



January 29, 2016

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CHIEF EXECUTIVE OFFICER

The Honorable Mark Leno, Chair  
Joint Legislative Budget Committee  
1020 N Street, Room 553  
Sacramento, CA 95814

Mr. Mac Taylor, Legislative Analyst  
Legislative Analyst's Office  
925 L Street, Suite 1000  
Sacramento, CA 95814

Dear Chairman Leno and Mr. Mac Taylor:

The California High-Speed Rail Authority (Authority) is pleased to submit to you the enclosed Staffing Levels Report prepared in accordance with the Supplemental Report of the 2015-16 Budget Act.

Item 2665-004-6043, within the Supplemental Report of the 2015-16 Budget Act, requires the Authority, no later than February 1, 2016, to report to the appropriate fiscal committees of the Legislature and the Legislative Analyst's Office with information on state staffing levels for the Authority. Specifically, Item 2665-004-6043 requires the report to include the rationale for the Authority's current state staffing level and the extent to which this staffing level is consistent with best practices for construction oversight on large projects of comparable size and scale of the California High-Speed Rail Project.

The Authority's Board of Directors and Executive Management recognize the importance of a strong management structure and proper staffing to ensure the successful delivery of the high-speed rail program. The Authority employs an organizational approach to deliver the program that takes into account the unique nature of the California High-Speed Rail Program and the various responsibilities that will arise under the phased implementation strategy outlined in its business plan.

A key reason behind this approach is the Authority is a "single-purpose" agency. That is, unlike other state agencies, it does not have an ongoing stream of projects that justify the creation of large, ongoing teams of state personnel to carry out responsibilities over extended periods of time.

Driven by state statute, the Authority's staffing model ensures core governmental functions common to all state agencies are staffed by state employees. Consultant teams are brought on board to provide needed expertise and resources, working side-by-side with agency employees. This integrated approach has proven to be successful, efficient, and effective in California, throughout the United States, and internationally. It has been the model for the Authority since its inception, and is the typical model for California's self-help counties and regional agencies.

EDMUND G. BROWN JR.  
GOVERNOR



The enclosed report details the Authority's current staffing levels, its approach and rationale to ensure proper staffing, and to the extent possible, provides a staffing comparison with similar programs around the world. This comparison demonstrates that the Authority's staffing levels are within a reasonable range of these comparison programs and consistent with best practices for construction oversight on projects of similar size and scale.

If you have any additional questions about the Authority's Staffing Levels Report, please contact Barbara Rooney, Deputy Director of Legislation, at [barbara.rooney@hsr.ca.gov](mailto:barbara.rooney@hsr.ca.gov) or (916) 330-5636.

Sincerely,



JEFF MORALES  
Chief Executive Officer

cc: Mr. Brian P. Kelly, Secretary of the California Transportation Agency  
Mr. Daniel Alvarez, Secretary of the Senate  
Mr. E. Dotson Wilson, Chief Clerk of the Assembly  
Ms. Diane Boyer-Vine, Legislative Counsel  
Mr. Christian Griffith, Chief Consultant, Assembly Budget Committee  
Ms. Farra Bracht, Deputy Staff Director, Senate Budget and Fiscal Review Committee  
Ms. Peggy Collins, Consultant, Joint Legislative Budget Committee



**CALIFORNIA**  
High-Speed Rail Authority

# *Staffing Levels Report*

FEBRUARY 2016



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This Staffing Levels Report is provided in accordance with the Supplemental Report of the 2015-16 Budget Act.

Item 2665-004-6043 – The High-Speed Rail Authority (HSRA) shall report to the appropriate fiscal committees of the Legislature and the Legislative Analyst’s Office no later than February 1, 2016 with information on state staffing levels for HSRA. Specifically, the report shall include the rationale for HSRA’s current state staffing level and the extent to which this staffing level is consistent with best practices for construction oversight on large projects of comparable size and scale of the California High Speed Rail project.

**Jeff Morales**

*Chief Executive Officer*

**California High-Speed  
Rail Authority**

*770 L Street, Suite 620*

*Sacramento, CA 95814*

*(916) 324-1541*

*info@hsr.ca.gov*

*www.hsr.ca.gov*

## **INTRODUCTION**

The California High-Speed Rail Authority (Authority) is responsible for planning, designing, building and operating the first high-speed rail system in the nation. California high-speed rail will connect the mega-regions of the state, contribute to economic development and a cleaner environment, create jobs and preserve agricultural and protected lands. When it is completed, it will run from San Francisco to the Los Angeles basin in under three hours at speeds capable of exceeding 200 miles per hour. The system will eventually extend to Sacramento and San Diego, totaling 800 miles with up to 24 stations. In addition, the Authority is working with regional partners to implement a statewide rail modernization plan that will invest billions of dollars in local and regional rail lines to meet the state's 21st century transportation needs.

The Authority's Board of Directors (Board) and Executive Management recognize the importance of a strong management structure and proper staffing to ensure the successful delivery of the high-speed rail program.

Pursuant to Senate Bill (SB) 1029 (Chapter 152, Statutes of 2012), the Authority has submitted to the Legislature three Staff Management Reports (October 2012, December 2013, and March 2015) that describe the organizational structure supporting the delivery of the high-speed rail program, as well as the staffing structure and key construction management procedures established by the Authority. The Staff Management Reports document the enhanced organizational strategies implemented by the Authority's executive management team to achieve the program goals identified in the 2014 Business Plan and to implement a program funded through SB 1029 (Chapter 152, Statutes of 2012), and the Cap and Trade auction proceeds in SB 852 (Chapter 25, Statutes of 2014) and SB 862 (Chapter 36, Statutes of 2014).

The Authority's fundamental strategies and principles to staffing as delineated in the prior Staff Management Reports remain unchanged, and are therefore provided in this Staffing Levels Report in order to further clarify the rationale for current staffing levels.

This Staffing Levels Report, required by Item 2665-004-6043 in the Supplemental Report of the 2015 Budget Act, provides the following information on the Authority's state staffing levels:

- Staffing and organizational guiding principles for its organizational structure and staffing.
- Organizational approach to deliver the program, including a functional overview, and organizational chart.
- Current staffing levels and recent staffing changes and allocations.

To the extent that comparisons can be made, this Staffing Levels Report also provides:

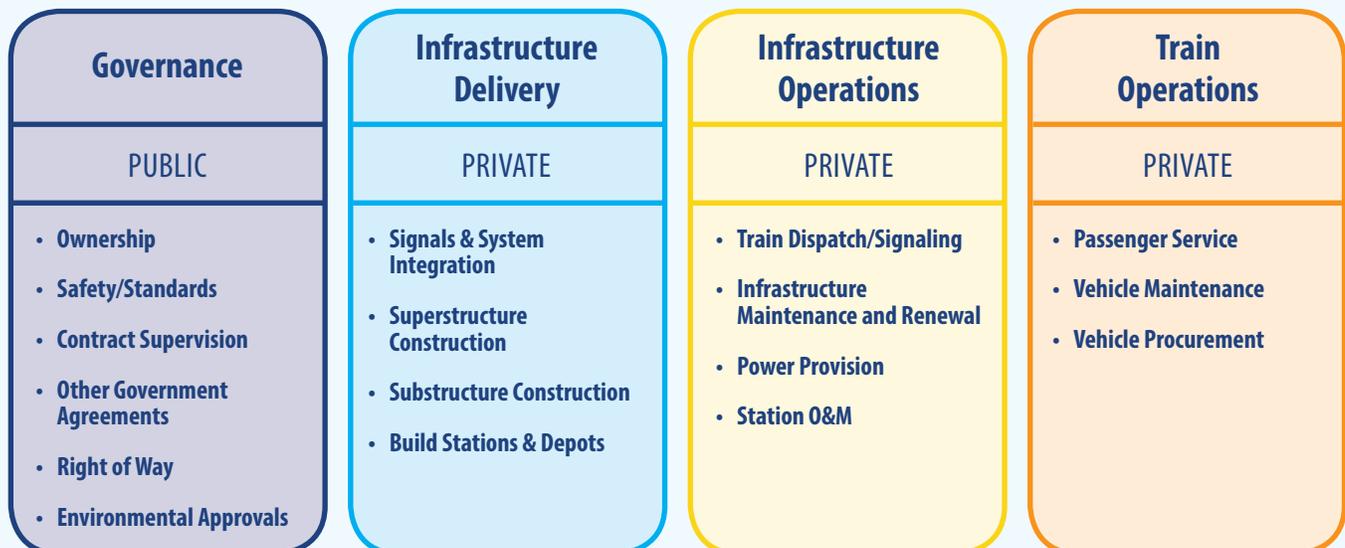
- Best practice comparisons for construction oversight with other major infrastructure programs.

## **STAFFING AND ORGANIZATIONAL GUIDING PRINCIPLES**

To successfully deliver this complex program within scope, quality standards, budget and schedule, the Authority employs the following guiding principles that underpin its organizational structure and staffing. These principles reflect an overall program delivery approach that is driven by state laws and the experience of other countries that have successfully developed high-speed rail systems. Existing statutes and the Authority's business plans rely on the public sector to plan and manage the development of the system while shifting responsibility for operational planning, design, construction, operations, and maintenance services to the private sector. This approach allows the public sector to manage and oversee development and operation while obtaining extensive private sector expertise to achieve lower costs and greater efficiency. Under this model, the State transfers key risks for building and operating the system to the private sector, which can lead to numerous additional public benefits.

The principal roles for the public and private sectors are illustrated in Exhibit 1 below.

### **EXHIBIT 1: HIGH-SPEED RAIL PROGRAM PRINCIPAL ROLES**



# GUIDING PRINCIPLES

## 1) Governance and oversight shall be provided by the Authority's Board of Directors and government employees:

- The key functions of the Authority's Board of Directors, executive management, and government employees must include government program management, including: policy-setting; decision-making; management functions, accountability; and reporting. All strategic and development decisions of the Authority will be made by government employees with sufficient management experience for the activity.
- The organizational structure of the Authority will ensure the strategic direction and ongoing implementation of the high-speed rail systems is driving by objective government decision makers.
- The reliance on the private sector for construction and operation of the system means that the Authority maintains a relatively small internal staff for program delivery. However, the Authority's government staff must consist of highly-qualified senior executive managers with large project development expertise and commitment to public service to ensure proper oversight and decision making roles are effectively filled.
- Responsiveness to multiple oversight bodies will remain a key priority for the Authority's executive team, while also balancing implementation and efficiency objectives.

## 2) Accelerating the delivery of California's high-speed rail system through cost-effective and innovative practices is in the public interest:

- Structure and ways of doing business have been adapted to sustain a nimble and responsive government organization.
- Traditional government employment levels associated with operating organizations are not appropriate for a development-oriented program that is long-term, but ultimately temporary in nature.
- Innovation will be integral to project success, as will partnership with public and private sector entities with specialized skills and resources, including financial resources.
- The means of achieving accelerated project delivery must not compromise quality or sacrifice accountability to the public interest.

### **3) Various functions will be supported through partnerships arranged with other governmental agencies:**

- Proper oversight and accountability requires knowledgeable and dedicated staff, thus many administrative functions must be performed by Authority staff.
- To maintain a lean organization, the Authority leverages the support of other state agencies, such as the hosted technology services provided by the California Department of Technology.
- External departments and agencies such as the California Department of General Services, Department of Finance, Department of Transportation, and the State Controller's Office have both an oversight and supporting role in several administrative functions (e.g., payroll, benefits administration, purchasing, etc.).
- Budgeting, accounting, and financial management duties are being conducted by Authority staff.
- Inclusion of the Authority with the California State Transportation Agency facilitates leveraging of resources across departments and agencies.
- Where gaps exist or additional support is required, loaned staff is utilized.

## ***ORGANIZATIONAL APPROACH TO DELIVER THE PROGRAM***

The Authority has an organizational approach that takes into account the unique nature of California's High-Speed Rail Program and the various responsibilities that will arise under the phased implementation strategy outlined in the Authority's Business Plan. Its basis is the 1996 statute that created the Authority. Of particular note is the efficient organizational approach the Authority has adopted to execute a business model in which public and private sector capabilities are leveraged over the course of implementation and operation of the high-speed rail program.

This model includes: oversight provided by multiple external agencies, both state and federal; an active Board of Directors to set policy and make routing, environmental, contracting and financial decisions; a senior Executive management team with extensive project development experience; interagency support for many standard state administrative functions; and reliance on the private sector to deliver the project under contracts negotiated and managed by government employees and legal counsel. Such a structure is needed to support the nature of the Authority's single project focus – to develop the high-speed rail program. Core governmental functions common to all state agencies are staffed with state employees. But, there are skillsets and experience levels specific to the development, construction, and operation of a high-speed rail program that are not typically found in state government. It is more appropriate to retain those through limited-term contracts than to build a new capacity that would have limited or no application elsewhere in state government.

There are other organizations in California with analogous project development and oversight responsibilities that are structured similarly to the Authority, notably, the “self-help” counties responsible for the delivery of a combined \$140+ billion in capital projects. These organizations typically have elected or appointed boards, a core team of highly-experienced senior executives, directors, and managers, and a relatively small number of staff members overseeing the work of a larger number of external resources. The executive management teams typically include the core competencies of project development/planning, procurement, project delivery, administration/information systems, legislation/public affairs, legal, communication, and funding/financing, along with functions more tailored to the nature of the organizations projects. Consultant teams are brought on board to provide needed expertise and resources, working side-by-side with agency employees. This integrated approach has proven to be successful, efficient, and effective in California, throughout the United States, and internationally. It has been the model for the Authority since its inception, and is the typical model for California’s self-help counties and regional agencies.

For example, the Riverside County Transportation Commission (RCTC) is an association of local governments that coordinates county-wide transportation planning and project funding – including over \$4 billion in transportation construction spending in 2011 through 2014, alone. These transportation projects include those constructed by RCTC, the County of Riverside, local cities, or Caltrans. RCTC has a lean organization that reflects its planning, funding, and oversight functions. Governed by its 34-member Board of Commissioners, the staff of the organization consists of 46 personnel predominately comprised of senior executives, including eight Directors/Deputy Directors and 19 Managers. Additional resources are acquired through contracting for various professional services. According to RCTC management, this approach helps to control costs and provides staffing only as required.

Another example is the Metropolitan Transportation Commission (MTC), which is the transportation planning, coordinating, and financing agency for the nine-county San Francisco Bay Area. Along with acting as the Bay Area’s Regional Transportation Planning Agency (RTPA) and Metropolitan Planning Organization (MPO), the MTC coordinates and updates the Regional Transportation Plan, screens requests from local agencies for state and federal grants for transportation projects to determine compatibility with the Regional Plan, and administers the Bay Area Toll Authority (BATA).

The MTC is responsible for administering the 25-year Regional Transportation Plan, which is budgeted to total \$118 billion over the period of 2005 through 2030, including \$27 billion in state and federal funds. MTC is governed by a 19-member Commission and supported by a relatively lean staff of 170 employees, including an Executive Director, two Deputy Executive Directors, Chief Financial Officer, General Counsel, and Directors overseeing seven functional divisions.

Similarly, in the Central Valley, the San Joaquin Council of Governments (SJCOG) is comprised of the County of San Joaquin and the local cities. SJCOG is the Regional Transportation Planning Agency (RTPA) responsible for adopting a Regional Transportation Plan and a Regional Transportation Improvement Program, and overseeing state and federal funds within the region’s

boundaries, including through its planning and coordination responsibilities. In 2011, SJCOG oversaw more than \$2.8 billion in Regional Transportation Plan investments for rehabilitation, repair, and expansion from federal, state, and local funding sources. SJCOG is a lean agency that reflects its planning and coordinating functions. Governed by its 15 member Board of Directors, the staff of the organization consists of 31 personnel comprised largely of senior executives, including three Directors, nine Managers, and four Senior Planners.

## **FUNCTIONAL OVERVIEW**

### **External Oversight (State and Federal)**

The functional model begins with the external oversight agencies that are responsible for reviewing and, in many cases, approving or confirming decisions and transactions for the Authority. Numerous external entities are involved in the oversight of the Authority, including the California State Legislature, United States Congress, the Executive Branch/Office of the Governor, the Legislature's Peer Review Group, the State Auditor, the California State Transportation Agency, federal transportation and environmental agencies, and other state control agencies. These oversight bodies provide a wide range of services, from strategic to tactical. They also have set guidelines and procedures which the Authority follows in the execution of its daily business. For example, DGS has external oversight over most of the Authority's procurement activities and DOF is a key gatekeeper for all budget-related activities. The Federal Railroad Administration has a wide range of oversight responsibilities, both as a funding partner and as a regulatory agency with responsibility for safety of the nation's railways.

In addition to process, transaction, environmental, and other reviews that occur as a part of individual planning and development activities, there are a range of external audit and miscellaneous agencies that review and report on the Authority's policies, procedures, plans, and progress on a regular basis.

### **Authority Board of Directors**

The Authority's Board consists of nine members (five appointed by the governor, two appointed by the Senate Rules Committee, and two appointed by the Speaker of the Assembly). The Board sets direction for and governs the organization through broad policies and objectives. Other responsibilities include the approval of key actions, including various contracts, reports, plans, and financial allocations and expenditures. The Board convenes on a monthly basis, or more or less frequently as needed.

The Board is responsible for approving Authority policies and key organizational documents, such as the Authority's business and strategic plans. The Board selects, appoints, supports, and reviews the performance of the Chief Executive Officer (CEO) and may approve the hiring of other management staff. The Board is also responsible for approving the annual budget, other

financial plans, all environmental documents, and contracts. Ultimately, the Board is accountable to the public and other stakeholders for the Authority's performance.

Two key staff functions that are elements of Board oversight report to and take direction from the Board: internal audit and risk management.

### **Audit Division**

The audit function is responsible for providing independent evaluation and consultation services to management and the Authority Board. The audit function provides objective evaluations, opinions, and recommendations concerning operational and programmatic deficiencies and internal and external risks to the organization. The audit function also identifies opportunities for managing organizational risks and the optimization of the internal control environment. The audit function also has oversight responsibilities for the financial and operational reporting processes of the Authority, as well as compliance monitoring duties. It is the responsibility of the audit function to conduct reviews of the Authority's program and administrative control systems to determine if the control systems are operating in accordance with management's instructions, policies, and procedures, and in a manner which supports the attainment of strategic goals and objectives. The function's role includes coordinating external audit activities, submitting annual audit plans, and reporting functionally to the Board and administratively to the CEO as to whether appropriate actions have been taken on audit findings.

### **Risk Management and Project Controls**

The risk management function is responsible for managing and tracking risks as well as risk mitigation/contingencies on the project. As a member of the executive management team, the Risk Manager monitors prime contractor risk management efforts to ensure they do not adversely impact the high-speed rail program. The Risk Manager manages and tracks potential and active risks, maintains the risk management tool and document information, leads risk identification sessions for the high-speed rail program, monitors prime contractor risk management efforts, and participates in project-level risk management activities for risks that cross project boundaries or are beyond the project's control. The Risk Manager identifies and analyzes areas of potential risk to the assets, earning capacity, or success of the organization.

## **Authority Executive Management Team**

The Authority has a dedicated executive management team including a chief executive officer, chief counsel, chief financial officer, chief program manager and other senior management. Several of these key positions are specifically called out in statute [Section 185024 Public Utilities Code] and the Legislature provided specific authority to work outside the traditional state hiring process in filling them. The Authority's executive management function is responsible for executing the High-Speed Rail Program and working with the Board, external oversight bodies, and other stakeholders to achieve the vision for high-speed rail in California. The executive management team provides leadership for all of the Authority's activities, manages state and contract personnel, and holds primary responsibility for making those decisions that the

Board has delegated. The function is responsible for providing management and oversight for the day-to-day operations of the organization. The executive management function also has responsibilities related to determining the appropriate organizational structure for the Authority, selecting management staff, and establishing management plans while executing the risk management, budgetary, compliance, and other organizational processes.

The CEO also has primary responsibility for defining the Authority's strategic direction, in coordination with the Board. The CEO has a strategic initiatives group that manages the development of the Authority's Business Plans and associated analyses and forecasts based on the requirements of Proposition 1A and SB 1029. Additionally, the strategic initiatives group oversees the development of ridership and revenue forecasts and economic analyses, and works with other divisions within the Authority to analyze and develop implementation and procurement approaches. The group also sets direction on cross-cutting initiatives such as sustainability.

The Authority's functional divisions are described below, followed by descriptions of other agency support and private sector services obtained by the Authority to deliver the High-Speed Rail Program.

## **Program Management/Project Delivery**

The Authority's overall Program Management function is responsible for the design, development, construction, and preparation for future operations of the high-speed rail system. Over time, this function is responsible for the environmental planning, transportation planning, engineering, operations, project controls, project management, right of way, contract and construction management, railroad operations, procurement, and regional coordination elements of the High-Speed Rail Program. This organization is led by Authority management and staff with extensive transportation development experience and supported by Caltrans managers and engineers dedicated to the High-Speed Rail Program under interagency agreements. This team oversees the delivery of environmental document preparation, preliminary engineering, permit preparation, systems planning, revenue forecasting, and other technical activities conducted by specialists from the private sector. The elements of this function include:

### **Transportation Planning**

Transportation Planning supports long-range planning activities by developing and maintaining transportation plans, compiling preliminary route analyses, and assisting with schedule, cost, and other planning activities. This includes coordinating with other regional and state-wide transportation agencies. Transportation planning also encompasses station area planning and connectivity to other modes of transportation. Authority staff, with assistance from Caltrans and contract staff, support the Transportation Planning function.

## **Environmental Planning**

The Environmental Planning function within the Authority is responsible for overseeing and coordinating environmental assessments in compliance with state and federal law. State employees oversee contract staff, federal and state review, public outreach, and the activities conducted by others on the Authority's behalf. Legal support for environmental processes is provided by the Authority and the Office of the Attorney General (AG's Office). Key environmental decisions are made by the Board.

## **Right of Way**

To construct the various segments of California's high-speed rail system in the Central Valley, the Authority must acquire nearly 1,400 land parcels upon which to build the rail system and accompanying facilities, stations, etc. Accordingly, the Authority has a standard government transportation right of way function that has the responsibility to manage state employees and contract staff that survey land, prepare maps, prepare deeds, appraise property, acquire property, plan for utility relocation, and provide relocation assistance to homeowners and businesses. The right of way function also provides other property-related services such as managing encroachments, negotiating damage contracts to private property, coordinating permits, and providing escrow and title services. The right of way function is performed by both Authority and contract staff and is supported by the Public Works Board, DOF in all acquisition activities, a contract legal team, and Caltrans through an interagency agreement.

## **Engineering**

Engineering includes implementing railroad systems testing commissioning, overseeing the development and implementation of standards for structures, development and integration of engineering policies, procedures, specifications and preparing and approving final environmental documentation. This division also provides direction and oversight to the Program Management Team's Offices of Preliminary Engineering, Infrastructure Development, Systems Development, Design and Construction Support, Rolling Stock and Systems Integration.

## **Project Delivery**

Project Delivery includes the overall planning, coordination, and control of construction. Key to the function is quality assessments of projects through key activities such as site visits and inspections to verify contractor compliance.

## **Contract Procurement**

Contract Procurement is responsible for requests for proposals, evaluations, negotiation, and contracting for design and construction phases of the High-Speed Rail Program. The Contract Procurement function is managed by Authority staff and supported by Caltrans' procurement team, as well as engineers, financial advisors, and legal counsel from the private sector.

## Commercial and Business Planning

Commercial and Business Planning will develop and implement strategies and tools to enhance the financial performance of the system through means such as station and station-area development, generation of ancillary (non-ticket) revenues, and cooperative programs with partner agencies.

## Operations and Maintenance

Operations and Maintenance will prepare comprehensive studies and operation plans for operations and service scenarios. The Operations and Maintenance function is to define the operation, maintenance, safety/security and revenue/ridership attributes of the High-Speed Rail Program and prepare the operation and maintenance cost estimates as well as developing all rail operating criteria and standards.

## External Affairs

Providing accurate and timely information to the public, stakeholders, and oversight agencies is critical to the success of the High-Speed Rail Program. The Authority's External Affairs function fulfills this need by coordinating communications, legislation, stakeholder outreach, and the small business program. External Affairs oversees and directs the Authority's public and stakeholder-related communications to ensure consistency and accuracy of information as well as the efficient operation of these functions internally and across the three primary regions covering the Bay Area, Central Valley, and Southern California. The Authority's External Affairs function also provides support to the Regional Directors and their staff and works closely and collaboratively with them to advance the High-Speed Rail Program.

## Communications

The Authority's communications function has primary responsibility for overall public relations, messaging, media relations, and communications, including interacting with the media and working with Stakeholder Outreach and Regional Directors to communicate effectively with Authority stakeholders. The function is also responsible for the Authority's website, social media, coordination of meetings, developing public materials, coordinating with other state agencies, and other communications outreach activities. The Authority's communications function is performed by Authority employees with support from contract staff overseen by Authority employees.

## Legislation

The Authority's legislation function advises the Board and executive management on legislative matters. The function is responsible for monitoring, coordinating and implementing the Authority's partnership with federal, state and other elected officials, and works closely with the Regional Directors to coordinate outreach to district offices and local and regional officials. The function also monitors legislation that affects the Authority, develops analysis and testifies on the Authority's behalf during hearings. Where applicable, the function also assists with outreach efforts and responses to media and public inquiries. The Authority's legislation function is performed by Authority employees.

## Stakeholder Outreach

The Authority's stakeholder outreach function, in collaboration with the Regional Directors and staff, is responsible for developing a statewide strategic stakeholder and community engagement plan to meet the current needs of each High-Speed Rail Project section, and to coordinate outreach with statewide organizations and key leaders in business, labor, environmental justice and advocacy, education, healthcare and other sectors. This function focuses on working with the Authority's Communications function to develop public materials and information on key High-Speed Rail Program activities (e.g., business plan), and working with other segment teams to ensure a consistent and coordinated approach to regional outreach. This function includes tasks to continue to regularly inform and educate the public on the process while developing strong stakeholder contacts and connections in the local communities. The Authority's stakeholder outreach function is performed by Authority employees with support from contract staff overseen by Authority employees.

## Small Business

The Authority's small business function is responsible for the development and implementation of a statewide Small Business Outreach Program to achieve the Authority's policies and goals for small business participation in the High-Speed Rail Program. The function provides direction to small businesses that would like to contract or subcontract with the Authority's prime contractors, develops strategies to attract participation, identifies and implements best practices and policies from partner agencies in order to achieve program goals of 30% Small Business (SB), 10% Disabled Business Enterprises (DBE), and 3% Disabled Veteran Business Enterprises (DVBE) participation. The External Affairs Division develops a database of interested, certified and participating small business, coordinates and facilitates activities of the Authority's Business Advisory Council (BAC), and coordinates efforts with the Regional Directors. The Authority's small business function is performed by Authority employees with support from contract staff overseen by Authority employees.

## Financial Management

Constructing and operating California's first high-speed rail system represents a significant financial endeavor for the Authority and its public/private partners. Accordingly, the Authority has a critical responsibility for prudent financial management that requires a Financial Management function. As careful stewards of state, federal, and other funds, the Authority's Financial Management function includes budget, accounting, grants, contracts, and procurement. Authority staff oversees and manages the overall Financial Management function.

## Budget

The Authority's budget function conducts financial forecasting for current and future years to project costs and needed funding. Authority staff is responsible for preparing and submitting the Authority's proposed budget change proposals to DOF.

## Accounting

The Authority's accounting function is responsible for maintaining the Authority's record of its financial transactions, monitoring account balances, managing cash flow, preparing and posting regular financial statements, and reporting on the Authority's financial results. The Authority presently has internal staff performing the accounting activities.

## Grants

The Authority's grants function is responsible for overall management, oversight, and monitoring of state and federal awards received. This function requires accountability and transparency, and must provide a means of tracking and monitoring High-Speed Rail Program goals, accomplishments, and compliance with grant requirements. The grants function also interfaces with the Grantor to transfer funds and report on progress. The Authority presently has both internal staff and contract staff performing grants activities.

## Contracts and Procurement

The contracts and procurement function is responsible for purchasing goods and services required by the Authority, managing contracts, and ensuring that the Authority complies with state and federal procurement guidelines. The Authority's contracts and procurement function develops requests for proposals and other procurement documentation, reviews proposals, and selects vendors/services in accordance with relevant guidelines. Authority staff works with DGS on all procurements.

## Administration

As with any organization, the Authority requires administrative functions to support the organization's broader mission. The Authority's administration function is designed with performance and management of business responsibilities in mind. Thus, it includes key services such as human resources (HR), information technology (IT), as well as facilities and business services (BSO).

## Human Resources

The HR function is responsible for acquiring, developing, and sustaining the appropriate level of internal staff required to support the Authority. This function includes identifying resource needs, developing future staff projections, navigating California human resources-related policies, procedures, and regulations, defining job duties, recruiting and selecting candidates, facilitating staff development and training, managing the employee evaluation process, managing employee benefit information, and performing other HR processes. The Authority's HR function is staffed by Authority employees, who work in coordination with other state agencies (e.g., Caltrans, Department of Human Resources, Public Employees' Retirement System, State Controller's Office (SCO), and DOF).

## Information Technology

The IT function is responsible for providing needed computer and technology resources to Authority staff. This function includes desktop support, network services, website development and support, technical systems (e.g., e-mail, file sharing and collaboration environments), telephone support, and other software and hardware services. The Authority's IT function is staffed by Authority employees, who work with and oversee interagency agreements with other state agencies that provide technical services, as well as contract staff.

## Business Services

The BSO function is responsible for property acquisition, contract administration, financial record keeping, office layout, purchasing, records management, and building management as it relates to daily activities. This function develops process and procedures for the organization to manage the facilities and purchasing of materials, supplies, and equipment. Record retention is vital for the High-Speed Rail Program, and the Business Services section provides information on new laws and regulations regarding monitoring of records storage and advising how to protect vital records, which includes solving forms and records management problems and ensuring compliance with applicable laws.

## Legal

The Legal function is responsible for providing the Authority's Board, Chief Executive Officer, and other executive management with required in-house legal services. The Legal function is directed by the Authority's Chief Counsel, who coordinates with the AG's Office as necessary. This function includes contract preparation and review, litigation support and representation, legislative review and technical support, regulatory support (e.g., environmental impact review), and other services as requested. The Authority's Legal function is staffed by Authority employees who work with the AG's Office. Authority legal staff also coordinate with and oversee contract staff that perform a limited number of legal services as part of the Program Delivery function. In matters of litigation, the Authority is represented by the AG's Office, and also may engage outside legal counsel, as needed. The Authority also must obtain the review and approval of the AG's Office prior to engaging outside legal counsel for litigation work. When the Authority's legal staff do not have the expertise or capacity to provide legal services such as design-build procurements, railroad agreements, franchise agreements, public/private agreements, eminent domain, or other specialized legal services, the Authority contracts with other state entities, such as Caltrans, or private law firms to provide those services.

## Other Agency Support

The Authority uses a range of state agencies to perform administrative and support functions under interagency agreements. This strategy allows the Authority to utilize subject matter experts, controls, and processes that have proven successful in other agencies without recreating them within the Authority, thereby saving time and resources.

The Authority has initiated a new collaborative working group consisting of representatives of the Authority's executive management team and other state agencies, including DGS, DOF, Caltrans, and the AG's Office. Working under the guidance of CalSTA, the Authority and Caltrans are identifying additional opportunities to utilize Caltrans expertise and experience to effectively deliver the program.

Activities supported by other agencies include:

- Legal support – AG's Office
- Real estate acquisition – Caltrans
- Construction oversight – Caltrans
- Construction procurement – Caltrans
- HR processing – Caltrans
- IT services – Department of Technology
- Procurement – DGS

## Private Sector Services

The private sector provides support services in five broad categories:

- Program delivery support for transportation planning, contract management, environmental planning, right of way delivery, project delivery, and system engineering.
- Program and construction oversight for program management, construction management, project controls, and contract management related services.
- Design and construction of segments of the system under design-build contracts.
- Financial assistance for support of commercial planning and transaction advice related to funding.
- Legal support for contracting, litigation, and specialized compliance services.

Private sector activities are performed under contracts with annual workplans and monthly status reporting. All contractors report to one or more Authority management team members and all deliverables are reviewed by Authority staff. By utilizing the private sector, the Authority is able to secure specific expertise when and where needed, adapting to the evolving needs of the program.

## **Rail Delivery Partner**

As a key step in implementing its integrated organizational model, in June 2015, the Authority awarded the Rail Delivery Partner (RDP) contract. This contract brings a team with proven experience in large-scale program management and international high-speed rail project delivery. It also includes support for strategic advice, business planning, continued development and management assistance for the Authority. The RDP contract greatly expanded the focus on program delivery, systems and program integration, operations and maintenance planning and specialized technical expertise. The Authority will continue to provide program oversight and policy direction while the RDP supports the Authority by assuming the responsibility for managing, monitoring and overseeing the delivery of the Program as defined by the Authority.

The RDP contract is for a period of seven years to create stability and ensure accountability for long-term results. The Authority and the RDP negotiate work plans for defined periods with specific scope and resource expectations. As of January 2016, the RDP has 286 positions filled out of a total of 435 planned over the course of the 2016 calendar year.

## **Current Authority Staffing Levels**

As previously noted, the Authority's staffing and management approach has and continues to be focused on maintaining a lean, well-qualified staff comprised of Authority employees, loaned staff made available through interagency agreements, and private sector resources. The Authority's approach has been to bring onboard new staff and resources as those resources are needed to support current and upcoming program phases. Detailed information on the Authority's management approach for the Construction Phase is contained in the three previously issued Staff Management Reports available on the Authority's website.

The Authority has successfully implemented this organizational structure, and as a result, has become a more nimble and responsive government organization. However, the reliance on the private sector for construction and operation of the system means that the Authority has a relatively small number of State staff for program delivery as compared to other State agencies that are responsible for delivering similarly sized programs.

A key reason behind the Legislature's approach and the Authority's implementation of the model is that the Authority is a "single-purpose" agency. That is, unlike other State agencies, it does not have an ongoing stream of projects that justify the creation of large, ongoing teams

of State personnel to carry out responsibilities over extended periods. For example, once the environmental approvals for the high-speed rail program are secured, the staff responsible for those approvals will no longer be needed; once design and construction are completed, the specialized staff tied to those functions will no longer be needed.

This model requires a compliment of highly qualified senior executive managers with large project development expertise and a commitment to public service to ensure proper oversight and decision-making roles are effectively filled.

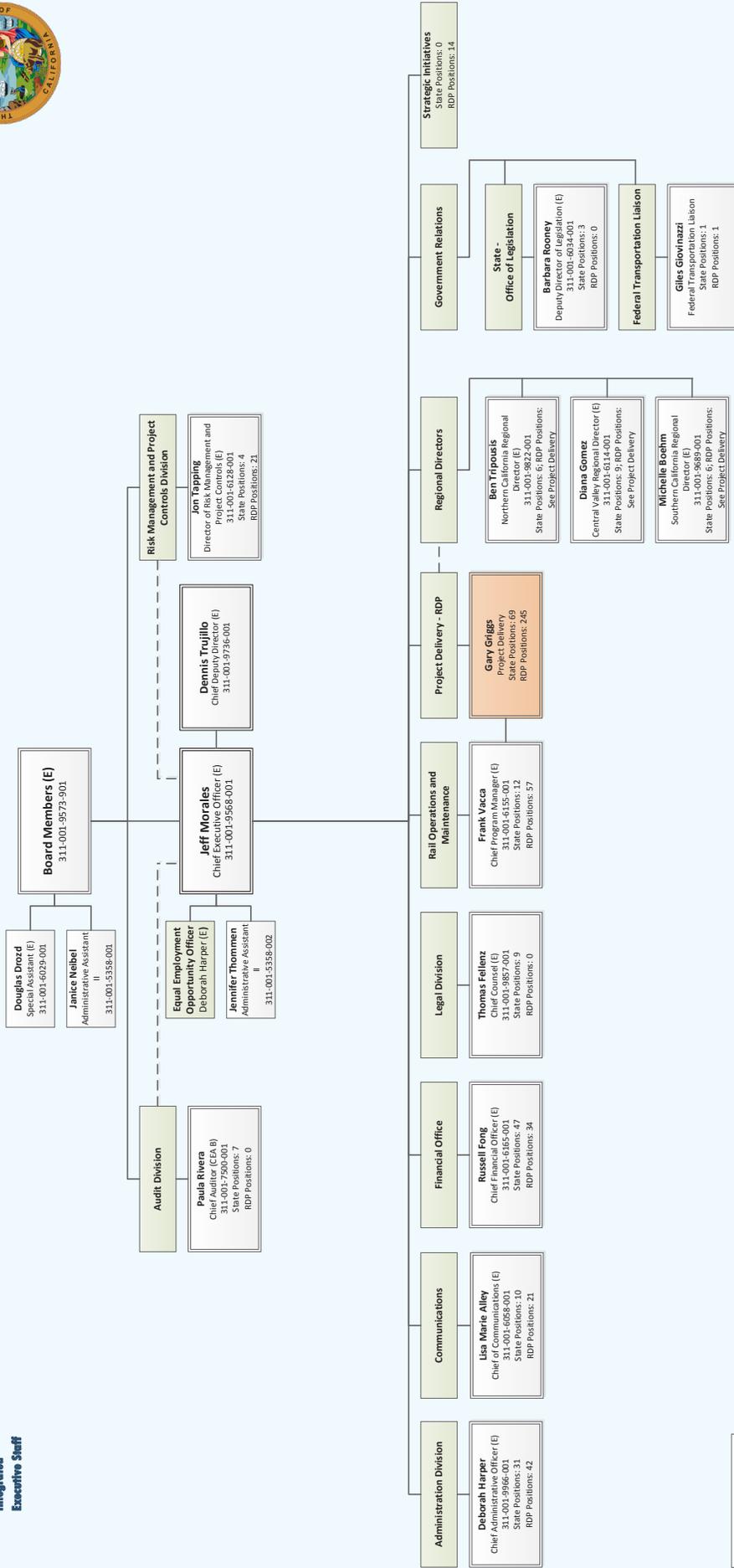
As of January 2016, the Authority currently employs 184 state employees out of a total of 219 authorized positions. The Authority is in the process of filling the vacant positions.

## **Organizational Chart**

As previously noted, the Authority employs a variety of resources to support its needs including internal employees, staff loaned to the Authority from other state agencies, services provided by other state agencies, and contract staff from private-sector service providers. Given the reliance on support from external entities, it is critical that the Authority is staffed internally with highly qualified individuals who have deep expertise in their designated role and discipline, so that they can appropriately manage and oversee personnel from other sources.

In a sense, the Authority has designed its internal organization in a manner that optimizes its ability to oversee resources that are provided by others – both in the public sector and private sector. As illustrated in Exhibit 2, the Authority’s structure supports the functions previously described by providing experienced executives, managers, and staff in each of the functional areas. Positions filled by interagency agreements do not appear in Exhibit 2.

# EXHIBIT 2: INTEGRATED ORGANIZATIONAL CHART



HSRA Filled Positions: 184  
 HSRA Vacant Positions: 35  
 HSRA Total Positions: 219  
 HSRA Blanket Positions: 17  
 RDP Filled Positions: 286  
 RDP Vacant Positions: 149  
 RDP Total Positions: 436

Revised: 1/28/16

Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

## STAFFING CHANGES AND ALLOCATIONS

The Authority has strategically grown its staff and organizational structure to support the business plan and intended project phases. In past years, the Authority has grown incrementally year-over-year to support the organization's initial start-up and planning tasks. In FY 13/14, the Authority experienced a more significant increase in staff to support the start of Construction Package (CP) 1 and Construction Packages 2-3 (CP 2-3). Specifically, new positions were authorized in the areas of environmental planning, right of way, transportation planning, project management, contract compliance, and construction management.

In FY 2014/15, provisional language for 35 positions was approved by the Legislature in the 2014/15 budget. FY 2015/16 included 10 positions to provide additional legal, project management and oversight of the high-speed rail project construction packages and assist with the planning, development and execution of upcoming phases. Finally, in FY 2016/17, the Governor's budget proposes to establish six positions in the Audit Division to perform contract and performance audits that will assist the Authority in carrying out the project in a sound, economical, and efficient manner.

Future years are anticipated to have minor increases to support future construction packages as the Authority continues to follow its staffing approach by maintaining a lean, well-qualified staff that provides vital oversight for the construction phases of the High-Speed Rail Program. This approach is illustrated in Exhibit 3 below.

EXHIBIT 3: CHANGES IN AUTHORITY STAFFING AND ALLOCATIONS						
	FY 2010/11	FY 2011/12	FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16
Budgeted Positions	41.5	54	69	174	209	219
% Change	-	30.1%	27.8%	152.1%	20.1%	4.7%

# **BEST PRACTICE COMPARISONS OF LARGE PROJECTS OF COMPARABLE SIZE AND SCALE**

In order to confirm the Authority's staffing model and staffing levels, this report includes international and national examples of large transportation infrastructure programs. Because each program has unique governance arrangements and staffing requirements, it is not possible to make exact comparisons, however there are certain criteria that were used to determine the size and composition of comparable programs:

- **Legacy:** The Authority is a relatively new government organization and as such, is streamlined to match exacting program requirements by hiring only the staff to fill the defined program requirements.
- **Procurement Strategy:** The Authority is contracting out a majority of the work including considering innovative public-private partnership (P3) procurement strategies. This allows significant activity and responsibility to be transferred away from the public agency, thereby reducing the Authority staffing requirement, while retaining accountability.
- **Agility:** The majority of the activities of the program such as planning, environmental, design, construction and operations and maintenance will fluctuate over time or have limited life spans, so these activities are contracted out to other organizations, allowing for flexible and agile staffing specific to the work requirements.
- **Operations and Maintenance:** The Authority will use a private sector partner to take responsibility for the system's operations and maintenance. This partner will be engaged as soon as possible to inform operational facing decisions required during the design and construction phases. By using such an operator in advance of passenger operations, the majority of the staffing will be carried by the operator, with policy decisions and accountability remaining with the Authority.
- **Program Funding:** The high-speed rail program is staffed appropriately for management of available funds, but the agility of the staffing plan enables the Authority to respond quickly as additional funds become available.

Using the criteria above, four international high-speed rail projects and two other large transportation programs were evaluated for comparison. To make a meaningful comparison, the metric of staffing levels per one billion dollars of capital expenditure was used. Staffing levels for these purposes is defined as program staff, and does not include the employees of the construction contractor or subcontractors. Efforts were made to use data from a similar point in the delivery of each program.

For this comparison, the Authority current staffing and funding levels have been used. The approximate staffing level of 643 (219 Authority staff plus 424 consultant staff) and committed funding level of \$13 billion resulting in approximately 49 staff per one billion dollars.

It is important to note that this metric, employees per billion dollars, is not one that we or the entities presented for comparison use to establish staffing levels. It is presented as a means of comparison and analysis.

The following comparisons demonstrates the Authority's staffing levels are within a reasonable range of similar programs around the world and is making effective use of innovation and best practices from industry and government experiences. Although not presented here for specific comparison, it is worth noting that some major federal government programs are also managed and delivered through an integrated organizational structure, with government employees working alongside contract employees. Key examples are the National Aeronautics and Space Administration (NASA) and the Federal Emergency Management Agency (FEMA). From its inception, NASA has employed such a model, with private-sector engineers and technical experts forming part of the core team to accomplish the agency's mission. Similarly, FEMA utilizes contract employees to carry out key functions in response to disasters.

## High-Speed Rail Programs

In terms of comparison with the Authority's current staffing of 49 staff per one billion dollars of funding the following international high-speed rail programs have a funding range of between 20 and 60 staff per one billion dollars of funding.

The Taiwan high-speed rail project was a brand new infrastructure project comprising of 211 miles of electrified high-speed rail with seven new stations. It took nine years to build, opening in 2007, at a cost of \$18 billion. It is now carrying approximately 50 million passengers per year. The project was initiated as a green field program, and as public-private partnership from day one. This project delivery structure allowed for the government program to be consistent with the volume of activity, responsibility of the authority and involvement of private sector. The government program selected and approved the alignment, with the intention of, at the earliest opportunity handing over responsibility for designing, constructing and operating the system, in its entirety, to a private sector consortium – The Taiwan High Speed Rail Consortium.



In France, the Tours/Bordeaux high-speed rail line is a new infrastructure project comprising of 188 miles of electrified high-speed rail and four new stations. It is estimated that it will take eight years to build at a projected cost of \$11 billion. It will increase ridership on the French high-speed rail network by over five million passengers per year. This project is being delivered through a public-private partnership that involves a private sector consortium being awarded a 50-year concession to design, build, finance and maintain the new infrastructure. The French national operator, SNCF, will operate rail services over the new line.



The High Speed One (HS1) program in the United Kingdom (UK) is a new infrastructure project comprising of 68 miles of electrified high-speed rail, three new stations, and an extensive rebuild of the Central London terminus. It was opened in two phases, 2003 and 2007. It took eight years to build at a cost of \$10.8 billion. This project was originally structured as a public-private partnership. During the construction, and first years of operation the project was taken back into public ownership, restructured, and then subject to another procurement exercise. Today the UK Government retains ownership of the asset but has sold the rights to operate the infrastructure to an infrastructure company (HS1) and independent train operators paying an access fee to run trains on the infrastructure. There is currently a mix of international high-speed rail services, domestic high-speed rail services, and freight operators on the route.



The High Speed Two (HS2) in the UK will be the country's second high-speed rail line, with phase 1 to be a new alignment of 100 miles of electrified high-speed rail line from London to Birmingham, with a second phase planned to the north of England. The first phase is estimated to be complete by 2026. This project is to be fully funded by government funding and is overseen by a newly created public entity (HS2 Ltd) that has received a large number of transferred staff from other government agencies. HS2 Ltd will award contracts for the design and construction of the line, and will then likely award an operations and maintenance contract.



## Major Transportation Projects

A comparison was also made with non-high-speed rail major programs. In terms of comparison with Authority current staffing of 49 staff per one billion dollars of funding, these major transportation projects have a funding range of between 15 and 90 staff per one billion dollars of funding.

The Crossrail project in London, UK, involves 100 km of conventional track connecting to 30 existing stations and building ten new stations with a budget of \$22.4 billion. It will increase central London's rail capacity by 10%, the largest increase since World War II. This project commenced in 2009 and is scheduled to begin service in late 2018. It will carry an estimated 200 million passengers annually. This project is a highly complex, tunneled project, delivered by the public sector. Ownership remains with the public sector, with a private sector operator awarded a concession to operate the new service.



The Louisiana Department of Transportation and Development's (DOTD) Transportation Infrastructure Model for Economic Development (TIMED) Program delivered the largest infrastructure program in the history of the State of Louisiana. Valued at \$5 billion (2013), the program resulted in more than 500 miles of new and widened roads, port improvements, airport upgrades, and two large bridge projects spanning the Mississippi River. To expedite the program DOTD selected a private sector consortium to manage the process of accelerating construction and to provide support staff in program controls, financial management, public outreach and engineering. "Bond-financed" funding allowed projects being delivered 20 years sooner than the original 2031 completion date, resulting in significant savings in construction cost from future inflation.





The South Carolina Department of Transportation (SCDOT) operated a statewide program from 1999 to 2008 to accelerate the implementation of 200 highway improvement projects from seven to 27 years. The program was worth over \$5 billion (2008). SCDOT entered into partnerships with two private construction and resource management (CRM) firms employing approximately 500 staff to undertake strategic planning and financial management and coordinate design and construction activities, all without augmenting the size of the state agency. The program included interstate widening projects, interchange improvements, the 16-mile, four-lane Southern Connector, and the Cooper River Bridge Replacement, the single largest project undertaken in SCDOT's history. The program was delivered through a P3.