

SUMMARY

This Supplemental Draft Environmental Impact Statement/Subsequent Draft Environmental Impact Report (SDEIS/SDEIR) evaluates environmental consequences of transportation alternatives in the South Sacramento Corridor, which includes areas east of the Sacramento River and south of the American River within Sacramento County. The eastern boundary of the corridor is approximately Elk Grove-Florin Road and Watt Avenue, expanding to the Cosumnes River in the vicinity of Elk Grove, and the southern limit is roughly Kammerer Road. The alternatives analyzed consist of the Locally Preferred Alternative Phase 2 (LPAP2), a Transportation Systems Management (TSM) Alternative, and a No-Action Alternative.

S-1 REGIONAL PLANNING CONTEXT

Planning for the South Sacramento Corridor as a part of Regional Transit's (RT) Light Rail Transit (LRT) program began over 25 years ago. Segments of the Corridor were formally identified for future LRT extension as early as 1981, when the RT Board designated Cosumnes River Boulevard (CRB) to Calvine Road for a future LRT extension. In 1984, the Sacramento Area Council of Governments (SACOG) completed the *Sacramento LRT Extension Study Expanded LRT System Analysis*, which prioritized projects to guide future LRT expansion efforts. This study identified the Meadowview, Laguna, Route 148, and Elk Grove extensions, portions of which generally follow the alignments of the recently completed South Sacramento Corridor Phase 1, Phase 2 (the subject of the present SDEIS/SDEIR), and a future Phase 3 (which will be the subject of a future alternatives analysis and environmental evaluation).

The SACOG *Sacramento Light Rail Transit Extension Study Final Report*, which identified nine preferred alignments that included the Meadowview, Calvine, and Elk Grove extensions, was brought before the RT Board for adoption in June, 1987. The RT Board's adoption of these alignments was intended to preserve rights-of-way in accordance with City and County of Sacramento planning processes, by depicting the alignments on the land use and circulation element maps of their respective general plans, and by adoption of policies "dedicating" these rights-of-way for LRT. In 1987, the RT Board unanimously passed a resolution "reaffirming Cosumnes River Boulevard as a preferred high capacity transit corridor." This resolution depicted the Meadowview LRT Extension (along the old Southern Pacific Railroad right-of-way) from downtown Sacramento, and thence eastward along Union House Creek within Cosumnes River Boulevard to Calvine Road, key portions of which reflect the LPAP2 alignment under consideration in the present document.

The South Sacramento Corridor was identified as a candidate for a future extension of LRT during RT's 1991 *Sacramento Systems Planning Study*, on the basis of which RT proceeded to prepare Environmental Impact Reports (EIR) to enable preservation of right-of-way for the Downtown-Natomas Airport and Folsom Corridor LRT extensions, prepared a project-level EIR for extending the starter line to Sunrise/Gold River, and advanced the South Sacramento Corridor into conceptual engineering and environmental review. This EIR, prepared under the state California Environmental Quality Act (CEQA), was for the program-level *Systems Planning Study* and did not evaluate detailed environmental impacts for specific projects contained in the study; but it did enable right-of-way preservation through local land use planning processes. It was recognized that additional detailed environmental evaluations for individual projects and phases would need to occur under the Federal National Environmental Policy Act (NEPA) for federal projects and under the state CEQA.

On March 29, 1995, following public review of seven investment alternatives in the 1994 *South Sacramento Corridor Alternatives Analysis/Draft Environmental Impact Statement/ Draft*

Environmental Impact Report (AA/DEIS/DEIR), the RT Board of Directors adopted an LPA for long-term development of LRT improvements in the South Sacramento Corridor. This designation identified the "LRT-Low/UPRR Alignment" as the preferred alignment for extension of LRT from downtown Sacramento southward to Calvine Road/Auberry Drive and thence to Elk Grove. The RT Board certified the EIR for this LPA on May 8, 1995 (see Resolution No. 95-05-2356, shown in Appendix F).

In response to funding constraints, the RT Board stated its intention to implement the South Corridor project in two phases. On August 28, 1995, the RT Board adopted the Interim Operable Segment, or first implementation phase of the project. The project was advanced to preliminary engineering and a project-specific draft and final Supplemental EIS/Subsequent EIR were prepared for this phase. Final design was completed in 2000. The South Sacramento Corridor Phase 1 Project extends from the 16th Street LRT station in downtown Sacramento along the UPRR corridor to Meadowview Road in south Sacramento. The Phase 1 project was open to the public in September 2003.

Also in 2000, in its *Multi-Corridor Study*, RT re-evaluated 19 candidate corridors for future extensions of fixed-guideway transit. This study confirmed the South Sacramento and Downtown/Natomas Airport corridors in order as the top ranking high priority corridors for further LRT extension. LRT extension in the South Sacramento Corridor was also included in the Metropolitan Transportation Plan for 2025, adopted by the Board of Directors of SACOG in June 2002.

Consistent with this planning to date, this SDEIS/SDEIR focuses on the environmental impacts of the second phase of the LPA adopted by the RT Board of Directors in 1995 and supplements the environmental evaluation contained in the 1994 AA/DEIS/DEIR. Specifically, it describes the current environmental setting, it recognizes current and recent planning activities and plans, and evaluates impacts from a more precisely defined Phase 2 project, including a description and evaluation of changes between that portion of the 1995 LPA that is now defined as LPAP2. This phase extends from Meadowview Road in South Sacramento along the previously designated alignment down the UPRR right-of-way and along Cosumnes River Boulevard to Cosumnes River College in the City of Sacramento. A new LRT station at Morrison Creek has been added to the previously defined LPA.

Various design options alignments will be considered in the future to extend LRT to the City of Elk Grove as a third phase of the project. The present project does not evaluate these alternative alignments, but engineering refinements for the LPAP2 are being carried out so as not to preclude any of the viable alignments that have been identified for the Phase 3 LRT extension. Phase 3 alignments and options will be fully evaluated in a subsequent alternatives analysis and environmental evaluation.

This draft document is being circulated for public review, and a public hearing will be held to provide an opportunity for oral comments on this draft. Extensive public notice has been provided regarding the availability this draft document and the opportunity for public comment. A Supplemental Final Environmental Impact Statement/Subsequent Final Environmental Impact Report (SFEIS/SFEIR) will be prepared following the public comment period. The SFEIR will then be certified by the RT Board of Directors under CEQA, and the Federal Transit of Administration will issue a Record of Decision for the SFEIS. These actions will enable the design, development of funding agreements, and construction of the project.

Table S-1 summarizes the timeline for these prior planning activities and shows anticipated future milestone activities.

Year	Milestone
1981	RT Board Designates Cosumnes River Blvd. & Calvine Road for Right of Way Preservation
1984	SACOG Completes <i>Sacramento LRT Extension Study - Expanded LRT System Analysis</i>
1987	SACOG Issues <i>Sacramento Light Rail Transit Extension Study Final Report</i>
1991	RT Completes <i>Sacramento Systems Planning Study</i>
1994	RT Board Certifies South Sacramento Corridor AA/DEIS/DEIR
1995	RT Board Adopts Locally Preferred Alternative
2000	South Line Phase 1 RT Board Certifies EIR FTA Issues Record of Decision
2003	RT Opens South Line Phase 1 for Revenue Service RT Submits Phase 2 "New Starts" Criteria Report to FTA
2004	RT Board Terminates Phase 2 at Cosumnes River College & Adds Morrison Creek Station RT Board Rejects Maintenance Facility Options Along Phase 2 RT Completes Fleet Management Plan 2003 - 2013 RT Submits Phase 2 "New Starts" Criteria Report to FTA Receives Recommended Rating FTA Approve New Starts Baseline (TSM) Alternative
2005	RT Receives Authorization to Enter Preliminary Engineering RT / FTA Circulate SDEIS/SDEIR
2007	FTA / RT Distribute SFEIS/SFEIR RT Board Certifies SFEIR FTA Issues Record of Decision FTA Authorizes Final Design RT Develops Final Design RT / FTA Sign Full Funding Grant Agreement
2007 - 2010	LPAP2 Construction

S-2 PURPOSE AND NEED

The Purpose and Need statement summarized below and detailed in Chapter 1 identifies and describes the transportation problem(s) that the proposed action is intended to address and specifies the underlying purposes of and need for the proposed action. The proposed action, summarized in Section S-3-3, is the 4.2-mile LPAP2 LRT extension of the Sacramento LRT system into Southern Sacramento, with four LRT stations and associated facilities (e.g., park-and-ride lots/structure) and amenities.

The South Sacramento Corridor is one of the fastest growing areas of metropolitan Sacramento. Improving public transit services to provide faster, more convenient access between the South Corridor and downtown Sacramento as well as to other corridor activity centers is the primary purpose of the South Sacramento Corridor Phase 2 project.

Meeting this primary project purpose would also address the following related needs:

- Enhance regional connectivity through expanded, interconnected LRT services along the primary travel corridors in Sacramento County, by connecting the project area with Interstate 80 (I-80) east (existing Northeast LRT Line), US 50 (existing Folsom LRT Line with extensions), and State Route 99 (SR 99)/I-5.
- Accommodate future travel demand in the corridor by increasing transit capacity and expanding modal options (by considering LRT and other enhanced transit services along with conventional transit).

- Reduce the growth in increasing traffic congestion on SR 99 and I-5 between downtown Sacramento and the communities of Elk Grove, Laguna Creek, and Laguna West, and on the major north-south arterials in South Sacramento, such as Franklin Boulevard and Bruceville Road.
- Improve regional air quality by reducing auto emissions.
- Improve mobility options to employment, education, medical, and retail centers for corridor residents, in particular low-income and ethnic minority populations and provide a mobility option to the use of congested highways.

Support local economic and land development goals by increasing transit service to current and future corridor activity centers. Figure 1.1-1 depicts major activity centers in the South Sacramento Phase 2 Corridor. Figure S-1 shows the location of the proposed project. The South Sacramento Corridor is located within one of the fastest-growing urban areas in the State of California and the nation. The Sacramento consolidated metropolitan statistical area experienced a 21 percent increase in population between 1990 and 2000¹, and regional population growth is projected to continue at a high rate for the foreseeable future. Within the South Sacramento Phase 2 area (i.e., the area south of Meadowview and Mack Roads comprising the area most directly served by the alternatives under consideration in this document), the number of households is projected to increase from 82,440 in 2000 to 152,440 in 2025, and increase of 85 percent.² Employment in this same area is expected to increase by 145 percent, from 36,820 to 90,170, over the same period.³ RT is working closely with the City of Sacramento and other local jurisdictions to implement its Transit for Livable Communities (TLC) program designed to focus new development around transit stations. The TLC program is an important part of RT's planning for the South Sacramento Corridor.

The levels of population and job growth projected for the corridor and region are likely to adversely affect corridor transportation systems. Travel forecasts indicate that person trip demand in the South Sacramento Corridor Phase 2 Area will grow by 86 percent between 2000 and 2025. Neither the highway network nor the transit system will be able to accommodate this projected future travel demand without major improvements.

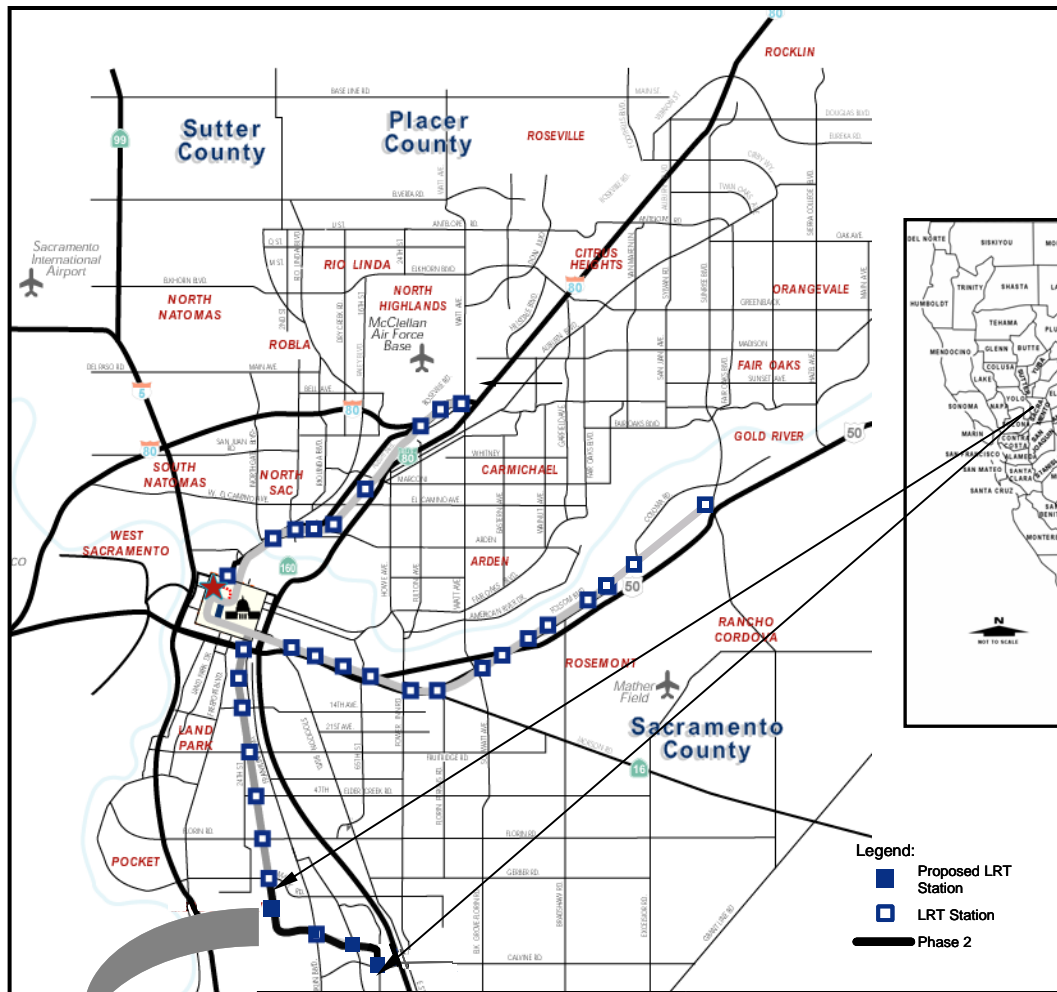
The major north-south freeways in South Sacramento – I-5 and SR 99 – are the critical freeway links in the roadway network and the most affected by corridor growth. Traffic volumes are projected to increase substantially throughout the length of both highways as the area grows. The projected growth in traffic will produce a steady deterioration in highway travel conditions in coming years. I-5 is currently below capacity between Meadowview and Laguna, but severe congestion is projected for 2025 operations south of Meadowview Road. SR 99, which is currently over capacity, was widened to accommodate High Occupancy Vehicle (HOV) lanes from Elk Grove Boulevard north to the Sacramento Central City during the 1990s; no additional improvements are planned for this section of SR 99 over the next 20 years.⁴ By 2025, SR 99 will suffer severe congestion during peak periods over the length of the corridor. Major arterials serving South Sacramento will also experience increasing congestion as the area continues to develop, and a combination of transportation network improvements will be necessary to meet future travel demand in South Sacramento. The use of alternative modes, including public transit, will be important in meeting this need.

¹ U.S. Census Bureau.

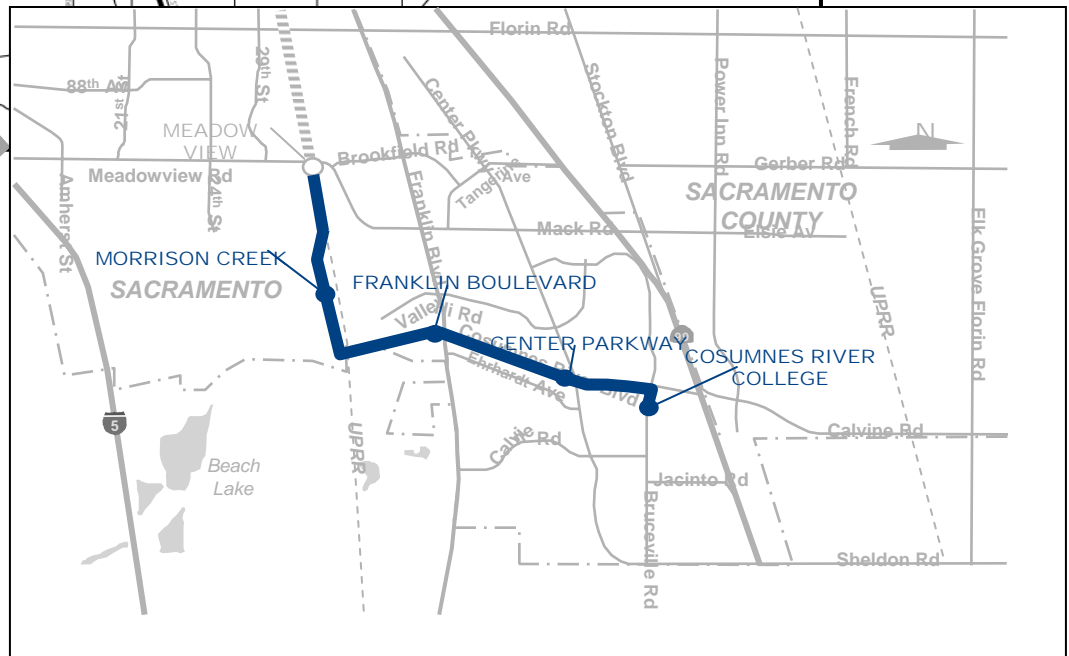
² Sacramento Area Council of Governments (SACOG) statistics used for preparation of the 2002 Metropolitan Transportation Plan and used in the travel demand modeling summarized in Chapter 3.

³ Ibid.

⁴ DKS, 2005



- Legend:**
- Proposed LRT Station
 - LRT Station
 - Phase 2



South Sacramento Corridor
Phase 2 Project

**SOUTH SACRAMENTO CORRIDOR
Figure S-1**

RT proposes to improve its transit services substantially in South Sacramento and elsewhere. The South Line LRT Phase 1, which opened to service in September, 2003, was the highest priority transit improvement project in the region. Express bus demand from Elk Grove to downtown Sacramento is currently running over capacity. The overloading of express buses is likely to increase due to the ongoing rapid growth in the area fueling increased automobile commuting to downtown Sacramento jobs.

Current and projected bus ridership emphasizes the need for additional transit service, particularly on exclusive right-of-way. This is because the biggest obstacle to realizing projected transit ridership is likely to be the problems faced by buses operating in mixed flow traffic on congested roadways. Bus travel times will increase (and likely discourage transit use) unless buses can operate apart from the mixed-flow traffic stream. Travel time studies have shown that bus transit trips between major activity centers in the South Sacramento corridor would typically be five to 30 minutes longer than transit trips using exclusive right-of-way, such as the proposed LPAP2 LRT Extension.

Increasing congestion and slowing travel times for both auto and transit threaten to worsen regional air quality. Metropolitan Sacramento currently is an Environmental Protection Agency designated non-attainment area for ozone. Automobiles are responsible for 70 percent of this air pollution. The Sacramento Metropolitan Air Quality Management District's adopted *Air Quality Attainment Plan* and Sacramento County's *General Plan* both include the development of light rail and increased use of alternative-fuel vehicles as major clean air policy objectives. The South Corridor Phase 2 Project would directly address these objectives.

S-3 ALTERNATIVES EVALUATED IN THE SDEIS/SDEIR

Three alternatives are evaluated in this SDEIS/SDEIR, as described below.

S-3.1 No-Action Alternative

The No-Action Alternative consists of highway and transit systems existing in the South Sacramento Corridor as of year 2000, plus planned and programmed improvements to the year 2025 as contained in the adopted 2002 Metropolitan Transportation Plan (MTP). It represents future conditions against which the transportation, environmental, and community impacts of the other alternatives are compared.

Major South Corridor roadway improvements in the 2025 MTP include HOV lanes and additional park-and-ride lots along I-5, from Elk Grove Boulevard to Downtown Sacramento. These improvements will provide travel alternatives, improved auto travel times, and additional transit amenities, especially for residents of Laguna and Elk Grove, and those living nearer I-5. Other major roadway system improvements identified in the 2025 MTP are the City of Sacramento's proposed widening of CRB between Bruceville Road and Franklin Boulevard, the extension of CRB from its western terminus at Franklin Boulevard to I-5 (expected to be completed by 2008), and the widening of Bruceville Road ultimately to three lanes in each direction between Sheldon Road and CRB (to be completed by 2010).

The 2025 MTP transit improvements within the South Sacramento Corridor that were incorporated into the No-Action Alternative are as follows:

- Continued expansion of Capitol Corridor intercity train service to 16 daily trains to the Bay Area.

- Commuter rail service between Dixon and Auburn using the Union Pacific (UP)/Amtrak facilities.
- Light rail extended north from Downtown Sacramento to Natomas Town Center and the Sacramento Airport.
- Light rail extended east from Northeast Line to Antelope in Sacramento County.
- Light rail extended to city of Folsom (opened October 2005) and to Amtrak station in Downtown Sacramento.
- Implementation of express LRT service to Downtown Sacramento from Folsom and Watt/I-80.
- Light rail extended west from Downtown Sacramento to West Sacramento.
- Bus service increased substantially above current levels, with concomitant bus fleet expansion from the current 230 buses to 400 buses by 2025.
- Bus rapid transit implemented in three commute corridors, including Stockton Boulevard, Watt Avenue, and Sunrise Boulevard.
- Expansion of bus and van service regionwide, including an increase in service for elderly and disabled persons.
- Additional community circulator vans or shuttles that serve neighborhoods, commercial areas, and jobs centers throughout the day at reduced fares.

Although contained in the 2025 MTP, the LPAP2 is not included in the No-Action Alternative, given that it is the proposed action being evaluated in this SDEIS/SDEIR. Figure 2.2-1 and Table 2.2-1 summarize transit service in the South Sacramento Corridor for the No-Action Alternative.

S-3.2 Transportation Systems Management (TSM) Alternative

The Transportation Systems Management (TSM) Alternative consists of transit improvements that are lower in capital cost than the proposed LPAP2. Consistent with FTA guidance, these improvements generally represent the “best that can be done” to improve transit in the corridor without building the rail project. This alternative would replace the LPAP2 LRT extension and associated bus service with lower-cost line-haul and feeder bus routes, by including the following additions compared to the No-Action Alternative:

- Direct express bus service via SR-99 HOV lanes, connecting from a new CRC transit center (with 1,400 new parking spaces) to Downtown Sacramento to enhance drive-access transit opportunities in the LPAP2 Corridor.
- Direct express bus service via Interstate 5 HOV lanes, connecting from the Laguna West community to Downtown Sacramento. The existing park-and-ride lot in Laguna West was sized to accommodate parking demand for this service.
- A high-frequency, trunkline bus route connecting the Elk Grove/Lent Ranch area to CRC and the Meadowview LRT Station via Bruceville Road, Cosumnes River Boulevard and Franklin Boulevard.
- The planned transit center at CRC would be improved to enhance bus-to-bus and park-and-ride lot access at this transit center. Other improvements to bus-to-LRT transfers at the Meadowview LRT station were added.
- Transit priority treatment along Stockton Boulevard in the corridor, affecting Route 50E. RT is also implement transit priority along Watt Avenue and Sunrise Avenue in addition to downtown

Sacramento as part of a system-wide approach to transit priority, so transit priority would be part of the No-Action Alternative as well.

Figure 2.3-1 shows the South Sacramento Corridor transit network proposed under the TSM Alternative. Table 2.3-1 lists the starting headways for the new bus services identified to “replace” the LPAP2 LRT extension under this alternative.

Rail operations under the TSM Alternative would consist of the existing Sacramento LRT system with other LRT and rail improvements as identified in the 2025 Metropolitan Transportation Plan but without the South Corridor Phase 2 extension. Note that the TSM Alternative includes all the other LRT extensions in the 2025 MTP – that is, the Downtown Natomas Airport Extension and the proposed LRT extensions to West Sacramento and Antelope, as included in the No-Action Alternative.

S-3.3 Locally Preferred Alternative Phase 2 (LPAP2)

The proposed action is the Locally Preferred Alternative Phase 2 (LPAP2), an extension of the current LRT system that would implement the second phase of the South Sacramento Corridor LRT extension. Light rail vehicles would operate generally at 10-minute average headways during peak hours of service and have a maximum speed of 55 mph. The LPAP2 consists of approximately 4.3 miles of dual LRT tracks from the existing Meadowview Road station to Cosumnes River College. Figure S-2 shows the general alignment.

The detailed alignment is illustrated in Figures 2.4-3 through 2.4-18. From the Meadowview Station, the track alignment would continue south on the west side of the Union Pacific Railroad (UPRR) right-of-way to Morrison Creek, where it would jog west then south remaining on the west side of the creek. North of the Cosumnes River Boulevard Extension, the alignment would turn east crossing Morrison Creek, the UPRR, and Union House Creek on aerial structure. From there the alignment would continue east on the north side of the Cosumnes River Boulevard Extension (a roadway project to be completed by others) crossing Franklin Boulevard and Center Parkway along the north edge of Cosumnes River Boulevard. After crossing Center Parkway, the alignment would turn south on the west side of Bruceville Road to terminate at Cosumnes River College. Design Options for LPAP2 crossings at Meadowview Road, Franklin Boulevard, and Cosumnes River Boulevard are described in Section 2.4.3, Detailed Description of LPAP2 Alignment.

The LPAP2 includes four stations:

1. Morrison Creek Station (with PNR lot for 50 spaces);
2. Franklin Boulevard Station (with PNR lot with 650 spaces);
3. Center Parkway Station, north of Cosumnes River Boulevard west of the Center Parkway intersection; and
4. Cosumnes River College, immediately north of the College’s east entrance (with PNR structure with 2,000 spaces).

RT planners will work with local planners and jurisdiction to encourage transit oriented development around the Morrison Creek and Cosumnes River College stations.

Feeder bus service would be oriented to serve stations on the extension. The LPAP2 also includes four Traction Power Substations:

- On the north boundary of the Morrison Creek Station.
- In the southwest corner of the Franklin Station park-and-ride lot.
- On the southeast corner of CRB and Center Parkway or a site 600 feet east.
- In the vicinity of the tail tracks at CRC.

Grade-separated pedestrian/bike crossings are proposed at the Franklin and Center Parkway stations. A grade separation for the light rail line is under consideration for Meadowview Road, Franklin Boulevard, and Cosumnes River Boulevard. Vehicle maintenance for the LPAP2 LRT vehicles would occur at RT's central maintenance facility. RT has acquired additional LRT vehicles to operate on the LPAP2.

S-4 SUMMARY OF ENVIRONMENTAL IMPACTS, DESIGN REQUIREMENTS/ RT PRACTICES, AND PROPOSED MITIGATION MEASURES

Table S-1 presents the long term environmental impacts and proposed mitigation measures for the TSM and LPAP2 Alternatives. Table S-2 presents the short-term (i.e. construction) impacts and mitigation measures. For a full description of impacts and mitigation, see Chapters 3, 4 and 5. All proposed mitigation measures are included in project cost estimates.

Many impacts of the TSM and LPAP2 alternatives would be addressed through design requirements and RT practices that are required by regulations, current standards and guidelines or are already part of RT's existing project development and construction procedures. These design requirements and RT practices are identified for each impact category and summarized in Tables S-2 and S-3 because compliance with these practices would minimize or avoid project impacts, precluding the need for formal mitigation measures. In all cases RT's construction documents would require the use of appropriate RT Practices and proposed mitigation measures listed in this environmental document.

Table S-2: Summary of Long-Term Impacts, Design Requirements/RT Practices, and Proposed Mitigation Measures

Impact Category/ Section in SDEIS/SDEIR	No-Action Alternative	Transportation Systems Management (TSM) Alternative	Locally Preferred Alternative Phase 2 (LPAP2)
<p>Transportation and Traffic Chapter 3</p>	<p>Not implementing the TSM or LPAP2 would not yield the increased transit use and decreased roadway congestion.</p>	<p>Increased Transit Use: The TSM Alternative is projected to increase year 2030 weekday ridership by 3,400 trips (linked trips) over the No-Action Alternative.</p> <p>Decreased Roadway Congestion: TSM Alternative will reduce Average Daily Traffic by 100 to 1,400 more vehicles on SR 99, north of Sheldon Road, than the No-Action Alternative (in 2025).</p> <p>Travel Time Savings: The drive-access-transit time improvement of the TSM Alternative compared with the No-Action Alternative ranges from 2 to 18 minutes (in 2030).</p> <p>Impact on Intersections: Under the TSM Alternative, during the p.m. peak hour, operations would deteriorate from LOS C to D at one intersection in the City of Sacramento.</p> <p>Parking: This alternative is projected to reduce downtown parking demand by about 900 spaces (in 2025).</p> <p><u>Mitigation Measures</u>: Adding dual eastbound and westbound turning lanes at the affected intersection would eliminate the impact.</p>	<p>Increased Transit Use: The LPAP2 is projected to increase year 2030 weekday ridership by 5,900 trips (linked trips) over the No-Action Alternative and by 2,500 trips over the TSM Alternative. These are new trips attracted to transit by the LPAP2; additional riders will transfer from buses to LRT but are not included in this total.</p> <p>Decreased Roadway Congestion: the LPAP2 would reduce Average Daily Traffic by 100 to 2,500 more vehicles on SR 99, north of Sheldon Road, than the No-Action Alternative (in 2025).</p> <p>Travel Time Savings: the LPAP2 would improve drive-access-transit time from 17 to 29 minutes (in 2030) compared with the No-Action Alternative.</p> <p>Impact on Intersections: Under the LPAP2, operations at five intersections in the City of Sacramento are projected to go from LOS C to D and E during the AM and PM peak hour.</p> <p>Parking: The LPAP2 is projected to reduce downtown parking demand by about 1,300 spaces (in 2025).</p> <p><u>Mitigation Measures</u>: Adding turn lanes at four of the affected intersections would result in no remaining impacts. Due to physical constraints at the intersection, improvements are not feasible or practicable at the intersection of Bruceville Road and CRB, resulting in an unavoidable adverse impact.</p>
<p>Aesthetics Section 4.1</p>	<p>No impact.</p>	<p>Visual changes associated with construction of one PNR lot would be consistent with the changing urban scene.</p>	<p>New LRT facilities would introduce visual changes that would be perceived by motorists, residents and business occupants within the project corridor and would add more or less to the visual elements of the urban scene, depending on the design options at each location.</p>

Table S-2: Summary of Long-Term Impacts, Design Requirements/RT Practices, and Proposed Mitigation Measures

Impact Category/ Section in SDEIS/SDEIR	No-Action Alternative	Transportation Systems Management (TSM) Alternative	Locally Preferred Alternative Phase 2 (LPAP2)
		<p><u>Mitigation Measures:</u></p> <p>RT will incorporate landscaping into the final design to soften views of PNR lots.</p> <p>RT will control potential light and glare by directing lighting associated with proposed PNR lots, onto the premises of each facility and away from surrounding land uses.</p>	<p><u>Mitigation Measures:</u></p> <p>RT will invite public participation regarding station and noise wall design during the final design phase of the project.</p> <p>RT will incorporate landscaping into the final design to soften views of LPAP2 LRT stations, PNR lots, substations and the optional shuttle lot.</p> <p>RT will control light and glare by directing lighting associated with LRT facilities onto the premises of each facility and away from surrounding land uses.</p>
<p>Agriculture Section 4.2</p>	<p>No impact.</p>	<p>The TSM Alternative would require approximately 12.7 acres of farmland for construction of the Cosumnes River College PNR lot.</p> <p><u>Mitigation Measures:</u> None required.</p>	<p>The LPAP2 would require approximately 18.3 acres of farmland for construction of the LPAP2. These areas of farmland are not under Williamson Act contract and are located adjacent to urbanized areas. Most of the farmland area that would be taken for the project is zoned for uses other than agriculture.</p> <p>Form NRCS-CPA-106 has been submitted to the NRCS. Following their review, a total site farmland assessment criteria score will be determined for the project. Based on federal regulation 7 CFR 658.4, sites receiving a total score of less than 160 points shall be given a minimal level of consideration for protection and no additional sites need be evaluated.</p> <p><u>Mitigation Measures:</u> None required.</p>

Table S-2: Summary of Long-Term Impacts, Design Requirements/RT Practices, and Proposed Mitigation Measures

Impact Category/ Section in SDEIS/SDEIR	No-Action Alternative	Transportation Systems Management (TSM) Alternative	Locally Preferred Alternative Phase 2 (LPAP2)
Air Quality Section 4.3	Not implementing the TSM or LPAP2 would not yield the reduction in air emissions shown for the TSM and LPAP2 Alternatives.	Regional criteria pollutant emissions (CO, ROG, NOx, SOx, and PM ₁₀) are projected to decrease in comparison to the No-Action Alternative. Small-localized increases in CO would result, but are not anticipated to exceed the State or federal one- and eight-hour standards. The CO emissions at the PNR lot and PM10 emissions (from idling of buses) would not exceed State or federal standards. <u>Mitigation Measures:</u> None required.	Regional criteria pollutant emissions (CO, NOx, SOx, and PM10) are projected to decrease when compared to the No-Action Alternative, by amounts comparable to (or better than) the TSM Alternative. Small localized increases in CO would result, but are not anticipated to exceed the State or federal one- and eight-hour standards. The CO emissions at PNR lots and PM10 emissions (from idling of buses at stations) would not exceed State or federal standards. <u>Mitigation Measures:</u> None required.
Biological Resources Section 4.4	No impact.	No impact to wetlands or other waters of the U.S. Up to 2.0 acres of habitat suitable for western burrowing owl would be affected. The western burrowing owl is a federal and California species of concern. <u>Mitigation measures:</u> Consultations with USFWS, CDFG, and ACOE to formulate mitigation measures to minimize harm to and ensure the continuation of special-status species. USFWS will develop a no-jeopardy Biological Opinion and Incidental Take Statement or will issue a Letter of Concurrence that will be reported in the SFEIS/SFEIR stipulating the project-specific mitigation measures and practices.	Loss of 0.34 acres of jurisdictional wetlands for the LPAP2. Up to 0.14 acres of seasonal wetlands that provide suitable habitat for vernal pool fairy shrimp, midvalley fairy shrimp, vernal pool tadpole shrimp, and California linderiella; 0.04 acres of suitable habitat for western pond turtle and giant garter snake; and between 0.70 and 63.34 acres of nesting and foraging habitat for 13 special-status bird species would be affected. <u>Mitigation measures:</u> Consultations with USFWS, CDFG, and ACOE to formulate mitigation measures to minimize harm to and ensure the continuation of special-status species and jurisdictional areas. USFWS will develop a no-jeopardy Biological Opinion and Incidental Take Statement or will issue a Letter of Concurrence that will be reported in the SFEIS/SFEIR

Table S-2: Summary of Long-Term Impacts, Design Requirements/RT Practices, and Proposed Mitigation Measures

Impact Category/ Section in SDEIS/SDEIR	No-Action Alternative	Transportation Systems Management (TSM) Alternative	Locally Preferred Alternative Phase 2 (LPAP2)
		<p>Permanent impacts to western burrowing owl burrows and foraging habitat will be mitigated through the purchase of credits at a CDFG-approved mitigation bank.</p>	<p>stipulating the project-specific mitigation measures and practices.</p> <p>Purchase mitigation credits in an existing USFWS-approved mitigation banks to compensate for impacts to giant garter snake and vernal pool crustaceans.</p> <p>Consult with SRCSD Bufferlands manager to explore opportunities to compensate for impacts to nesting and foraging habitat for special-status bird species.</p> <p>Permanent impacts to western burrowing owl burrows and foraging habitat and Swainson's hawk foraging habitat will be mitigated through the purchase of credits at a CDFG-approved mitigation bank.</p> <p>Purchase mitigation credits in an agency-approved wetland mitigation bank or an in lieu fee.</p>
<p>Cultural Resources Section 4.5</p>	<p>No impact.</p>	<p>No archaeological resources appear eligible for listing in the NRHP or the CRHR. Because much of the APE has been covered over with pavement or other obstructions, however, the survey could not conclude with certainty that there are no unrecorded cultural remains within the APE. Areas in which such remains may exist have been identified. No historic architectural resources appear eligible for listing in the NRHP or CRHR, or are included in any local list of historic resources.</p> <p><u>Mitigation Measures:</u> During construction in identified areas, monitoring will be conducted by a qualified professional archaeologist and/or a member of the local Native American community. The</p>	<p>No archaeological resources appear eligible for listing in the NRHP or the CRHR. Because much of the APE has been covered over with pavement or other obstructions, however, the survey could not conclude with certainty that there are no unrecorded cultural remains within the APE. Areas in which such remains may exist have been identified. No historic architectural resources appear eligible for listing in the NRHP or CRHR, or are included in any local list of historic resources.</p> <p><u>Mitigation Measures:</u> During construction in identified areas, monitoring will be conducted by a qualified professional archaeologist and/or a member of the local Native American community. The</p>

Table S-2: Summary of Long-Term Impacts, Design Requirements/RT Practices, and Proposed Mitigation Measures

Impact Category/ Section in SDEIS/SDEIR	No-Action Alternative	Transportation Systems Management (TSM) Alternative	Locally Preferred Alternative Phase 2 (LPAP2)
		<p>monitor(s) will have the ability to temporarily stop any work in an area where archaeological materials or human remains are uncovered long enough to assess the finds and, in the case of human remains, to follow the stipulations set out in the State Health and Safety Code (Section 7050.5). Such provisions will be in the construction contracts.</p> <p>If unanticipated archaeological resources are encountered during construction, they would be addressed in consultation with the Office of Historic Preservation (OHP) or in accordance with an archaeological treatment plan to be developed in consultation with OHP. Such provisions will be in the construction contracts.</p>	<p>monitor(s) will have the ability to temporarily stop any work in an area where archaeological materials or human remains are uncovered long enough to assess the finds and, in the case of human remains, to follow the stipulations set out in the State Health and Safety Code (Section 7050.5). Such provisions will be in the construction contracts.</p> <p>If unanticipated archaeological resources are encountered during construction, they would be addressed in consultation with the Office of Historic Preservation (OHP) or in accordance with an archaeological treatment plan to be developed in consultation with OHP. Such provisions will be in the construction contracts.</p>
<p>Electromagnetic Fields (EMF) and Electromagnetic Interference (EMI) Section 4.6</p>	<p>No impact.</p>	<p>No impact.</p>	<p>Present evidence suggests that any increased health risks from EMF exposures attributable to light rail improvements would be very small. The LPAP2 would generate EMF, which could interfere with the effective performance of electronics and electrical equipment.</p> <p><u>Mitigation Measures:</u> The potential for EMI effects can be minimized by ensuring that all electronic equipment is operated with a good electrical ground and that proper shielding is provided for electronic system cords, cables, and peripherals.</p> <p>Specialized components, such as filters, capacitors and inductors that can also reduce EMI susceptibility of certain systems will be installed, as appropriate.</p>
<p>Geology, Soils and Seismicity</p>	<p>No impact.</p>	<p>The risk of fault rupture in the project area appears very low. The proposed facilities would, however, be exposed to a risk of substantial ground shaking, which can impose</p>	<p>The risk of fault rupture in the project area appears very low. The proposed facilities would, however, be exposed to a risk of substantial ground shaking, which can impose loads on</p>

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Impact Category/ Section in SDEIS/SDEIR	No-Action Alternative	Transportation Systems Management (TSM) Alternative	Locally Preferred Alternative Phase 2 (LPAP2)
Section 4.7		<p>loads on structures and earth embankments. Some soils may be susceptible to seismically induced liquefaction and settlement, which could affect design and service of the alternatives.</p> <p><u>Mitigation Measures:</u></p> <p>All geologic hazard impacts will be fully addressed by design requirements. Therefore, no mitigation is required.</p>	<p>structures and earth embankments. Some soils may be susceptible to seismically induced liquefaction and settlement, which could affect design and service of the alternatives.</p> <p><u>Mitigation Measures:</u></p> <p>All geologic hazard impacts will be fully addressed by design requirements. Therefore, no mitigation is required.</p>
<p>Hazardous Wastes Section 4.8</p>	No impact.	<p>Construction activities may be affected by releases of hazardous materials from known or previously unidentified sites. Clearing/grubbing/excavation may expose or encounter hazardous materials.</p> <p><u>Mitigation Measures:</u></p> <p>All maintenance personnel who may be exposed to contaminated soils or water would be trained in accordance with the OSHA HAZWOPER standard, follow a site-specific health and safety plan, and use proper personal protective equipment. Untrained workers and members of the public would be excluded from the area.</p> <p>Contractors will incorporate procedures into a construction management plan describing how they</p>	<ul style="list-style-type: none"> • Contaminated groundwater may be encountered. • Dewatering during trenching or excavating may change or amplify local hydraulic gradients and draw groundwater contamination into the trench or excavation. • New tracks and passenger LRT service would be introduced into a segment of the existing UPRR corridor with existing freight rail service. Safety issues associated with any hazardous materials transport on freight trains would not increase or decrease and would remain the responsibility of the UPRR. <p><u>Mitigation Measures:</u></p> <p>All maintenance personnel who may be exposed to contaminated soils or water would be trained in accordance with the OSHA HAZWOPER standard, follow a site-specific health and safety plan, and use proper personal protective equipment. Untrained workers and members of the public would be excluded from the area.</p> <p>The one building subject to demolition will be inspected (and tested as necessary) for asbestos containing materials and lead based paints.</p>

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Impact Category/ Section in SDEIS/SDEIR	No-Action Alternative	Transportation Systems Management (TSM) Alternative	Locally Preferred Alternative Phase 2 (LPAP2)
		<p>will monitor for subsurface contamination.</p> <p>Prepare and implement a contingency plan for handling and disposing of contaminated soil and groundwater.</p> <p>Perform Phase 2 site investigations where indicated. Remediation and/or disposal of all materials deemed to be hazardous.</p>	<p>Contractors will incorporate procedures into a construction management plan describing how they will monitor for subsurface contamination.</p> <p>Prepare and implement a contingency plan for handling/disposing of contaminated soil and groundwater.</p> <p>Perform Phase 2 site investigations where indicated.</p> <p>All contaminated materials encountered will be evaluated in the content of applicable local state, and federal regulations and/or guidelines governing hazardous wastes. Remediation and/or disposal of all materials deemed to be hazardous.</p>
<p>Hydrology, Floodplain and Water Quality Section 4.9</p>	<p>No impact.</p>	<p>No long-term groundwater impacts are anticipated. Runoff from PNR lot would be directed to the stormwater system, and eventually to receiving waters.</p> <p><u>Mitigation Measures:</u> Parking lot pavement, catch basins, and storm drains will be cleaned regularly.</p>	<p>From Morrison Creek to Union House Creek, and from Franklin Boulevard to Center Parkway, a flood control project (by others), currently under construction, will eliminate 100-year flood hazards.</p> <p>From Union House Creek to Franklin Blvd., the LPAP2 line would be constructed on a fill embankment above the 100-year flood elevation. Culverts through the embankment would convey runoff/flood flows.</p> <p>The Franklin PNR lot would be constructed above the 100-year flood elevation. The south berm of a large detention basin at Franklin Station would be modified. Flood storage reduction would be avoided.</p>

Table S-2: Summary of Long-Term Impacts, Design Requirements/RT Practices, and Proposed Mitigation Measures

Impact Category/ Section in SDEIS/SDEIR	No-Action Alternative	Transportation Systems Management (TSM) Alternative	Locally Preferred Alternative Phase 2 (LPAP2)
			<p>Runoff from the LPAP2 would be negligible.</p> <p><u>Mitigation Measures:</u> Consult with ACOE and SAFCA regarding the need for temporary flood control measures from Meadowview to Morrison Creek and from Franklin Blvd to Center Parkway in the event the LPAP2 Project precedes completion of flood control project.</p> <p>Parking lot pavements, catch basins, and storm drains will be cleaned regularly. Solid waste will be collected from facilities on a regular basis.</p> <p>For fill in 100-year floodplain either (1) excavate compensating floodplain storage equal to the amount removed, or (2) pay a mitigation fee to SAFCA. Develop final floodplain mitigation plan in consultation with ACOE and SAFCA.</p>
<p>Land Use and Planning Section 4.10</p>	<p>The No-Action Alternative would support a long-term dispersed pattern of development in the South Sacramento Corridor.</p>	<p>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.</p> <p>Approximately 4.0 acres of non-residential property and 12.7 acres of agricultural land would be acquired.</p> <p><u>Design Requirements/RT Practices:</u> RT will coordinate with the City and County of Sacramento and the City of Elk Grove to ensure that project facilities would be consistent with land use planning processes and zoning ordinance controls.</p>	<p>An estimated 53.6 to 71.2 acres would be required for construction of the LPAP2 alignment, stations, PNR lots, replacement college parking, and optional shuttle lot.</p> <p>Approximately 14.6 acres of Cosumnes River College land, 19.1 acres of SRCSD bufferlands, and 18.3 acres of agricultural land would be converted to public right-of-way. An additional 8.9 acres would come from the UPRR.</p> <p><u>Design Requirements/RT Practices:</u> RT will coordinate with the City and County of Sacramento to ensure that project facilities would be consistent with land use planning processes and zoning ordinance controls.</p>

Table S-2: Summary of Long-Term Impacts, Design Requirements/RT Practices, and Proposed Mitigation Measures

Impact Category/ Section in SDEIS/SDEIR	No-Action Alternative	Transportation Systems Management (TSM) Alternative	Locally Preferred Alternative Phase 2 (LPAP2)
		<p><u>Mitigation Measures:</u> None required.</p>	<p>RT will work closely with local jurisdictions to encourage transit oriented development around appropriate stations consistent with RT's ongoing TLC program.</p> <p>RT will work with SRCSD to ensure that project facilities are compatible with SRCSD's <i>Land Use Management Plan</i>.</p> <p><u>Mitigation Measures:</u> None required.</p>
<p>Mineral and Energy Resources Section 4.11</p>	<p>Direct energy consumption would be highest for the No-Action Alternative.</p>	<p>Although transit vehicle miles of travel (VMT) increase, these increases are more than offset by a corresponding decrease in auto/truck VMT as travelers shift to transit and drive less. Net energy consumption for vehicle operations (i.e., direct energy consumption) is lower than the No-Action Alternative and higher than the LPAP2. Similarly, when total system energy is considered, the TSM Alternative consumes less energy than the No-Action Alternative and slightly more energy than the LPAP2.</p> <p><u>Design Requirements/RT Practices:</u> Facilities and equipment will be designed and specified to ensure energy efficiency.</p> <p><u>Mitigation Measures:</u> None required.</p>	<p>Although transit vehicle miles of travel (VMT) increase with the LPAP2, these increases are more than offset by a corresponding decrease in auto/truck VMT as travelers shift to transit and drive less. Energy consumption for vehicle operations (both total and direct energy consumption) is lowest for the LPAP2.</p> <p>Overall it can be concluded that the LPAP2 would have a negligible impact on transportation system energy consumption for vehicle operations. Auto/truck travel would remain the dominant transportation mode in the region and the changes in total VMT and energy consumption would be relatively small from a system perspective.</p> <p><u>Design Requirements/RT Practices:</u> Facilities and equipment will be designed and specified to ensure energy efficiency.</p> <p><u>Mitigation Measures:</u> None required.</p>
<p>Noise and Vibration Section 4.12</p>	<p>No impact.</p>	<p>No impacts.</p> <p>The TSM Alternative consists of additional bus service and construction of one park and ride lot. These improvements are not expected to generate any noise and</p>	<p><u>Noise</u> FTA noise impacts along the LPAP2 alignment would vary depending on the design options selected. Noise impacts along the full LPAP2 alignment would vary from 196 (117 "Impact" and 79 "Severe") to 340 (61 "Impact" and 279</p>

Table S-2: Summary of Long-Term Impacts, Design Requirements/RT Practices, and Proposed Mitigation Measures

Impact Category/ Section in SDEIS/SDEIR	No-Action Alternative	Transportation Systems Management (TSM) Alternative	Locally Preferred Alternative Phase 2 (LPAP2)
		vibration impacts approaching or exceeding the FTA's thresholds.	<p>"Severe").</p> <p><u>Design Requirements/RT Practices:</u> Maintain track and vehicles regularly to reduce noise levels from vehicles.</p> <p><u>Mitigation Measures:</u> Mitigation measures include noise barriers, sound insulation, and special trackwork. Noise barriers will be constructed to mitigate noise impacts in compliance with FTA criteria. RT will coordinate mitigation with SAFCA, ACOE, and City of Sacramento to address barrier needs of South Sacramento Corridor Phase 2, flood control, and CRB Widening and Extension projects.</p> <p><u>Vibration:</u> Vibration impacts along the full LPAP2 alignment would vary depending on design options selected, with the number of homes affected ranging from 78 to 89.</p> <p><u>Design Requirements/RT Practices:</u> Maintain track and vehicles regularly to reduce vibration levels from vehicles.</p> <p><u>Mitigation Measures:</u> Ballast mats in all sensitive areas, as well as speed reductions in the vicinity of Franklin Blvd., Center Parkway, and Bruceville Road.</p>
<p>Population, Housing and Environmental Justice</p> <p>Section 4.13</p>	No impact.	<p><u>Property Acquisitions and Displacements:</u> Approximately 4.0 acres of non-residential property and 12.7 acres of agricultural land would be acquired.</p> <p><u>Neighborhoods and Businesses:</u> Additional bus services would improve local and regional linkages among neighborhoods, businesses and community facilities in</p>	<p><u>Property Acquisitions and Displacements:</u> No business relocation would be required. If selected, the Center Parkway Pedestrian Overcrossing Option would require relocation of one single-family home.</p> <p>Relocation assistance would be provided consistent with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 and RT policy.</p>

Table S-2: Summary of Long-Term Impacts, Design Requirements/RT Practices, and Proposed Mitigation Measures

Impact Category/ Section in SDEIS/SDEIR	No-Action Alternative	Transportation Systems Management (TSM) Alternative	Locally Preferred Alternative Phase 2 (LPAP2)
		<p>comparison to the No-Action Alternative.</p> <p><u>Environmental Justice</u>: Improved bus service and one new bus PNR lot would be provided. There would not be a disproportionate distribution of these benefits to certain groups. There would be no adverse impacts or disproportionate distribution of adverse impacts to low-income or minority groups.</p> <p><u>Mitigation Measures</u>: None required.</p>	<p><u>Neighborhoods and Businesses</u>: The LPAP2 service would improve local and regional linkages among neighborhoods, businesses and community facilities with improved travel times in comparison to the No-Action and TSM Alternatives.</p> <p><u>Environmental Justice</u>: The LPAP2 service would improve access to regional employment, education, medical, and retail centers for low-income and minority populations. There would not be a disproportionate distribution of these benefits to certain groups. There would be no adverse impacts or disproportionate distribution of adverse impacts to low-income or minority groups.</p> <p><u>Mitigation Measures</u>: None required.</p>
<p>Public Services and Facilities Section 4.14</p>	<p>No impact.</p>	<p>Ten community facilities (including recreation facilities) would realize direct benefits of improved bus service. Enhanced bus service from the Calvine/SR 99 PNR to the Meadowview Road LRT Station and express bus service from Elk Grove and the CRC transit center would facilitate access between the study area and community facilities located downtown and in other regional activity centers.</p> <p><u>Mitigation Measures</u>: None required.</p>	<p>Ten community facilities (including recreation facilities) would realize direct benefits of improved transit access as a result of the LPAP2. Extending LRT service would also improve accessibility to community facilities in downtown Sacramento and other regional activity centers.</p> <p><u>Mitigation Measures</u>: None required.</p>
<p>Parks & Recreation Section 4.15</p>	<p>No impact.</p>	<p>Four park and recreational facilities would realize direct benefits of improved bus service. Enhanced bus service from the Calvine/SR 99 PNR to the Meadowview Road LRT Station and express bus service from Elk Grove and the</p>	<p>Four park and recreational facilities would realize direct benefits of improved transit access. The LPAP2 service would also improve accessibility to park and recreational facilities in downtown Sacramento and other regional activity centers.</p>

Table S-2: Summary of Long-Term Impacts, Design Requirements/RT Practices, and Proposed Mitigation Measures

Impact Category/ Section in SDEIS/SDEIR	No-Action Alternative	Transportation Systems Management (TSM) Alternative	Locally Preferred Alternative Phase 2 (LPAP2)
		<p>CRC transit center would facilitate access between the study area and park and recreational facilities located downtown and in other regional activity centers.</p> <p><u>Mitigation Measures:</u> None required.</p>	<p>The at-grade crossing option at Cosumnes River Boulevard and Bruceville Road would cut through a portion of the berm at the northeast corner of the CRC stadium. The flyover option would incorporate part of the berm in the flyover's abutment. There would be no adverse impact on access to or operations and use of the stadium under either the at-grade or flyover options.</p> <p>Two recreational playing fields would be relocated for the surface parking option at CRC.</p> <p><u>Mitigation Measures:</u> Recreation facilities at CRC would be relocated on campus.</p>
<p>Safety & Security Section 4.16</p>	<p>No impact.</p>	<p>Increased bus services and a new PNR lot would require increased security services. The alternative would not expose children to disproportionate environmental health or safety risk.</p>	<p>New rail stations would create activity centers and PNR lot traffic, with potential for safety and/or security incidents. Large parking areas would increase the risk of vandalism to vehicles. Circulation of autos and pedestrians in PNR lots would create potential for auto-pedestrian conflicts. The reduction of corridor auto traffic is expected to have a beneficial impact on motor vehicle accident rates and resulting injuries. The LPAP2 tracks and stations would be adjacent to an active freight railroad and would traverse high volume roadways that require crossings by pedestrians and vehicular traffic, increasing the potential for accidents. The alternative would not expose children to disproportionate environmental health or safety risk. At-grade rail crossings would be signalized and gated and would comply with Public Utilities Commission regulations.</p>

Table S-2: Summary of Long-Term Impacts, Design Requirements/RT Practices, and Proposed Mitigation Measures

Impact Category/ Section in SDEIS/SDEIR	No-Action Alternative	Transportation Systems Management (TSM) Alternative	Locally Preferred Alternative Phase 2 (LPAP2)
		<p><u>Mitigation Measures:</u> RT security services would extend to include increased bus services.</p>	<p><u>Mitigation Measures:</u> Provide safety and security services by increasing contract security services and assigned law enforcement personnel.</p> <p>Expand fire safety and emergency response training to include five districts that will be responsible for providing these services.</p> <p>Invite public participation regarding station design details during the final design phase of the project to identify and address safety and security concerns.</p> <p>Work with emergency service providers to develop alternative sources and adjust service areas and destinations as necessary to maintain emergency service coverage and response times following implementation of the new LPAP2 service.</p>
<p>Utilities Section 4.17</p>	<p>No impact.</p>	<p>The proposed park-and-ride lot may require minor utility relocations or new utility services, potentially affecting existing and planned utilities. Affected utilities would be relocated after consultation with their owners. It is anticipated that any required utility relocations could be managed with only short-term disruptions to utility service.</p>	<p>The construction of light rail tracks could affect underground and above-ground utilities throughout the alignment. To minimize or eliminate interruption in utility service to customers, a set of detailed plans would be submitted to utility providers for their review and comment prior to the onset of any relocation work.</p> <p>Some utilities will be moved to the edges of the LPAP2 LRT right-of-way. If right-of-way is not available, some utilities would be relocated to easements in adjacent properties. A PGE gas line between Meadowview Road and Morrison Creek will be relocated from the west side of the UPRR right-of-way</p>

Table S-2: Summary of Long-Term Impacts, Design Requirements/RT Practices, and Proposed Mitigation Measures

Impact Category/ Section in SDEIS/SDEIR	No-Action Alternative	Transportation Systems Management (TSM) Alternative	Locally Preferred Alternative Phase 2 (LPAP2)
		<p><u>Design Requirements/RT Practices:</u> Careful and periodic coordination with all utility providers will continue to identify potential conflicts and formulate strategies to avoid potential problems. If disruptions to utility service are required, they will be restricted in time duration and geographic extent. Careful scheduling of these disruptions and prior notification of adjacent properties that would be affected by temporary service disruptions will mitigate the impact.</p> <p><u>Mitigation Measures:</u> None required.</p>	<p>to the Detroit Boulevard right-of-way. A branch of this line will require and easement through private property. Underground gas, water and sanitary sewer utilities crossing the trackway would be provided with additional protection including minimum depth of ground cover and possibly steel casings in accordance with state and federal pipeline safety laws.</p> <p><u>Design Requirements/RT Practices:</u> Careful and periodic coordination with all utility providers will continue during the preliminary engineering, final design, and construction stages of the LPAP2 to identify any potential conflicts and formulate strategies to overcome potential problems. If disruptions to utility service are required, they would be restricted in time duration and geographic extent. Careful scheduling of these disruptions and prior notification of adjacent properties that would be affected by temporary service disruptions will mitigate the impact.</p> <p><u>Mitigation Measures:</u> None required.</p>

Table S-3: Summary of Short-Term Impacts, Design Requirements/RT Practices, and Proposed Mitigation Measures

Impact Category/ Section in SDEIS/SDEIR	No-Action Alternative	Transportation Systems Management (TSM) Alternative	Locally Preferred Alternative Phase 2 (LPAP2) Alternative
Aesthetics Section 5.2.1	No impact.	<p>Construction equipment would introduce a temporary visual change to the area, including stockpiling of soils and materials, use/staging of heavy equipment, and possible night-time lighting.</p> <p><u>Mitigation Measures:</u> The contractor will be required to maintain the site in an orderly manner, removing trash, waste, and securing equipment and vehicles at the close of each day's operation.</p> <p>To reduce glare from nighttime lighting, RT will require contractor to direct lighting onto the immediate construction area and away from residences and traffic lanes.</p>	<p>Construction equipment would introduce a temporary visual change to the area, including stockpiling of soils and materials, use/staging of heavy equipment, and possible night-time lighting.</p> <p><u>Mitigation Measures:</u> The contractor will be required to maintain the site in an orderly manner, removing trash, waste, and securing equipment and vehicles at the close of each day's operation.</p> <p>To reduce glare from nighttime lighting, RT will require contractor to direct lighting onto the immediate construction area and away from residences and traffic lanes.</p>
Agriculture Section 5.2.2	No impact.	<p>It is not anticipated that construction activities would disturb agricultural land, crops or soils.</p> <p><u>Mitigation Measures:</u> None required</p>	<p>It is not anticipated that construction activities would disturb agricultural land, crops or soils.</p> <p><u>Mitigation Measures:</u> None required</p>
Air Quality Section 5.2.3	No impact.	<p>Construction would generate short-term emissions of dust, fumes, equipment exhaust, pollutants and other air contaminants. PM10 would be the air pollutant of greatest concern. Under the "worst-case" construction scenario, NO_x emissions are anticipated to exceed the SMAQMD and federal thresholds.</p>	<p>Construction would generate short-term emissions of dust, fumes, equipment exhaust, pollutants and other air contaminants. PM10 would be the air pollutant of greatest concern. Construction impacts were evaluated based on a "worst-case" construction scenario in which track construction, station construction, grade separation, and bridge structure construction would occur concurrently, which is highly unlikely. Under this assumption, NO_x emissions are anticipated to exceed the SMAQMD and federal thresholds.</p>

Table S-3: Summary of Short-Term Impacts, Design Requirements/RT Practices, and Proposed Mitigation Measures

Impact Category/ Section in SDEIS/SDEIR	No-Action Alternative	Transportation Systems Management (TSM) Alternative	Locally Preferred Alternative Phase 2 (LPAP2) Alternative
		<p><u>Mitigation Measures:</u> RT practices include site-sweeping, site-wetting, washing or sweeping site-access points and covering or watering on-site stockpiles. In addition, operations on unpaved surfaces will be suspended when winds exceed 25 mph, construction traffic speeds will be limited to 15mph, and operations would be suspended during first and second stage smog alerts. Truck loading zones will be maintained in the construction area, temporary traffic control will be provided, best efforts will be used to limit truck idling to no more than two minutes and non-toxic soil stabilizers will be applied to inactive construction areas.</p> <p>Submit to SMAQMD for approval a plan to achieve a project-wide fleet-average reduction of roughly 20% for NO_x and approximately 45% for PM₁₀ (compared to the most recent CARB fleet average at time of construction).</p> <p>Submit to SMAQMD an inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that would be used 40 or more hours during any part of construction phase. Update and submit the inventory monthly.</p> <p>Off-road diesel-powered equipment emissions will not exceed 40% opacity for more than three minutes in any one hour, or else it will be repaired immediately and the SMAQMD will be notified within 48 hours. A visual survey of all in-operation equipment will be made at least weekly, and a monthly summary will be submitted.</p>	<p><u>Mitigation Measures:</u> RT practices include site-sweeping, site-wetting, washing or sweeping site-access points and covering or watering on-site stockpiles. In addition, operations on unpaved surfaces will be suspended when winds exceed 25 mph, construction traffic speeds will be limited to 15mph, and operations would be suspended during first and second stage smog alerts. Truck loading zones will be maintained in the construction area, temporary traffic control will be provided, best efforts will be used to limit truck idling to no more than two minutes and non-toxic soil stabilizers will be applied to inactive construction areas.</p> <p>Submit to SMAQMD for approval a plan to achieve a project-wide fleet-average reduction of roughly 20% for NO_x and approximately 45% for PM₁₀ (compared to the most recent CARB fleet average at time of construction).</p> <p>Submit to SMAQMD an inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that would be used 40 or more hours during any part of construction phase. Update and submit the inventory monthly.</p> <p>Off-road diesel-powered equipment emissions will not exceed 40% opacity for more than three minutes in any one hour, or else it will be repaired immediately and the SMAQMD will be notified within 48 hours. A visual survey of all in-operation equipment will be made at least weekly, and a monthly summary will be submitted.</p>

Table S-3: Summary of Short-Term Impacts, Design Requirements/RT Practices, and Proposed Mitigation Measures

Impact Category/ Section in SDEIS/SDEIR	No-Action Alternative	Transportation Systems Management (TSM) Alternative	Locally Preferred Alternative Phase 2 (LPAP2) Alternative
<p>Biological Resources Section 5.2.4</p>	<p>No impact.</p>	<p>Construction of PNR lots may disturb non-native grassland that provide suitable habitat for the western burrowing owl. No wetland areas would be affected. Natural resources may be adversely affected by construction dust, construction equipment emissions, increased runoff and soil erosion, and construction noise.</p> <p><u>Mitigation Measures:</u> Pre-construction survey for western burrowing owls and burrows within 330 feet no more than two weeks before construction. If active burrows are located, a no-disturbance buffer will be established around each active burrow. The size of the buffer will be determined through CDFG. If adverse effects to occupied burrows are unavoidable, the owls shall be passively relocated using techniques approved by CDFG. Best management practices for water quality shall be implemented.</p>	<p>Approximately 0.15 acre of wetlands/waters would be temporarily disturbed at Morrison Creek and 0.05 acre of wetlands/waters at Morrison Creek/Union House Creek.</p> <p>Construction activities and related impacts may disturb vernal pool, riparian and non-native grassland natural communities that provide suitable habitat for up to 19 special-status species including four invertebrates, two reptiles and 13 bird species.</p> <p>There is no confirmed evidence that any or all of these species are present in the project area or would be present at the time of construction. All sensitive habitat and wetland areas would be identified for avoidance during project design.</p> <p><u>Mitigation Measures:</u> Pre-construction survey for western burrowing owls and burrows within 330 feet no more than two weeks before construction. If active burrows are located, a no-disturbance buffer will be established around each active burrow. The size of the buffer will be determined through CDFG. If adverse effects to occupied burrows are unavoidable, the owls shall be passively relocated using techniques approved by CDFG.</p> <p>Best management practices for water quality shall be implemented.</p>

Table S-3: Summary of Short-Term Impacts, Design Requirements/RT Practices, and Proposed Mitigation Measures

Impact Category/ Section in SDEIS/SDEIR	No-Action Alternative	Transportation Systems Management (TSM) Alternative	Locally Preferred Alternative Phase 2 (LPAP2) Alternative
		<p>Where possible, protect by a 50-foot buffer zone (ESA) with exclusionary fencing habitat for vernal pool fairy shrimp, Midvalley fairy shrimp, vernal pool tadpole shrimp, and California linderiella.</p> <p>Pre-construction survey of all project affected aquatic habitat no more than 24 hours prior to instream construction or disturbance of riparian vegetation. If western pond turtles are found, on-site monitoring and possible relocation shall be implemented.</p> <p>Use water quality best management practices. Where possible, protect giant garter snake (GGS) habitat by a 200-foot buffer zone (ESA) with exclusionary fencing.</p> <p>Construction in GGS habitat is preferably from May 1 to October 1. If between October 2 and April 30 USFWS may require additional measures.</p> <p>Survey for GGS 24 hours prior to construction. A qualified, USFWS-approved biological monitor shall be present during construction within suitable habitat. If a snake is encountered, all construction activities in the immediate area shall be halted until appropriate corrective measures are implemented.</p>	<p>Where possible, protect by a 50-foot buffer zone (ESA) with exclusionary fencing habitat for vernal pool fairy shrimp, Midvalley fairy shrimp, vernal pool tadpole shrimp, and California linderiella.</p> <p>Pre-construction survey of all project affected aquatic habitat no more than 24 hours prior to instream construction or disturbance of riparian vegetation. If western pond turtles are found, on-site monitoring and possible relocation shall be implemented.</p> <p>Use water quality best management practices. Where possible, protect giant garter snake (GGS) habitat by a 200-foot buffer zone (ESA) with exclusionary fencing.</p> <p>Construction in GGS habitat is preferably from May 1 to October 1. If between October 2 and April 30 USFWS may require additional measures.</p> <p>Survey for GGS 24 hours prior to construction. A qualified, USFWS-approved biological monitor shall be present during construction within suitable habitat. If a snake is encountered, all construction activities in the immediate area shall be halted until appropriate corrective measures are implemented.</p> <p>Any dewatered GGS habitat shall remain dry for at least 15 consecutive days after April 15 and prior to excavating or filling.</p>

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Impact Category/ Section in SDEIS/SDEIR	No-Action Alternative	Transportation Systems Management (TSM) Alternative	Locally Preferred Alternative Phase 2 (LPAP2) Alternative
			<p>Post-construction, remove all temporary fill/ debris. Restore disturbed areas to pre-project conditions, using native grass seed mixes.</p> <p>If construction or tree removal will occur between February and August, preconstruction surveys for migratory bird, raptor, or special-status birds nests will be conducted within 0.25 mile of the project area. If active nests are found, consult with USFWS and CDFG to develop avoidance/minimization measures. Raptor or migratory bird nest trees shall be removed outside of the nesting season (February through August), or after nest is empty and adult and young birds leave the tree. Annual survey for Swainson's hawk nests from March-August 15. If nests are discovered, consult with CDFG.</p>
<p>Cultural Resources Section 5.2.5</p>	<p>No impact.</p>	<p>Although not anticipated, construction activities could result in loss or degradation of previously undiscovered cultural resources.</p> <p><u>Mitigation Measures:</u> See Section 4.5 in Table S-1.</p>	<p>Although not anticipated, construction activities could result in loss or degradation of previously undiscovered cultural resources.</p> <p><u>Mitigation Measures:</u> See Section 4.5 in Table S-1.</p>
<p>Employment Section 5.2.6</p>	<p>No impact.</p>	<p>Compared with the No-Action Alternative, the TSM Alternative would generate 90 on-site full-time construction positions (person years of employment [PYE]) and 150 total positions (PYE).</p> <p><u>Mitigation Measures:</u> None required.</p>	<p>LPAP2 would generate 900 on-site full-time construction positions (PYE) and 1,400 total positions (PYE), as compared to the No-Action Alternative.</p> <p><u>Mitigation Measures:</u> None required.</p>

Table S-3: Summary of Short-Term Impacts, Design Requirements/RT Practices, and Proposed Mitigation Measures

Impact Category/ Section in SDEIS/SDEIR	No-Action Alternative	Transportation Systems Management (TSM) Alternative	Locally Preferred Alternative Phase 2 (LPAP2) Alternative
<p>Geology, Soils and Seismicity Section 5.2.7</p>	<p>No impact.</p>	<p>Weak and/or compressible soils or expansive soil when present can adversely affect the PNR lot. Shallow groundwater could affect earthwork and construction and the service PNR lots. Soil erosion can damage existing structures and can discharge sediment to waterways.</p> <p><u>Mitigation Measures:</u> Geotechnical studies in final design will incorporate requirements into the final design and construction requirements. Design requirements likely to be implemented include excavation and replacement (or treatment) of soil, use of synthetic material to reinforce weak soils and deep foundations.</p>	<p>Weak and/or compressible soils or expansive soil can adversely affect the structures, pavements and slabs on grade. Shallow groundwater could affect earthwork and construction and the service of floor slabs and roadbed/hardscape subjected to traffic load. Soil erosion can damage existing structures and can discharge sediment to waterways. Additional loads on existing slopes could result in slope instability.</p> <p><u>Mitigation Measures:</u> Geotechnical studies in final design will incorporate requirements into the final design and construction requirements. Design requirements likely to be implemented include excavation and replacement (or treatment) of soil, use of synthetic material to reinforce weak soils and deep foundations, modification or re-grading of slopes, increased set-backs and clearance from slopes, vegetation of slopes, and lining of channels.</p>
<p>Hazardous Wastes Section 5.2.8</p>	<p>No impact.</p>	<p>Previously unidentified contamination may be encountered.</p> <p><u>Mitigation Measures:</u> Walk-through site reconnaissance will be conducted for each of the site areas to identify any additional evidence of contamination.</p> <p>A review will be conducted of the remediation status of the sites listed in Table 4.8-1. If remediation activities will be complete before construction of the project, then no further mitigation will be necessary. If remediation would not be completed prior to project construction, then an alternate mitigation plan will be prepared and implemented.</p>	<p>Previously unidentified contamination may be encountered.</p> <p><u>Mitigation Measures:</u> Walk-through site reconnaissance will be conducted for each of the site areas to identify any additional evidence of contamination.</p> <p>A review will be conducted of the remediation status of the sites listed in Table 4.8-1. If remediation activities will be complete before construction of the project, then no further mitigation will be necessary. If remediation would not be completed prior to project construction, then an alternate mitigation plan will be prepared and implemented.</p>

Table S-3: Summary of Short-Term Impacts, Design Requirements/RT Practices, and Proposed Mitigation Measures

Impact Category/ Section in SDEIS/SDEIR	No-Action Alternative	Transportation Systems Management (TSM) Alternative	Locally Preferred Alternative Phase 2 (LPAP2) Alternative
		<p>A site specific evaluation will be made of any known and suspected contaminated sites that would be distributed by construction operations before any soil is removed from affected areas for construction, using the following procedure:</p> <ol style="list-style-type: none"> 1) implementation of a Worker Health and Safety Plan; 2) preparation of a site specific work plan specifying the proposed location for surface samples or soil borings or trenches; 3) soil boring or trenching and sample collection; 4) laboratory analysis of samples; and 5) preparation of a findings and recommendations report. <p>If the site-specific evaluations determine that contaminants are present, RT will determine the type and extent of contamination and will prepare and implement a remediation plan to avoid risks to public health and safety.</p> <p>RT will notify the State Department of Toxic Substances Control, Sacramento County Environmental Health Department and the local fire department of any contaminants encountered during construction.</p>	<p>A site specific evaluation will be made of any known and suspected contaminated sites that would be distributed by construction operations before any soil is removed from affected areas for construction, using the following procedure:</p> <ol style="list-style-type: none"> 1) implementation of a Worker Health and Safety Plan; 2) preparation of a site specific work plan specifying the proposed location for surface samples or soil borings or trenches; 3) soil boring or trenching and sample collection; 4) laboratory analysis of samples; and 5) preparation of a findings and recommendations report. <p>If the site-specific evaluations determine that contaminants are present, RT will determine the type and extent of contamination and will prepare and implement a remediation plan to avoid risks to public health and safety.</p> <p>RT will notify the State Department of Toxic Substances Control, Sacramento County Environmental Health Department and the local fire department of any contaminants encountered during construction.</p>
<p>Hydrology, Floodplain and Water Quality Section 5.2.9</p>	<p>No impact.</p>	<p>Construction activities would increase the sediment load in stormwater and disturb one or more acres of land.</p>	<p>Construction activities would increase the sediment load in stormwater and disturb one or more acres of land. Modification of the berm of Franklin Station detention basin could result in the temporary loss of flood storage.</p>

Table S-3: Summary of Short-Term Impacts, Design Requirements/RT Practices, and Proposed Mitigation Measures

Impact Category/ Section in SDEIS/SDEIR	No-Action Alternative	Transportation Systems Management (TSM) Alternative	Locally Preferred Alternative Phase 2 (LPAP2) Alternative
		<p><u>Mitigation Measures:</u></p> <p>The contractor will prepare a SWPPP identifying Best Management Practices to reduce water quality impacts.</p> <p>If groundwater is encountered, dewatering will be conducted and contaminated effluent disposed of per applicable regulations.</p>	<p><u>Mitigation Measures:</u></p> <p>The contractor will prepare a SWPPP identifying Best Management Practices to reduce water quality impacts.</p> <p>RT will coordinate with SRCSD and the City of Sacramento regarding impacts to the detention basin and to maintain flood storage during construction.</p> <p>If groundwater is encountered, dewatering will be conducted and contaminated effluent disposed of per applicable regulations.</p>
<p>Land Use Section 5.2.10</p>	<p>No impact.</p>	<p>No impact.</p>	<p>No impact.</p>
<p>Mineral and Energy Resources Section 5.2.11</p>	<p>No impact.</p>	<p>Minerals: No important minerals have been identified in the project area.</p> <p>Energy Resources: Energy use would represent a small portion of the total energy consumed in the region.</p> <p><u>Mitigation Measures:</u> None required.</p>	<p>Minerals: No important minerals have been identified in the project area.</p> <p>Energy Resources: Construction energy requirements are greater than for the TSM Alternative, but not considered substantial, since, energy use for the project would represent a small portion of the total energy consumed in the region.</p> <p><u>Mitigation Measures:</u> None required.</p>
<p>Neighborhoods and Businesses Section 5.2.12</p>	<p>No impact.</p>	<p>Construction traffic could temporarily disrupt traffic near the new PNR lot. Grading and paving would result in construction noise and vibration, air emissions, and visual changes. These impacts are expected to be very localized and none would have substantial impacts on the neighborhoods or businesses.</p> <p><u>Mitigation Measures:</u></p>	<p>Construction traffic would temporarily affect study area neighborhoods due to street closures, rerouting of transit and vehicular traffic, and movements of construction equipment, materials and vehicles. There would be construction noise and vibration, air emissions, and visual changes. Impacts would be localized, temporary and intermittent; none would substantially affect neighborhoods or local businesses.</p>

Table S-3: Summary of Short-Term Impacts, Design Requirements/RT Practices, and Proposed Mitigation Measures

Impact Category/ Section in SDEIS/SDEIR	No-Action Alternative	Transportation Systems Management (TSM) Alternative	Locally Preferred Alternative Phase 2 (LPAP2) Alternative
		RT practices for noise and vibration, air quality, transportation and aesthetics are in the respective sections of Chapter 5. No further mitigation is indicated.	<u>Mitigation Measures:</u> RT practices for noise and vibration, air quality, transportation, and aesthetics are in the respective sections of Chapter 5. No further mitigation is indicated.
Noise and Vibration Section 5.2.13	No impacts.	Temporary noise during construction of the park-and-ride (PNR) lot may adversely affect nearby residents. <u>Mitigation Measures:</u> Include specific residential property line noise limits in the construction specifications for this project, and Perform noise monitoring during construction to verify compliance with the limits. Vibration impacts will be mitigated by including numeric limits in the construction specifications, monitoring vibration, and requiring the contractor to follow the specified limits.	Temporary noise during construction of new tracks, stations, and traction power substations may adversely affect nearby residents. Most severe conditions would occur if construction was concurrent with that of the CRB Widening, CRB Extension and levee system improvement projects (by others). <u>Mitigation Measures:</u> Include specific residential property line noise limits in the construction specifications for this project, and Perform noise monitoring during construction to verify compliance with the limits. Vibration impacts will be mitigated by including numeric limits in the construction specifications, monitoring vibration, and requiring the contractor to follow the specified limits.
Parks & Recreation Section 5.2.14	No impact.	The construction of the PNR facility would have no impact on park and recreational facilities in the area.	Construction could involve temporary detours or street closures but are expected to have little or no impact on access to local parks and recreational and facilities. Construction at the Cosumnes River College Stadium berm would not affect access to or operations of the recreational facility. <u>Mitigation Measures:</u> None required.

Table S-3: Summary of Short-Term Impacts, Design Requirements/RT Practices, and Proposed Mitigation Measures

Impact Category/ Section in SDEIS/SDEIR	No-Action Alternative	Transportation Systems Management (TSM) Alternative	Locally Preferred Alternative Phase 2 (LPAP2) Alternative
<p>Public Services and Facilities Section 5.2.15</p>	<p>No impact.</p>	<p>The construction of the PNR facility would have no impact on parks, recreation and public services and facilities in the area.</p>	<p>Construction could involve temporary detours or street closures but are expected to have little or no impact on access to local public services and facilities. Emergency vehicles would need to observe any short-term road closures and temporary construction detours.</p> <p><u>Mitigation Measures:</u> RT will coordinate with local emergency service providers in developing detour plans.</p> <p>Emergency service providers would be provided advance notice of road closures and detour routes.</p>
<p>Safety and Security Section 5.2.16</p>	<p>No impact.</p>	<p>Construction activities could expose construction workers, local residents, and employees to potential safety hazards.</p> <p><u>Mitigation Measures:</u> RT will require the contractor submit a safety plan in advance of construction to ensure procedures for the safety of construction workers, local residents, and employees during construction of the TSM Alternative.</p> <p>Fencing and lighting of construction and staging areas, and recognized safety practice requirements for the utilization of heavy equipment and the movement of construction materials would be implemented to contain construction activities and avoid accidents.</p>	<p>Construction activities could expose construction workers, local residents, and employees to potential safety hazards.</p> <p><u>Mitigation Measures:</u> RT will require the contractor submit a safety plan in advance of construction to ensure procedures for the safety of construction workers, local residents, and employees during construction of the LPAP2 Alternative.</p> <p>Fencing and lighting of construction and staging areas, and recognized safety practice requirements for the utilization of heavy equipment and the movement of construction materials would be implemented to contain construction activities and avoid accidents.</p>

Table S-3: Summary of Short-Term Impacts, Design Requirements/RT Practices, and Proposed Mitigation Measures

Impact Category/ Section in SDEIS/SDEIR	No-Action Alternative	Transportation Systems Management (TSM) Alternative	Locally Preferred Alternative Phase 2 (LPAP2) Alternative
		<p><u>Mitigation Measures:</u> Contractors will prepare and implement traffic handling plans.</p> <p>RT will coordinate with the City or County to provide advance public notice of traffic detours.</p> <p>Parking: Construction workers for the park-and-ride lot would be expected to park on-site. No substantial impact anticipated.</p> <p><u>Mitigation Measures:</u> Provisions will be incorporated into the construction contracts to avoid parking impacts to residential areas or businesses requiring on-street parking.</p>	<p>LPAP2 improvements would require street closures for 24 to 48 hours at several locations and rerouting of vehicular traffic.</p> <p><u>Mitigation Measures:</u> The same mitigation measures proposed to minimize bus transit impacts will address these effects, with two additions:</p> <ul style="list-style-type: none"> • Contractors will prepare and implement traffic handling plans. • RT will coordinate with the City or County to provide the public advance notice of proposed traffic detours and their duration. <p>Parking: Construction workers for the park-and-ride lots would be expected to park on-site. No substantial impact anticipated.</p> <p><u>Mitigation Measures:</u> Construction contracts will include provisions to avoid parking impacts to residential areas or businesses requiring on-street parking.</p>
<p>Utilities Section 5.2.18</p>	<p>No impact.</p>	<p>Construction activities may encounter unexpected utilities within the project right-of-way. Relocations of affected utilities will be the responsibility of RT and may require short-term, limited interruptions of service.</p> <p><u>Mitigation Measures:</u> See Section 4.7, Table S-1.</p> <p>Schedule any service interruptions in advance and ensure appropriate notification to users.</p>	<p>Construction activities may encounter unexpected utilities within the project right-of-way. Relocations of affected utilities will be the responsibility of RT and may require short-term, limited interruptions of service.</p> <p><u>Mitigation Measures:</u> See Section 4.7, Table S-1.</p> <p>Schedule any service interruptions in advance and ensure appropriate notification to users.</p>

S-5 SUMMARY OF CAPITAL COSTS

Total capital costs for the TSM Alternative, escalated to the year of expenditure in fiscal year (FY) 2008, are estimated to be \$52,118,000. These costs include contingencies, engineering, and reserve. The principal components of the TSM Alternative are new buses and construction of a park-and-ride lot at Cosumnes River College.

Total capital costs for the LPAP2 (base case), escalated to the year of expenditure through 2010, are estimated to be \$226,250,000, which is \$174,132,000 more than the estimated TSM Alternative costs. Table S-3 presents capital costs for the principal components of the LPAP2. See Section 2.6 for costs of project options (such as grade separations) which would add to the project costs.

Table S-4: LPAP2 Capital Cost Estimate by Cost Category	
Element	Cost Estimate (Year of Expenditure dollars)
Guideway and Track Elements	\$34,240,000
Stations, Stops, Terminals, Intermodal	\$45,780,000
Support Facilities: Yards, Shops, Administration	\$0
Sitework & Special Conditions	\$51,28,000
Systems	\$23,770,000
ROW, Land, Existing Improvements	\$14,780,000
Vehicles	\$0
Professional Services	\$45,620,000
Unallocated Contingency	\$10,770,000
Finance Charges	\$0
Total Project Cost	\$226,250,000
Source: RT Financial Forecasting Model, August 2006.	
Notes: Construction costs include 28% contingency.	
ROW costs include 25% contingency.	

Capital costs for both the TSM and LPAP2 alternatives include the cost of mitigation measures, contingencies, engineering and reserves. Additional vehicles will not be acquired as part of the LPAP2 Project. Vehicle maintenance for LRT vehicles would occur at RT's central maintenance facility at Academy Way. A new maintenance facility will not be required for the LPAP2 Project.

S-6 OPERATING AND MAINTENANCE COSTS

RT's projected 2030 annual operating and maintenance costs is \$266.9 million (2006 \$'s) based on RT's assumption that labor and materials costs per unit of service increase 3.5 and 4.0 percent per year, respectively. The LPAP2 operating costs are expected to be approximately \$1.44 million lower than the costs for the TSM Alternative (FY 2006 \$).

S-7 FINANCIAL ANALYSIS AND EVALUATION

The LPAP2 is estimated to cost approximately \$226.3 million to construct in Year of Expenditure (YOE) dollars. Full funding for the project has been identified from a variety of sources (Table S-4): State Transportation Improvement Program (STIP) funds, Traffic Congestion Relief Program (TCRP) funds, Congestion Mitigation and Air Quality Improvement (CMAQ) funds, 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). The funding assumptions used for the project and for the RT system as a whole are consistent with the assumptions used in the MTP.

Funding Source	Amount (Year of Expenditure dollars)	Percent of Total Funding
CMAQ	\$7,100,000	3.6%
Laguna Community Facilities District	\$800,000	0.4%
Vineyard Fee District	\$3,990,000	1.7%
STIP	\$4,310,000	2.2%
Measure A Sales Tax/Developer Fee	\$30,930,000	8.7%
TCRP/STIP	\$66,000,000	33.5%
Section 5309 New Starts	\$113,130,000	50.0%
Total	\$226,250,000	100%

Source: Nancy Whelan Consulting; RT Financial Forecasting Model, August 2005.

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

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,
- 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, RT would use a mix of funds from these sources.

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 transit system. 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.

S-8 ISSUES TO BE RESOLVED/AREAS OF CONTROVERSY

With the exception of traffic impacts at one intersection – Bruceville road at Cosumnes River Boulevard – impacts can be fully mitigated as described in Chapter 4 subsections and summarized with level of impact before and after mitigation in Chapter 6, Table 6.2-1.

