,392	6,418	6,443	6,469	6,495	6,521	6,544
Purple Psgrs. - Pk/Hr/Dir	1,920	2,016	2,068	2,078	2,085	2,296	2,407	2,430	2,561	2,708	4,015	4,664	4,734	4,805	4,877	4,951	5,025	5,100	5,177	5,254	5,333	5,413	5,494	5,577	5,671
Red Vehicles Req'd. (131 Per Veh.)	27	28	28	28	28	29	30	30	31	31	47	47	48	48	49	49	49	49	49	49	49	49	50	50	50
Red Sched. Veh. Pk/Hr/Dir	36	32	32	32	32	40	40	40	40	40	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
Pur Sched. Veh. Pk/Hr/Dir	24	32	32	32	32	40	40	40	40	40	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
Trunk Schedule	5 min, all 6's	3.75min, All 4's	3.75min, All 4's	3.75min, All 4's	3.75min, All 4's	3min all 4's	3min all 4's	3min all 4's	3min all 4's	3min all 4's	2min, All 4's	2min, All 4's	2min, All 4's	2min, All 4's	2min, All 4's	2min, All 4's	2min, All 4's	2min, All 4's	2min, All 4's	2min, All 4's	2min, All 4's	2min, All 4's	2min, All 4's	2min, All 4's	2min, All 4's
Red Branch Schedule	10 min, all 6's	7.5 min, all 4's	7.5 min, all 4's	7.5 min, all 4's	7.5 min, all 4's	6 min, all 4's	6 min, all 4's	6 min, all 4's	6 min, all 4's	6 min, all 4's	4 min, all 4's	4 min, all 4's	4 min, all 4's	4 min, all 4's	4 min, all 4's	4 min, all 4's	4 min, all 4's	4 min, all 4's	4 min, all 4's	4 min, all 4's	4 min, all 4's	4 min, all 4's	4 min, all 4's	4 min, all 4's	4 min, all 4's
Purple Branch Schedule	10 min, all 4's	7.5 min, all 4's	7.5 min, all 4's	7.5 min, all 4's	7.5 min, all 4's	6 min, all 4's	6 min, all 4's	6 min, all 4's	6 min, all 4's	6 min, all 4's	4 min, all 4's	4 min, all 4's	4 min, all 4's	4 min, all 4's	4 min, all 4's	4 min, all 4's	4 min, all 4's	4 min, all 4's	4 min, all 4's	4 min, all 4's	4 min, all 4's	4 min, all 4's	4 min, all 4's	4 min, all 4's	4 min, all 4's
Peak Schedule Shortline	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No

RFMP Notes:
- FY21, Westside Extension to Westwood/VA is implemented.

RFMP Ridership Assumption Notes:

General

- Ridership characteristics during individual years are a function of existing observations and reporting, anticipated normal growth ranging from 0.4% to 1.5% depending on line and regions served, implications of new lines and extensions as they are implemented, and a 2035 ridership model as developed for the Westside Subway Extension which includes all lines and is consistent with LACMTA's 30/10 Initiative. No model is available depicting individual years of operation. As such, ridership characteristics depicting interim years is an approximation and subject to variation.

Blue Line

- FY11 Ridership characteristics is based on most recent Metro Performance Monitoring Department reporting.
- FY12 thru FY18 Ridership characteristics are a function of present day conditions, anticipated annual growth, and an approximate reflection of system-wide service changes.
- FY19 thru FY22 is a function FY35 build-out year estimation, including service assumed from Little Tokyo to Azusa operated by the Gold Line.
- Additional ridership is assumed FY20 thru FY22 with a planned extension from Azusa to Claremont using projections cited in the Foothill Authority Final Environmental Impact Report.

Expo Line

- FY12 thru FY18 Ridership characteristics are a function of projections cited from the Exposition Authority Final Environmental Impact Reports, and an approximation reflective of system-wide service changes.
- FY19 thru FY22 Ridership characteristics are a function of the estimated FY35 build-out year estimation, including service assumed from Little Tokyo to Whittier.

Gold Line

- FY11 Ridership characteristics are based on most recent Metro Performance Monitoring Department reporting.
- FY12 thru FY18 Ridership characteristics are a function of present day conditions, anticipated annual growth, and is approximate reflection of system-wide service changes.
- FY19 thru FY22, Gold Line services are replaced with extensions of Blue and Expo line services as a result of the Regional Connector.

Green Line

- FY11 Ridership characteristics are based on most recent Metro Performance Monitoring Department reporting.
- FY12 thru FY17 Ridership characteristics are a function of present day conditions, anticipated annual growth, and an approximate reflection of system-wide service changes.
- FY18 thru FY22: Effective with the Crenshaw and South Bay project openings, the Green Line will run to Century and Crenshaw will assume service from Mariposa to Marine and beyond to Torrance. Ridership characteristics are a function of the FY35 build-out year estimation; however, with modest adjustments accounting for difference in a network assumptions.

Crenshaw Line

- FY18 thru FY22: Effective with the Crenshaw and South Bay project openings, the Green Line will run to Century and Crenshaw will assume service from Mariposa to Marine and beyond to Torrance. Ridership characteristics are a function of estimated total daily ridership from the FY35 build-out year estimation; however, with modest adjustments accounting for difference in a network assumptions.

Red Line

- FY11 Ridership characteristics are based on most recent Metro Performance Monitoring Department reporting.
- FY12 thru FY20 Ridership characteristics are a function of present day conditions, anticipated annual growth, and an approximate reflection of system-wide service changes.
- FY21 & FY22 Ridership characteristics are a function of the FY35 build-out year estimation.

Purple Line

- FY11 Ridership characteristics are based on most recent Metro Performance Monitoring Department reporting.
- FY12 thru FY20 Ridership characteristics are a function of present day conditions, anticipated annual growth, and an approximate reflection of system-wide service changes.
- FY21 & FY22 Ridership characteristics are a function of the FY35 build-out year estimation.

Appendix 2

METRO RAIL SYSTEM RUNNING AND CYCLE TIME - CURRENT AND PROJECTED

LIGHT RAIL

Blue Line (Beginning in FY 2012, trunk service w/ Exposition Line between 7th St./Metro Center & Washington/Flower Junction - 4 min. travel)

Northbound	AM Peak (Minutes)	PM Peak (Minutes)	Notes
Transit Mall to 7th/Metro Center - End to End	55	55	FY11 thru FY18.
Transit Mall to Sierra Madre Villa	100	100	FY19, Post Regional Connector
Transit Mall to Azusa/Citrus - End to End	117	117	FY19, Post Regional Connector to Azusa/Citrus
Transit Mall to Claremont - End to End	134	134	FY20, Post Regional Connector to Claremont
Willow to 7th/Metro Center - Shortlines	40	40	FY11 thru FY18; Shortlines.
Willow to Sierra Madre Villa - Shortlines	85	85	FY19 Post Regional Connector, Peak Period; Shortlines.
Logistical Movement at 7th/Metro Ctr. N. Crossovers	5	5	Peak periods, pre-Expo.
Logistical Movement at 7th/Metro Ctr. S. Crossovers	4	4	Peak and non-peak periods w/Expo (more staff). Subj. to interline with Expo.
Logistical Movement at 7th/Metro Ctr. S. Crossovers	0	0	With Expo, subject to interline.
Logistical Movement at SMV N. Pocket	up to 5	up to 5	Crossover south of station, pocket track north of station.
Logistical Movement at Azusa/Citrus S. Crossovers	4	4	
Logistical Movement at Claremont S. Crossovers	4	4	
Turn Time/Schedule Recovery	2 minimum	2 minimum	2 min., when combined with North Crossover move. 3 min. otherwise.

Southbound	AM Peak (Minutes)	PM Peak (Minutes)	Notes
7th/Metro Center to Transit Mall - End to End	53	53	FY11 thru FY18.
Sierra Madre Villa to Transit Mall - End to End	97	97	FY19, Post Regional Connector
Azusa/Citrus to Transit Mall - End to End	114	114	FY19, Post Regional Connector to Azusa/Citrus
Claremont to Transit Mall - End to End	131	131	FY20, Post Regional Connector to Claremont
7th/Metro Center to Willow - Shortlines	40	40	FY11 thru FY18; Shortlines.
Sierra Madre Villa to Willow - Shortlines	84	84	FY19 Post Regional Connector, Peak Period; Shortlines.
Logistical Movement at Transit Mall	0	0	FY11 thru FY18; with Expo, subject to interline.
Logistical Movement at Willow - Shortlines	3	3	
Turn Time/Schedule Recovery	3 minimum	3 minimum	

Cycle Time	Peak	Notes
Transit Mall to 7th/Metro Center	120	Assumption 6" headway. Varies with fractional headways.
Transit Mall to Sierra Madre Villa	204	Assumption 6" or 12" headways. Varies with fractional headways.
Transit Mall to Azusa/Citrus	240	Assumption 6" or 12" headways. Varies with fractional headways.
Transit Mall to Claremont	276	Assumption 6" or 12" headways.
Transit Mall to Claremont	275 - 280	Assumption 5" or 10" headways. Varies with fractional headways.
Willow to 7th/Metro Center (shortline)	90 - 96	Assumption 6" or 12" headways. Varies with fractional headways.
Willow to Sierra Madre Villa (shortline)	180/186/192	Assumption 6" or 12" headways. Varies with fractional headways.
Willow to Sierra Madre Villa (shortline)	185 - 190	Assumption 5" or 10" headways. Varies with fractional headways.

Note - The Exposition Line will be operated as a branch of the Blue Line.

Appendix 2

METRO RAIL SYSTEM RUNNING AND CYCLE TIME - CURRENT AND PROJECTED

LIGHT RAIL (continued)

Exposition Line (Effective w/ Pre-Rev. testing, trunk service w/ Blue Line between 7th St./Metro Ctr. & Washington/Flower Junction - 4 min. travel)
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Northbound (Eastbound)	AM Peak (Minutes)	PM Peak (Minutes)	Notes
Culver City to 7th/Metro Center - End to End	27	27	FY12. Subject to final design, verification.
Colorado/4th to 7th/Metro Center - End to End	44	44	FY16. Subject to final design, verification
Colorado/4th to Atlantic - End to End	74	74	FY19, Regional Connector, subject to final design, verification.
Colorado/4th to Whittier	92	92	FY20, Extension to Whittier, subject to final design, verification.
Logistical Movement at 7th/Metro Ctr. N. Crossovers	4	4	Peak and non-peak periods w/Blue. Subject to interline with Blue.
Logistical Movement at Atlantic	0	0	Crossovers west of station. Subject to verification.
Logistical Movement at Whittier	0	0	Crossovers west of station. Subject to verification.
Turn Time/Schedule Recovery	2 minimum	2 minimum	2 min., when combined with North Crossover move. 3 min. otherwise.
Southbound (Westbound)	AM Peak (Minutes)	PM Peak (Minutes)	Notes
7th/Metro Center to Culver City - End to End	29	29	FY12. Subject to final design, verification.
7th/Metro Center to Colorado/4th - End to End	46	46	FY16. Subject to final design, verification
Atlantic to Colorado/4th - End to End	77	77	FY19, Regional Connector, subject to final design, verification.
Whittier to Colorado/4th - End to End	95	95	FY20, Extension to Whittier, subject to final design, verification.
Logistical Movement at Crenshaw	0	0	Subject to final design, verification.
Logistical Movement at Culver City	0	0	Subject to final design, verification.
Logistical Movement at Colorado/4th	5	5	Subject to final design, verification.
Turn Time/Schedule Recovery	3 minimum	3 minimum	
Cycle Time	Peak		
7th/Metro Center to Culver City	72		Assumption 6 or 12" headway. Varies with fractional headways.
7th/Metro Center to Colorado/4th	114		Assumption 6" headway. Varies with fractional headways.
Colorado/4th to Atlantic	162		Assumption 6" headway. Varies with fractional headways.
Colorado/4th to Whittier	198		Assumption 6" headway. Varies with fractional headways.
Colorado/4th to Whittier	195		Assumption 5" headway. Varies with fractional headways.

Note - The Exposition Line will be operated as a branch of the Blue Line.

Appendix 2

METRO RAIL SYSTEM RUNNING AND CYCLE TIME - CURRENT AND PROJECTED

LIGHT RAIL (continued)

Gold Line

Northbound	AM Peak (Minutes)	PM Peak (Minutes)	Notes
Atlantic to Sierra Madre Villa - End to End Seg. 1 and East	53	53	
Atlantic to Azusa/Citrus - End to End	71	71	In service FY16. Subject to City/County traffic signal coord., verification.
Logistical Movement at Union Station - Shortlines	up to 5	up to 5	Crossovers north and south of station; subject to verification.
Logistical Movement at Sierra Madre Villa- Seg. 1 and East	0	0	Crossovers south of station, tail tracks.
Logistical Movement at Sierra Madre Villa- Shortline Fthll.	up to 5	up to 5	crossover south of station, pocket track north of station.
Turn Time/Schedule Recovery	3 minimum	3 minimum	
Southbound	AM Peak (Minutes)	PM Peak (Minutes)	Notes
Sierra Madre Villa to Atlantic - End to End East and Seg. 1	53	53	
Azusa/Citrus to Atlantic - End to End	71	71	In service FY 2016. Subject to City/County traffic signal coord., verification.
Logistical Movement at Union Station - Shortlines	up to 5	up to 5	Crossovers north and south of station; subject to verification.
Logistical Movement at Atlantic - Eastside and Foothill	0	0	Crossovers north of station.
Turn Time/Schedule Recovery	3 minimum	3 minimum	
Cycle Time	Peak		
Union Station to Sierra Madre Villa	67.5		Assumption 7.5" headway. Varies with fractional headways.
Union Station to Sierra Madre Villa	66		Assumption 6" headway. Varies with fractional headways.
Atlantic to Sierra Madre Villa	120		Assumption 15" headway. Varies with fractional headways.
Atlantic to Sierra Madre Villa	120		Assumption 12" headway. Varies with fractional headways.
Atlantic to Sierra Madre Villa	112.5		Assumption 7.5" headway. Varies with fractional headways.
Atlantic to Sierra Madre Villa	120		Assumption 6" headway. Varies with fractional headways.
Atlantic to Azusa/Citrus	150		Assumption 6" headway. Varies with fractional headways.

Note: The Gold Line alignment will be assumed by Blue and Expo line services effective with the Regional Connector in FY19.

Appendix 2

METRO RAIL SYSTEM RUNNING AND CYCLE TIME - CURRENT AND PROJECTED

LIGHT RAIL (continued)

Green Line

Eastbound	AM Peak (Minutes)	PM Peak (Minutes)	Notes
Redondo Beach to Norwalk - End to End	34	34	
Century/Aviation to Norwalk	29	29	FY18, Post Crenshaw, subject to verification
LAX International Terminal to Norwalk	34	34	FY18, Post Crenshaw, subject to verification
Logistical Movement at Norwalk West Crossovers	0	0	If headway is equal to or greater than 6 minutes.
Logistical Movement at Norwalk East Crossovers	5	5	If headway is less than 6 minutes.
Turn Time/Schedule Recovery	3 minimum	3 minimum	

Westbound	AM Peak (Minutes)	PM Peak (Minutes)	Notes
Norwalk to Redondo Beach - End to End	34	34	
Norwalk to Century/Aviation	29	29	FY18, Post Crenshaw, subject to verification
Norwalk to LAX International Terminal	34	34	FY18, Post Crenshaw, subject to verification
Logistical Movement at Redondo Beach/Marine	5		
Logistical Movement at Century/Aviation	3 minimum	3 minimum	Subject to verification.
Turn Time/Schedule Recovery	4 minimum	4 minimum	

Cycle Time	Peak	
Redondo Beach to Norwalk	75	Assumption 7.5" headway. Varies with fractional headways.
Redondo Beach to Norwalk	78	Assumption 6" headway. Varies with fractional headways.
Torrance to Norwalk	96	Assumption 6" headway. Varies with fractional headways.
Century/Aviation to Norwalk	66	Assumption 6" headway. Varies with fractional headways.
Century/Aviation to Norwalk	70	Assumption 5" headway. Varies with fractional headways.
LAX International Terminal to Norwalk	78	Assumption 6" headway. Varies with fractional headways.
LAX International Terminal to Norwalk	80	Assumption 5" headway. Varies with fractional headways.

Note: This RFMP assumes all Green Line services are re-aligned to terminate at Century/Aviation in FY18. However, optionally, Green Line service can continue to Redondo Beach and/or to Torrance.

Crenshaw - South Bay

Northbound	AM Peak (Minutes)	PM Peak (Minutes)	Notes
Redondo Beach/Marine to Crenshaw/Exposition	26		Subject to final design and verification.
Torrance to Crenshaw/Exposition	34		Subject to final design and verification.
Logistical Movement at Crenshaw/Exposition	0		Crossovers S. of station, subject to verification.
Turn Time/Schedule Recovery	3 minimum	3 minimum	

Southbound	AM Peak (Minutes)	PM Peak (Minutes)	Notes
Crenshaw Exposition to Redondo Beach/Marine	26		Subject to running to verification
Crenshaw Exposition to Torrance	34		Subject to running to verification
Logistical Movement at Redondo Beach/Marine	5		Subject to running to verification
Logistical Movement at Torrance	0		Depending on final running time verification.
Turn Time/Schedule Recovery	3 minimum	3 minimum	

Cycle Time	Peak	
Crenshaw/Exposition to Redondo Beach/Marine	60	Assumption 6" headway. Varies with fractional headways.
Crenshaw/Exposition to Torrance	78	Assumption 6" headway. Varies with fractional headways.

Appendix 2

METRO RAIL SYSTEM RUNNING AND CYCLE TIME - CURRENT AND PROJECTED

HEAVY RAIL

Red Line (Trunk service with Purple Line between Union Station and Wilshire/Vermont - 9 minutes travel time)

Westbound	AM Peak (Minutes)	PM Peak (Minutes)	Notes
Union Station to North Hollywood - End to End	29	29	
Logistical Movement at North Hollywood	Up to 3 minutes	Up to 3 minutes	Subject to crossover-schedule coordination.
Logistical Movement at Wilshire/Western	0	0	
Turn Time/Schedule Recovery	2 minimum	2 minimum	
Eastbound	AM Peak (Minutes)	PM Peak (Minutes)	Notes
North Hollywood to Union Station - End to End	29	29	
Logistical Movement at Union Station East Crossovers	5	5	Peak periods, subject to verification for processing 3-minute headways.
Logistical Movement at Union Station West Crossovers	0	0	Non-peak periods.
Logistical Movement at D20 Turnback	7	7	Subject to verification.
Turn Time/Schedule Recovery	2 minimum	2 minimum	2 min. when combined with East Crossover move; 3 min. minimum otherwise.
Cycle Time	Peak		
Union Station to North Hollywood	67.5		Assumption 7.5" headway. Varies with fractional headways.
Union Station to North Hollywood	66		Assumption 6" headway. Varies with fractional headways.
Union Station D20 Turnback to North Hollywood	75		Assumption 7.5" headway. Varies with fractional headways.
Union Station D20 Turnback to North Hollywood	72		Assumption 4" or 6" headway. Varies with fractional headways.
Union Station D20 Turnback to North Hollywood	75		Assumption 5" headway. Varies with fractional headways.

Purple Line (Trunk service with Red Line between Union Station and Wilshire/Vermont - 9 minutes travel time)

Westbound	AM Peak (Minutes)	PM Peak (Minutes)	Notes
Union Station to Wilshire/Western - End to End	13	13	
Union Station to Westwood/VA	29	29	FY21; Westside Extension, subject to verification
Logistical Movement at Wilshire/Western	0	0	
Logistical Movement at Westwood/VA	Up to 3 minutes	Up to 3 minutes	Subject to crossover-schedule coordination.
Turn Time/Schedule Recovery	2 minimum	2 minimum	Non-peak only; other times, 3 minute minimum.
Eastbound	AM Peak (Minutes)	PM Peak (Minutes)	Notes
Wilshire/Western to Union Station - End to End	13	13	
Westwood/VA to Union Station	29	29	FY21; Westside Extension, subject to verification
Logistical Movement at Union Station East Crossovers	5	5	Peak periods, subject to verification for processing 3-minute headways.
Logistical Movement at Union Station West Crossovers	0	0	Non-peak periods.
Logistical Movement at D20 Turnback	9	9	Subject to verification and crossover-schedule coordination.
Turn Time/Schedule Recovery	2 minimum	2 minimum	
Cycle Time	Peak		
Union Station to Wilshire/Western	37.5		Assumption 7.5" headway. Varies with fractional headways.
Union Station to Wilshire/Western	36		Assumption 6" headway. Varies with fractional headways.
Union Station to Wilshire/Western	35		Assumption 5" headway. Varies with fractional headways.
Union Station D20 Turnback to Wilshire/Western	42		Assumption 6" headway. Varies with fractional headways.
Union Station D20 Turnback to Westwood/VA	75		Assumption 7.5" headway. Varies with fractional headways.
Union Station D20 Turnback to Westwood/VA	72		Assumption 4" or 6" headway. Varies with fractional headways.
Union Station D20 Turnback to Westwood/VA	75		Assumption 5" headway. Varies with fractional headways.

Appendix 3

METRO RAIL SYSTEM - PROJECTED REVENUE TRAIN / CONSIST / VEHICLE SERVICE REQUIREMENTS

Light Rail

Table with 25 columns (FY12 to FY35) and 10 rows (Metro Blue Line, Scheduled Trains, Reserve Trains, Total Trains, Consist Length, Scheduled Vehicles, Reserve Vehicles, Total Vehicles). Includes service requirements for Metro Blue Line.

RFMP Notes:
* - FY12, Blue Line and Expo Line service will be integrated into one operational unit, similar to Red Line and Purple Line, including interlining.
- FY19, Regional Connector project, the downtown LRT subway, results in Blue Line assuming the Gold Line from Little Tokyo to Azusa Citrus.
^ - FY20, Blue Line is extended from Azusa/Citrus to Claremont.

Table with 25 columns (FY12 to FY35) and 10 rows (Metro Exposition Line, Scheduled Trains, Reserve Trains, Total Trains, Consist Length, Scheduled Vehicles, Reserve Vehicles, Total Vehicles). Includes service requirements for Metro Exposition Line.

RFMP Notes:
* - FY12, Blue Line and Expo Line service will be integrated into one operational unit, similar to Red Line and Purple Line, including interlining.
% - FY12, Expo I Initial Operating Segment to Crenshaw, then to Culver City.
& - FY16, Expo II Segment implemented from Culver City to Colorado/4th.
- FY19, Regional Connector project, the downtown LRT subway, results in Expo Line assuming the Gold Line from Little Tokyo to Atlantic/Pomona.
^ - FY20, Expo Line is extended to Whittier (to South El Monte remains an option).

Appendix 3

METRO RAIL SYSTEM - PROJECTED REVENUE TRAIN / CONSIST / VEHICLE SERVICE REQUIREMENTS

Light Rail (continued)																								
Metro Gold Line	FY12	FY13	FY14	FY15	FY16 \$	FY17	FY18	FY19 #	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
	6min., all 2's	6min., all 2's	6min., all 2's	6min., all 2's	6min., all 2's	6min., all 3's	6min., all 3's	6min., all 3's																
Scheduled Trains - Revenue Operation	20	20	20	20	23	23	23																	
Scheduled Trains - Pre-Revenue Operation	0	0	0	0	0	0	0																	
Reserve Trains - Terminal/Pocket	0	0	0	0	0	2	2																	
Reserve Trains Maintenance - Division	1	1	1	1	1	1	1																	
Total Trains - Service Requirement	21	21	21	21	24	26	26																	
Consist Length - One Car Trains	0	0	0	0	0	0	0																	
Consist Length - Two Car Trains	21	21	21	21	0	0	0																	
Consist Length - Three Car Trains	0	0	0	0	24	26	26																	
Scheduled Vehicles - Revenue Operation	40	40	40	40	69	69	69																	
Scheduled Vehicles - Pre-Revenue Operation	0	0	0	0	0	0	0																	
Reserve Vehicles - Terminal	0	0	0	0	0	6	6																	
Reserve Vehicles Maintenance - Division	2	2	2	2	3	3	3																	
Total Vehicles - Service Requirement	42	42	42	42	72	78	78																	

RFMP Notes:

\$ - FY16, Gold Line Foothill Extension from Sierra Madre Villa to Azusa/Citrus.

- FY19, Regional Connector project, the downtown LRT subway, results Blue and Expo Lines assuming the Gold Line services.

Appendix 3

METRO RAIL SYSTEM - PROJECTED REVENUE TRAIN / CONSIST / VEHICLE SERVICE REQUIREMENTS

Light Rail (continued)																								
Light Rail Combined	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
Scheduled Trains - Revenue Operation	55	55	55	55	71	71	86	89	98	98	98	98	98	112	112	112	112	112	112	112	112	112	112	112
Scheduled Trains - Pre-Revenue Operation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reserve Trains - Terminal/Pocket	1	1	1	1	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Reserve Trains Maintenance - Division	3	3	3	3	4	4	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Total Trains - Service Requirement	59	59	59	59	76	78	94	96	105	105	105	105	105	119	119	119	119	119	119	119	119	119	119	119
Consist Length - One Car Trains	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Consist Length - Two Car Trains	33	33	33	33	12	12	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28
Consist Length - Three Car Trains	26	26	26	26	64	66	66	68	77	77	77	77	77	91	91	91	91	91	91	91	91	91	91	91
Scheduled Vehicles - Revenue Operation	134	134	134	134	202	202	232	241	268	268	268	268	268	310	310	310	310	310	310	310	310	310	310	310
Scheduled Vehicles - Pre-Revenue Operation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reserve Vehicles - Terminal	3	3	3	3	3	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Reserve Vehicles Maintenance - Division	7	7	7	7	11	11	13	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Total Vehicles - Service Requirement	144	144	144	144	216	222	254	260	287	287	287	287	287	329	329	329	329	329	329	329	329	329	329	329

RFMP Notes:
 - See individual lines for specific notes.
 - Light Rail combined totals shown for statistical purposes only.
 - Interoperability between Blue/Expo and Gold becomes effective in FY19 as result of Regional Connector project. No inter-operability exists between Green/Crenshaw lines with Blue/Expo.

Appendix 4

METRO RAIL SYSTEM - PROJECTED WEEKDAY RAIL FLEET CATEGORY ALLOCATION / SPARE RATIOS

Light Rail																								
Metro Blue Line	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19 #	FY20 @	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
Revenue Vehicle Service Requirement	60	60	60	60	60	60	60	117	126	126	126	126	126	150	150	150	150	150	150	150	150	150	150	150
Pre-Revenue Vehicle Service Requirement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Preventive Maintenance	4	4	4	4	4	4	4	12	12	12	12	12	12	15	15	15	15	15	15	15	15	15	15	15
Corrective Maintenance	4	4	4	4	4	4	4	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9	9
Overhaul Maintenance	2	2	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Warranty	1	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3
Vehicle Demand - Revenue Serv. & Maint.	71	71	71	71	71	71	71	139	148	148	148	148	148	177	177	177	177	177	177	177	177	177	177	177
Maintenance Spare Ratio	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.19	0.17	0.17	0.17	0.17	0.17	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Structural Overhaul / Systems Rehabilitation	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fleet Vehicle Requirement	71	71	71	71	71	71	71	139	148	148	148	148	148	177	177	177	177	177	177	177	177	177	177	177
Fleet Size (on property / ordered)	71	71	71	71	71	74	74	148	148	148	148	148	148	148	148	148	148	148	148	148	148	148	148	148
Shortage (-) / Excess	0	0	0	0	0	3	3	9	0	0	0	0	0	-29	-29	-29	-29	-29	-29	-29	-29	-29	-29	-29
Operating Spare Ratio (All Vehicles)	0.18	0.18	0.18	0.18	0.18	0.23	0.23	0.26	0.17	0.17	0.17	0.17	0.17	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01

RFMP Notes:
 * - FY11, Blue Line and Expo Line service will be integrated into one operational unit, similar to Red Line and Purple Line, including interlining.
 # - FY19, Regional Connector project, the downtown LRT subway, results in Blue Line assuming a portion of Gold Line fleet. In support of service from Little Tokyo to Azusa/Citrus.
 @ - FY20, Gold Line Foothill Extension to Claremont (Assumed as part of Blue Line).
 FY25 through FY35 vehicle requirement is projection consistent with operating 5-minute headways on the Blue and Expo Lines. Figures are subject to change. Date of implementation subject to change.

Metro Exposition Line	FY12 %	FY13	FY14	FY15	FY16 &	FY17	FY18	FY19 #	FY20 +	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
Revenue Vehicle Service Requirement	18	18	18	18	60	60	60	87	105	105	105	105	105	123	123	123	123	123	123	123	123	123	123	123
Pre-Revenue Vehicle Service Requirement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Preventive Maintenance	1	1	1	1	6	6	6	8	9	9	9	9	9	12	12	12	12	12	12	12	12	12	12	12
Corrective Maintenance	1	1	1	1	4	4	4	6	7	7	7	7	7	8	8	8	8	8	8	8	8	8	8	8
Overhaul Maintenance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Warranty	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Vehicle Demand - Revenue Serv. & Maint.	21	21	21	21	71	71	71	103	123	123	123	123	123	145	145	145	145	145	145	145	145	145	145	145
Maintenance Spare Ratio	0.17	0.17	0.17	0.17	0.18	0.18	0.18	0.18	0.17	0.17	0.17	0.17	0.17	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Structural Overhaul / Systems Rehabilitation	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fleet Vehicle Requirement	21	21	21	21	71	71	71	103	123	123	123	123	123	145	145	145	145	145	145	145	145	145	145	145
Fleet Size (on property / ordered)	21	21	21	61	74	74	76	123	123	123	123	123	123	123	123	123	123	123	123	123	123	123	123	123
Shortage (-) / Excess	0	0	0	40	3	3	5	20	0	0	0	0	0	-22	-22	-22	-22	-22	-22	-22	-22	-22	-22	-22
Operating Spare Ratio (All Vehicles)	0.17	0.17	0.17	2.39	0.23	0.23	0.27	0.41	0.17	0.17	0.17	0.17	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

RFMP Notes:
 % - FY12, Expo I Initial Operating Segment to Crenshaw, then to Culver City.
 & - FY16, Expo II Segment to Colorado/4th.
 # - FY19, Regional Connector project, the downtown LRT subway, results in Expo Line assuming a portion of Gold Line fleet. In support of service from Little Tokyo to Atlantic/Pomona.
 + - FY20, Gold Line East Los Angeles Phase 2 to Whittier or South El Monte (Assumed as part of Expo Line).
 FY25 through FY35 vehicle requirement is projection consistent with operating 5-minute headways on the Blue and Expo Lines. Figures are subject to change. Date of implementation subject to change.

Appendix 4

METRO RAIL SYSTEM - PROJECTED WEEKDAY RAIL FLEET CATEGORY ALLOCATION / SPARE RATIOS

Light Rail (continued)																								
Metro Gold Line - Light Rail	FY12*	FY13	FY14	FY15\$	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
Revenue Vehicle Service Requirement	42	42	42	42	72	78	78																	
Pre-Revenue Vehicle Service Requirement	0	0	0	0	0	0	0																	
Preventive Maintenance	4	4	4	4	7	7	7																	
Corrective Maintenance	2	2	2	2	4	4	4																	
Overhaul Maintenance	0	0	0	0	0	0	0																	
Warranty	2	2	2	2	2	2	2																	
Vehicle Demand - Revenue Serv. & Maint.	50	50	50	50	85	91	91																	
Maintenance Spare Ratio	0.19	0.19	0.19	0.19	0.18	0.17	0.17																	
Structural Overhaul / Systems Rehabilitation	0	0	0	0	0	0	0																	
Fleet Vehicle Requirement	50	50	50	50	85	91	91																	
Fleet Size (on property / ordered)	50	50	50	50	85	93	123																	
Shortage (-) / Excess	0	0	0	0	0	2	32																	
Operating Spare Ratio (All Vehicles)	0.19	0.19	0.19	0.19	0.18	0.19	0.58																	

RFMP Notes:

\$ - FY16, Foothill Extension to Azusa/Citrus.

- FY19, Regional Connector project, the downtown LRT subway, results in Blue and Expo Lines assuming the Gold Line fleet.

Appendix 4

METRO RAIL SYSTEM - PROJECTED WEEKDAY RAIL FLEET CATEGORY ALLOCATION / SPARE RATIOS

Light Rail (continued)																								
Metro Green Line - Light Rail	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
Revenue Vehicle Service Requirement	24	24	24	24	24	24	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	
Pre-Revenue Vehicle Service Requirement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Preventive Maintenance	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Corrective Maintenance	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Overhaul Maintenance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Warranty	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Vehicle Demand - Revenue Serv. & Maint.	29	29	29	29	29	29	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	
Maintenance Spare Ratio	0.21	0.21	0.21	0.21	0.21	0.21	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	
Overhaul / Systems Rehabilitation	0	0	0	0	0	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fleet Vehicle Requirement	29	29	29	29	29	29	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	
Fleet Size (on property / ordered)	29	29	29	29	29	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	
Shortage (-) / Excess	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Operating Spare Ratio (All Vehicles)	0.21	0.21	0.21	0.21	0.21	0.38	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	

RFMP Notes :

Crenshaw - South Bay																								
	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
Revenue Vehicle Service Requirement							28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	
Pre-Revenue Vehicle Service Requirement							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Preventive Maintenance							2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Corrective Maintenance							2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Overhaul Maintenance							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Warranty							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Vehicle Demand - Revenue Serv. & Maint.							33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	
Maintenance Spare Ratio							0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	
Structural Overhaul / Systems Rehabilitation							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fleet Vehicle Requirement							33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	
Fleet Size (on property / ordered)							33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	
Shortage (-) / Excess							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Operating Spare Ratio (All Vehicles)							0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	

RFMP Notes :

Appendix 4

METRO RAIL SYSTEM - PROJECTED WEEKDAY RAIL FLEET CATEGORY ALLOCATION / SPARE RATIOS

Light Rail (continued)																								
Light Rail Combined	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
Revenue Vehicle Service Requirement	144	144	144	144	216	222	254	260	287	287	287	287	287	329	329	329	329	329	329	329	329	329	329	329
Pre-Revenue Vehicle Service Requirement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Preventive Maintenance	11	11	11	11	19	19	21	24	25	25	25	25	25	31	31	31	31	31	31	31	31	31	31	31
Corrective Maintenance	9	9	9	9	14	14	16	18	19	19	19	19	19	21	21	21	21	21	21	21	21	21	21	21
Overhaul Maintenance	2	2	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Warranty	5	5	5	5	5	5	6	6	6	6	6	6	6	7	7	7	7	7	7	7	7	7	7	7
Vehicle Demand - Revenue Serv. & Maint.	171	171	171	171	256	262	299	308	337	337	337	337	337	388	388	388	388	388	388	388	388	388	388	388
Maintenance Spare Ratio	0.19	0.19	0.19	0.19	0.19	0.18	0.18	0.18	0.17	0.17	0.17	0.17	0.17	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Structural Overhaul / Systems Rehabilitation	0	0	0	0	0	14	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fleet Vehicle Requirement	171	171	171	171	256	262	299	308	337	337	337	337	337	388	388	388	388	388	388	388	388	388	388	388
Fleet Size (on property / ordered)	171	171	171	211	259	307	339	337	337	337	337	337	337	337	337	337	337	337	337	337	337	337	337	337
Shortage (-) / Excess	0	0	0	40	3	45	40	29	0	0	0	0	0	-51	-51	-51	-51	-51	-51	-51	-51	-51	-51	-51
Operating Spare Ratio (All Vehicles)	0.19	0.19	0.19	0.47	0.20	0.38	0.33	0.30	0.17	0.17	0.17	0.17	0.17	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02

RFMP Notes:

- See individual lines for specific notes.
- Interoperability between Blue/Expo and Gold becomes effective in FY19 as result of Regional Connector project. No inter-operability exists between Green/Crenshaw lines with Blue/Expo.

METRO RAIL SYSTEM - PROJECTED WEEKDAY RAIL FLEET CATEGORY ALLOCATION / SPARE RATIOS

Metro Red/Purple Lines - Heavy Rail																								
Metro Red/Purple Lines - Heavy Rail	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21 #	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
Revenue Vehicle Service Requirement*	64	64	64	64	76	76	76	84	84	152	152	152	152	152	152	152	152	152	152	152	152	152	152	152
Pre-Revenue Vehicle Service Requirement	0	0	0	0	0	0	0	0	68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Preventive Maintenance	4	4	4	4	4	4	4	8	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
Corrective Maintenance	4	4	4	4	4	4	4	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Overhaul Maintenance	2	2	2	2	2	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Warranty	2	2	2	2	2	2	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Vehicle Demand - Revenue Serv. & Maint.	76	76	76	76	88	88	88	102	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182
Maintenance Spare Ratio	0.19	0.19	0.19	0.19	0.16	0.16	0.16	0.21	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Structural Overhaul / Systems Rehabilitation	0	12	12	12	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fleet Vehicle Requirement	76	76	76	76	88	88	88	102	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182
Fleet Size (on property / ordered)	104	92	92	92	120	152	176	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182
Shortage (-) / Excess	28	16	16	16	32	64	88	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operating Spare Ratio (All Vehicles)	0.63	0.44	0.44	0.44	0.58	1.00	1.32	1.17	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20

RFMP Notes:

- * - Minimum consist is two vehicles = configured into one married pair.
- # - FY21, Westside Extension from Wilshire/Western to Westwood/VA is implemented.

Appendix 5

METRO RAIL SYSTEM PROJECTED VEHICLE DISTRIBUTION BY LINE

HEAVY RAIL	FY 12	FY 13	FY 14	FY 15	Deliver 24 FY 16	Deliver 24 FY 17	Deliver 24 FY 18	Deliver 6 FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	TOTAL / VEHICLE TYPE	
VEHICLE TYPE	Red %- Purple %	Red %- Purple %	Red %- Purple %	Red %- Purple %	Red %- Purple %	Red %- Purple %	Red %- Purple %	Red %- Purple %	Red %- Purple %	Red %- Purple %	Red %- Purple %	Red %- Purple %	Red %- Purple %	Red %- Purple %	Red %- Purple %	Red %- Purple %	Red %- Purple %	Red %- Purple %	Red %- Purple %	Red %- Purple %	Red %- Purple %	Red %- Purple %	Red %- Purple %	Red %- Purple %	Red %- Purple %	30
BREDA A650 Base	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74
BREDA A650 Option																										30
Procurement 3021 &					24	48	72	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78

TOTAL VEHICLES BY LINE	104	104	104	104	128	152	176	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182
TOTAL VEHICLES / SYSTEM	104	104	104	104	128	152	176	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182
FLEET VEHICLE REQUIREMENT	76	76	76	76	88	88	88	102	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182
REMOVED FROM FLEET - REBUILD	0	12	12	12	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VEHICLE REQUIREMENT	76	76	76	76	88	88	88	102	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182
TOTAL VEHICLES NEEDED - SYSTEM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VEHICLES NEEDED - LINE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

RFMP Notes:
 % - Red Line and Purple Line vehicles are managed as one operational fleet, vehicles are subject to assignment on either line.
 & - Assumption is that new procurements would be exercised for both LRV and HRV systems; 235 LRVs and 78 HRVs.
 * - Up to 12 A650 vehicles are unavailable for revenue service due to Rebuild program; FY13 through FY16.

F) State of Good Repair Document

The LACMTA's State-of-Good-Repair Assessment dated January 28, 2010 was provided in the 2010 submission.

G) Long Range Financial Plan Model

LACMTA developed a countywide financial forecasting model analyzing funding sources and uses for FY 2010 through FY 2040 for both the Accelerated Financial Plan and the Alternative Financial Plan. These documents provide an agency-wide financial plan for LACMTA, including LACMTA-operated bus and rail transit services; transit services operated by other local operators; Metrolink; highway capital and operations; other multi-modal projects and programs. These models are included as Appendix G.

- G-1 Countywide Financial Forecasting Model FY 2010-FY 2040 30/10 Initiative dated August 19, 2011 (Basis of Westside and Regional Connector America Fast Forward Plan) (p. 2)

- G-2 Countywide Financial Forecasting Model FY 2010-FY 2040 2009 Long Range Transportation Plan Financial Update dated July 29,2011 (Basis of Westside and Regional Connector America Alternative Financial Plan) (p. 417)