Comment Letter AL054

August 26, 2004

Mr. Dan Leavitt
California High-Speed Rail Authority
925 "L" Street, Suite 1423
Sacramento, CA 95814

Subject: Comments to Draft Program EIS/EIR for the Proposed California High Speed Train System (CAHSR)

Dear Mr. Leavitt:

PCJPB staff has reviewed the Draft Program CAHSR Draft EIS/EIR and is submitting the following comments:

1. The Peninsula Corridor Joint Powers Board has affirmed its support and full cooperation for the CAHSR program and more specifically the CAHSR alternative(s) which share the corridor with Caltrain from San Francisco to San Jose. Please refer to the attached PCJPB Board Resolution No. 1999-48. (S.4.3)

2. The PCJPB has authorized its Executive Director to execute a Memorandum of Understanding (MOU) with CAHSR which identifies specific technical and operational issues related to CAHSR "shared corridor alternatives" on the San Francisco to San Jose PCJPB corridor. Provided that the CAHSR Draft EIS/EIR is adopted, a decision is made to pursue the PCJPB/CAHSR shared corridor concept, additional analysis will be needed to fully evaluate both the impacts and potential benefits of the proposed shared corridor. Copies of the PCJPB Board Resolution No. 2003-24 and executed MOU are attached for reference. (S.4.3)

3. Of the three alternatives proposed, PCJPB supports the High-Speed Train alternative utilizing state-of-the-art electrically powered, 2 x 25 KV Overhead Catenary, high-speed, steel-wheel-on-steel technology. (S.4.3)

4. The PCJPB recently adopted a 20-year Strategic Plan. The Strategic Plan provides four future scenarios for development of the PCJPB (Caltrain) system. These development scenarios include a Station Based, Moderate Growth, Enhanced and Build-Out. Portions of the Strategic Plan that are relevant to implementation of CAHSR are attached. The No-Project and Modal Alternatives should also be taken into consideration with respect to the attached portion of the PCJPB Strategic Plan and addressed in the Final EIS/EIR. (S.4.5.5)

5. With regard to the alternative corridor alignment and station options, the PCJPB supports a CAHSR alignment that shares track with PCJPB on the PCJPB corridor provided that the technical and operational compatibility issues outlined in the PCJPB/CAHSR Memorandum of Understanding can be mutually resolved. PCJPB's conceptual planning efforts indicate that the combined future PCJPB and CAHSR service levels will require an electrified 4-track fully grade separated railroad with maximum operating speeds from 90 to 110 mph. Additionally, conceptual planning has indicated that the shared PCJPB/CAHSR tracks, structures, signals, train control systems, stations, and rolling stock must be fully compatible in terms of both operations and regulations. The combined PCJPB/CAHSR "shared rail corridor" must also be able to accommodate a limited amount of inter-state commerce freight services as well as allow for new construction, reconstruction and maintenance of the system. (S.4.3) (S.5.2)

6. The PCJPB agrees with Key Findings that implementation of CAHSR as the preferred system alternative (S.5.4)

7. The performance criteria provided in Table 2.6.2 for the CAHSR system should include a "shared track compatibility category" and the criteria should state that the system would be "fully compatible" when operating at reduced speeds with the other rail operator(s) under a "shared corridor" scenario. (S.5.7)

8. The "DRAFT" EIS/EIR assures that CAHSR service could be initiated only after completion of the system from San Francisco to Los Angeles. It would be possible and very advisable to complete some short segments of the system and place those segments into service to facilitate testing and startup of the larger system. The CAHSR/PCJPB shared segment from San Francisco to San Jose would be an excellent candidate for early construction and operations while the remaining more difficult line segment to the south are under construction. (S.2.6.9)

9. The PCJPB agrees with the alignment and station options carried forward on pages 2-51, 2-52, 2-53 and 2-54 for San Francisco to San Jose and San Jose to Merced alignment and station options. (S.2.6.9)

10. The PCJPB recommends that a site for basic service, inspection, light maintenance and storage of CAHSR train sets be included near the San Francisco Downtown Terminal. The proposed Transbay and 4th and Townsend terminals cannot support these additional support functions. (S.2.6.10)
Comment Letter AL054 Continued

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August 26, 2004
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11. In Appendix 3.17-A, Page 3.17 A-1, please include the Caltrain Electrification Program and the Transbay Terminal/Downtown Extension Project, plus the four development scenarios in PCPBR's strategic plan, in the Cumulative Analysis.

12. The Draft Program EIS/EIR appears to lack a projected ridership section and projected ridership effect on secondary public transportation providers. Please include a ridership projection section in the Final EIS/EIR broken down by segments, and include ridership effects of CAHSR on local public transportation providers such as Caltrain. Please include the ridership projections in a table in the document, in the index, table of contents, and as an appendix.

Again, thank you for CAHSR’s collaboration on this proposed project. We look forward to working with you as you complete this environmental review and during design and construction. If you need additional information, please don’t hesitate to contact me at (650) 508-6346.

Sincerely,

Ian R. McAvoy
Chief Development Officer
Peninsula Corridor Joint Powers Board

IBMEMgen
Attachments: PCPBR Resolution No. 1999-48 (2 Pages)
P-CN Resolution No. 2003-24 (2 Pages)
PCPBR and CBT and MOU (3 Pages)
Caltrain Strategic Plan 2004-2-23 Excerpts (18 Pages)

Cc: Darrell J. Massy
Robert Doby
Michael Chinn
Anthony Queipo
Stephen Chace
Raul Millena
Brian Fitzgerald
Erik Olafson
Document Control

RESOLUTION NO. 1999- 6

PENINSULA CORRIDOR JOINT POWERS BOARD
STATE OF CALIFORNIA

RESOLUTION SUPPORTING THE PENINSULA CORRIDOR AS A POTENTIAL SEGMENT OF THE INTEGRITY HIGH-Speed RAIL NETWORK LINKING NORTHERN AND SOUTHERN CALIFORNIA

WHEREAS, the California Intercity High-Speed Rail Commission has identified the Peninsula Rail Corridor as a potential segment of the 676-mile network that would link Northern and Southern California and serve more than 60 percent of the State’s population, and

WHEREAS, said Peninsula Corridor and its rail facility, Caltrain, also joins the cities of San Francisco and San Jose, two of California’s most vital population centers and consists of anticipated economic and cultural growth at the threshold of the 21st Century; and

WHEREAS, the corridor not only provides critical rail access to the City of San Francisco, but also serves as the gateway to San Francisco International Airport, one of the most important transportation terminals on the Pacific rim; and

WHEREAS, the Peninsula Corridor Joint Powers Board is embarking on a series of major improvements to the system infrastructure, including track, signal, bridges and station enhancements; and

WHEREAS, said improvements also include electrification of the system between San Francisco and Gilroy; and
WHEREAS, the Joint Powers Board’s newly-adopted Capital Budget includes a provision for final environmental documentation to support an extension of the Caltrain system from its present San Francisco terminal to a downtown location; and

WHEREAS, these developments serve to enhance the potential of the Peninsula Corridor as an irreplaceable component of the California High-Speed Rail system;

NOW, THEREFORE, BE IT RESOLVED that the Peninsula Corridor Joint Powers Board hereby affirms its support of the California Intercity High-Speed Rail Program, and affirms its full cooperation to the California High-Speed Rail Authority in its efforts to bring the program to early fruition.

Regularly passed and adopted this 2nd day of September, 1999, by the following vote:

AYES: Ayers, Burns, Lloyd, McComber, Novin, Powers, Schmidt, Lawson

NOES: [Signature]

ABSENT: Katz

Chirs, Peninsula Corridor Joint Powers Board

ATTY: [Signature]

Booth Stirling

RESOLUTION NO. 2003- 24

BOARD OF DIRECTORS, PENINSULA CORRIDOR JOINT POWERS BOARD
STATE OF CALIFORNIA

***

AUTHORIZING THE EXECUTIVE DIRECTOR TO EXECUTE A MEMORANDUM OF UNDERSTANDING WITH THE CALIFORNIA HIGH SPEED RAIL AUTHORITY

WHEREAS, the State of California has established the California High Speed Rail Authority (CHSRA); and

WHEREAS, the CHSRA has selected the Caltrain Peninsula Corridor (the “Corridor”) as a potential route for a proposed High Speed Rail (HSR) Project (the “HSR Project”); and

WHEREAS, opportunities exist for Caltrain to significantly benefit from the HSR Project; and

WHEREAS, the CHSRA is preparing a Program Level Environmental Assessment for the HSR Project which contemplates shared utilization of the Corridor between San Jose and San Francisco; and

WHEREAS, shared use of the Corridor will require coordination and resolution of technical and service issues; and

WHEREAS, the Peninsula Corridor Joint Powers Board (PCJPB) and CHSRA staff have drafted a Memorandum of Understanding (MOU) which defines specific areas upon which the parties will coordinate and provides the basis for each agency to identify and evaluate the issues and requirements associated with shared use of the Corridor.

NOW, THEREFORE, BE IT RESOLVED that the Executive Director is authorized to execute the attached Memorandum of Understanding with the California High Speed Rail Authority.
MEMORANDUM OF UNDERSTANDING

Between

the California High Speed Rail Authority (CHSRA) and

the Peninsula Corridor Joint Powers Board (PCJPB)

A. Purpose

The parties desire to set forth a framework for future cooperation between the CHSRA and the PCJPB after the CHSRA and the Federal Railroad Administration have completed the Final Program EIR/EIS for a proposed high-speed rail system for California.

B. Shared Corridor Concept

Based upon planning studies conducted by the CHSRA and the PCJPB, the CHSRA identified the shared corridor concept as an alternative for evaluation in the Program EIR/EIS. Following the completion of the Final Program EIR/EIS, if a decision is made to pursue the shared corridor concept, additional analysis will be needed in order to evaluate the full potential for such shared use in the Corridor. The initial tasks and objectives of the parties under this MOU will be to prepare a description of potential corridor modifications and to prepare a proposed draft complementary operating strategy, or strategies, which may be needed or useful in order to facilitate or enhance the potential for shared use of the corridor. This MOU sets forth the process for performing these initial tasks.

C. Equipment and Facilities Compatibility

1. The PCJPB shall make available to the CHSRA and its consultants detailed information describing the standards and requirements currently applicable to the PCJPB's Caltrain system, including equipment specifications, train signaling, engineering criteria, and traffic control, plus other technical characteristics which determine the requirements for Caltrain equipment and facilities.

2. The CHSRA shall make available to the PCJPB a detailed description of the performance standards, the engineering parameters, the equipment used, and the system operational assumptions used in the preparation of the Final Program EIR/EIS for a proposed high-speed rail system for California and any additional requirements resulting from decisions made following the certification of the Final Program EIR/EIS. This information will include vehicle type, size and performance characteristics and such other data as necessary to evaluate further...
the potential compatibility of proposed high-speed train operations with Caltrain operations in the Corridor (i.e., shared use).

3. Staff of the PCPB and staff of the CHSRA shall each prepare a draft assessment of the equipment and facilities compatibility potential for the possible joint use of the Corridor. After staff of each agency has independently made a draft assessment, staff representatives from each agency will meet to discuss their respective draft assessments, and to commence preparation of a draft joint assessment of compatibility.

4. After the preparation of the draft assessment by staff of each party, the parties will work together to identify and evaluate potential strategies and potential modifications which could be used or provided in order to address limitations or constraints on the potential for shared use of the Corridor, including issues that may involve a third party, such as a freight railroad or a governmental agency.

D. Service Level Compatibility
1. The PCPB is preparing a Strategic Plan for Caltrain to identify desired improvements to Caltrain. The PCPB plans to include in its Strategic Plan an option which would incorporate a proposed High-Speed Rail service in the Corridor.

2. The CHSRA will provide to the PCPB detailed information describing the proposed HSR service in the PCPB’s Corridor, anticipated operating speeds and potential location of conceptual HSR stations, from the evaluation of potential shared use of the Corridor as an alternative in the Program EIR/EIS.

3. The PCPB will review the proposed level of HSR service evaluated as an alternative in the Program EIR/EIS for the PCPB’s Corridor in order to identify anticipated services coordination issues which may be related to providing such an alternative. For those locations which could potentially accommodate HSR service, the PCPB will identify the potential facility improvements and modifications which may be necessary for or could facilitate such service, and will provide a description of these potential facility changes to the CHSRA for review and comment.

E. Shared Corridor Requirements
1. Based upon the joint assessment of compatibility and the identification of potential modifications to enhance shared use opportunities, as described in the preceding two sections, the PCPB in cooperation with the CHSRA will prepare a proposed Shared Corridor Plan which contains a draft complementary operating strategy or strategies.

2. A preliminary cost estimate for identified possible Corridor modifications will be prepared by the PCPB and submitted to the CHSRA for review and comment.

3. The proposed Shared Corridor Plan will be submitted to the PCPB and CHSRA for review and comment. The parties anticipate that the necessary approvals for, and the future use of, a Shared Corridor Plan will be addressed in a future MOU or in future amendments to this MOU.

F. Shared Corridor Agreement
1. The parties agree that any future implementation of the Shared Corridor Concept, if decisions were to be made after the completion of the Final Program EIR/EIS to go forward with the development of a proposed high-speed rail system and to pursue the Shared Corridor alternative, would require the preparation of a comprehensive agreement or agreements, setting forth the roles and responsibilities of each party, and addressing construction and operation issues.

2. The potential topics to be covered in a possible future comprehensive agreement, however, may constitute an additional aspect of evaluating compatibility. The parties, therefore, agree to develop a draft outline of a possible future comprehensive agreement as an aid to their broad assessment of compatibility.

G. Amendments
This Memorandum of Understanding (MOU) may be updated, expanded, or otherwise altered, by written amendments approved and executed by both parties.

Peninsula Corridor Joint Powers Board:

California High Speed Rail Authority:
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Introduction

The Caltrain Strategic Plan 2004 - 2023

The Strategic Plan is a blueprint for the future of Caltrain. It presents a vision and guiding principles that shape broad level policy decisions as well as specific strategies for service and capital improvements. The Strategic Plan is intended to be a reference for policymakers, Caltrain staff, and members of the public that guides them toward a common vision for Caltrain. Above all, it is meant to be an agent for change.

The Caltrain Strategic Plan includes the following elements:

- The Vision & Guiding Principles, which present a vision for Caltrain and outline principles for guiding policy decisions;
- A summary of the Service Plan, which details the service chronometrics, policies, and budget requirements for Caltrain over the next 20 years;
- A summary of the Capital Improvement Program (CIP), which identifies policy and provides capital improvements over the next 20 years; and
- A summary of the Financial Plan, which discusses funding strategies for Caltrain.

Information from the Service, Capital, and Financial plans is presented through four future scenarios: Status Quo, Maximum Growth, Enhanced, and Build-out scenarios. The scenarios are described in detail in the Future Scenario chapters.

The service chronometrics, objectives and capital costs, and member agency contributions reflected in each of the scenarios are based upon the Draft Short-Range Transit Plan, Capital Improvement Plan, and Financial Plan of June 1, 2004. The information in the Strategic Plan is meant to provide a general understanding of the costs and benefits of each scenario and to provide a basis for comparing the scenarios. Adoption of the Strategic Plan does not commit the member agencies to the funding requirements, service levels, or capital projects presented in this document, but is an agreement of the principles and policies which will guide the development of the Short-Range Transit Plan, Service Plan, Capital Improvement Plan, and Financial Plan. These plans are being finalized and will be adopted separately from the Strategic Plan in the Fall/Winter of 2004. Any updated information related to SF604 will influence the adoption of the Strategic Plan and the levels of service supported in the plan.
From Principle to Policy

The Scenario Approach

Following the development of the Vision & Guiding Principles, four future scenarios were developed to prepare Caltrain for different possible future states in light of multiple unknowns, such as upcoming ballot measures and the economic climate. These scenarios were used to answer key policy questions and set a clear direction for making detailed service, capital, and financial decisions. The four scenarios are: the Status Quo scenario, the Moderate Growth scenario, the Enhanced scenario, and the Build-out scenario.

The Status Quo Scenario is the most financially constrained scenario. It follows a "pay-as-you-go" approach and assumes that only current (FY06) levels of committed and programmed funds are available. It is assumed that upcoming local sales tax revenues would not be materialized and no innovative funding sources would be pursued. The objective of the Status Quo Scenario is to keep the rail corridor operating at current levels of service, maintain existing infrastructure, and limit investments in improvements other than normal maintenance and rehabilitation.

The Moderate Growth Scenario is a steady growth scenario and is financially constrained in the first five years. Similar to the Status Quo Scenario it follows a "pay-as-you-go" approach, but requires fewer additional resources above current levels of planned expenditures. It is assumed that upcoming local sales tax revenues would not be materialized and no innovative funding sources would be pursued. The objective of the Moderate Growth Scenario is to optimize the operating and capital programs with limited increases in funding resources, service, and capital improvements.

The Enhanced Scenario is the "market-driven" scenario. It is financially constrained in the first five years (same as the Moderate Growth scenario), and assumes that additional resources become available in the outer years. The main objective of the Enhanced Scenario is to capture latent market demand by providing optimal levels of service, improving station access and regional connectivity, and incorporating universal design elements and customer amenities that are characteristics of a "world class" railroad. Innovative financing techniques would have to be pursued.

The Build-out Scenario is the "ultimate" scenario that assigns Caltrain and the proposed intercity High-Speed Rail system. The objective of the Build-out scenario is to capture a significant market share of trips by providing a travel experience similar to the Enhanced Scenario that is complemented by the additional services and amenities offered by the connection to High-Speed Rail. It assumes that additional funding resources via high-speed rail bonds and other resources would be available. An aggressive innovative financing program would be required.

More detailed information on each of the scenarios is presented in the chapter titled "The Future Scenarios."

Policy Questions

Six policy questions were developed that address how Caltrain will make key decisions regarding future service and capital improvements and financial strategies. Many decisions regarding capital improvements need to be made within the next few years, so that the necessary funding can be secured and early re-designs are avoided. The findings and evaluation of the scenarios, along with input received from the member agencies and the general public, were used to answer the following policy questions:

- Scenario Approach: Should one scenario be selected or should the scenarios be viewed as part of a continuum? In a continuing, key finding opportunities and increased demand for service can trigger a shift in another scenario.
- Financial Strategy: Should Caltrain continue with current strategies or should the "pay-as-you-go" approach be followed for long-term stability by utilizing innovative financing techniques?
- Service Levels: Should service levels be decreased by proposed financial constraints or should be maintained?
- System Rehabilitation: Should Caltrain follow a normalized rehabilitation plan, or should a more aggressive schedule that is consistent with other capital improvement projects may be considered?
- Electrification: Should electrification be deferred until a more feasible schedule is available or should be designed within?
- Capacity Improvements: What level of capacity improvements should Caltrain invest in to improve headways and reliability of service in the near years?

Each scenario has a different combination of assumptions regarding funding availability and financial strategies, service levels, and capital improvements. These differ in general policy directions and objectives of each scenario. In general, the Status Quo and Moderate Growth scenarios have a more conservative approach in...
their policy positions, while the Enhanced and Build-out scenarios include market-driven service and capital improvements as well as innovative financing techniques. The scenario policy approaches are presented in Table 1.

### Table 1: Scenario Policies

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Status Quo</th>
<th>Moderate Growth</th>
<th>Enhanced</th>
<th>Build-out</th>
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</thead>
<tbody>
<tr>
<td>Financial Strategy</td>
<td>Annual review, Material 2024 level of investment</td>
<td>Annual review, Production of 2024</td>
<td>Long-term, innovative strategies</td>
<td>Long-term, innovative strategies</td>
</tr>
<tr>
<td>Service Levels</td>
<td>Minimum level of service</td>
<td>Maximum growth</td>
<td>Maximize growth</td>
<td>Maximize growth</td>
</tr>
<tr>
<td>System Rehabilitation</td>
<td>Scheduled Normalization</td>
<td>Scheduled Normalization</td>
<td>Accelerated</td>
<td>Accelerated</td>
</tr>
<tr>
<td>Operational Efficiency</td>
<td>Designed with new</td>
<td>Designed with new</td>
<td>Code with new</td>
<td>Code with new</td>
</tr>
<tr>
<td>Capacity Improvements</td>
<td>July 17, improvements completed in 2024</td>
<td>North (San Jose and Santa Clara)</td>
<td>North (San Jose and Santa Clara)</td>
<td>North (San Jose and Santa Clara)</td>
</tr>
</tbody>
</table>

The following assumptions to the six policy options were drawn based on comprehensive research to the public and to the member agencies:

- **Scenario Approach:** Should the scenarios be selected or should the scenario be viewed as a part of a continuum?

  It is clear that the continuum is the most practical and practical scenario approach, given the unpredictable nature of the economic climate and future funding sources. The strategy for California should begin with the **Status Quo** scenario and advance to the **Moderate Growth**, **Enhanced**, or **Build-out** scenario when critical milestones are reached. Critical milestones would include securing additional capital and earning bills. Because the first five years of the capital program are financially constrained in all scenarios, there is some flexibility with regard to securing funds to meet the projected milestones.

- **Financial Strategy:** Should California continue with simple revenue by utilizing the "pay as you go" approach or serve the long-term stability by utilizing innovative finance techniques?

  Given the uncertainty of the "pay as you go" approach and the complexities it creates when planning and coordinating future improvements, California should strive for long-term stability through dedicated funding sources and innovative mechanisms. This strategy is in line with the Fifth Guiding Principle, which is to "develop a solid financial foundation that ensures long-term sustainability." Securing dedicated funding sources will enable California to meet its projected funding shortfalls, plus future service and capital improvements, and implement the improvements in a timely manner. It will be critical for California to see if the Status Quo or Moderate Growth to the Enhanced or Build-out presents.

  - **Service Levels:** Should service levels be determined by financial resources or should they be constrained?

    Service levels must be tied to productivity and public demand, yet balanced with funding availability. Good information on market demand is necessary to determine the service characteristics that are desired by the public and to prioritizing service improvements as funding becomes available. Because service improvements sometimes require capital projects, the availability of capital funding can directly affect service levels.

  - **System Rehabilitation:** Should California follow a normalized rehabilitation and replacement schedule or an accelerated schedule?

    Capital investment in rehabilitation must be deferred, but should be implemented in the most cost-effective manner. When opportunities arise, rehabilitation should be considered to prepare a system of deferred maintenance, which can greatly increase maintenance costs. It is critical to balance rehabilitation with other improvements in the capital program.

  - **Electrification:** Should electrification be deferred until funding is available or should it be designed and constructed?

    Design for the electrification project should continue and should be included into all improvement projects along the right-of-way. Timing of implementation should be part of the design development. A funding plan must be ensured in order to implement the project and avoid further delays.

  - **Capacity Improvements:** Will level of capacity improvements should California invest in the upgrade of lines and the ability to serve the public?

    Capacity improvements will be made to the current lines to increase capacity and improve reliability of service in the peak periods.
Capital improvements that exceed system capacity, such as adding additional tracks, must be tied to service objectives, and must be balanced with other projects in the capital program. Caltrain should explore the most cost-effective means for improving service before overspending on capacity expansion.

Snapshot of the Continuum and Future Improvements

Based on the policy approach outlined above, a conceptual schedule was developed for the capital improvements that can be expected in the next 20 years. The following chart provides a snapshot of when the capital program will include the projects or programs that depend on service and financial triggers, such as establishing dedicated funding sources, are distinguished from ongoing programs such as rehabilitation, which are almost completely funded.

<table>
<thead>
<tr>
<th>Year</th>
<th>Project A</th>
<th>Project B</th>
<th>Project C</th>
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<tr>
<td>2020</td>
<td>$100M</td>
<td>$50M</td>
<td>$20M</td>
</tr>
<tr>
<td>2021</td>
<td>$150M</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2022</td>
<td>$200M</td>
<td>$75M</td>
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Projections of revenue availability are based on past experience and reasonable estimates of future events. These revenue projections assume that all of the local matching funds identified in the financial plans will be approved accurately by Caltrain’s three member agencies.

As shown in the chart below, Caltrain could begin with the Santa Clara County and shift to the Moderate Growth scenario within the first five years, once funding for identified elements is secured and a funding plan for electrification is developed. By the end of the first five years, it will be determined whether or not a high-speed line will be constructed along the Caltrain corridor. In the second five-year period, Caltrain could shift from the Moderate Growth scenario to either the Enhanced or Baseline scenario, depending on the status of the high-speed rail project. This scenario shift from the Moderate Growth scenario would require Caltrain to secure operating and capital funds for the Enhancement and Capacity Expansion programs. By the second half of the 20-year period, Caltrain would be in the Enhanced or Baseline scenario.

Existing sales tax measures (Measure A) in San Mateo and (Measure B) Santa Clara County and a new sales tax measure (Proposition 1) in San Francisco County provide funds for Caltrain capital projects. Two upcoming ballot measures that would provide funding for enhancements and capacity expansion are the consolidation of the San Mateo County sales tax (November 2004) and the high-speed rail bond measure (November 2005 or 2006). Revenue from the San Mateo County sales tax would help to meet most of the $220 million capital shortfall in the Moderate Growth scenario. Any additional funding sources would be needed to achieve improvements included in the Enhanced scenario. If the high-speed rail bond measure fails, Caltrain would be positioned to shift into the Baseline scenario by the second five-year period.

The following describes the capital program according to the scenario approach outlined above:

**Replacement and Rehabilitation:**
- Capping throughout the 20-year period, replacement state of equipment. May be included in the Enhanced or Baseline scenarios. Full funding has been identified for the Replacement and Rehabilitation program in the Santa Clara and Moderate Growth scenarios. Over several phases of the Replacement and Rehabilitation funding sources have been identified for the Enhanced and Baseline scenarios.
- Major programs include replacement and overhaul of rolling stock and replacement of track, bridges, signals, and other components. Replacement of rolling stock must be consistent with the timing of the electrification project (i.e., electrification), which will require the purchase of new electric locomotives. Platform improvements at key stations to remove the head-end rule are included.

**Enhancement Program:**
- Electrification project completed within the first five years. Full funding has been identified for the project in the Baseline and Enhanced scenarios.
A funding plan to bring all dedicated funds forward must be developed in order to implement the project within the ten-year time frame.

- Other enhancements, such as improved station access and customer amenities, will require additional funding.

Capacity Expansion

- Funding has been identified for the first five years for capacity expansion projects, which include grade separations, track and signal construction, and station improvements. Additional capacity expansion may be necessary to substantially improve service levels, and will depend on demand for service and the availability of funds.

Support Program

- The support program remains as project development and capital program development. Full funding has been identified for the next 20 years.

Regional Extensions

- Regional extensions include the Downtown extension to O’Hare, Tri-Cities Terminal in Chicago, the Durham Area Corridor, and the extension to Madison and Madison. These are considered third party projects whose capital costs are not included in the Capital Plan. While they are all currently partially funded and not included in the State Plan or Amtrak Board assessment, it is assumed that planning and design will continue and that they will be implemented within the next 10 years.

CAPITAL PLAN OBJECTIVES

The Capital Improvement Plan consists of a wide array of improvements, categorized by Replacement and Rehabilitation, Enhancements, and Support Programs. Regional extensions are considered in Third Party projects. The Capital Plan supports each Service Plan by including improvements that are necessary to implement the service goals of each scenario. The main objectives of the Capital Plan are to:

- Identify the magnitude of system rehabilitation and replacement
- Identify the improvements required to realize the service goals
- Develop conceptual cost estimates of proposed capital programs
- Develop techniques for implementing cost-effective capital improvement programs

Replacement and Rehabilitation projects include improvements needed to bring the railroad into a good state of repair and to continue scheduled replacement of infrastructure and rolling stock. The major projects in this category are bridge rehabilitation, rolling stock overhaul and replacement, and track rehabilitation, which comprise two-thirds of the approximately $600 million replacement and rehabilitation program (in 2003 dollars). Also included in the requirements are stations to eliminate the built-out role of some stations. The replacement and rehabilitation needs are generally consistent between scenarios. Any variations are due to reconfiguration projects that occur under the enhancement program and defer the need for replacement.

Enhancement projects include upgrades to the system, new construction, and amenities. The major projects in this category include electrification and improvements related to capacity expansion, such as grade separations and track construction. Capacity expansion projects can include track rehabilitation as well as new construction and are necessary to increase express service in the peak periods. The capacity expansion projects are typically packaged together because it is more cost-effective to implement them simultaneously.

The cost of the Enhancement program varies widely between the scenarios and depends primarily on the extension of electrification and the extent of capacity expansion along the corridor. Due to inflation, the timing of projects will also affect costs; however, only constant dollars (2003) are shown in the program. In the case of electrification, the timing and implementation with other improvements is also critical. Most of the funding for the electrification is in the analysis of the four hour service project by 2035.
The Future Scenarios

The Support Program includes capital program development and project development.

Regional Extensions include the extension to Downtown San Francisco to a rebuilt Transbay Terminal, the Donnelley Rail Corridor, and the extension to Monterey/Salinas. These extensions are considered to be third party projects, and their capital costs are not included in the Central Coast Improvement Plan.

Additional spending costs associated with the extension to Downtown San Francisco have been included in the Estimated scenario beginning in 2019 and Build out scenario beginning in 2019. Operating costs that would be incurred by the Joint Powers Board for the Donnelley and Monterey/Salinas projects have not been determined.

The financial, service, and capital characteristics of the scenarios are summarized in Tables 1 and 2 and are described further on the following page, followed by a comparison and evaluation of all three scenarios. All costs and revenues are shown in 2010 dollars and do not include potential revenue from innovative funding sources.

Table 3: Summary of Scenario Characteristics – Status Quo and Moderate Growth

<table>
<thead>
<tr>
<th>Category</th>
<th>Status Quo (2010)</th>
<th>Moderate Growth</th>
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<td>Operations</td>
<td>Revenue Sources and Components</td>
<td>Historical Baseline</td>
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<td>Capital</td>
<td>Federal/State/Loss</td>
<td>San Francisco Bay Area Tax</td>
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<td>Other State/Loss</td>
<td>High-Speed Rail Bond issuance Techniques</td>
</tr>
<tr>
<td>Revenue</td>
<td>Revenue Sources and Components</td>
<td>Historical Baseline</td>
</tr>
<tr>
<td>Service/FEFRA</td>
<td>Pay 80 million service leaders</td>
<td>20 million service leaders</td>
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<tr>
<td>Workday Travel Time</td>
<td>48 minutes</td>
<td>10 minutes</td>
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<tr>
<td>Weekend/Holiday Travel</td>
<td>220 minutes</td>
<td>350 minutes</td>
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<tr>
<td>Weekend/Holiday Travel</td>
<td>450 minutes</td>
<td>370 minutes</td>
</tr>
<tr>
<td>Customer Amenities</td>
<td>45 minutes</td>
<td>37 minutes</td>
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<tr>
<td>Average Weekly Mileage</td>
<td>45,700</td>
<td>56,100</td>
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<td>Annual Mileage</td>
<td>14,360,000</td>
<td>17,960,000</td>
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<tr>
<td>Annual Operating Cost</td>
<td>$334M</td>
<td>$470M</td>
</tr>
<tr>
<td>Annual Operating Cost</td>
<td>$334M</td>
<td>$470M</td>
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<tr>
<td>Caltrain (2010)</td>
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<td>Replacement &amp; Rehabilitation</td>
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<td>Capacity Expansion</td>
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<td>Rail/roadway</td>
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<td>Electrification (Revenue Service)</td>
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<td>Regional Extension (Third Party)</td>
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<td>Development</td>
<td>Government</td>
<td>Non-Government</td>
</tr>
<tr>
<td></td>
<td>State/Local</td>
<td>Non-State/Local</td>
</tr>
<tr>
<td></td>
<td>Federal/High Speed Rail</td>
<td>Tolling</td>
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<tr>
<td>Total Capital Program Cost</td>
<td>$1.5 Billion</td>
<td>$2.0 Billion</td>
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<tr>
<td>Share of Federal Assistance and M&amp;O Bond</td>
<td>$500M (Assumed $1.30)</td>
<td>$1.8 Billion (Assumed $1.46)</td>
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</tbody>
</table>

*Source: Figures may be rounded. **Note: The California state and local governments are not included. ***Note: Figures are based on current year-to-year with the exception of increases due to inflation.
Response to Comments

Comment Letter AL054 Continued

Table 4: Summary of Scenario Characteristics – Enhanced and Build-out

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Enhanced</th>
<th>Build-out</th>
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<tbody>
<tr>
<td><strong>Service</strong></td>
<td></td>
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<tr>
<td>Capacity</td>
<td>24,000</td>
<td>32,000</td>
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<tr>
<td>Average Speed</td>
<td>125 MPH</td>
<td>125 MPH</td>
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<tr>
<td>Average Stops</td>
<td>25</td>
<td>25</td>
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<tr>
<td>Average Transit</td>
<td>150 min</td>
<td>150 min</td>
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<tr>
<td>Average Travel</td>
<td>90 min</td>
<td>90 min</td>
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<tr>
<td>Service Frequency</td>
<td>30 trains</td>
<td>30 trains</td>
</tr>
<tr>
<td><strong>Cost</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial Investment</td>
<td>$24.5B</td>
<td>$32.0B</td>
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<tr>
<td>Total Capital Program Cost</td>
<td>$23.0B</td>
<td>$32.0B</td>
</tr>
<tr>
<td><strong>Operation</strong></td>
<td></td>
<td></td>
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<tr>
<td>Capacity Exposure</td>
<td></td>
<td></td>
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<tr>
<td><strong>System Configurations</strong></td>
<td>2012</td>
<td>2014 or earlier</td>
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<tr>
<td><strong>HSR Expenditures</strong></td>
<td></td>
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<tr>
<td>California High Speed Rail</td>
<td>$21.1B</td>
<td>$24.5B</td>
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<tr>
<td><strong>Benefits</strong></td>
<td></td>
<td></td>
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<tr>
<td>Benefits Realized</td>
<td>$8.2B</td>
<td>$9.7B</td>
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Note: Some figures may be updated once the Service and Cost tables are finalized.

The Build-out Scenario

**Objective:** Capture a significant market share of trips by providing enhanced “world-class” service, complemented by the non-tariff connectivity and amenities offered by the convenience of High-Speed Rail.

**General Characteristics:** The Build-out Scenario is the “ultimate” future scenario for California and assumes that High-Speed Rail (HSR) would operate on the Caltrain High-speed. It includes all the characteristics and amenities of the Enhanced Scenario and rail connectivity with all the major metropolitan areas in California via HSR. The Build-out Scenario includes improvements that will allow HSR to operate on the Caltrain high-speed and integrate major funding sources for these improvements would be made available through high-speed rail bonds, and other innovative financing techniques. The characteristics of the Build-out Scenario are summarized in Table 4.

**Service Improvements:** The Build-out Scenario is very similar to the Enhanced Scenario in many ways in terms of Caltrain service. One of the added service benefits would be that the HSR system would be accessible through two or more Caltrain stations, making statewide intercity rail travel available to Caltrain passengers as early as 2024. Caltrain would function as a feeder system for HSR passengers as well, with transfers taking place between HSR and Caltrain. Additional work will be performed to optimize the integration of HSR and Caltrain. Up to 50 Caltrain train sets would provide station access services.

**Capital Improvements:** The Build-out Scenario includes several major infrastructure modifications that would allow HSR and Caltrain to operate on the same line. The Build-out Scenario includes a fully safety-qualified alignment, and widening of the entire route to accommodate four tracks. Some systems would have to be reclassified or reclassified. Platform configurations would have to be optimized to accommodate HSR and Caltrain. New signal and communications systems would also be required. The electrification project and associated in San Francisco began operations by 2014 at the latest, but could be accelerated depending on the coordination with other projects such as grade separations and track capacity. Improvements related to HSR. In this scenario, capacity expansion projects including track rehabilitation, bridge improvements, grade separations, signal construction, station improvements, track construction, and travel time improvements could be expected to cost approximately $5 billion (in 2010 dollars) of total expansion.
Financial Resources: The Build-Out Scenario includes the enhanced levels of funding in the Enhanced Scenarios plus new sources of funding, primarily from the proposed High-Speed Rail bond measure scheduled for voter consideration in November 2008. While the High-Speed Rail bonds would not supplement other innovative financing techniques, they would guarantee a significant portion of funds for major Caltrain improvements. Revenue from high-speed rail bonds or potential innovative sources are not included in the outcomes of capital shortfall.

Passenger Experience: The total number of system improvements included in the Build-Out Scenario would be greater than in either scenario. In addition to the passenger experience benefits of electrification and service expansion, the Build-Out includes extensive grade separations, track capacity improvements, and station improvements that will dramatically affect the passenger experience. A grade-separation once will increase service reliability, reduce delays, improve safety, improve local pedestrian and traffic circulation, and reduce noise. Additional track capacity provided by this tracking will allow the flexibility required for high levels of express service. With statewide High-Speed Rail service available in 2016, it is anticipated that regional and intercity connectivity will be greatly improved.

Key Findings: In the absence of controllability issues, funding for High-Speed Rail would accelerate the timing of many improvements along the Caltrain route. It is expected that ridership and further resources will grow; however, the full potential of this growth would probably be realized outside of the 20-year time horizon of this plan. Ridership is projected to increase by about 200 percent between 2004 and 2021, which does not include potential ridership gains from transfers between HELP and Caltrain. Operating cost and number agency contributions are expected to increase, but will depend ultimately on how the systems are operated and coordinated.

The capital program totals approximately $3 billion and will result in $2 billion shortfall. The shortfall does not include the potential revenues from high-speed rail bonds or other innovative financing techniques.

### Table B. Build-Out Scenario Characteristics Summary

<table>
<thead>
<tr>
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<tr>
<td>Weekly Caltrain Trains</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Weekly Limited Trains</td>
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<td>22</td>
<td>28</td>
<td>36</td>
<td>45</td>
<td>52</td>
<td>59</td>
<td>70</td>
<td>82</td>
<td>95</td>
<td>112</td>
<td>387</td>
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<tr>
<td>Weekday Total Trains</td>
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<td>30</td>
<td>38</td>
<td>48</td>
<td>58</td>
<td>68</td>
<td>78</td>
<td>88</td>
<td>99</td>
<td>111</td>
<td>123</td>
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<tr>
<td>Service/weekday Trains</td>
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<td>0</td>
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<td>0</td>
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<td>Weekend (return service)</td>
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<td>52</td>
<td>64</td>
<td>76</td>
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<td>100</td>
<td>112</td>
<td>124</td>
<td>136</td>
<td>148</td>
<td>160</td>
<td>592</td>
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<tr>
<td>Average Ridership (Caltrain)</td>
<td>78,900</td>
<td>102,900</td>
<td>135,900</td>
<td>170,900</td>
<td>210,900</td>
<td>250,900</td>
<td>290,900</td>
<td>350,900</td>
<td>410,900</td>
<td>470,900</td>
<td>530,900</td>
<td>1,620,900</td>
</tr>
</tbody>
</table>

**Note:** 310 service days in the planning period are expected to be the full year actually used for service levels of 70 million passenger miles per year. Operation costs include all income sources and revenue in the forecast from the Bay Area, San Francisco, Monterey, and Los Angeles areas. For more information, please refer to the California High-Speed Rail Authority's website.
Response to Comments of Ian B. McAvoy, Chief Development Officer, Caltrain, August 30, 2004 (Letter AL054)

**AL054-1**
Acknowledged. The Authority has identified the Caltrain (shared use) option as the preferred HST alignment for serving San Francisco and the Peninsula. Please also see standard response 6.2.1.

**AL054-2**
Acknowledged.

**AL054-3**
Acknowledged. The Authority has identified the preferred technology alternative for the proposed HST system as state-of-the-art electrically powered (overhead catenary), high-speed, steel-wheel-on-steel-rail technology, including an assumption that the system would use 2 x 25 KV Overhead Catenary. The Authority will continue to coordinate with the Caltrain JPB should the HST proposal move forward.

**AL054-4**
The Authority is aware of the Caltrain Strategic Plan and it was taken into consideration in the development of the No Project Alternative to the extent that any of the specific improvements in the Strategic Plan scenarios meet the criteria for inclusion in the No Project Alternative (see Appendix 2C: No Project Alternative Projects Funded for Intercity and Freight Rail in the State of California). The Modal Alternative is comprised of only intercity highway and aviation infrastructure improvements. Please also see response to Comment AL054-11.

**AL054-5**
Acknowledged. See standard response 2.7.3

**AL054-6**
Acknowledged.

**AL054-7**
Based on the alignment and technology options identified as preferred in the Final Program EIR/EIS (i.e., Caltrain Corridor and the LOSSAN Corridor), the Authority will develop performance criteria for shared use operations in conjunction with Caltrain and other owner/operators involved. The criteria will be developed to guide the subsequent project level engineering and environmental review in these shared use segments.

**AL054-8**
Acknowledged. Neither the Draft Program EIR/EIS, nor the Final Program EIR/EIS makes any assumption that, “CAHSR service could be initiated only after the completion of the system from San Francisco to Los Angeles”. Please see standard response 10.1.7.

**AL054-9**
Acknowledged. Please see standard response 6.3.1.

**AL054-10**
Acknowledged. Please see standard response 2.35.1.

**AL054-11**
Section 3.17 “Cumulative Impacts Evaluation” of the Final Program EIR/EIS is intended to account for the potential impacts of the proposed HST system together with impacts from other reasonably foreseeable projects/actions and has been revised to include the Build-Out development scenario, which includes the Caltrain Electrification Program and the Transbay Terminal/Downtown Extension Project. This scenario represents the most comprehensive and likely infrastructure and system improvements to be implemented in conjunction with the HST Alternative.
**AL054-12**

The technical reports which include ridership and revenue by segment were referenced in Chapter 2 of the Draft Program EIR/EIS (page 2-7) as well as Chapter 12 “References”. The program EIR/EIS identifies potential impacts to transit at a broad level. Please see Section 3.1 of the Program EIR/EIS under “Transit, Goods Movement and Parking”. Detailed analysis of the projected ridership effect on secondary public transportation providers is beyond the scope of this program EIR/EIS process. Should the HST proposal move forward, this would be investigated as part of more detailed project level analyses. Please also see response to Comment AL053-8 and AL053-9.