

## CHAPTER 7: FINANCIAL ANALYSIS AND EVALUATION

### 7.1 OVERVIEW

This chapter reviews the financial capacity of RT to build, operate, and maintain the proposed project and presents the evaluation of alternatives. The following sections discuss revenue sources, funding issues and risk analysis, financial conclusions, and evaluation of alternatives.

### 7.2 FUNDING FOR CONSTRUCTION COSTS

The LPAP2 is estimated to cost \$270 million to construct (in year of expenditure – YOY – dollars). Table 7.2-1 presents a summary of the capital cost estimate by cost category.

<b>Table 7.2-1: LPAP2 Capital Cost Estimate by Cost Category</b>	
<b>Element</b>	<b>Cost Estimate (Year of Expenditure dollars)</b>
<i>Guideway and Track Elements</i>	\$43,974,000
<i>Stations, Stops, Terminals, Intermodal</i>	\$44,886,000
<i>Support Facilities: Yards, Shops, Administration</i>	\$0
<i>Sitework &amp; Special Conditions</i>	\$61,822,000
<i>Systems</i>	\$30,044,000
<i>ROW, Land, Existing Improvements</i>	\$14,929,000
<i>Vehicles</i>	\$0
<i>Professional Services</i>	\$42,094,000
<i>Unallocated Contingency</i>	\$32,171,000
<i>Finance Charges</i>	\$0
<b>Total Project Cost</b>	<b>\$269,920,000</b>
<i>Source: RT Financial Forecasting Model, September 2007.                      Notes: Cost estimates include an allocated contingency (as a percent of Base Year Dollars without contingency) of 16.43%. The unallocated contingency (as a percent of Base Year Dollars without Contingency) shown in this table is 15.75%, yielding a total contingency (as a percent of Base Year Dollars without contingency) of 32.18%.</i>	

Table 7.2-2 presents a plan for fully funding the project. As shown, funding will come from variety of sources: State Transportation Improvement Program (STIP), Traffic Congestion Relief Program (TCRP), Congestion Mitigation and Air Quality Improvement (CMAQ) Program, community facilities district funds, transit fee district funds, Measure A sales tax / developer fee funds, and FTA Section 5309 New Starts funds. The project is included in the financially constrained SACOG Metropolitan Transportation Plan (MTP).<sup>1</sup> The funding assumptions used for the project and for the RT system as a whole are consistent with the projections in the MTP.

If the LPAP2 were not constructed, and the TSM Alternative were implemented instead, it would be funded entirely from STIP, CMAQ, and local sources.

<sup>1</sup> 2006 Metropolitan Transportation Plan for 2025, March 16, 2006.

Each of these funding sources is described below.

<b>Funding Source</b>	<b>Amount (Year of Expenditure dollars)</b>	<b>Percent of Total Funding</b>
CMAQ	\$7,100,000	2.6%
Laguna Community Facilities District	<i>\$803,250</i>	<i>0.3%</i>
Vineyard Fee District	<i>\$3,989,286</i>	<i>1.5%</i>
STIP	<i>\$4,307,000</i>	<i>1.9%</i>
Measure A Sales Tax/Developer Fee	<i>\$52,760,464</i>	<i>19.5%</i>
TCRP/STIP	\$66,000,000	<i>24.5%</i>
Section 5309 New Starts	<i>\$134,960,000</i>	50.0%
Total	<i>\$269,920,000</i>	100%

Source: Nancy Whelan Consulting; RT Financial Forecasting Model, *September 2007, updated July 2008.*

### 7.2.1 Congestion Mitigation and Air Quality Improvement

CMAQ funds are allocated to States on a formula basis. In California the funds are suballocated to regional transportation planning agencies such as the Sacramento Area Council of Governments (SACOG) for programming. RT has received \$7.1 million for the design phase of the LPAP2 project.

### 7.2.2 Laguna Community Facilities District

The Laguna Community Facilities District was formed to finance the acquisition and construction of (or reimbursement for) certain capital public facilities. The Calvine Transit Center is included in the 2001 Laguna Public Facilities Financing Plan for \$803,250. In May 2006, RT and the County of Sacramento entered into a joint facilities agreement wherein the County agreed to provide \$803,250 for the light rail station / transfer center at Cosumnes River College. The County has indicated that additional funds may be made available in the future based on interest earned on the fund.

### 7.2.3 Vineyard Fee District

The Vineyard Financing Plan Development Fee Program includes funding for \$3,989,286 in capital expenditures for the planned Cosumnes River College light rail station component of the LPAP2 Project. Fees are collected on a per-dwelling unit equivalent for transit capital improvements within the designated area.

### 7.2.4 State Transportation Improvement Program

The State Regional Improvement Program (RIP) funds are programmed by the California Transportation Commission (CTC) in the State Transportation Improvement Program (STIP) for projects that relieve traffic congestion on state and local roads and highways. These funds are allocated to counties largely on a formula basis. Allocations are comprised of both Federal Highway

Trust Funds and State Gas Tax funds. The Federal matching requirements for these funds have been met within each allocation. SACOG is responsible for programming STIP funds in Sacramento, and has programmed \$4,307,000 in 2002 STIP funds for the LPAP2 project.

### **7.2.5 Measure A Sales Tax / Developer Fees**

In November 2004, Sacramento County voters passed the reauthorization of Measure A, the transportation sales tax. The new ordinance includes two sources of transportation funds: sales tax proceeds and a developer fee program entitled "Sacramento Countywide Transportation Mitigation Fee Program." The one half percent sales tax will be collected for 30 years beginning in April 2009. The reauthorization increases RT's share of the sales tax proceeds from *32.50* percent to 38.25 percent. Of this total, 3.75 percent is dedicated to five specific transit capital projects: South Sacramento Corridor Phase 2 (LPAP2), Northeast Corridor Light Rail Improvements, Downtown-Natomas-Airport (DNA) Light Rail extension, Regional Rail Commuter Service and Downtown Intermodal Station. In addition, 20 percent of the new developer fee program revenues are directed toward transit capital improvements. The developer fees are to be assessed at a rate of \$1,000 (2004 dollars) per each new single family unit. Fees for other types of development are proportionate to the trip generation rate of the new land use in comparison to the single family unit rate. Local jurisdictions that do not comply with the developer fee program forfeit their streets and roads maintenance funds from the reauthorized sales tax.

The Sacramento County Transportation Expenditure Plan 2009 – 2039 includes \$98 million (2004 dollars) in developer fees for the Transit Capital Improvement Program and \$118 million (2004 dollars) in sales tax revenues for Rail Transit Improvements. These funds will be directly subvented to Sacramento Regional Transit based on a five-year, annually updated transit capital and operating business plan recommended by Sacramento RT, and approved by the Sacramento Transportation Authority Board. The LPAP2 financial plan includes *\$52.8* million drawn from the Measure A program.<sup>2</sup> According to the financial plan schedule, these funds could be from the existing Measure A sales tax, the reauthorized sales tax, or the new developer fee revenues. Depending on the availability of these sources, RT may request an advance of anticipated Measure A funds from the Sacramento Transportation Authority. In its *New Measure A Sales Tax Program Plan of Finance* (July 18, 2006) report, the Sacramento Transportation Authority describes its plan to make the reauthorization sales tax revenues available for projects prior to 2009.

### **7.2.6 State Traffic Congestion Relief Program**

In 2000, the Governor of California signed into law the Traffic Congestion Relief Program (TCRP) that dedicated a portion of the sales tax on gasoline to transportation programs and projects for a period of five years, which was later extended for two years. Among the projects named in the legislation was the LPAP2 project at a funding level of \$70 million. Approximately \$7 million in TCRP funds have been allocated to the Final Environmental/Preliminary Engineering phase of the project. Although budget shortfalls resulted in the suspension of TCRP allocations in 2003 and 2004, the State budget for FY 2006 provided revenue for TCRP. Beginning in July 2005, TCRP allocations were approved by the California Transportation Commission and will continue until all funds are used. While it is possible that TCRP funds may not be available within the timeframe anticipated in the funding plan, it is highly likely that funds will continue to flow during *the project construction period*.

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<sup>2</sup> From Ordinance No. STA 04-01, "An Ordinance Providing for the Continuation of a One-Half of One Percent Retail Transactions and Use Tax by the Sacramento Transportation Authority for Local Transportation Purposes".

### **7.2.7 Federal Section 5309 New Starts**

Federal Section 5309 New Starts funds are discretionary funds authorized every six years and appropriated annually by Congress for fixed guideway transit projects. Under Section 5309, projects are evaluated and rated by the Federal Transit Administration and submitted to Congress for appropriations. The reauthorization of the Transportation Equity Act of the 21st Century, SAFETEA-LU, continues the New Starts program. The LPAP2 financial plan includes 50 percent of its funding from the New Starts program (\$ *135.0* million).

## **7.3 FUNDING FOR OPERATIONS AND MAINTENANCE COSTS**

The system wide operating and maintenance costs under the LPAP2 are estimated to total \$ *275.2* million in 2030 (FY *2007* \$). The costs are shown in FY *2007* dollars rather than YOY dollars to make comparisons more easily with the current and near future costs. These costs are \$ *1.03* million lower than the operating and maintenance costs for the TSM Alternative. *The* TSM scenario utilizes substantially more bus service than the Full Build scenario, and, based on RT's operating data and projections, bus operating costs are increasing at a faster rate than rail operating costs.

These figures compare to RT's 2006 total budgeted operating expenses of \$ *134.8* million.<sup>3</sup>

The primary funding sources for RT's current bus, LRT, paratransit, and regional rail operations include the following:

- Sacramento County Measure A (one-half cent sales tax),
- The Local Transportation Fund component of the State Transportation Development Act (TDA--one-quarter cent of the State's 7.25 percent sales tax),
- State Transit Assistance Program funds,
- Measure A funds from the City of Folsom per a trade of state capital dollars<sup>4</sup>,
- City contributions of TDA to pay for RT services,
- Special service (e.g., shuttles, events) revenues,
- Fare revenues,
- Federal Section 5307 formula funds,
- Federal Section 5309 Fixed Guideway funds, and
- Other sources (e.g., advertising, interest earnings).

To fund the operation of the LPAP2 project, RT would use a mix of funds from these sources. RT's financial planning model does not provide cost and revenue projections for operations and maintenance for individual routes. Rather, the model projects the subtotal for operations and maintenance costs by mode throughout the entire RT system, and assigns revenues on a systemwide basis. Thus, distinct revenue sources have not been assigned to the incremental operations and maintenance costs associated with the LPAP2.

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<sup>3</sup> Sacramento Regional Transit District, RT Financial Forecasting Model, *September 2007*.

<sup>4</sup> As stated in RT's 2000 – 2008 Short Range Transit Plan, Financial Plan section, "In an innovative funding arrangement RT has secured an agreement with the City of Folsom to receive \$40.4 million of their Measure A funds through the year 2009 in exchange for \$32.75 million in Flexible Congestion Relief funds. The funds to be received annually reflect Folsom's portion of the Measure A receipts which can be used by RT to fund expenses."

The financial analysis indicates that RT has the financial capacity to build, operate and maintain the LPAP2, while continuing to operate and maintain the existing system without a new revenue source, based on the assumed growth factors for current revenue sources, including the renewal of the Measure A sales tax. RT anticipates that revenues from the renewal of the Measure A sales tax, passed in November 2004, would partially fund the LPAP2 operations and maintenance costs.

Renewal of Measure A, the current countywide half percent sales tax for transportation, will take effect upon expiration of the existing Measure A beginning in April 2009. Under the current Measure RT receives *32.50%* of the half percent sales tax. The new Measure will increase the amount of revenue to RT by dedicating 38.25% of the half cent sales tax to RT.

## **7.4 CASH FLOW ANALYSIS**

A cash flow analysis is used to determine RT's financial capacity. This analysis projects operating and capital revenues and expenditures that RT is likely to incur in continuing current transit services and by increasing service as included in the 2006 Metropolitan Transportation Plan and RT's current plans for service implementation. To the extent that this analysis does not show a deficit (inadequate revenues to meet projected expenditures) in some future year, the financial capacity of the District to build, operate, and maintain the project is demonstrated.

RT's Financial Forecasting Model is used to analyze capital and operating cash flows through FY 2030. The model relies on a series of assumptions regarding service levels, cost inflation, revenue growth, fare price elasticity, and fleet size.

The RT Financial Forecasting Model used for the cash flow analysis produces a capital statement and operating statement. Given the assumptions applied in the cash flow analysis, the operating statement indicates that revenues are adequate to cover operating expenses over the period. Operating surpluses are transferred to capital. The capital statement indicates that capital revenues are sufficient to cover expenditures *required for the LPAP2 project*.

## **7.5 RISK ANALYSIS**

A risk analysis takes the cash flow analysis one step further by accounting for variations in the key variables. The renewal of Measure A in November 2004 provides the needed funds to operate and maintain RT's existing system and to allow for system expansion. The renewal of the sales tax removes substantial financial risk from implementing the LPAP2.

Although the cash flow analysis shows that RT has the financial capacity to extend light rail and increase bus service over time, the financial plan is not without risk. The financial feasibility of building the LPAP2 project and other planned light rail extensions is dependent upon several significant revenue assumptions:

- The construction cost estimate includes *an allocated contingency (as a percent of Base Year Dollars without contingency) of 16.43% and an unallocated contingency (as a percent of Base Year Dollars without Contingency) of 15.75%, yielding a total contingency (as a percent of Base Year Dollars without contingency) of 32.18%*.
- Should these assumptions prove optimistic, RT will need to identify additional revenues to complete the project. Possible sources could include Measure A revenues.

- The availability of State Traffic Congestion Relief Funds in the years for which they are planned. \$70 million in TCRP funds is programmed for the LPAP2 Project, of which \$7 million has been allocated to the AA/Final Environmental/Preliminary Engineering phase of the project. After a two-year suspension of TCRP allocations, TCRP funds *were* allocated for FY 2006. While it is possible that TCRP funds may not be available within the timeframe anticipated in the funding plan, it is highly likely that funds will continue to flow *in the future*.
- The availability of Section 5309 New Starts Funds. \$ *135* million in Section 5309 New Starts funds is planned for the LPAP2 capital project. RT will continue to submit annual New Starts Rating Reports *as required until a Full Funding Grant Agreement is executed for the project*. The project must be rated “recommended” or higher to be eligible for New Starts funding. The New Starts program is a highly competitive nationwide process, with funding requests vastly exceeding availability.
- The availability of a new revenue source to fund operating and capital requirements of the planned system. *The Sacramento Transportation Authority adopted a resolution declaring its intent to pursue a supplemental transportation funding program equivalent in revenue to a one half percent countywide sales tax. Half of the revenue would be used for transit, and half would be used for local streets and roads. The supplemental funding program is planned to take effect no later than FY 2013.* A new revenue source would be required *for RT* to fully fund the planned system.
- Ridership and fare revenues. Fare revenue is projected to provide a significant source of revenue to offset the operations and maintenance costs of the LPAP2 project. Fare revenue estimates are dependent upon both ridership and average fare estimates, and are based on assumptions that reflect RT’s historical experience. RT’s financial model projects a surplus of sources available for funding operations and maintenance costs. Thus, if the fare revenue estimates are shown to be overstated, other sources could be available to fully fund operations and maintenance of the RT system. Under this circumstance, transfers of surplus operations and maintenance revenues to capital projects would likely be reduced.

Should the above assumptions about operating and capital funding for the project prove optimistic, it would become necessary to re-prioritize the rail extension program, phase the capital program, reconsider systemwide service expansion, and seek other stable funding sources in order to avoid a net deficit. If capital funding commitments to the project are made in years beyond the construction schedule, interim or “bridge” financing may address the cash flow shortfalls.

At this stage in the development of the LPAP2 project, the systemwide funding plan for RT is based on financial projections and governmental actions which are not finalized. More detailed information on the financial plan is presented in RT’s LPAP2 Section 5309 New Starts Report to the Federal Transit Administration.

In short, the financial plan has risks, but at this point in time they appear to be manageable risks. Close tracking of the sales tax renewal measure, the State Transportation Improvement Program (STIP) and TCRP programs, and the status of the LPAP2 project as it is reviewed and rated in the New Starts evaluation process will help address these risks and to assess when corrective action *may be* needed.

## **7.6 CONCLUSIONS**

The analyses outlined in this chapter (cash flow and risk) indicate that RT can afford to build, operate and maintain the LPAP2 Project, while continuing to operate and maintain the existing transit



system.<sup>5</sup> This conclusion is not unqualified, however. As with any financial forecast, there is risk in the uncertainty of future economic conditions. Also, there is some risk that the additional operating and capital funding needed to extend the service may not be identified in the near term. Detailed financial modeling results that support these conclusions are presented in a separate technical report that is available from RT's planning office.

## **7.7 EVALUATION OF ALTERNATIVES**

### **7.7.1 New Starts Evaluation Process**

*The Section 5309 "New Starts" program is the Federal government's primary program for providing financial support to locally-planned, implemented, and operated fixed guideway transit major capital investments. The New Starts evaluation process is used in conjunction with the evaluation process under the NEPA, for which this FSEIS has been prepared. This section describes how FTA evaluates projects for its New Starts funding recommendations. The South Sacramento Corridor Phase 2 LRT project is seeking New Starts funding and, therefore, is subject to this evaluation and rating process.*

*Each year FTA submits its Annual Report on New Starts to Congress as a companion document to the annual budget submitted by the President. The report provides recommendations for the allocation of New Starts funds under Section 5309 of Title 49 of the United States Code. As required by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), FTA uses the following project justification criteria to evaluate New Starts projects: mobility improvements; environmental benefits; cost effectiveness; operating efficiencies; transit-supportive existing land use policies and future patterns; and other factors. FTA must also consider the local financial commitment for the proposed project. In total, the criteria are intended to measure the overall merits of a project and the sponsor's ability to build and operate it.*

*FTA reviews the project justification and local financial commitment criteria for each candidate project and assigns a rating for each criterion. For some of the project justification criteria, the proposed project is compared against a New Starts TSM (baseline) alternative." The TSM alternative consists of improvements to the transit system that are relatively low in cost and represent the "best that can be done" to improve transit without major capital investment in new guideway infrastructure (See Chapter 2, Section 2.3 of this SFEIS/SFEIR). As such, it is usually different than the baseline (represented by the no-build condition) against which environmental impacts are measured in the NEPA document.*

*A candidate project is given an overall rating of "High", "Medium-High", "Medium", "Medium-Low" or "Low", based on ratings assigned by FTA to each of the project justification and local financial commitment criteria described above. These ratings are important, as FTA considers them in its decision to recommend projects for New Starts funding. Specifically, FTA will not recommend funding for projects that are rated "Medium-Low" or "Low." It is important to note, moreover, that a "High", "Medium-High" or "Medium" rating does not automatically translate into a funding recommendation, although the potential for receiving New Starts funding is much greater.*

*Project evaluation is an on-going process. FTA evaluation and rating occurs annually in support of budget recommendations presented in the Annual Report on New Starts and when projects request FTA approval to enter into preliminary engineering or final design. Consequently, as proposed New*

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<sup>5</sup> Sacramento Regional Transit District, RT Financial Forecasting Model, *September 2007*.

Starts projects proceed through the project development process, information concerning costs, benefits, and impacts is refined and the ratings are updated to reflect new information.

South Sacramento Corridor Phase 2 project currently has an overall FTA rating of medium-high. Individual components of that rating are discussed in the following sections

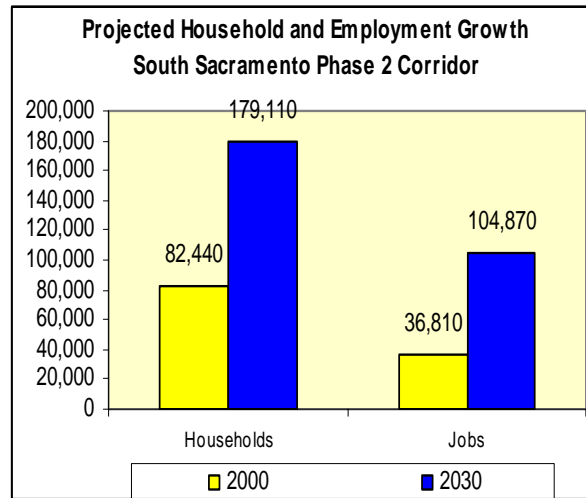
**Mobility Improvements – Rating: Medium-High**

In its evaluation of the mobility improvements that would be realized by implementation of a proposed project, FTA reviews three measures:

1. User benefits per project passenger mile;
2. Number of current Low Income Households which would be served by the proposed New Starts investment; and
3. Number of current Jobs served by the proposed New Starts project.

User benefits essentially represent all the travel time savings to transit riders in the forecast year that result from the New Starts project as compared to the TSM. They include reductions in walk times, wait times, transfers, and, most importantly, in-vehicle times. In order to rate projects in comparison to other proposed New Starts, this measure is normalized by the annual passenger miles traveled on the New Starts project in the forecast year.

The South Sacramento Phase 2 Corridor is the fastest growing portion of Sacramento County. Elk Grove, at the south end of the corridor, is the fastest growing community in California, and the Sacramento Region is the third fastest growing region in the state. As shown in the graph to the right, total households in the Phase 2 Corridor are projected to more than double from 82,400 in Year 2000 to 179,100 by 2030. Employment is projected to grow even faster, increasing from 36,800 in Year 2000 to over 104,800 by Year 2030.



In addition, employment in Central Business District (CBD) of Sacramento – a primary destination for Phase 2 Corridor residents – is expected to increase by 55 percent (over 30,000 jobs) between 2000 and 2030. This increase in jobs attracts over 156, 000 new person trips to the CBD Core with more than 22 percent produced from the South Corridors.

Meanwhile, City of Sacramento parking policies continue to purposefully restrict the growth of downtown's parking supply as per the Central City Parking Master Plan's specific objective as stated by the City Council; ensuring that parking supply and rates support transit, other alternative modes, and air quality. These policies result in parking demand growth outpacing increases in supplied parking. The anticipated outcomes are parking cost increases and shifts in parking supply from all-day (employee) parking to short-term (business and visitor) parking; both of which serve to make transit more attractive. To illustrate this trend, the City raised parking prices by 25% (from \$1.00 to \$1.25 per hour) on all Pay-&-Display stations and at all traditional parking meters, and raised parking citation fines by \$5.00 as of July 1 2008. The LRT Project helps to alleviate this by reducing the need



for downtown parking by 1,300 spaces over the No Build alternative and by 900 spaces over the TSM alternative.

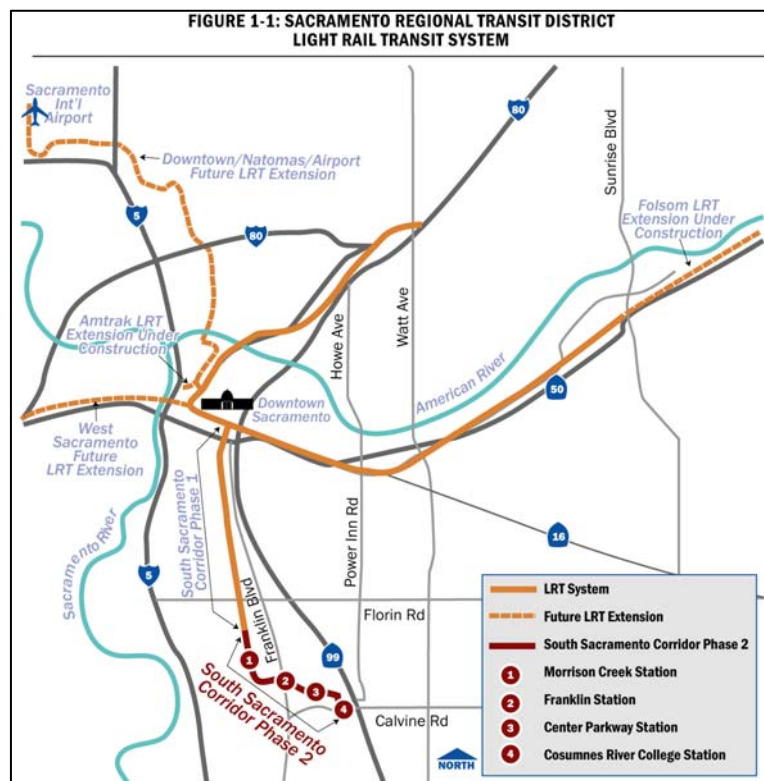
Additional development anticipated to the south along Route 99 and Interstate 5, and a high rate of employment growth forecasted for downtown Sacramento, have created the need for additional peak-period transportation capacity between the region's southern communities and its central business district (CBD) – the largest employment center in the region where over 1/5 of the trips are made by transit. By extending LRT service south and providing new park-and-ride opportunities, the LRT Project is intended to provide an attractive alternative to private automobiles for trips destined for downtown and other areas served by the LRT system.

The Project is expected to generate 2,570 new transit trips above the TSM alternative (5,930 more than the No-Build) providing 2,273 hours of user benefit on an average weekday.

Given the planned provision of park-and-ride facilities along the alignment (particularly the 2,000-space parking garage at CRC just off of Route 99, a major parallel facility for travel downtown), a significant level of travel-time benefits are attributable to this market. Approximately 10 percent of travel-time benefits are for trips destined for the corridor itself, with reverse-commute trips ending at CRC representing the largest single corridor market.

Travel forecasts show that more than half of all travel time benefits generated by the South Corridor LRT Extension project are attributable to commuters destined for downtown Sacramento. Focusing on commute trips from the CRC area to downtown Sacramento, the LRT project provides almost a 20 percent reduction in travel time compared with the drive-alone option and matches the travel time of modes that use the I-5 HOV lanes (e.g. carpool and express bus service).

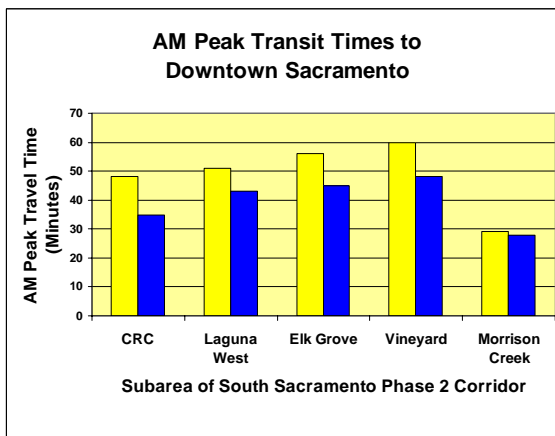
This high transit percentage for trips Downtown from the Phase 2 Corridor is caused by severe congestion on South Corridor freeways (both SR 99 and I-5 are expected to operate at LOS "F" for three or more hours by 2030). Currently SR 99 HOV lanes are at or near capacity. Express bus services lose any time saving advantage when operating on capacity constrained HOV lanes. To make matters worse, the growth in freeway travel (demand) by far exceeds the increases in freeway capacity throughout the South Sacramento Phase 2 corridor. Vehicular travel is expected to grow over 35% between now and 2030, from 272,000 to 368,300 ADT vehicle trips on the combined I-5 &



SR 99 freeways (estimated at Florin Road). Meanwhile, I-5 HOV lanes and a few SR 99 auxiliary lanes segments are the only freeway capacity improvements programmed for this corridor.

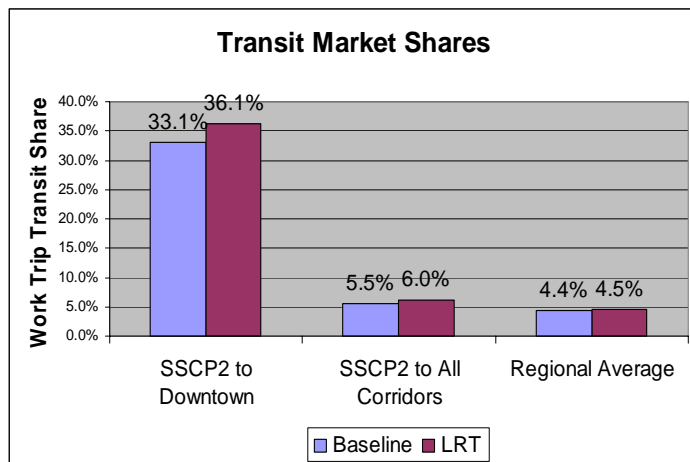
The LRT Project provides excellent access for Phase 2 Corridor residents to RT's existing LRT network. It provides unparalleled access to Downtown Sacramento – the largest transit market and regional employment center – by providing virtually all corridor residents with the option to drive to a station, board LRT, and arrive Downtown without transferring. Downtown Sacramento will provide transfer options to the Capitol Corridor Inter-city rail and Amtrak at the Sacramento Valley Intermodal Station in the city center. Under the LRT Alternative, 15 percent of the corridor residents can walk to a LRT station and arrive at their destination with no-transfer, compared with less than 10 percent for the TSM. The LRT Project also provides access with no transfer to intermediate stops on the Phase 1 LRT line (e.g. Sacramento City College) and the Northeast LRT Corridor, plus same-platform transfer access to the Folsom LRT line and the planned Downtown/Natomas/Airport line. It also provides a direct transit connection from the rest of the region to CRC, with an anticipated near doubling of enrollment to 20,000 in the year 2030. Further, the LRT Project helps mitigate transportation inequities by providing direct access between CRC and lower income neighborhoods north of CRC. This excellent service coverage is possible because the LRT Project is a natural extension of the region's LRT network.

The LRT Project's superior system continuity and operation on a separate guideway rather than on congested streets and freeways provide significant travel time savings over the bus-based TSM Alternative. As shown to the right, compared to the TSM Alternative, the proposed LRT Extension provides transit travel time savings of 3 to 27 percent for trips to Downtown Sacramento from areas in the Phase 2 Corridor. On average, the 2030 LRT AM peak period travel times are forecasted to be 16% faster than TSM alternative and 23% than for transit in the No Build alternative.



Systemwide travel time savings (calculated using FTA's SUMMIT software) show that the total travel time savings relative to the TSM are 2,273 hours per weekday, or 668,262 hours per year.

Ninety-five percent of the time savings accrue to trips beginning in the Phase 2 Corridor. For trip destinations, 74 percent of the time savings accrue to trips ending in Downtown Sacramento; nine percent to trips ending in the Phase 2 Corridor; 10 percent to trips ending in the Phase 1 Corridor; and six percent to trips ending in the Folsom/US 50 Corridor.



The LRT Project provides significantly higher ridership than the TSM Alternative, reflecting the benefits of system continuity and reduced travel time. In total, the LRT Project would generate 756,450 more transit person trips per year than the TSM Alternative. As shown on the right, for the largest single transit market – from the Phase 2 Corridor to Downtown – the LRT Project would generate a 36.1 percent market share, compared to 33.1 percent for the TSM Alternative. For all Phase 2 Corridor work trips, the LRT Project would generate a six percent market share, significantly higher than the 4.5 percent regional average.

**Environmental Benefits -- Rating: High**

In its evaluation of environmental benefits that would be realized through the implementation of a proposed project, FTA considers the current air quality designation by EPA. This measure is defined for each of the transportation-related pollutants (ozone, CO, and PM-10) as the current air quality designation by EPA for the metropolitan region in which the proposed project is located, indicating the severity of the metropolitan area's noncompliance with the health-based EPA standard (NAAQS) for the pollutant, or its compliance with that standard. New Starts project sponsors also submit information to FTA on the forecast reductions in emissions resulting from the New Starts project for each transportation-related pollutant. FTA has found that information submitted in support of the environmental benefits criterion does not distinguish with any meaning the merits of competing New Starts projects. While FTA reports the information submitted by project sponsors on environmental benefits to Congress and other stakeholders, it does not formally incorporate this measure in its evaluation of New Starts projects.

By attracting more passengers to transit, the LRT Project leads to an improvement in air quality as shown in Table 7.2-3. The LRT Project will reduce criteria pollutants and precursor emissions, as well as greenhouse gases compared to the No Project and TSM Alternative. Reducing air pollution will help the Sacramento region address its severe (ozone) and moderate (PM10) EPA air quality designations. The LRT Project will also reduce energy consumption by 11,542 million BTUs per year.

**Table 7.2-3: Tons Per Year Reduction from LRT**

Pollutant	Compared to No-Project	Compared to TSM
CO	-12.96	- 8.97
NOx	- 2.43	- 1.68
VOC	- 0.72	- 0.5
PM10	- 0.30	- 0.21
PM2.5	- 0.28	- 0.19
Greenhouse Gases ( CO2)	- 6,507.18	- 4,504.97

**Operating Efficiencies Rating: Medium**

FTA measures this criterion by evaluating the change in systemwide operating costs per passenger mile in the forecast year, comparing the Section 5309 New Start investment to the baseline alternative. FTA assigns a rating of "medium" to all projects that have information submitted for this measure. Like the environmental benefits measure, FTA has found that information submitted in support of the operating efficiencies criterion does not distinguish with any meaning the merits of competing New Starts projects. While FTA reports the information submitted by project sponsors on operating efficiencies to Congress and other stakeholders, it does not formally incorporate this measure into its evaluation.

**Cost Effectiveness Rating:** *Medium-High*

*Significant among the project justification criteria is cost effectiveness, which is the annualized capital and operating cost per hour of user benefits for the forecast year. It captures the additional costs of the New Start project compared to the transportation benefits to transit riders. User benefits are defined identical to the measure used in the mobility improvements criterion.*

*New Starts projects must be rated "Medium" for cost effectiveness, in addition to receiving an overall "Medium" rating, in order to be considered by the Federal Transit Administration for New Starts funding.*

**Transit-Supportive Land Use Rating:** *Medium-Low*

*This criterion addresses the extent that transit-oriented development is likely to occur in the New Start project's corridor. The growing trend throughout the Sacramento Region continues to move toward "Smart Growth" Transit Oriented Development (TOD) around area transit facilities. Through extensive education by SAGOG and RT, the development community is increasingly embracing this form of mixed use/joint development for their properties. The City and County of Sacramento have begun developing implementation programs for SACOG's preferred scenario of their Blueprint Project that incorporates high density/joint development surrounding transit. The redevelopment of land adjacent to the Meadowview LRT Station (terminus of Phase 1/beginning of Phase 2) is moving forward with construction of the 23-acre Hampton Station development – a piece of a larger mixed-use TOD project, . The first move in of residents began towards the close of 2007. Through extensive coordination between the developer, City of Sacramento and RT, the land adjacent to the Morrison Creek Station (Stone-Boswell property) will be designated for transit supportive uses in the City's General Plan and South Area Community Plan currently being updated. The previous plans submitted by a developer, Dunmore Homes, included 1,204 housing units at up to 40 units to the acre as well as neighborhood oriented small-scale retail mixed uses, urban parks (including public art, wide sidewalks, flowering street trees etc.) and open space. As Dunmore Homes is no longer pursuing the development of the site, RT and the City see this as an opportunity to frame policies in the General Plan and the South Area Community Plan that will retain the previously proposed level of intensity of development or higher. All land uses are oriented to provide direct connectivity to the proposed Morrison Creek LRT Station. At the terminus of the proposed SSCP2 extension, located adjacent to the CRC light rail station, the development known as College Square has opened the 65,000 square foot grocery center and an approximately 50,000 square feet of retail and restaurants constructed, with more to come. The residential portion of the project will open in summer 2009. RT has selected a joint-use 2,000 space parking garage on the CRC campus as the preferred alternative, thus opening up an additional 12.7 acres of higher density land development across from the LRT Station that was originally proposed for surface parking. Both along the South Line Phase 2 Corridor and around the region, joint development and TOD opportunities continue to be identified and plans created and approved to increase transit viability.*

**Local Financial Commitment Rating:** *Medium-High*

*Proposed New Starts projects must be supported by evidence of stable and dependable financing sources to construct, operate and maintain the transit system. The measures FTA uses to evaluate local financial commitment are:*

**Local Share Rating: Medium**

*FTA examines the proposed share of total project costs from sources other than Section 5309 New Starts, including Federal formula and flexible funds, the local match required by federal law, and any additional capital funding.*

**Strength of Capital Financing Plan Rating: Medium-High**

*FTA looks at the stability and reliability of the proposed capital financing plan, including the current capital condition of the project sponsor, the level of commitment of capital funds to the project, the financial capacity of the project sponsor to withstand cost overruns or funding shortfalls, and the reliability of the capital cost estimates and planning assumptions.*

**Strength of Operating Financing Plan Rating: Medium**

*FTA looks at the ability of the sponsoring agency to fund operation and maintenance of the entire system (including existing service) as planned, once the guideway project is built. This includes: an examination of the current operating condition of the project sponsor; the level of commitment of operating funds for the transit system; the financial capacity of the project sponsor to operate and maintain all proposed, existing and planned transit services; and the reliability of the operating cost estimates and planning assumptions.*

The remainder of this section addresses project evaluation from the perspective of the environmental review process and the goals and objectives of the South Sacramento Corridor, as defined in the original corridor environmental document. Subsection 7.7.2 presents a comprehensive set of the original goals and objectives from the 1994 *South Sacramento Corridor AA/DEIS/DEIR*. Chapter 1 identifies six major purposes of this project that were derived from these goals and objectives. Refer to Chapter 8 of this document and Chapter 1 of the 1994 *South Sacramento Corridor AA/DEIS/DEIR* for information on public input to the original planning process. The following Subsections 7.7.2 through 7.7.6 compare the alternatives with respect to the original goals and objectives. Table 7.7-1 presents a comparison of the alternatives in the years 2025 and 2030 using a mix of quantitative and qualitative measures for all of the goals and most of the objectives. The comparison of alternatives is a summary evaluation of more detailed information included in the previous chapters or in the project New Starts submissions to FTA. It should be noted that the No-Action Alternative provides the basis for evaluation of TSM and LPAP2 impacts under NEPA and CEQA, while the comparison of the TSM and LPAP2 alternatives provides the basis for the FTA's evaluation of the project's worthiness for federal funding. This evaluation shows that the LPAP2 is generally an improvement over the TSM Alternative in measures of each of the five goals discussed below.

## **7.7.2 Goals and Objectives**

### **7.7.2.1 TRAVEL AND MOBILITY GOAL**

The travel and mobility goal is to provide a transportation system that is safe, efficient, and coordinated, and that provides a balanced set of travel alternatives in the corridor by

- Expanding transit service in South Sacramento;
- Increasing service frequencies, accommodating demand, and by increasing transit safety, comfort, and reliability;
- Minimizing transit travel times, including minimizing transfer time and travel delays;
- Promoting use of carpools and feeder bus service to access stations and park-and-ride lots;



- Improving accessibility for the disabled and senior communities; and
- Minimizing demand for parking facilities downtown and at Sacramento City College.

### 7.7.2.2 LAND USE GOAL

The land use goal is to ensure compatibility between land use policies and transportation policies so that the need for and amount of travel using automobiles is minimized. Three techniques to achieve this goal will be used by RT and community land use planners during the station area planning effort:

- Encouraging high-density, multi-use development in the proximity of transit stations to increase transit use;
- Encouraging in-fill development and discouraging the trend towards urban sprawl; and
- Developing and implementing transportation policies and services that reinforce local and regional land use plans and policies.

Local governments have embraced these techniques in several policy documents. For example, to encourage in-fill development, the City of Sacramento adopted an *Infill Strategy* in May 2002 which targets areas in the *General Plan* for higher density and TOD around existing and proposed light rail stations. To support development which promotes public transportation and revitalizes urban areas and existing communities, the Sacramento City Council adopted the *Smart Growth Implementation Strategy* into the *General Plan* to address issues of growing traffic congestion, deteriorating air quality and greater losses of open space. Section 4.10.2, Local Development Plans and Policies describes these programs in more detail.

<b>Table 7.7-1: Comparison of Alternatives in 2030 with Measure of Goals and Objectives</b>			
<b>Category</b>	<b>No-Action</b>	<b>TSM</b>	<b>LPAP2</b>
<b>TRAVEL AND MOBILITY GOAL</b>			
<b>Expand Transit Service in South Sacramento</b>			
Change in Transit Service (routes added or enhanced)	0	5 bus	2 bus, 1 LRT
<b>Increase Service Frequencies, Accommodate Demand, Increase Transit Safety, Comfort, and Reliability (2030)</b>			
Projected Daily Transit Passenger Boardings in Region	278,570	284,930	285,690
Projected Daily Linked Transit Trips In Region	182,180	185,540	188,110
Projected Daily System Light Rail Boardings	105,180	104,060	111,550
Safety, Comfort, and Reliability	0	+	++
<b>Minimize Transit Travel Times (2030)</b>			
A.M. Peak Period Transit Travel Time [1] (min)			
CRC Area to Downtown Sacramento	52	50	35
Laguna West Area to Downtown Sacramento	72	54	43
Elk Grove Area to Downtown Sacramento	70	60	46
Vineyard Area to Downtown Sacramento	75	65	51
System-wide Travel Time Savings (user benefit hours per weekday) [2]	0	N/A	2,273
<b>Promote Use of Carpools and Feeder Bus Service to Access Stations and Park-and-Ride Lots</b>			
Feeder Routes [3]	6	8	11
Carpool Priority Parking at Park-and-Ride Lots	0	+	++



<b>Table 7.7-1: Comparison of Alternatives in 2030 with Measure of Goals and Objectives</b>			
<b>Category</b>	<b>No-Action</b>	<b>TSM</b>	<b>LPAP2</b>
<b>Improve Accessibility for the Disabled and Senior Communities</b>			
Increased Senior Living at College Square	0	0	+
<b>Minimize Demand for Parking Facilities Downtown and at Sacramento City College</b>			
Estimated Reduction in Parking Demand Downtown	0	-900	-1,300
<b>Alleviate Traffic Congestion on Corridor Freeways and Arterials</b>			
ADT on SR-99 (Florin Road To Mack Road)	203,400	202,000	202,000
ADT on SR-99 (Mack Road To Cosumnes River Blvd/ Calvine Rd)	155,700	154,900	153,200
Intersections in City of Sacramento with LOS D or Worse in PM Peak Hour before Mitigation	5	1	5
Intersections in City of Sacramento with LOS D or Worse in AM Peak Hour before Mitigation	8	0	3
Intersections in Sacramento County and City of Elk Grove with LOS F or Worse in PM Peak Hour before Mitigation	0	0	0
Intersections in Sacramento County and City of Elk Grove with LOS F or Worse in AM Peak Hour before Mitigation	0	0	0
<b>Enhance Regional Connectivity through Expanded, Interconnected LRT Services</b>			
Regional Connectivity	0	+	++
<b>LAND USE GOAL</b>			
<b>Encourage High-density, Multi-use Development in the Proximity of Transit Stations to Increase Transit Use</b>			
Transit-oriented Design Adjacent to Stations	0	0	+
<b>Encouraging In-Fill Development and Discourage the Trend towards Urban Sprawl</b>			
Transit Support of In-Fill and Focused Development	0	+	++
<b>Develop/Implement Transportation Policies and Services that Reinforce Local/Regional Land Use Plans/Policies</b>			
Land Use - Consistent with Objectives of General Plans	0	+	++
<b>FINANCIAL AND ECONOMIC GOAL</b>			
<b>Maximize Transit Operating Efficiency/Return on Investment</b>			
Annual Cost per Hour of User Benefit [2]	0	N/A	\$14.53
Annual Cost per New Passenger [2]	0	N/A	\$13.03
<b>Minimize Capital and Operating Costs</b>			
Estimated Capital Cost (Year of Expenditure FY 2007/2011 \$ millions)	0	\$52.1	\$270.0
Estimated Capital Cost (FY 2007 \$ millions)	0	\$53.1	\$208.1
2030 Operating and Maintenance Costs (FY 2007 \$ millions)	\$261.3	\$276.3	\$275.2
<b>Enhance Opportunities for Public/Private Partnerships</b>			
Coordination on Transit-Oriented Development	0	0	++
<b>ENVIRONMENTAL GOAL</b>			
<b>Minimize Air Pollution and Facilitate Attainment of Air Quality Standards</b>			
Noise and Vibration	-	0	+
<b>Minimize Impacts on Resources, Conform To Environmental Regulations</b>			
Biological Resources	0	0	-
Cultural Resources	0	0	0

<b>Table 7.7-1: Comparison of Alternatives in 2030 with Measure of Goals and Objectives</b>			
<b>Category</b>	<b>No-Action</b>	<b>TSM</b>	<b>LPAP2</b>
<b>Consider Aesthetics in Transportation Planning</b>			
Visual and Aesthetic Resources	0	0	0
<b>Minimize the Displacement of Homes and Businesses</b>			
Acquisitions and Relocations	0	0	-
Land Use - Consistent with Objectives of General Plans	0	+	++
<b>Minimize and Mitigate Noise Pollution</b>			
Noise and Vibration	-	0	0
<b>Conserve Energy</b>			
Direct Energy Consumption (millions of BTUs per year)	91,140,764	91,121,280	91,103,755
<b>Conserve Land</b>			
Land Acquisition	0	-	--
<b>COMMUNITY CONSIDERATIONS GOAL</b>			
<b>Minimize the Disruption of Neighborhood Cohesiveness and Quality of Life</b>			
Use of Land and Displacements	0	-	--
<b>Maximize the Service to, and Mobility of, the Transit-Dependent and Transportation-Disadvantaged</b>			
Creation of Senior Housing next to Transit Stations	0	+	+
<b>Encourage the Economic Revitalization of Low-Income Areas</b>			
Economic Development - Temporary Construction Jobs	0	+	++
<b>Seek a Fair Distribution of Costs and Benefits</b>			
Equity	0	+	++
Source: DKS Associates, Parsons, Nancy Whelan Consulting, 2006.			
Notes:			
[1] Drive-access transit times. All data in table are for 2030, e.g., travel times.			
[2] FTA New Starts statistic calculated for LPAP2 Alternative with respect to TSM Alternative only.			
[3] See Tables 2.3-1 and 2.4-1 for details on LRT feeder routes.			

### 7.7.2.3 FINANCIAL AND ECONOMIC GOAL

The financial and economic goal is to provide a transportation system that makes the most efficient use of limited financial resources by:

- Maximizing transit operating efficiency;
- Minimizing capital and operating costs;
- Developing the transportation system to maximize the return on investment;
- Maintaining or increasing farebox receipts as a percentage of transit revenues to minimize subsidies; and
- Enhancing opportunities for public/private partnerships in the development of transit facilities and services.

### 7.7.2.4 ENVIRONMENTAL GOAL

The environmental goal is to provide a transportation system that enhances and preserves the physical and natural environment by:

- Minimizing air pollution and facilitating the attainment of air quality standards;

- Minimizing impacts on parks, recreational, historic, archaeological, cultural, biotic, and scenic resources and conforming to all local, state, and federal environmental regulations;
- Considering aesthetics in transportation planning;
- Minimizing flood hazards and water pollution;
- Minimizing the displacement of homes and businesses;
- Minimizing and mitigating noise pollution;
- Conserving energy;
- Conserving land; and
- Minimizing short-term construction impacts.

#### **7.7.2.5 COMMUNITY CONSIDERATIONS GOAL**

The community considerations goal is to provide a transportation system that is consistent with the needs and desires of the residents of the corridor, and that thereby maximizes community acceptance and political support. This goal includes the following specific objectives:

- Minimizing the disruption of neighborhood cohesiveness and quality of life;
- Maximizing the service to, and mobility of, the transit-dependent and transportation-disadvantaged;
- Encouraging the economic revitalization of low-income areas; and
- Seeking a fair distribution of costs and benefits among different population groups.

The community considerations goal and its objectives have been developed as part of RT's ongoing community involvement program. In this case, the public involvement has been continuous through all the technical and environmental studies completed on the South Sacramento Corridor (starting with the 1981 studies) as well as general outreach on other RT programs and projects.

#### **7.7.3 Travel and Mobility**

Table 7.7-1 lists associated measures and the six objectives for travel and mobility from the original environmental document and. In addition, Table 7.7-1 includes associated measures and two other purposes or objectives on congestion relief and connectivity derived from the original travel and mobility goal during the current environmental process.

##### **7.7.3.1 EXPAND TRANSIT SERVICE IN SOUTH SACRAMENTO**

Both the TSM Alternative and the LPAP2 would expand transit service in South Sacramento. Under the TSM Alternative, five bus routes would be extended or enhanced: Routes 50E, 52X, 66X, G, and G2 (see Table 2.3-1 for details). Under the LPAP2, two bus routes and the LRT would be extended (see Table 2.4-1 for details). As described in Section 2.3.2, TSM Alternative Bus Service, and Section 2.4.2, LPAP2 Transit Service, these service expansions are tailored to optimize each alternative. The relative effectiveness of these proposed service expansions is described by the other measures under the travel and mobility.

Route 50E on Stockton Boulevard would include bus priority features such as queue jumps. The bus priority treatment is part of a system-wide effort by RT, which is in the process of implementing bus priority treatments in the Downtown and in limited major transit corridors in Sacramento County.

### **7.7.3.2 INCREASE SERVICE FREQUENCIES, ACCOMMODATE DEMAND, INCREASE TRANSIT SAFETY, COMFORT, AND RELIABILITY**

Service frequencies are held constant across the alternatives to ensure a fair comparison in this evaluation. In practice, service frequencies would be tailored to demand. The measures for accommodating demand displayed in Table 7.7-1 include the daily unlinked and linked transit trips in the region and the daily corridor rail boardings and alightings in 2030. The TSM Alternative is projected to increase daily regional transit ridership in 2030 by about 3,360 trips (linked trips) over the No-Action Alternative, while the LPAP2 is projected to add an additional 2,570 trips over the TSM Alternative. The LPAP2 also would increase RT rail boardings in 2030. Under the LPAP2, the number of daily systemwide rail boardings is 111,550. This is 7,880 more than the No-Action Alternative and 7,260 more than the TSM Alternative.

For the largest single transit market, from the LPAP2 Corridor to Downtown, the LPAP2 would generate a 36.1 percent market share, compared to 33.1 percent for the TSM Alternative. For all LPAP2 Corridor work trips, the LPAP2 would generate a 6.0 percent market share, significantly higher than the 4.5 percent regional average.

Transit safety is considered in the design of both the bus and LRT stops and access. See Section 4.16, Safety and Security, for more information. The alternatives are rated from - - or - (negative) to 0 (neutral) to + or ++ (positive), depending upon their expected relative effect with respect to this objective. Transit priority is being implemented on Route 50E, which will increase bus reliability. LRT on separate right-of-way would inherently be more reliable and safer than buses in mixed traffic, which would be subject to related traffic delays and accident hazards. Likewise, LRT tends to be more comfortable than buses due to a smoother ride.

### **7.7.3.3 MINIMIZE TRANSIT TRAVEL TIMES**

The measure of accessibility in Table 7.7-1 is the projected change in corridor transit travel time in 2030. The drive-access-transit time improvement of the LPAP2 compared with the TSM Alternative would range from 11 to 15 minutes.

The LPAP2's superior system continuity and operation on a separate guideway rather than on congested streets and freeways provide material travel time savings over the bus-based TSM Alternative. Compared to the TSM Alternative, the proposed LRT Extension provides transit travel time savings of 20 to 30 percent for trips to Downtown Sacramento from areas in the LPAP2 Corridor.

System-wide travel time savings (calculated using FTA's SUMMIT software) show that the total travel time savings relative to the TSM are 2,273 hours per weekday, or 668,262 hours per year.

Ninety-six percent of the time savings accrue to trips beginning in the LPAP2 Corridor. For trip destinations, 75 percent of the time savings accrue to trips ending in Downtown Sacramento; nine percent to trips ending in the LPAP2 Corridor; 8 percent to trips ending in the Phase 1 Corridor; and 8 percent to trips ending in the Folsom/ US 50 Corridor.

### **7.7.3.4 PROMOTE USE OF CARPOOLS AND FEEDER BUS SERVICE TO ACCESS STATIONS AND PARK-AND-RIDE LOTS**

The LPAP2 would add four new LRT stations with 2,700 park-and-ride spaces and a major new transit center at the CRC Station near State Route 99. The TSM Alternative would add 1,400 park-and-ride spaces and a new transit center at CRC. All park-and-ride lots would implement priority parking for

carpools. The alternatives are rated from - - or – (negative) to 0 (neutral) to + or ++ (positive), depending upon their expected relative effect with respect to this objective.

#### **7.7.3.5 IMPROVE ACCESSIBILITY FOR THE DISABLED AND SENIOR COMMUNITIES**

The alternatives are rated from - - or – (negative) to 0 (neutral) to + or ++ (positive), depending upon their expected relative effect with respect to accessibility for senior communities. The No-Action Alternative would be neutral, while the TSM Alternative and LPAP2 would be positive. The positive rating is the result of senior housing being added to the College Square development at the urging of RT. While the housing addition was predicated upon the new LRT station at CRC, it would also be served by the increased bus service and new CRC transit center planned under the TSM Alternative.

#### **7.7.3.6 MINIMIZE DEMAND FOR PARKING FACILITIES DOWNTOWN AND AT SACRAMENTO CITY COLLEGE**

The parking demand reduction measures displayed in Table 7.7-1 indicate that the LPAP2 is expected to be superior to the TSM Alternative in reducing parking demand in downtown Sacramento. The LPAP2 is projected to reduce parking demand by about 1,300 spaces downtown compared with a demand reduction of 900 spaces downtown by the TSM Alternative.

#### **7.7.3.7 ALLEVIATE TRAFFIC CONGESTION ON CORRIDOR FREEWAYS AND ARTERIALS**

Severe congestion on South Corridor freeways is expected on by *2030*, with both SR 99 and I-5 expected to operate at LOS “F” for three or more hours. The associated measure shows slight but helpful reductions in daily traffic on the two freeways by the TSM Alternative and the LPAP2. The LPAP2 is likewise expected to be superior to the TSM Alternative in reducing traffic on area freeways. Table 7.7-1 indicates that the LPAP2 would reduce Average Daily Traffic (ADT) by up to 1,700 more vehicles on SR-99 than the TSM Alternative.

Local arterial traffic impacts were evaluated using intersection level of service (LOS) analysis (see Section 3.3 for details). The analysis included the major sources of impacts from the proposed alternatives: traffic generated by new park-and-ride facilities as well as increased bus service frequency and the increase in delay at some intersections due to new at-grade crossings, or increased train frequency at existing at-grade intersections. Traffic impacts were considered to be significant when a project worsens an intersection's LOS from a locality's LOS standard (LOS C in the City of Sacramento, and LOS E in Sacramento County and Elk Grove). Under the TSM Alternative, one intersection would deteriorate from LOS C to LOS D during the AM peak hour in the City of Sacramento. Under the LPAP2, two intersections in the City of Sacramento are projected to go below LOS C during the AM peak hour and one is expected to go below LOS C during the PM peak hour. Neither the TSM Alternative nor the LPAP2 is projected to have adverse impacts on intersections in Sacramento County or the City of Elk Grove in *2030*.

#### **7.7.3.8 ENHANCE REGIONAL CONNECTIVITY**

The alternatives are rated from - - or – (negative) to 0 (neutral) to + or ++ (positive), depending upon their expected relative effect with respect to connectivity. The No-Action Alternative would be neutral, while the TSM Alternative and the LPAP2 would be positive. The LPAP2 provides excellent access for LPAP2 Corridor residents to RT's existing LRT network. It provides unparalleled access to

Downtown Sacramento – the largest transit market and regional employment center – by providing virtually all corridor residents with the option to drive to a station, board LRT, and arrive Downtown without transferring Downtown Sacramento will provide transfer options to the Capitol Corridor Inter-city rail and Amtrak, and an intermodal facility is currently under development in the city center. Under the LPAP2, 15 percent of the corridor residents can walk to an LRT station and arrive at their destination with no-transfer, compared with less than 10 percent for the TSM. The LPAP2 also provides no-transfer access to intermediate stops on the Phase 1 LRT line (e.g. Sacramento City College) and the Northeast LRT Corridor, plus same-platform transfer access to the Folsom LRT line and the planned Downtown/Natomas/Airport line. It also provides a direct transit connection from the rest of the region to Cosumnes River College, with an anticipated near doubling of enrollment to 20,000 in the year 2030. This excellent service coverage is possible because the LPAP2 is a natural extension of the region's LRT network.

In comparison, the best that can be offered under the TSM Alternative is a combination of expanded feeder buses to the Phase 1 LRT terminus at Meadowview (that requires bus-to-rail transfers), plus Downtown express buses operating on increasingly congested freeways and HOV lanes. These express buses do not provide access to intermediate stations in the Phase 1 Corridor and add to congestion in the crowded streets of Downtown Sacramento.

#### **7.7.4 Land Use**

A scale is used to evaluate the alternatives with respect to each other. The alternatives are rated from - - or - (negative) to 0 (neutral) to + or ++ (positive), depending upon their expected relative effect. The subsections below discuss the factors considered in the rating for each measure.

##### **7.7.4.1 ENCOURAGE HIGH-DENSITY, MULTI-USE DEVELOPMENT IN THE PROXIMITY OF TRANSIT STATIONS TO INCREASE TRANSIT USE**

The City of Sacramento and RT are working together with developers on transit oriented development plans for the Morrison Creek and Cosumnes River College stations. The City of Sacramento is revising planning documents and zoning in the Morrison Creek station area to allow for medium and high-density housing clustered near the LRT station, transitioning back to single family zoning further away. At the CRC Station, the City has recently approved development for a mixed commercial/retail/residential development, with high density housing clustered near the proposed LRT station. Finally, the LRT Project would allow redevelopment of up to two acres of lands currently reserved for parking at the Meadowview Station since less parking would be required there with development of the Phase 2 LRT Project. These actions lead to a positive rating for the LPAP2.

##### **7.7.4.2 ENCOURAGE IN-FILL DEVELOPMENT AND DISCOURAGE THE TREND TOWARDS URBAN SPRAWL**

In addition to the actions cited in the previous subsection the region is pursuing a broader transit-friendly policy through the "Blueprint" plan which has been approved by the Sacramento Area Council of Governments (SACOG). This plan will form the framework for SACOG's 2007 metropolitan transportation plan update. The City of Sacramento has also developed an in-fill policy which RT's LRT planning supports. See Subsection 7.7.1.2, Land Use Goal, above for more detail.

The alternatives are rated on their promotion of a transit system that would influence development into efficient and coherent patterns. The long-term land use impacts of the No-Action Alternative would likely support more dispersed patterns of development. The TSM Alternative would better



promote transit as the focus of orderly and sustainable growth, but not to the level offered by the LPAP2. The LPAP2 is rated the highest because of the ability of fixed rail transit to focus and concentrate land use patterns. See Section 7.7.1.2, Land Use Goal, and Section 4.10.2, Local Development Plans and Policies, and section 4.10.4.1, Land Use Impacts at Proposed LPAP2 LRT Station Locations, for more discussion.

#### **7.7.4.3 DEVELOP AND IMPLEMENT TRANSPORTATION POLICIES AND SERVICES THAT REINFORCE LOCAL AND REGIONAL LAND USE PLANS AND POLICIES**

The basis for land use evaluation is the level of consistency of the alternatives with the transit objectives of Sacramento City and County General Plans, City of Elk Grove General Plan, South Sacramento Community Plan, Airport Meadowview Community Plan and Sacramento Regional County Sanitation District (SRCSD) Bufferlands Master Plan (Final Draft). The LPAP2 is rated higher because of the ability of fixed rail facilities to provide a more stable, long-term focus of development.

### **7.7.5 Financial and Economic**

The following subsections address four of the five objectives listed in Section 7.7.1 for the Financial and Economic Goal. The objective relating to fare box return, while addressed systemwide by RT, is not rated because it is not a specific feature of the proposed project.

#### **7.7.5.1 MAXIMIZE TRANSIT OPERATING EFFICIENCY/RETURN ON INVESTMENT**

The measures for these two objectives are the cost per hour of user benefit and cost per new passenger. Table 7.7-1 list these measures for the LPAP2, which shows substantial benefit compared with the TSM Alternative.

#### **7.7.5.2 MINIMIZE CAPITAL AND OPERATING COSTS**

The capital cost of the TSM Alternative (in year of expenditure FY 2009 dollars) is \$53.7 million. The capital cost for the LPAP2 is \$270 million (also in YOE dollars FY 2007-2011).

RT's additional annual operating costs above the No-Action Alternative are expected to be \$7.1 million for the TSM Alternative and \$5.6 million for the LPAP2 (both in FY 2006 dollars). The annual operating cost saving for the LPAP2 compared with the TSM Alternative would be \$1.4 million in FY 2006 dollars. The forecasted operating and maintenance costs for the TSM Alternative are slightly higher than that for the LPAP2. This is due to several factors. First, the TSM Alternative utilizes substantially more bus service than the LPAP2, and, based on RT's operating data and projections, bus operating costs are increasing at a faster rate than rail operating costs. This is for several reasons, including:

- Higher pension contributions for bus drivers beginning in FY 2006,
- Increased bus overhead costs related to the formation of a new Community Bus Services Department, and
- Increase in bus indirect costs (e.g., casualty & liability insurance, debt service).

In addition, RT has achieved rail operating cost efficiencies with the opening of the Southline Phase 1 and Folsom extensions, and this trend is expected to continue with the operations of Southline Phase

2. The combined impact of all factors mentioned above results in a shift in total O&M costs, with the TSM Alternative costs forecast to be slightly higher than the LPAP2.

### **7.7.5.3 ENHANCE OPPORTUNITIES FOR PUBLIC/PRIVATE PARTNERSHIPS**

The alternatives are rated from - - or – (negative) to 0 (neutral) to + or ++ (positive), depending upon their expected relative effect. Based on the coordination of RT and the City of Sacramento with private developers regarding transit-oriented development plans for the Morrison Creek and Cosumnes River College stations as discussed in Section 7.7.3, Land Use, the LPAP2 is rated positive for public/private partnerships.

### **7.7.6 Environmental**

For the environmental measures, a scale is used to evaluate the alternatives with respect to each other. The alternatives are rated from - - or – (negative) to 0 (neutral) to + or ++ (positive), depending upon their expected relative effect. The subsections below discuss the factors considered in the rating for each measure. All objectives are rated except the two relating to flood hazards/water quality and short-term construction impacts, which design considerations that are discussed in Section 4.9, Hydrology, Flood Plain, and Water Quality, and Section 5.2, Construction Phase Impacts and Mitigation, respectively.

#### **7.7.6.1 MINIMIZE AIR POLLUTION AND FACILITATE ATTAINMENT OF AIR QUALITY STANDARDS**

Effects of the No-Action Alternative on corridor air quality would be considered neutral because although traffic volumes and congestion would continue to increase over time, air emissions per gallon would decrease. Both the TSM Alternative and the LPAP2 would improve air quality slightly by shifting travel to transit modes. By attracting more passengers to transit, the LPAP2 leads to more improvement in air quality as shown in Table 7.2-3, which compares the LPAP2 with the *No Project and TSM Alternatives*. The LPAP2 will reduce criteria pollutants and precursor emissions, as well as greenhouse gases compared to the TSM Alternative. Reducing air pollution will help the Sacramento region address its severe (ozone) and moderate (PM<sub>10</sub>) EPA air quality designations. See Section 4.3, Air Quality, for more information.

#### **7.7.6.2 MINIMIZE IMPACTS ON RESOURCES, CONFORM TO ENVIRONMENTAL REGULATIONS**

Impacts to biological resources would be greater under the LPAP2 than under the TSM Alternative. Avoidance measures have been implemented in project design to minimize harm to special-status species, and mitigation is provided to ensure no net loss of habitat values. Thus, the No-Action and TSM Alternatives are rated neutral and the LPAP2 slightly negative on this measure. See Section 4.4, Biological Resources, for more information.

The project would not have any impact on historic architectural resources as no project area architectural resources were found to appear eligible for listings in the NRHP or CRHR. Also, no archaeological resources were found to appear eligible for the NRHP or CRHR, but there is a possibility of uncovering unanticipated cultural resources. In general, however, the effects of the alternatives on corridor cultural resources would be neutral. See Section 4.5, Historic and Cultural Resources, for more information.

### **7.7.6.3 CONSIDER AESTHETICS IN TRANSPORTATION PLANNING**

Construction of the TSM Alternative and the new LPAP2 LRT facilities would introduce visual changes that would be perceived by motorists, residents and business occupants within the project corridor. However, they would not substantially degrade scenic views or introduce obtrusive visual elements substantially out of character with existing land uses. All three alternatives are rated neutral on this criterion. See Section 4.1, Aesthetics, for more information.

### **7.7.6.4 MINIMIZE THE DISPLACEMENT OF HOMES AND BUSINESSES**

Acquisition and relocation measure a potential displacement associated with the optional pedestrian overcrossing of CRB. The No-Action and TSM alternatives would involve no displacements.

The TSM Alternative would require the acquisition of approximately 16.7 acres of land to construct one bus park-and-ride (PNR) lot within the study area.

The LPAP2 would require an approximate 54.4 acres of land. *Two residential properties would be acquired, and if* the optional pedestrian overcrossing of CRB were selected, this alternative would require the displacement of one *additional* residential property. Thus the No-Action Alternative and TSM alternatives would have a neutral effect, and the LPAP2 would have a negative effect. See Section 4.13.3, Property Acquisition and Relocation, and Section 4.13.4, Effects on Neighborhoods and Businesses, for more information.

### **7.7.6.5 MINIMIZE AND MITIGATE NOISE POLLUTION**

Effects of the No-Action Alternative on corridor noise levels would be negative as traffic volumes and congestion continued to increase. These impacts would be very slightly lessened under the TSM Alternative, given the shift from motor vehicle to transit use. Noise impacts under the LPAP2 after mitigation would be similar to those under the TSM Alternative. Thus, the No-Action Alternative is rated slightly negative, while the TSM Alternative and the LPAP2 after mitigation would be neutral. See Section 4.12, Noise and Vibration, for more information.

### **7.7.6.6 CONSERVE ENERGY**

The TSM Alternative will reduce direct energy consumption by 19,484 million BTUs per year in comparison to the No-Action Alternative. The LPAP2 will reduce direct energy consumption by an additional 17,525 BTUs per year. See Section 4.11.2, Energy, for additional detail.

### **7.7.6.7 CONSERVE LAND**

Based on the discussion of land acquisition under Subsection 7.7.5.4, Minimize the Displacement of Homes and Businesses, the No-Action and TSM alternatives would have a neutral effect, and the LPAP2 would have a negative effect if the pedestrian overcrossing over CRB design option were selected.

## **7.7.7 Community Considerations**

The alternatives are rated from - - or – (negative) to 0 (neutral) to + or ++ (positive), depending upon their expected relative effect, for each of the objectives listed below.

#### **7.7.7.1 MINIMIZE THE DISRUPTION OF NEIGHBORHOOD COHESIVENESS AND QUALITY OF LIFE**

The predominant use of existing rail and highway rights-of-way for the LRT would minimize impacts to neighborhood cohesiveness and quality of life. While there would be no displacements associated with the park-and-ride lots for either the TSM Alternative or the LPAP2, the creation of the lots would still constitute some impact to the adjacent residential neighborhoods. Consequently, both alternatives would be rated slightly negative, with the TSM Alternative having a slightly negative effect, and the LPAP2 having the most negative effect. See Section 4.13.3, Property Acquisition and Relocation, and Section 4.13.4, Effects on Neighborhoods and Businesses, for more information.

#### **7.7.7.2 MAXIMIZE THE SERVICE TO, AND MOBILITY OF, THE TRANSIT-DEPENDENT AND TRANSPORTATION-DISADVANTAGED**

To the extent that senior communities may be transit dependent, both alternatives would have a slightly positive effect because of the inclusion of senior housing in the College Square development adjacent to the CRC LRT Station or the CRC Transit Center (under the TSM Alternative). See Section 7.7.2.5, Improve Accessibility for the Disabled and Senior Communities, for explanation.

#### **7.7.7.3 ENCOURAGE THE ECONOMIC REVITALIZATION OF LOW-INCOME AREAS**

The proposed project may have some effect on the revitalization of the whole South Sacramento Corridor by virtue of improving access as described above and by creating short-term construction related jobs. Economic revitalization in the corridor is rated by the provision of temporary construction-related jobs. Just under half of the jobs tabulated in Section 5.2.7, Construction Employment, would occur in the corridor, with the rest being drawn from the regional and national markets for construction materials and labor. Because jobs are proportional to the investment, the No-Action Alternative would be neutral, the TSM Alternative would be positive, and the LPAP2 would be the most positive. See Section 5.2.6, Employment, for more information.

#### **7.7.7.4 SEEK A FAIR DISTRIBUTION OF COSTS AND BENEFITS AMONG DIFFERENT POPULATION GROUPS**

With the LPAP2 funding sources identified in Section 2.6 above, RT would invest almost \$153 million (in year of expenditure dollars) to improve transit service in the South Sacramento Corridor. With the TSM Alternative, RT would invest \$33 million (year of expenditure dollars) to improve transit service in the area. By most measures, the study area has higher than average percentages of ethnic minority and low-income populations. The percentage of households below the poverty line is about average for the City of Sacramento, and above average for Sacramento County.

As illustrated in Table 7.7.1, transit travel time would be improved from the area to the Sacramento downtown, measurably increasing the accessibility of area residents to jobs. Improved access to station areas would augment economic development potential in the community. As discussed in Section 5.2.6, Employment, construction spending would also create jobs in the corridor over the construction period, with the LPAP2 creating more jobs than the TSM Alternative.

The project would thus have positive equity implications because it would concentrate benefits achieved through local, state and federal funding in an area with relatively higher than average percentages of low-income households and ethnic minority populations. See Section 4.13.1, Demographic Characteristics, for more information.