CALIFORNIA
High-Speed Rail Authority

Project Update Report to the California State Legislature

March 1, 2015

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CALIFORNIA High-Speed Rail Authority

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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's high-speed rail system will connect the mega-regions of the state, contribute to economic development and a cleaner environment, create jobs and preserve agricultural and protected lands. By 2029, the system will run from San Francisco to the Los Angeles Basin in under three hours and will be capable of speeds of over 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 state and regional partners to implement a statewide rail modernization program that will invest billions of dollars in urban, commuter, and intercity rail systems to meet the state's 21st century transportation needs.

Statutory Requirements for the Project Update Report

In July 2012, the California Legislature approved – and Governor Brown signed into law – Senate Bill (SB) 1029 (Budget Act of 2012) which appropriated almost $8 billion in federal and state funds to construct the first high-speed rail segments in the Central Valley and fund 15 bookend and connectivity projects throughout California. The bill also put into place extensive reporting requirements to ensure legislative oversight over the progress of the project. The requirements of this report, the Authority's biannual Project Update Report, are as follows:

On or before March 1 and November 15 of each year for which funding appropriated in this item is encumbered, the High-Speed Rail Authority shall provide a Project Update Report approved, as consistent with the criteria in this provision, by the Secretary of Business, Transportation and Housing to the budget committees and the appropriate policy committees of both houses of the Legislature on the development and implementation of intercity high-speed train service pursuant to Section 185030 of the Public Utilities Code. The report, at a minimum, shall include a programwide summary, as well as details by project segment, with all information necessary to clearly describe the status of the project, including, but not limited to, all of the following:

(a) A summary describing the overall progress of the project.

(b) The baseline budget for all project phase costs, by segment or contract, beginning with the California High-Speed Rail Program Revised 2012 Business Plan.

(c) The current and projected budget, by segment or contract, for all project phase costs.

(d) Expenditures to date, by segment or contract, for all project phase costs.

(e) A comparison of the current and projected work schedule and the baseline schedule contained in the California High-Speed Rail Program Revised 2012 Business Plan.

(f) A summary of milestones achieved during the prior year and milestones expected to be reached in the coming year.

(g) Any issues identified during the prior year and actions taken to address those issues.

(h) A thorough discussion of various risks to the project and steps taken to mitigate those risks.

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Project Update By Section

STATEWIDE

SB 1029 PROJECT UPDATE REPORT

Section (a)

A summary describing the overall progress of the project.

On January 6, 2015, the California High-Speed Rail Authority (Authority), Governor Brown, federal, state and local officials, stakeholders, students and workers came together to celebrate the high-speed rail program's official groundbreaking in downtown Fresno. The event highlighted the work that is already underway in the Central Valley on Construction Package 1 (CP 1), and underscored the Authority's commitment to advancing the program on multiple project sections concurrently in order to deliver statewide mobility and environmental benefits sooner.

A press conference prior to the groundbreaking was attended by over 60 media outlets from across the state and the nation who came out to visit the site of Fresno's future high-speed rail station, and to get an update from the Authority's Central Valley staff on the program's progress to date. One of the most visible signs of progress, the demolition of the abandoned Del Monte plant, was highlighted on a brief media tour. The plant, which had been vacant for years and was recently damaged by fire, was a community eyesore and was demolished to make way for the future high-speed rail station. On the tour, the media also had an opportunity to meet two of the local small businesses working on the project: Paul Katchadourian, owner of Katch Environmental Inc., an environmental abatement firm, and certified Disabled Veterans Business Enterprise; and, Jill Kroeker, owner of J. Kroeker, Inc., a woman-owned demolition business. Both Mr. Katchadourian and Ms. Kroeker were able to deliver first-hand accounts of the positive impacts high-speed rail is having on their businesses and their local economy.

In addition to the media, almost a thousand invited guests attended this historic event. The event, which was emceed by Authority Board of Directors (Board) Chair Dan Richard, was opened by Fresno Mayor Ashley Swearengin, one of the Central Valley's most vocal supporters of the project. Other speakers included: Michael Lumio and Bianca Rodriguez, two local college students and members of the #IWillRide campaign; U.S. Representative Jim Costa; Federal Railroad Administrator Joe Szabo; Environmental Protection Agency Administrator Gina McCarthy; and, Robbie Hunter, President of the State Building & Trades Council of California. Governor Brown concluded the historic ceremony with a wide-ranging speech that covered the history of high-speed rail in California, his steadfast support for the program, and the importance of high-speed rail to California's future.

Governor Edmund G. Brown, Jr., flanked by supporters of *the high-speed rail program, delivered the closing remarks at the groundbreaking ceremony held at the site of downtown Fresno's future high-speed rail station on January 6, 2015. The air was electric as he talked with great enthusiasm about his support of the program and urged Californians to think big again. His speech capped off a positive program that featured numerous guest speakers and almost a thousand supporters.*

PHASE I

SAN FRANCISCO TO SAN JOSE

Electrification of the Caltrain corridor, funded in part by $600 million in Proposition 1A (Prop 1A) bond funds from Senate Bill (SB) 1029 (Budget Act of 2012), is proceeding along a path that will provide electrified commuter service as soon as 2020. This electrification project is an integral component of the joint-rail operations required to improve the Caltrain system in the near-term while accommodating the future integration of high-speed rail service along the Peninsula Corridor.

In January 2015, the Peninsula Corridor Joint Powers Board, the entity which owns and operates Caltrain, certified the Final Environmental Impact Report for the electrification project, allowing the agency to move forward with this transformational investment. Once operational, the electrification project will result in annual greenhouse gas (GHG) emissions reductions of approximately 79,000 metric tons of carbon dioxide equivalent (MTCO2e) in 2020 and 189,000 MTCO2e in 2040. The project will also measurably improve the performance, operating efficiency, and capacity of Caltrain's commuter rail service. Caltrain estimates that electrified service will increase ridership and fare revenue while decreasing fuel costs.

Caltrain and the Authority are analyzing comments and recommendations from industry experts that will inform the development of a RFP for the Caltrain EMU trainset that will provide boarding capabilities at both high and low levels. This configuration will allow Caltrain to operate at existing platform levels once electrified service in the Peninsula is underway, yet provide flexibility for ultimate conversion to a common high-level boarding solution. Caltrain expects to release a RFP for the new EMU vehicles in summer 2015.

SB 1029 also appropriated $42 million, which is combined with contributions from Bay Area Rapid Transit District (BART) and the Santa Clara Valley Transportation Authority, for the design, installation, testing, training and warranty for an intelligent network of signals, sensors, train-tracking technology and computer systems on the Caltrain Corridor as part of Caltrain's advanced signaling systems. Construction of this system, more commonly referred to as Positive Train Control, is well underway as required by federal regulation. Once completed, the system will allow trains to travel safely at higher speeds and with greater frequency. Field installation is approximately 75 percent complete and system integration has commenced. The Federal Railroad Administration (FRA) is scheduled to witness the Phase 3 testing of the Positive Train Control system in the second quarter of 2015. Final certification and revenue service of the PTC system is expected by the end of 2015, per the Federal Transit Administration (FTA) mandate.

Construction of the Transbay Terminal Center in downtown San Francisco continues to advance. The Transbay Terminal Center will eventually connect eight counties of the San Francisco Bay Area through 11 transit systems, including: AC Transit, Amtrak, BART, Caltrain, Golden Gate Transit, Greyhound, San Francisco Municipal Transportation Agency, SamTrans, WestCAT Lynx, and Paratransit. It will ultimately serve as the northern California launching hub for the future high-speed rail system from Los Angeles to San Francisco. Construction of the Transbay Terminal Center is expected to be completed by late 2018. The Transbay Terminal Center received $400 million in funding from the federal government's High-Speed Intercity Passenger Rail Program.

Next Steps: Construction on the Transbay Terminal Center's concourse level and structural steel will continue throughout 2015. Foundation piles for the Transbay Terminal Center bus ramp and cable stayed bridge section has commenced and will continue through spring 2015. Once complete, false-work for the new bus bridge ramp is expected to commence.

Planning and supplemental environmental clearance of the Downtown Extension Project, which will extend the Caltrain corridor 1.3 miles underground from its current terminus at 4th and King streets into the Transbay Terminal Center in downtown San Francisco, will continue to advance.

Authority staff is finalizing a Request for Qualification (RFQ) for environmental and engineering services for this section and is expected to request approval from the Authority Board in the first half of 2015, execution is anticipated by the end of 2015. During this process, staff is accelerating a public outreach plan targeting local jurisdictions along the peninsula corridor. Staff is currently meeting with San Jose and Millbrae officials to develop station area funding agreements.

SAN JOSE TO MERCED

In July 2014, the Authority and the City of Gilroy entered into a station-area funding agreement that initiated the planning process for a future high-speed rail station in downtown Gilroy. The Authority and the City of Gilroy are working together to engage in public outreach meetings aimed at garnering input on various options for the planned station.

The Authority continues to work with the cities of San Jose, Morgan Hill and Gilroy to address questions and concerns related to high-speed rail alignments along the Union Pacific Railroad (UPRR) corridor. The cities of Morgan Hill and Gilroy are in the midst of updating their respective General Plans and are working to include the proposed options for alignments and station locations into those plans.

Next Steps: We will continue to work with local communities and UPRR on proposed service, alignment and station options.

Authority staff is finalizing a RFQ for environmental and engineering services on this project section and is expected to request approval from the Authority Board in first half of 2015, execution is anticipated by the end of 2015. During this process, staff is accelerating a public outreach plan focusing on local jurisdictions.

MERCED TO FRESNO

Work currently underway on CP 1, a 29-mile stretch between Avenue 17 in Madera County and East American Avenue in Fresno County, includes geotechnical investigations to identify soil types, a crucial step in completing structural design work; and, the demolition of existing structures in preparation for the construction of dedicated high-speed rail roadways and bridges. In addition, large diameter pile load tests have been conducted at the Fresno River. In January 2015, the Authority started similar geotechnical investigative work at the San Joaquin River. This work is a precursor to the development of a major river crossing for high-speed trains. The Authority also continues to acquire right-of-way in this section. Crucial to the start of heavy construction, almost one-third of necessary parcels have been delivered to Tutor-Perini/Zachry/Parsons (TPZP), the Authority's design-build contractor for CP 1. To date, approximately 25 buildings have been demolished.

***The Del Monte Plant was the largest structure demolished to** date. This building was over 111,000 square feet and was up to 70 feet at its tallest point – taking up the entire block in downtown Fresno. It was demolished to make way for the first leg of high-speed rail and the future realignment of Golden State Boulevard. Work on the Del Monte Plant started in September 2014 and took several weeks. Approximately 3,600 tons of recyclable material was recovered from this demolition, with the majority of the concrete being crushed down to later be used when building CP 1 structures.*

TPZP is progressing on roadway and bridge design packages by submitting their 60 to 90 percent complete designs on various segments of CP 1. The 60% guideway plans for CP 1 are to be submitted during the next reporting period. TPZP also continues to progress on third-party designs with input from local irrigation, public works departments and other utility providers to relocate utilities. A Construction and Maintenance Agreement with the UPRR was executed in December 2014.

TPZP and the Authority continue to implement the provisions of a Community Benefits Agreement (CBA), including National Targeted Hiring goals and Small Business participation goals. Key goals of the CBA are to create jobs and business opportunities in California and specifically in the Central Valley, which continues to have high unemployment rates. As of December 31, 2014, of the over 26,000 hours of craft construction labor carried out, 80 percent of the workers involved are Targeted Workers and 37 percent are Disadvantaged Workers. Within CP 1, there are currently 40 certified small businesses with active contracts valued at $296 million, with many of these firms based in the Central Valley.

The Authority also continues to partner with local stakeholders to direct potential job seekers to existing job training opportunities for high-speed rail construction work. In June 2014, 22 people completed the first six-week training session of the Building Trades Pre-Apprenticeship Training Program, with 11 of them becoming apprentices. The initial focus of the program is on training operating engineers and laborers, who are in demand for rail construction. The ultimate goal of the program is to train 325 workers in preparation for the first phase of high-speed rail construction. In total, the program will include 13 cohorts – both for pre-apprenticeship and journeyman upgrade – and involve seven trade affiliates. The program is funded with a $1.5 million state grant awarded to workforce investment boards in Fresno, Stanislaus, Kern, Inyo and Mono counties.

The Authority continues to make headway on the acquisition of right-of-way in this project section. First written offers have now been made for all parcels needed for CP 1 A and B, the first 24 miles of CP 1. Crucial to the start of heavy construction, 105 or 28 percent of necessary parcels have been delivered to the DB contractor. The Authority has continued to work with TPZP to identify critical parcels for priority acquisition. Work also continues on parcels where an impasse exists or the project schedule dictates that the Authority obtain Resolutions of Necessity (RONs) to initiate the eminent domain process. The California State Public Works Board (SPWB) has adopted 118 RONs on behalf of the Authority. The Authority cannot begin any eminent domain proceeding until the SPWB adopts a RON that complies with

state law. In addition, the Authority has begun the process of acquiring the 141 parcels needed for CP 1C. As of February 2015, 112 first written offers have been submitted to impacted property owners.

Portions of State Route (SR) 99 located within the CP 1 project area will need to be realigned to accommodate the high-speed rail system between the existing SR-99 and UPRR corridors. The Authority has contracted this work to the California Department of Transportation (Caltrans) and work is underway for property acquisition, with major construction anticipated to begin in spring 2016.

In March 2014, the Authority obtained agency permits from the California Department of Fish and Wildlife (CDFW), State Water Resources Control Board (SWRCB), United States Army Corps of Engineers (USACE), and United States Fish and Wildlife Service (USFWS) needed for project construction between Madera and downtown Fresno. Since then, the Authority has continued working with these agencies to process permit amendments and complete the preparation of a permittee-responsible mitigation plan.

***Even before the bridge at the Fresno River near the** city of Madera begins to take shape, pre-construction, including geo-technical investigations, had been underway since June 2014. Throughout the summer and up to Thanksgiving, the Authority's design-build contractor TPZP conducted a series of tests to help finalize design work to prepare for the actual construction of the bridge anticipated to begin later in 2015.*

In November 2014, the Authority and the U.S. Environmental Protection Agency (USEPA) hosted a press conference to highlight the use of Tier IV construction equipment for demolition and other pre-construction activities for CP 1. Tier IV refers to the most stringent USEPA engine standards for non-road heavy-duty diesel engines. A Tier IV designation is achieved via different methods including the use of clean and efficient exhaust systems, electronically controlled engines, and selective catalytic reductions to significantly reduce the levels of harmful pollutants such as particulate matter and nitrogen oxide. Tier IV construction equipment used for the high-speed rail program will deliver emissions reductions of 50 to 90 percent compared to the average fleet utilized by typical infrastructure projects.

The use of this equipment, combined with the strict construction requirements the Authority has established for its contractors will ensure that, while thousands of Central Valley residents get to work on construction of the high-speed rail system, their families and communities will not suffer negative impacts of construction emissions and other pollutants. One such requirement being implemented is the recycling of 100 percent of viable concrete and steel from construction. As of February 2015, demolition has resulted in the recycling of 8,000 tons of asphalt and concrete. For example, the demolition of the dilapidated Del Monte building in downtown Fresno resulted in approximately 3,600 tons of recyclable material. Eventually, TPZP will operate a crushing yard to be located at the corner of G and Divisadero Streets in Fresno to process recyclable materials. Other materials will be recycled locally, while large steel beams are currently being sent to the Bay Area for recycling.

Also in November 2014, the Authority and the California Department of Conservation (DOC) announced the solicitation of farmland mitigation proposals in Fresno and Madera counties in support of the Authority's CP 1 mitigation requirements. This program is being managed by the DOC and is part of the $20

Disabled Veteran Business Enterprise Moore Twining conducted *procedures known as infiltration testing as part of our permitting agreement with the State Water Quality Control Board. The testing included sensors which measured the rate at which water is absorbed into the ground as part of work on CP 1.*

million the Authority has budgeted for Central Valley farmland mitigation. Initial applications were due in February 2015.

The Authority continues to pursue environmental clearance for a preferred alignment alternative for the Central Valley Wye in the vicinity of Chowchilla and Fairmead. As reported in the November 2014 Project Update Report, three alignment alternatives are under study and include:

- SR-152 (North) to Road 13 Wye
- Avenue 21 to Road 13 Wye
- SR-152 (North) to Road 19 Wye

In January 2015, the Authority hosted community workshops in Chowchilla and Farimead for members of the public to learn about the Central Valley Wye alignments now being evaluated. Over 400 people attended both events, listened to a presentation about the Central Valley Wye environmental review process and timelines, and spoke with right-of-way, engineering and environmental staff. Over 300 comments were received as part of this process.

Technical studies are now being prepared evaluating the three Central Valley Wye alternatives, and the Authority plans to release a Draft Environmental Impact Report/Environmental Impact Study for public review and comment in late 2015. Following public review, the Authority plans to complete its environmental document and select a preferred alignment alternative by the end of 2016.

Next Steps: We will continue construction and related work on CP 1A and CP 1B, and continue pre-construction activities within CP 1C as we move into the start of heavy construction. In the months ahead, construction will begin on a bridge over the Fresno River, the first component of major construction.

In spring 2015, work will commence on the construction of the Broadway track storm drain, resulting in road closures in downtown Fresno. Construction of this storm drain is being carried out in accordance with the Fresno Metropolitan Flood Control District and is part of the overall construction process for CP 1. This will be followed by additional storm and utility work in Fresno.

Also in spring 2015, the Authority, in partnership with the Department of General Services, Caltrans, the U.S. Small Business Administration and other community partners, will host a Spring Procurement Fair to bring government and procurement specialists together with small businesses. This procurement fair will help the Authority meet its commitment to 30 percent small business participation on the high-speed rail program, and will ensure that there are quality workers and businesses on board as construction activities ramp up.

We will also continue to work with business and property owners to mitigate impacts to their properties and ensure relocation processes are as smooth as possible. We will continue to mitigate impacts on important farmland in partnership with the DOC, and the preservation and development of unique habitats through mitigation properties such as the Lazy K Ranch in Madera. We also plan to launch the Authority's statewide urban forestry program in the Central Valley by planting 5,000 trees in the region as part of our commitment to net-zero emissions during construction.

We will also continue to accelerate work on the Central Valley Wye environmental document. This includes working with stakeholders, property owners and our federal partners to move towards the selection of a preferred alternative.

FRESNO TO BAKERSFIELD

Having received the necessary state and federal approvals in summer 2014, the Authority is moving forward with Construction Package 2-3 (CP 2-3). CP 2-3 is an approximately 65-mile construction section that begins at the southern terminus of CP 1, East American Avenue in Fresno, and ends one mile north of the Tulare-Kern County line.

In December 2014, the Authority announced that Dragados/Flatiron/Shimmick, a Joint Venture, presented the apparent best value for the CP 2-3 DB contract with a bid price of $1.2 billion. The identification of Dragados/Flatiron/Shimmick as the apparent best value proposer followed a competitive two-phase bid process designed to obtain the best overall value for the Authority and the State of California. Proposals were evaluated and ranked on 30 percent for technical merit and 70 percent for cost. Factors such as an understanding of the project, schedule, capacity, project approach and safety were part of the technical scoring. Dragados/Flatiron/Shimmick's bid came in under the engineer's estimate of $1.5 – $2.0 billion, and utilized significant savings through Alternative Technical Concepts, a process in contract bidding that allows bidders to provide solutions that promote efficiencies, reduce risks, accelerate project delivery schedules and reduce project costs. In January 2015, the Board unanimously voted to authorize Authority staff to commence negotiations with Dragados/Flatiron/Shimmick and to execute the contract, the final step in the contract award process. The Authority anticipates contract execution and work to be underway in spring 2015. Upon contract execution, Dragados/Flatiron/Shimmick will join ARCADIS, the Project and Construction Manager (PCM) for CP 2-3, to deliver this construction package.

As this process moves forward, the Authority continues certain pre-construction activities in the CP 2-3 project section, while concurrently advancing the acquisition of right-of-way. To date, the Authority has identified 545 parcels as necessary to deliver CP 2-3, of which, 490 of these parcels have now been appraised.

In November 2014, the Authority issued a RFQ for DB services for Construction Package 4 (CP 4) – the next 30 miles of the high-speed rail program from the terminus of CP 2-3 to Poplar Ave. north of the City of Bakersfield. This DB contract is estimated at $400 to $500 million. In December 2014, an Industry Forum for CP 4 was held in the City of Bakersfield and there was significant interest from several parties and small businesses.

In December 2014, the Authority and the City of Bakersfield announced that they had reached an settlement agreement to dismiss the city's California Environmental Quality Act (CEQA) lawsuit. As part of the agreement, the City of Bakersfield will dismiss their current CEQA litigation over the Fresno to Bakersfield Final Environmental Impact Report/Environmental Impact Study, and the Authority will continue to work with the city on moving the program forward in the region. The Authority and the city are also planning to host a series of public workshops to engage the public and affected stakeholders.

In February 2015, the Authority announced that it had also reached a settlement agreement with Coffee-Brimhall LLC, a developer entity that owns land in Bakersfield. This agreement will result in the dismissal of the second of the CEQA lawsuits filed over the Final Environmental Impact Report/Environmental Impact Study for the Fresno to Bakersfield project section.

While the Authority continues to work with its stakeholders and partners through the remaining CEQA lawsuits, the Surface Transportation Board's approval of the project section's environmental document in July 2014 allows the Authority to move forward with construction-related activities within the project section up to 7th Standard Road. Per the December 2014 settlement agreement, the Authority has committed to complete a future environmental document prior to the approval of an alignment through Bakersfield.

Next Steps: The Authority will continue to work to advance the high-speed rail program in the City of Bakersfield, and will continue to work with the remaining CEQA litigants for the Fresno to Bakersfield project section.

The Authority anticipates executing the CP 2-3 DB contract in spring 2015. Once executed, mobilization and pre-construction activities are expected to begin. In the meantime, the Authority will continue to work to obtain permits and right-of-way in the CP 2-3 area. The Authority will also begin an aggressive push for workforce training and small business certification in the region. The DB contractor and the PCM team will also be opening offices in the Central Valley, bringing new economic activity to the region.

The Authority will also continue to push further south within the Fresno to Bakersfield project section by releasing the RFP for DB services for CP 4 later this year. A shortlist of qualified firms is anticipated in spring 2015.

The Authority released an RFP for Habitat Mitigation Services in January 2015. The habitat mitigation services will satisfy environmental approvals and federal and State permit requirements related to habitat for federally and State-listed endangered or threatened wildlife and wetlands and waters of the United States. A pre-bid conference was held in February 2015 and was attended by industry leaders in the field of habitat restoration and preservation and by many small businesses ready to take advantage of the teaming opportunities. With the habitat mitigation services contract in place, anticipated in spring 2015, the federal and state regulatory agencies will have the mitigation assurances needed to issue permits for CP 2-3 and CP 4.

BAKERSFIELD TO PALMDALE

The Bakersfield to Palmdale project section is currently in the second round of the Supplemental Alternatives Analysis phase, which allows for additional evaluation, development and refinement of the

potential alignment alternatives. The resulting proposed changes will be refinements to the conceptual engineering conducted from September 2010 through December 2011, as part of the Preliminary Alternatives Analysis phase, which address concerns from stakeholders, minimize impacts to existing and planned developments, and contain costs. This Supplemental Alternatives Analysis will refine an existing alignment, as well as introduce a new option along Oak Creek, in order to further reduce impacts.

As part of this ongoing process, the Authority is planning to host community open houses in late spring 2015 to provide residents and business owners between Bakersfield and Palmdale an opportunity to learn about the environmental process, as well as the proposed conceptual alignments. Those who will be on hand for these meetings include Authority staff, regional planners and engineers who have developed the conceptual alignments currently being reviewed.

Throughout the study period, the Authority has also conducted stakeholder meetings with numerous federal, state and local entities, including the U.S. Department of Defense, Bureau of Land Management, Kern County, the cities of Rosamond, Tehachapi, Lancaster and Palmdale, local farm bureaus, and land and business owners along the alignments. Coordination with key resources agencies such as USACE, USFWS and the CDFW is also underway.

***Throughout the year, the Authority's Southern** California team, led by Regional Director Michelle Boehm, held a series of meetings throughout the region to inform the public about the upcoming Palmdale to Burbank environmental studies. The latest meetings in December 2014 drew significant community and media interest, with thousands of people attending to get the latest on the project and hear more from engineering, right-of-way agents and other Authority representatives. Community meetings similar to these will continue to be held as the process continues moving forward.*

Next Steps: After conducting more field studies and gathering more public feedback from residents and stakeholders, the Authority will produce a Supplemental Alternatives Analysis and move into the draft environmental process.

PALMDALE TO BURBANK

The newly formed Palmdale to Burbank project section was split from the Palmdale to Los Angeles project section in summer 2014. The approximately 35-to-45-mile long section will connect the Palmdale Transportation Center with Burbank Airport Station. Splitting the Palmdale to Los Angeles section into two environmental documents allows the Authority to accelerate plans in the Palmdale to Burbank project section as environmental and construction approval are obtained.

The Authority hosted a round of public meetings specific to this new project section in December 2014. Almost 1,000 people attended these meetings, where the Authority presented the public with a more detailed look at two proposed corridors. One of the proposed corridor would follow State Route 14 through the communities of Acton/Agua Dulce and Santa Clarita. The other proposed corridor, known as the East Corridor, would travel under the San Gabriel Mountains.

While there has been a great deal of progress made in advancing this project section, the Authority is still in the preliminary stages of conducting environmental studies and has not selected an alignment in

either the SR 14 or the East Corridor. The Authority will conduct a thorough environmental process and will take the public's input into account before ultimately choosing an alignment. The goal is to build the best possible high-speed rail system with the greatest benefits and the fewest impacts to communities, the environment and wildlife.

The Palmdale to Burbank project section is poised to enable high-speed rail connections beyond California. The future high-speed station at the Palmdale Transportation Center would allow passengers to connect to Las Vegas via the XpressWest high-speed rail project and the High Desert Corridor. XpressWest is estimated to carry travelers between the Victorville area and Las Vegas in approximately 80 minutes at speeds up to 150 mph. The High Desert Corridor will include connecting infrastructure between Palmdale and Victorville for the two high-speed rail segments. In October 2014, the Authority issued a RFQ for Regional Consultant Services for the Palmdale to Burbank project section. The regional consultant will provide planning, preliminary engineering, alternatives development, financial and programming analysis, stakeholder coordination, environmental and right-of-way services. After a thorough evaluation of qualified firms, the Authority announced in January 2015 that SENER is the apparent best value proposer. The Authority anticipates Board approval of this contract in spring 2015.

Next Steps: The Authority is currently hosting community working groups with key stakeholders including city councils, businesses and homeowners associations to educate them about where we are in the process and to gather more feedback. The Authority will then host more public meetings in spring 2015. Based on the feedback we receive, the Authority will produce an updated Supplemental Alternative Analysis in spring 2015 and a Draft Environmental Impact Report/Environmental Impact Statement in summer 2016.

BURBANK TO LOS ANGELES

The newly formed Burbank to Los Angeles project section was split from the Palmdale to Los Angeles project section in summer 2014. This approximately 15-mile long section will travel from Burbank Airport Station following the existing rail corridor to Los Angeles Union Station (LAUS) in Downtown Los Angeles.

In October 2014, the Authority issued a RFQ for Regional Consultant Services for the Burbank to Los Angeles and Los Angeles to Anaheim Project Sections. The regional consultant will provide planning, preliminary engineering, alternatives development, financial and programming analysis, stakeholder coordination, environmental and right-of-way services. In January 2015, the Authority announced the apparent best value proposer as STV Group, Inc. In February 2015, the Board approved the contract and staff is working to execute it in the coming weeks.

The Authority continues to advance near-term investments and partnerships to deliver regional mobility projects like the Doran Street Grade Separation and the Southern California Regional Interconnector Project that will materially improve Los Angeles-San Diego-San Luis Obispo (LOSSAN) corridor service for Metrolink, Amtrak and goods movement while paving the way for high-speed rail serve in the future. Combined with financial contributions for the Regional Connector Transit Project, Positive Train Control, and Metrolink Tier IV Locomotive purchase, this full program of projects will improve rail service and reduce GHG emissions by 2020.

Next Steps: The Authority will continue to work with stakeholders and regulatory agencies to determine the best possible alignment with the fewest impacts to communities. The Authority is also coordinating with regional partners to ensure projects, including the Southern California Regional Interconnector Project, LAUS Master Plan and the LA River Revitalization Master Plan, work in conjunction with future high-speed rail routes and stations.

LOS ANGELES TO ANAHEIM

The Anaheim Regional Transportation Intermodal Center (ARTIC) opened on December 13, 2014, and will serve as a transportation hub for Orange County where freeways, bus routes and rail systems, including high-speed rail service converge. ARTIC will house nine different modes of transportation including Metrolink, Amtrak, Orange County Transportation Authority bus, Anaheim Resort Transportation, shuttles, taxis and tour and charter buses and will be a future high-speed rail station. It is also an example of a transit-oriented station that encourages smart growth, where the public can shop and dine all in one place. Authority staff and outreach team members hosted an exhibit booth at ARTIC's grand opening, allowing the public to learn about the high-speed rail program and its future in Orange County.

Having received letters of support from Disney, the Anaheim Ducks, City National Grove of Anaheim, the Orange County Business Council and the Orange County Convention Visitor and Convention Bureau last year, these organizations and the Authority are confident that high-speed rail will boost tourism in Southern California, while bringing tens of thousands of jobs and millions of tax revenue dollars. In addition, high-speed rail will help ease congestion, while providing an efficient and clean mode of transportation from Los Angeles to Anaheim.

The grand opening of the ARTIC was held on *December 13. ARTIC will serve as the future station for high-speed rail service, and will provide links to other existing local and regional systems and bring a whole host of visitors and residents within steps of major attractions in the city of Anaheim and Orange County. On December 8, ARTIC hosted a ribbon cutting ceremony celebrating this accomplishment. Authority Board of Directors Chair Dan Richard was one of the featured speakers during the ceremony, with Authority Board Member Katherine Perez-Estolano, CEO Jeff Morales, and Southern California Regional Director Michelle Boehm also in attendance.*

The Authority is planning to host public meetings in the Los Angeles to Anaheim project section in late spring/early summer 2015 to give the public an update on the project and to provide an opportunity to ask questions.

The Authority continues to meet with the Gateway Cities as it refines its alternatives for this urban rail corridor. Additionally, the Authority continues to work closely with Los Angeles Metropolitan Transportation Authority's LAUS Master Plan team and the LOSSAN Joint Powers Authority. The Authority continues to advance near-term investments and partnerships to deliver regional mobility projects like the Rosecrans/Marquardt and State College Grade Separations and Southern California Regional Interconnector Project that will improve LOSSAN corridor service for Metrolink, Amtrak and goods movement. In particular, the Authority is meeting with the City of Anaheim and Orange County Transportation Authority on agreements to facilitate the funding and implementation of the State College Grade Separation. The Authority aims to finalize these agreements in 2015.

Next Steps: The Authority will continue working with the corridor cities and gather input from the public from our upcoming meetings to further refine our proposed alignment in this corridor. The Authority will continue to advance the funding and implementation of corridor near-term investments.

PHASE II

LOS ANGELES TO SAN DIEGO (VIA THE INLAND EMPIRE)

The Authority meets every other month with regional transportation partners from the four-county Southern California Inland Corridor Group (ICG) to coordinate the high-speed rail program with regional land use planning and transportation plans. The Inland Corridor Group has been essential in fostering integrated regional planning in order to promote synergy among the many systems and agencies along the 167-mile alignment. With input from the Inland Corridor Group, advancement of conceptual engineering and preliminary environmental review activities continue as the Authority addresses stakeholder feedback received on the alignments presented in the Preliminary Alternatives Analysis Report. A draft alignment refinement report has been developed and continues to be updated to reflect most recent coordination efforts. With our Inland Corridor Group partners, the Authority has embarked on planning activities that demonstrate opportunities to invest in rail development along the Los Angeles to San Diego corridor.

Next Steps: The Authority will continue to work with the Inland Corridor Group and other regional stakeholders to complete the alignment refinement report. The team will also be preparing a corridor investment plan for high speed rail as part of the regional rail network.

MERCED TO SACRAMENTO

The Authority continues to engage with stakeholders, coordinate with local agencies and develop engineering in support of project definition for the Merced to Sacramento project section. The Regional Consultant for this section, Precision Civil Engineering, has begun review of the Merced to Sacramento corridor and is completing an outreach plan that will serve as a roadmap for near-term community and stakeholder outreach and further project development. The Central Valley Rail Working Group, along with the San Joaquin Joint Powers Authority, will serve as advisory bodies to the ongoing planning of the corridor.

Authority staff has also engaged with City of Sacramento staff and policymakers, as well as the Sacramento Area Council of Governments, on the development and future planning of the Sacramento Rail yards and downtown station facility. Authority staff will coordinate efforts to complete near-term improvements at the downtown station while planning to accommodate future high-speed rail service to the historic site.

Additionally, the Authority continues to work with the Northern California Rail Partners to identify and prioritize near-term regional rail improvements as part of the Northern California Unified Rail Service. The Authority will continue to explore upgrades to the San Joaquin, Altamont and Capitol Corridor passenger rail lines to improve service and provide connectivity to the future high-speed rail system.

Next Steps: We will continue planning efforts and stakeholder outreach and receive input for setting project priorities.

Financials

BASELINES, CURRENT AND PROJECTED BUDGETS AND EXPENDITURES TO DATE

The 2014 Business Plan included a cost estimate for the Phase I Blended System by implementation phase: Initial Operating Section (IOS), Bay to Basin, and Phase 1 Blended. Costs for these implementation phases are shown in 2013 and year of expenditure dollars (YOE).

PRE-CONSTRUCTION PHASE

Pre-construction expenditures are defined in California Streets and Highways Code Section 2704.08(g), as, "environmental studies, planning, and preliminary engineering activities, and for (1) acquisition of interests in real property and right-of-way and improvement thereof (A) for preservation for high-speed rail uses, (B) to add to third-party improvements to make them compatible with high-speed rail uses, or (C) to avoid or to mitigate incompatible improvements or uses; (2) mitigation of any direct or indirect environmental impacts resulting from the foregoing; and (3) relocation assistance for property owners and occupants who are displaced as a result of the foregoing."

Table 1 shows the current contracts value, projected cost at completion, and expenditures by implementation phase. Table 1 also shows the Regional Consultant contracts that fall within each implementation phase of the high-speed rail project. The initial contracts were awarded between 2006 and 2008; during that timeframe it was assumed that the environmental reviews for all of the Phase 1 sections would be complete by 2014 and Phase 1 of the high-speed rail implemented and operating in 2020.

As shown on the table, two contracts were originally issued as single contracts for larger environmental segments but were subsequently divided:

- Subsequent to issuing the contract for the Sacramento to Fresno section, it was divided into the Merced to Fresno and Merced to Sacramento project sections with both remaining under contract to AECOM.
- Subsequent to issuing the contract for the Fresno to Palmdale project section, it was divided into the Fresno to Bakersfield and Bakersfield to Palmdale sections with both remaining under contract to the URS-HMM-Arup/JV.
- The regional sections that have been re-procured include Merced to Sacramento, Bakersfield to Palmdale, and Los Angeles to San Diego (Precision Civil Engineering, TY Lin and CH2MHill, respectively).

SB 1029 PROJECT UPDATE REPORT

Section (b)

The baseline budget for all project phase costs, by segment or contract, beginning with the California High-Speed Rail Program Revised 2012 Business Plan.

Section (c)

The current and projected budget, by segment or contract, for all project phase costs.

Section (d)

Expenditures to date, by segment or contract, for all project phase costs.

TABLE 1: PRE-CONSTRUCTION PHASE BUDGETS BY CONTRACT						
Section	Contract Start	Board Authorization for Amendment[1]	Current Contract Expiration	Current Contract Value[2]	Projected Cost at Complete	Expenditures Thru December 2014
Program Management (Parsons Brinkerhoff)[3]	06-Nov	13-May	15-Jun	$295	$468	$256
San Francisco - San Jose (HNTB)	Expired	N/A	Expired	$45	$45	$45
SF-SJ Future[4]	N/A	N/A	N/A	TBD	TBD	$0
San Jose - Merced (Parsons Transportation Group)	08-Dec	14-Jun	16-Jun	$73	$76	$64
Merced - Fresno (AECOM)[5]	07-Feb	13-May	15-Jun	$83	$58	$58
Fresno - Bakersfield (URS-HMM-Arup/JV)	07-Feb	13-Apr	15-Jun	$158	$113	$112
Bakersfield - Palmdale (URS-HMM-Arup/JV)[6]	Expired	N/A	Expired	--	$26	$26
Bakersfield - Palmdale (TY Lin)[7]	14-Feb	N/A	19-Jan	$46	$17	$5
Palmdale - Los Angeles (HMM-URS-Arup/JV)[8]	06-Dec	14-Jun	15-Jun	$74	$74	$65
Los Angeles - Anaheim (STV)[9]	06-Dec	14-Apr	15-Mar	$50	$44	$38
Los Angeles - San Diego (HNTB)	Expired	N/A	Expired	$12	$12	$12
Los Angeles - San Diego (CH2M Hill)[7]	14-Feb	N/A	16-Jan	$2	TBD	$0.5
Merced - Sacramento (AECOM)[5]	Expired	N/A	Expired	--	$8	$8
Merced - Sacramento (Precision Civil Engineering)[7]	16-Jan	N/A	16-Jan	$1	TBD	$0.2
Altamont (AECOM) (Under SJRRC direction)[10]	08-Nov	14-Apr	15-Jun	$55	$39	$9
Agency Costs (Estimate)[11]	N/A	N/A	N/A	--	$66	--
Contingency (Estimate)	N/A	N/A	N/A	--	$10	--
TOTAL				$894	**$1056**	**$699**
(Dollars in millions)						

TABLE 2: CONSTRUCTION COST BY SECTION			
Baseline Budgets by Section		**Cost Alignment Estimates (Constant Dollars*)**	**Cost Alignment Estimate (YOE)**
San Francisco - San Jose	2012 Business Plan	$5,699	$8,363
	2014 Business Plan	**$5,813**	**$7,960**
San Jose - Merced	2012 Business Plan	$14,042	$19,757
	2014 Business Plan	**$14,332**	**$18,978**
Merced - Fresno	2012 Business Plan	$5,214	$5,482
	2014 Business Plan	**$5,392**	**$5,972**
Fresno - Bakersfield	2012 Business Plan	$6,705	$7,711
	2014 Business Plan	**$6,927**	**$7,813**
Bakersfield - Palmdale	2012 Business Plan	$8,092	$9,533
	2014 Business Plan	**$8,359**	**$9,418**
Palmdale - Los Angeles	2012 Business Plan	$13,100	$16,704
	2014 Business Plan	**$13,468**	**$16,627**
Los Angeles - Anaheim	2012 Business Plan	$591	$815
	2014 Business Plan	**$603**	**$825**
TOTAL	2012 Business Plan	$53,443	$68,365
	2014 Business Plan	**$54,894**	**$67,593**

*2011 dollars are used for 2012 Business Plan estimates. 2013 dollars are used for 2014 Business Plan estimates.
(Dollars in millions)

The projected costs at completion, included in Table 1, reflect the current forecast to complete, which is subject to change, of the pre-construction phase (as documented in the Authority/FRA grant funding contribution plan) plus all expenditures through June 2014. These values include the current federal and state dollars and pre-date Prop 1A when this work was funded using a mix of Public Transportation Account and Reimbursement funding.

Program Management and Agency Costs (costs associated to partner agencies such as CDFW, USACE, and the USFWS) are allocated across pre-construction and construction funding. These planning activities do not include the cost for the environmental documents required to bring electrification to the high-speed rail alignment (i.e. PG&E, SoCal Edison, etc.).

CONSTRUCTION COST

The 2014 Business Plan included updated cost estimates for each implementation phase of the program presented in both base year 2013 dollars and in YOE dollars. Table 2 provides a further breakdown of the construction cost estimates in YOE dollars from the 2014 Business Plan by project section. Approximately $8.1 billion to $8.2 billion in program wide costs, which were identified in the 2012 Business Plan, and which remain unchanged in the 2014 Business Plan, have been prorated across the project sections. These costs include approximately $4.4 billion for rolling stock, $1.5 billion for program, project and construction management costs, and $2.3 billion in unallocated contingency funds (approximately 3 percent of the overall cost of the project).

TABLE 3: CONSTRUCTION PHASE BUDGETS BY CONTRACT					
Contract	Contract Execution Date	Current Contract Value	Current Contract Value + Total Provisional Sums[12]	Board of Directors Approved Contingency	Expenditures To Date
DB Services for Construction Package 1 (Tutor-Perini/ Zachry/Parsons)	8/16/2013	$969,988,000	$1,029,816,000	$160,000,000	$109,897,211

Table 3 shows the breakdown of costs for the contract awarded to TPZP for CP 1. The contract price for CP 1 is $969,988,000 with additional Authority-controlled provisional sums of $53,000,000 for utility relocation, construction contract work, and unforeseen circumstances, such as the discovery of hazardous materials. Table 3 also shows the $160,000,000 contingency, approved by the Board, which was based on Authority staff's risk-informed contingency assessment reports and recommended contingency estimates and the unit price allowance for hazardous soil remediation. Details on the CP 2-3 DB contract will be reported in the November 15, 2015 Project Update Report, pending execution of the DB contract.

Schedule
Current and Projected

The Authority establishes program and segment schedules based on a number of factors, and incorporates some contingency in anticipation of unforeseeable external factors. The schedules are based on the best available information and represent the Authority's expectations. However, the Authority does not control many factors that can affect the schedule negatively, such as delays due to litigation. Schedules may also be affected by stakeholder input, such as requests for extensions of comment periods beyond statutory/regulatory requirements and requests for analysis of additional alternatives. In addition, schedules rely on completion of third party agreements with cities, counties, private and public utility companies, freight railroads and other parties whose facilities are impacted by the projects. Timelines for completing these agreements are not within the Authority's complete control. Finally, negotiation and completion of federal and state environmental permits needed to proceed to construction can take longer than estimated in the project schedule and can impact construction schedules.

SB 1029 PROJECT UPDATE REPORT

Section (e)

A comparison of the current and projected work schedule and the baseline schedule contained in the California High-Speed Rail Program Revised 2012 Business Plan.

CONSTRUCTION/IMPLEMENTATION SCHEDULE

As detailed earlier in this report, TPZP continues to advance design and construction work on CP 1. With state and federal approvals now in place, the Authority is also moving forward with the delivery of CP 2-3. The Authority anticipates executing the contract for this construction package in spring 2015.

The table below shows the phased implementation schedule adopted by the Authority in the 2014 Business Plan.

ENVIRONMENTAL SCHEDULE

Having obtained construction approval from the Surface Transportation Board in August 2014, the Authority is moving forward to acquire real property and begin construction in the Fresno to Bakersfield project section.

The implementation of the Blended System and integration of the state rail modernization program has resulted in some changes in the environmental schedule in order to accommodate work with strategic stakeholders on the Bookends (the San Francisco Bay Area and Los Angeles Basin) and on Connectivity projects. These extended timelines will allow for additional community outreach and stakeholder input.

TABLE 4: IMPLEMENTATION SCHEDULE

Section	Length (approx)	Endpoints	Service Description	Planning Schedule
Initial Operating Section (IOS)	300 miles	Merced to San Fernando Valley	→ One-seat ride from Merced to San Fernando Valley. → Closes north-south intercity rail gap, connecting Bakersfield and Palmdale and then into Los Angeles Basin. → Begins with construction of up to 130 miles of high-speed rail track and structures in Central Valley. → Private sector operator. → Ridership and revenues sufficient to attract private capital for expansion. → Connects with enhanced regional/local rail for blended operations with common ticketing.	2022
Bay to Basin	410 miles	San Jose and Merced to San Fernando Valley	→ One-seat ride between San Francisco and San Fernando Valley.[13] → Shared use of electrified/upgraded Caltrain corridor between San Jose and San Francisco Transbay Transit Center. → First high-speed rail service to connect the San Francisco Bay Area with the Los Angeles Basin.	2026
Phase 1	520 miles	San Francisco to Los Angeles/ Anaheim	→ One-seat ride between San Francisco and Los Angeles.[13] → Dedicated high-speed rail infrastructure between San Jose and Los Angeles Union Station. → Shared use of electrified/upgraded Caltrain corridor between San Jose and San Francisco Transbay Transit Center. → Upgraded Metrolink corridor from LA to Anaheim.	2028

TABLE 5: PROJECTED MILESTONES FOR ENVIRONMENTAL REVIEW PROCESS/POTENTIAL CONSTRUCTION COMPLETION

Section		Receive Record of Decision	Complete Construction
Merced - Fresno	BASELINE **REVISED**	June 2012 COMPLETED	2018[14]
Fresno - Bakersfield	BASELINE **REVISED**	December 2012 COMPLETED	2018
San Francisco - San Jose[15]	BASELINE **REVISED**	December 2014 2017	2028
San Jose - Merced	BASELINE **REVISED**	December 2013 2017	2026
Bakersfield - Palmdale	BASELINE **REVISED**	February 2014 2017	2021
Palmdale - Burbank[16]	BASELINE **REVISED**	October 2013 2017	2022
Burbank - Los Angeles[16]	BASELINE **REVISED**	October 2013 2017	TBD
Los Angeles - Anaheim	BASELINE **REVISED**	December 2014 2017	TBD
Merced - Sacramento (Phase 2)	BASELINE **REVISED**	TBD TBD	TBD
Los Angeles - San Diego (Phase 2)	BASELINE **REVISED**	TBD TBD	TBD

Milestones Achieved
Since November 2014

SB 1029 PROJECT UPDATE REPORT
Section (f)
A summary of milestones achieved during the prior year and milestones expected to be reached in the coming year.

AUTHORITY AND USEPA HIGHLIGHT GREEN CONSTRUCTION EQUIPMENT

On November 19, 2014, the Authority joined state and local officials, and members of the USEPA to highlight the use of Tier IV construction equipment – including cranes, crawlers and excavators – on demolition, drilling and viaduct work for CP 1.

Tier IV refers to the most stringent USEPA engine standards for non-road heavy duty diesel engines. A Tier IV designation is achieved via different methods such as clean and efficient exhaust systems, electronically controlled engines, and selective catalytic reductions to significantly reduce the levels of harmful pollutants such as particulate matter and nitrogen oxide. Tier IV construction equipment used on the high-speed rail program will deliver emissions reductions of 50 to 90 percent compared to the average fleet utilized by typical infrastructure projects.

The use of this equipment, a key component of the Authority's overall strategy of offsetting GHG emissions and criteria pollutants during construction, will ensure that while thousands of Central Valley residents get to work on construction of the high-speed rail system, their families and communities will not suffer negative environmental and air quality impacts.

AUTHORITY FILLS KEY EXECUTIVE STAFF POSITIONS

The Authority continues to fill key executive positions to oversee the design and construction of the high-speed rail program. This includes the recent addition of Deborah Harper as Chief Administrative Officer, responsible for developing, managing and providing direction and oversight for the performance and business responsibilities for key services that include human resources, information technology, and facilities/business services; and, Boris Lipkin as Deputy Director of Business Analytics and Commercial Implementation, responsible for developing the Authority's Business Plans and associated analyses and forecasts, and the analyzing and developing implementation and procurement approaches.

***From Left to Right: Samir Sheikh, Deputy Air Pollution** Control Officer, San Joaquin Valley Unified Air Pollution Control District, Kate White, Deputy Secretary for Environmental and Housing, California State Transportation Agency, Jeff Morales, CEO, High-Speed Rail Authority and Jared Blumenfeld, Regional Administrator, U.S. EPA Pacific Southwest participated in a media day where the Authority's design-build contractor Tutor-Perini/Zachry/Parsons showcased their brand new Tier 4-rated construction equipment – the cleanest equipment in the nation. In the background, the LIEBHERR LR1160 Crawlers featured are used for construction of structures, viaducts, trenches, overpasses and underpasses.*

AUTHORITY RELEASES REQUEST FOR QUALIFICATION FOR DESIGN-BUILD SERVICES FOR CONSTRUCTION PACKAGE 4

On November 21, 2014, the Authority issued a RFQ for DB services for CP 4. CP 4 is the third major construction package of the high-speed rail program and represents the next phase of construction through the counties of Tulare, Kern and the cities of Wasco and Shafter.

Statement of Qualification are due March 13, 2015. Upon receipt, the Authority will review the applicants and establish a shortlist of the most highly-qualified firms to provide DB services for the project. Firms will be selected based on experience, technical competency, ability to perform and other factors. The qualified firms will then be eligible to submit formal DB proposals later in 2015.

DEPARTMENT OF CONSERVATION SOLICITS HIGH-SPEED RAIL FARMLAND MITIGATION

On November 25, 2014, the California DOC solicited proposals through its California Farmland Conservancy Program to offset farmland loss associated with implementation of the high-speed rail program. This milestone represents the next phase in a partnership between DOC and the Authority, which was borne out of an agreement between the Authority and the agricultural interest in the Central Valley. Through this partnership, DOC will preserve Important Farmland on behalf of the Authority by identifying suitable agricultural land for mitigation of project impacts and buy purchasing agricultural easements from willing sellers. For every acre impact, at least one acre will be preserved in perpetuity.

On December 8, the Authority's Chair Dan Richard, Board Member *Katherine Perez-Estolano, CEO Jeff Morales, and Southern California Regional Director Michelle Boehm attended a special ribbon-cutting ceremony at Anaheim's new multi-modal station called ARTIC. Authority Board of Directors Chair Dan Richard was also one of the featured speakers during the ceremony. The station held an open house on December 12 with activities for members of the public, with well over a thousand people attending.*

AUTHORITY PARTICIPATES IN ARTIC GRAND OPENING

On December 8, 2014, Board Chairman Dan Richard, Board Member Katherine Perez-Estolano, Authority CEO Jeff Morales, and Southern California Regional Director Michelle Boehm participated in the grand opening of ARTIC, the new state-of-the-art transportation hub in Orange County, and future home of a high-speed rail station. That weekend, Authority staff hosted a booth at an open house for the public that drew over 1000 members of the community.

Located between the Honda Center and Angel Stadium of Anaheim, ARTIC offers a number of transportation services including those of the Orange County Transportation Authority, Metrolink, Amtrak, Anaheim Resort Transportation shuttles, taxis, buses, tour and charter buses, and other public/private transportation providers. When high-speed rail arrives in Southern California, passengers will be able to ride from Northern California to ARTIC, and seamlessly board other modes of transportation to make their way to their final destination.

AUTHORITY RELEASES FIRST QUARTER SMALL BUSINESS PARTICIPATION AND JOBS REPORT

On December 10, 2014, the Authority issued its Small Business Participation and Jobs Report for the First Quarter of the Fiscal Year (FY) 14-15. This report is the second in the series of reports launched in 2014 to provide a timely and transparent accounting of jobs and small business participation in the high-speed rail program.

Covering the period of July 1, 2014 through September 30, 2014, the report looked at the 23 prime contractors that logged 328,388 man hours worked, resulting in 632 full-time equivalent jobs. The 23 prime contractors combined have 190 certified small businesses committed to perform work on the high-speed rail program, including 28 Disabled Veterans Business Enterprises and 47 Disadvantaged Business Enterprises. The Authority will continue to issue this report on a quarterly-basis in order to provide a timely and transparent accounting of jobs and small business participating in the program.

AUTHORITY AND UNION PACIFIC RAILROAD FINALIZE AGREEMENTS

In December 2014, the Authority finalized a series of agreements with UPRR for the Fresno to Bakersfield project section of the high-speed rail program. The series of agreements demonstrate the commitment between both parties to work together on design and construction activities of the high-speed rail system in the Fresno to Bakersfield section that are in close proximity to UPRR facilities and operations.

AUTHORITY AND CITY OF BAKERSFIELD REACH SETTLEMENT AGREEMENT

On December 19, 2014, the Authority reached a settlement agreement with the City of Bakersfield, which resulted in the dismissal of CEQA litigation over the Final EIR/EIS for the Fresno to Bakersfield project section. This agreement demonstrates a commitment by both parties to work together to bring high-speed rail service to the region. The Authority and the city are planning to host a series of public workshops to engage the public and affected stakeholders.

AUTHORITY HOSTS OFFICIAL GROUND-BREAKING CEREMONY IN FRESNO

On January 6, 2015, the Authority joined Governor Brown, hundreds of supporters and government, student, community, transportation, business and labor leaders to break ground on the nation's first high-speed rail system. The ceremony included remarks from owners of family-owned steel manufacturers already benefiting from high-speed rail construction. Student leaders from Fresno State and University of California, Merced also explained how high-speed rail is creating new local opportunities.

The event also showcased ground that has already been broken in the Central Valley. The Authority

***At the culmination of the Authority's groundbreaking ceremony at** the future high-speed rail station site in downtown Fresno on January 6, Governor Brown, First Lady Anne Gust Brown, and other dignitaries were invited to sign a ceremonial rail celebrating the high-speed rail program. This rail will be showcased for years to come.*

provided tours of nearby construction activity, including various demolition sites. Other achievements to date include finalization of project designs, ongoing right-of-way purchases, and workforce training and mobilization.

DAN RICHARD AND MICHAEL ROSSI RE-APPOINTED TO BOARD OF DIRECTORS

On January 9, 2015, Governor Brown re-appointed Dan Richard and Michael Rossi to the Board of Directors where they have served since 2011.

Mr. Richard, who has been Board Chair since 2012, has been a principal of Dan Richard Advisors since 2010. He was managing partner and co-founder of Heritage Oak Capital Partners, an infrastructure finance firm, from 2007 to 2009 and was senior vice president of public policy and governmental relations at Pacific Gas and Electric Company from 1997 to 2006. Richard was an elected member of the San Francisco Bay Area Rapid Transit District from 1992 to 2004, where he served twice as president of the Board of Directors. At BART, Richard led efforts to secure $4 billion in capital for system rehabilitation projects, the transit system's expansion to the San Francisco Airport and seismic retrofit programs. Richard was a principal at Morse, Richard, Weisenmiller and Associates from 1986 to 1996, a firm serving the independent power industry and project finance lending community, and was vice president of Independent Power Corporation from 1983 to 1986. He served as deputy legal affairs secretary in the Office of the Governor from 1982 to 1983, where he served as deputy assistant for science and technology from 1978 to 1979. Richard served as an advisor to the chairman at the California Energy Commission from 1978 to 1982 and was assistant to the deputy associate administrator at the National Aeronautics and Space Administration from 1972 to 1978

Mr. Rossi has served as a Senior Advisor for Jobs and Business Development in the Office of the Governor since 2011. He was chairman of GMAC Residential Capital LLC from 2007 to 2008 and an advisor and senior member of the Cerberus Capital Management L.P. operations team from 2005 to 2008. Rossi was chairman and chief executive officer of Aozora Bank from 2005 to 2008, taking it public in November 2006. Rossi was retired from the private sector from 1997 to 2005. He was vice chairman and chief risk officer at the BankAmerica Corporation and chairman of its Fiduciary and Investment Policy Committee from 1993 to 1997. Rossi also served as BankAmerica's chief credit officer, senior credit officer of the World Banking Group and held several executive positions, including running BankAmerica's Commercial Banking, Global Private Bank, Asia, Latin America, Commercial Real Estate, Corporate Real Estate, Personal and Corporate Trust and Cash Management divisions. Rossi is a senior advisor to the San Francisco 49ers and a member of the Shorenstein Properties LLC Advisory Board, the Court Appointed Special Advocates of Monterey County, Special Olympics Committee of Northern California and the Claremont Graduate University Board of Trustees.

AUTHORITY BOARD OF DIRECTORS AWARDS CONTRACT FOR DESIGN-BUILD SERVICES FOR CONSTRUCTION PACKAGE 2-3

On December 11, 2014, the Board identified Dragados/Flatiron/Shimmick as the apparent best value proposer for the DB services contract for CP 2-3. CP 2-3 represents the continuation of construction of the high-speed rail program to the south. CP 2-3 extends approximately 65 miles from the terminus of CP 1 at East American Avenue in Fresno to one mile north of the Kern-Tulare County line. CP 2-3 includes

approximately 36 grade separations in the counties of Fresno, Tulare and Kings, including viaducts, underpasses and overpasses.

The identification of the apparent best value proposer followed a competitive two-phase bid process designed to obtain the best overall value for the Authority and the State of California. Proposals were evaluated and ranked on 30 percent for technical merit and 70 percent for cost. Factors such as understanding of the project, schedule, capacity, project approach and safety were part of the technical scoring. The total contract amount of $1,365,335,890 for this construction package is consistent with the cost projections, and is below the engineer's estimate of $1.5 – $2.0 billion.

On January 13, 2015, the Authority Board of Directors voted unanimously to move forward with the awarding of the contract and to delegate authority to CEO Jeff Morales to negotiate the final terms and execute the contract. The execution is anticipated for spring 2015.

AUTHORITY ISSUES REQUEST FOR PROPOSALS FOR FRESNO TO BAKERSFIELD HABITAT MITIGATION SERVICES

On January 16, 2015, the Authority issued a RFP to procure Habitat Mitigation services. The RFP fulfills regulatory requirements that are necessary preconditions for regulatory agencies to issue permits and approvals for CP 2-3 and CP 4. The RFP will meet a number of biological mitigation obligations contained in the Fresno to Bakersfield project section EIR/EIS, and will fulfill the high-priority preservation of wildlife habitat required under the California Endangered Species Act, the federal Endangered Species Act, the California Fish and Game Code for lake and streambed alteration, and the federal Clean Water Act. The Authority hosted a pre-bid for this RFP on February 13, 2015, with notice of intent to award anticipated in spring 2015.

AUTHORITY HOST COMMUNITY MEETINGS ON CENTRAL VALLEY WYE

On January 20 and 21, the Authority hosted two open houses in the city of Chowchilla and the community of Fairmead, respectively, to educate impacted communities about the proposed alignment alternatives currently being evaluated , and to discuss next steps for the Central Valley Wye. The Central Valley Wye is located near Chowchilla and proposes to serve as a junction for the high-speed rail system to head West to San Francisco, North to Sacramento and South to Fresno and the Los Angeles Basin. It will include approximately 50 miles of track running in the three legs of the Central Valley Wye. These events provided community members with a forum to ask questions and provide comments about alignment alternatives that will be studied as part of a draft Merced to Fresno high-speed rail project supplemental environmental document.

At the meetings, members of the public had a chance to view a presentation by the Central Valley Regional Director and the Authority's Director of Real Property and to speak with Authority staff on a wide range of topics, includingenvironmental, right-of-way, and engineering. Additional commu-

In late January, the Authority hosted *community meetings in Chowchilla and Fairmead to meet with local residents and get them up to speed with the latest on the selection of the Central Valley Wye – a section of the project where trains coming from the south will either branch off west to the Bay Area or east to Sacramento. Central Valley Regional Director Diana Gomez and her team were on hand to address questions regarding the timeline for environmental study, right-of-way, and various other topics. These type of community meetings will continue throughout 2015 as the eventual selection of the preferred Wye alternative moves forward.*

nity meetings will take place later in the year and the Central Valley Regional staff will continue to meet with the stakeholders and any potentially impacted landowners.

AUTHORITY RELEASES DRAFT REQUEST FOR PROPOSALS FOR TRAINSETS AND MAINTENANCE FACILITIES

The Authority released a Request for Expressions of Interest (REOI) regarding the trainsets and maintenance facilities procurement in October of 2014. Nine leading international firms submitted Expressions of Interest (EOI) and have been in contact with the Authority regarding specifications for the Draft RFP.

On January 30, 2015, the Authority continued this process by releasing a Draft Request for Proposals (RFP) for Trainsets and Maintenance Facilities – one heavy maintenance facility and three light maintenance facilities – to solicit the industry's perspective and feedback on the forthcoming Tier III Trainsets RFP.

The Authority's initial procurement base order is for 16 trainsets with an option for an additional procurement of up to 95 trainsets. The Authority's trainset procurement contract calls for trainsets that can sustain speeds over 200 miles per hour with a minimum of 450 seats.

The eventual manufacturing of trainsets and the establishment of maintenance facilities are expected to produce up to 2,500 jobs tied to the maintenance facility and other industries associated with high-speed rail. This procurement would also increase economic benefits and facilitate the possible development of a new high-speed rail industry in California.

Comments on the Draft RFP for Tier III Trainsets were due back to the Authority on February 24, 2015. The Authority is inviting prime members of teams who submitted EOIs to participate in one-on-one meetings. A RFP is expected to be released in 2015, with the selection of a trainset manufacturer by 2016.

AUTHORITY RELEASES REQUEST FOR QUALIFICATION FOR RAIL DELIVERY PARTNER

Marking the high-speed rail program's transitions from preliminary design and planning to program delivery, the Authority issued a RFQ on January 30, 2015 for a Rail Delivery Partner.

Services sought by the Authority would continue to include support for strategic advice, business planning, continued development and management assistance for the Authority. Additional areas to be added to the consulting contract would greatly expand the focus on program delivery, systems and project integration, and specialized technical expertise. The transition to Rail Delivery Partner services enhances accountability for program delivery and project execution while also focusing on future high-speed rail related needs with expanded contract capabilities. The Authority would continue to have oversight and ultimate responsibility for the high-speed rail program.

Firms will have until March 23, 2015 to submit their Statement of Qualification. The Authority will review these applications and establish a shortlist for interviews of the most highly-qualified firms to provide Rail Delivery Partner services. Firms will be selected based on several criteria including past performance, key personnel and organizational structure, delivery approach, understanding of the project, and innovative ideas to deliver high-speed rail in California cost-effectively and more quickly. The

Authority anticipates making a Recommendation of Award to the Board in summer 2015 and beginning the transition from the current Project Management Team consultant services to the Rail Delivery Partner later in 2015.

AUTHORITY RELEASES ECONOMIC STUDY ON PROGRAM'S IMPACT ON CENTRAL VALLEY

In February 2015, the Authority released an independent report entitled "California High-Speed Rail and the Central Valley Economy." The report, produced by Oliviera Advisory Services in association with Parson Brinckerhoff , provides an on-the-ground analysis of the economic conditions, challenges and opportunities in the Central Valley and the potential transformative effect of the high-speed rail program. The report was designed to establish a dialogue with organizations working to advance economic development in the Central Valley and explore how high-speed rail could support those objectives. To that end, it identifies ways for the Authority to engage and collaborate with those organizations and other California stakeholders.

AUTHORITY AWARDS REGIONAL CONSULTANT CONTRACT FOR BURBANK TO LOS ANGELES AND LOS ANGELES TO ANAHEIM PROJECT SECTIONS

As part of the effort to accelerate work on the high-speed rail program in Southern California, the Authority announced the award of the Regional Consultant contract for the Burbank to Los Angeles and Los Angeles to Anaheim project sections for an amount not to exceed $51 million in February 2015.

The RFQ was released on October 20, 2014, with a pre-bid conference held in Los Angeles on October 28. Statements of qualifications were submitted on December 5, 2014. The selected firm will provide planning, preliminary engineering, alternatives development, financial and programming analysis, stakeholder coordination, environmental, and right-of-way services. The contract includes the Authority's adopted 30 percent goal for Small Business and Disadvantaged Business participation.

AUTHORITY AND COFFEE-BRIMHALL LLC REACH SETTLEMENT AGREEMENT

In February 2015, the Authority announced that it had reached a settlement agreement with Coffee-Brimhall LLC, a developer entity that owns land in Bakersfield, based on certain commitments by each party. This agreement will result in the dismissal of the second of the CEQA lawsuits filed over the Final Environmental Impact Report/Environmental Impact Study for the Fresno to Bakersfield project section. This second agreement demonstrates the Authority's commitment to continue working with stakeholders to resolve issues and move the high-speed rail program forward.

ONGOING APPROPRIATION OF CAP AND TRADE AUCTION OPENS NEW POSSIBILITIES FOR HIGH-SPEED RAIL PROGRAM

The appropriation of 25 percent of all future Cap and Trade auction proceeds to the high-speed rail program, made possible by SB 862 (Budget Act of 2014), has been a game-changer for the Authority.

While helping to accelerate the program in Southern California and allowing the Authority to continue to move forward with connectivity and bookend projects that will deliver environmental and mobility benefits to communities across the state, the appropriation has also dramatically increased the financing options available to the Authority. As a state entity, the Authority is evaluating potential options to best serve the interests of the State of California.

FUTURE MILESTONES

USE OF QUICKMAP

Starting in spring 2015, the Authority, in partnership with Caltrans, will start to utilize theQuickMap system to alert public and public safety officials of construction-related roadway impacts associated with high-speed rail construction. QuickMap, a Caltrans web-based program that launched in 2011, allows drivers to plan ahead and reach their destinations faster by providing them with real-time traffic and travel information. QuickMap visitors can also monitor traffic congestion, California Highway Patrol incidents, Amber Alerts, travel time information, and lane closures due to highway roadwork.

While the initial focus of the high-speed rail program construction is in the Central Valley, the Authority will continue to use QuickMap for all roadways across the state. Visitors to the online interactive travel map can access nearly 1,000 freeway cameras and more than 700 electronic message signs on highways statewide. Other helpful features of the service include chain control information and statewide freeway displays that are color-coded based on speed. This tool is also frequently used by media organizations to broadcast travel and commute information.

2015 STAFF MANAGEMENT REPORT RELEASE

In March 2015, the Authority will release its 2015 Staff Management Report. The report, which is required by Provision 5 of Item 2665-306-6043 of SB 1029, must be issued 60 days prior to advertising the contract for CP 4. The report describes the organization 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.

AUTHORITY KICKS OFF STATEWIDE URBAN FORESTRY PROGRAM

As part of its commitment to offsetting GHG emissions associated with the construction of the high-speed rail system, the Authority is launching an urban forestry program in the Central Valley. As a first step, the Authority has committed to planting approximately 5,000 trees in the Construction Package 1 area, with an average metric ton of carbon dioxide equivalent offset of 5.8 tons per year. The Authority will roll out the program with a series of plantings in partnership with local stakeholders. We will also have a website that covers the benefit of trees, what type of trees are being planted and other information on the program.

AUTHORITY RELEASES REQUEST FOR QUALIFICATION FOR REGIONAL CONSULTANT FOR NORTHERN CALIFORNIA

Authority staff is currently finalizing an RFQ for RCs for the Northern California project section, inclusive of San Francisco to San Jose and San Jose to Merced, and expects to request Board approval in spring 2015. The RCs will provide planning, preliminary engineering, alternatives development, financial and programming analysis, stakeholder coordination, and environmental services.

CONTINUED COLLABORATION WITH COMMUNITIES ON STATION AREA PLANNING

The Authority will continue to work with local governments to develop station area plans around the future high-speed rail stations. The Authority, in partnership with the FRA, has dedicated funding to support station cities in the development of station area plans that are consistent and supportive of local and regional planning efforts required by SB 375 (Steinberg, Chapter 728, Statutes of 2008) and the Authority's Station Area Development Policies. These planning efforts focus on a range of activities to create high-speed rail stations that serve appropriate local contexts and provide community development and local economic opportunities. It will also include working with regional and local transit providers to enhance connectivity to high-speed rail stations, plan for intensified development around stations, facilitate adoption or amendment to general plans and zoning codes, and developing a financing/phasing plan to support the station area plan including tools to attract private investors. To date, the Authority has entered into station-area funding agreements with the cities of Merced and Fresno; it anticipates entering into a station-area funding agreement with the City of San Jose in 2015.

RECORDATION OF FINAL CONSERVATION EASEMENT WITH LAZY K

In January 2013, the Board authorized the Authority's CEO, or a designee of the CEO, to execute a series of agreements or easements necessary to meet a number of biological mitigation obligations contained in the Merced to Fresno EIR/EIS and help fulfill the high-priority preservation of wildlife habitat called for under the California Endangered Species Act, the federal Endangered Species Act, and a number of other state and federal statutes. The Lazy K mitigation site is part of the 1,555-acre Lazy K ranch, and is located at the northwestern end of Madera County. The area on which mitigation-related activities will occur consists of a total of 1,055 acres. The Authority anticipates recordation, the processing and recording, of the final conservation easement for the site in spring 2015.

AUTHORITY HOLDS PUBLIC MEETINGS IN THE CITY OF BAKERSFIELD

Building on the settlement reached between the City of Bakersfield and the Authority, the Authority plans to continue to meet with the City to discuss new alignments and a new potential station location. The Authority has also agreed to hold at least three joint meetings for the public to review and provide input on the new potential alignment with the first meeting tentatively scheduled for fall 2015.

RELEASE OF REQUEST FOR QUALIFICATION FOR PROJECT AND CONSTRUCTION MANAGEMENT FOR CONSTRUCTION PACKAGE 4

The Authority anticipates releasing the RFQ for PCM services for CP 4 later this year. The purpose of the PCM contract is to provide design and construction oversight for CP 4. This oversight minimizes construction risks and ensures that delivery of the high-speed rail system meets the mandates of Prop 1A. Specific PCM duties include oversight of inspection and testing of the high-speed rail infrastructure, technical and environmental compliance including hazmat oversight, utility relocation, construction safety and public outreach.

RELEASE OF REQUEST FOR PROPOSALS FOR CONTRACT FOR DESIGN-BUILD SERVICES FOR CONSTRUCTION PACKAGE 4

The Authority anticipates releasing the RFP for CP 4, the next segment of the high-speed rail program from the terminus of CP 2-3 to Poplar Avenue north of the city of Bakersfield, to a group of shortlisted firms later this year. CP 4 is located within the counties of Tulare and Kings and the cities of Hanford, Corcoran and Allensworth. The anticipated contract cost is $400 to $500 million, with the contract anticipated to be awarded in late 2015.

The release of the RFP is the second step in a competitive two-phase bid process designed to obtain the best overall value for the Authority and the State of California.

RELEASE OF REQUEST FOR PROPOSALS FOR TRAINSETS AND MAINTENANCE FACILITIES

After receiving feedback from industry stakeholders, the Authority will release the RFP for Trainsets and Maintenance Facilities in spring 2015.

The Authority's initial procurement is expected to be for a base order of 16 trainsets with an option for production of up to 95 trainsets. California's high-speed rail system calls for sustained speeds over 200 miles per hour. The trainsets will have a minimum of 450 seats and be able to get passengers from Los Angeles to San Francisco in less than three hours. The manufacturing of trainsets and the establishment of maintenance facilities will create jobs, and increase economic benefits.

AUTHORITY USES CAP-AND-TRADE AUCTION PROCEEDS TO ACCELERATE PROGRAM

The Authority will use cap-and-trade auction proceeds to advance the program on multiple segments concurrently. The Authority anticipates that this will have a number of key benefits, resulting in environmental and mobility benefits sooner, including: overall acceleration of the program, which could also yield cost savings; and improvements in Southern California's existing rail system, which will benefit commuters in the region in the near-term and ultimately tie to the broader system.

In the months since the Legislature appropriated cap-and-trade auction proceeds to the high-speed rail program, the Authority has moved aggressively to accelerate work in Southern California, while advancing work in the Central Valley and along the Caltrain corridor. Development of the system in Southern California would also allow for early connection of our system with the proposed XpressWest line from Las Vegas.

Issues

CEQA LEGAL CHALLENGES

COUNTY OF KINGS V. CALIFORNIA HIGH-SPEED RAIL AUTHORITY

Sacramento Superior Court, Filed June 5, 2014

COUNTY OF KERN V. CALIFORNIA HIGH-SPEED RAIL AUTHORITY

Sacramento Superior Court, Filed June 6, 2014

FIRST FREE BAPTIST CHURCH OF BAKERSFIELD V. CALIFORNIA HIGH-SPEED RAIL AUTHORITY

Sacramento Superior Court, Filed June 6, 2014

DIGNITY HEALTH V. CALIFORNIA HIGH-SPEED RAIL AUTHORITY

Sacramento Superior Court, Filed June 6, 2014

CITY OF SHAFTER V. CALIFORNIA HIGH-SPEED RAIL AUTHORITY

Sacramento Superior Court, Filed June 6, 2014

SETTLED CEQA LEGAL CHALLENGES

CITY OF BAKERSFIELD V. CALIFORNIA HIGH-SPEED RAIL AUTHORITY

Sacramento Superior Court, Filed June 5, 2014

COFFEE-BRIMHALL LLC V. CALIFORNIA HIGH-SPEED RAIL AUTHORITY

Sacramento Superior Court, Filed June 5, 2014

On May 7, 2014, the Board certified that the Final EIR/EIS for the Fresno to Bakersfield project section had been completed in compliance with CEQA. The above listed parties thereafter filed lawsuits under CEQA alleging that, among other claims, that the Authority certified a legally inadequate EIR, failed to recirculate the revised draft EIR properly, and made inadequate CEQA findings. A few of the lawsuits have minor non-CEQA claims.

Actions Taken: The required CEQA settlement meetings occurred, and the Authority reached settlements with the City of Bakersfield and Coffee-Brimhall LLC (Case Nos. 34-2014-80001865 and 34-2014-80001859). Most of the administrative record has been completed and lodged with the Court. The Authority filed a motion to stay the proceeding on February 19, 2015 and the Court set a hearing date for March 27, 2015.. A stay is requested to allow time for the California Supreme Court to decide the Friends of Eel River v. North Coast Railroad Authority case which is currently under review. In Eel River the Court will decide whether CEQA is preempted for a publically owned railroad that is under the jurisdiction of the Surface Transportation Board. Eel River will have implications in the CEQA cases filed against the Authority.

SB 1029 PROJECT UPDATE REPORT

Section (g)

Any issues identified during the prior year and actions taken to address those issues.

JOHN TOS, AARON FUKUDA AND COUNTY OF KINGS V. CALIFORNIA HIGH-SPEED RAIL AUTHORITY

Sacramento Superior Court, Filed November 14, 2011

The Tos lawsuit proceeded in two parts. The first part regarding the Authority's funding plan required under Prop 1A was consolidated with the bond validation action, both of which are completed and resolved in the Authority's favor. On the second part, the plaintiffs allege that the high-speed rail project as proposed does not meet the requirements of Prop 1A; the Court has not set a hearing date for these claims.

Actions Taken: As to the first part of the action, The Court of Appeal, Third Appellate District, ruled that the (c) funding plan, developed by the Authority pursuant to SHC Section 2704.08 does not have to be re-done. This ruling clears the way for the Authority to develop the (d) funding plan to access and spend Prop 1A proceeds for construction purposes once raised in a bond sale. Tos filed a petition for review, which the California State Supreme Court denied thus ending this first part of the action.

In the second part of the action, the Authority has prepared the administrative record. It is anticipated that Plaintiffs will file a motion to augment the record and a hearing date could be scheduled in mid-2015.

ORDER INSTITUTING RULEMAKING, R. 13-03-009

California Public Utilities Commission, Filed March 21, 2013

On March 21, 2013, the PUC issued the Order Instituting Rulemaking (OIR), at the request of the Authority, which initiated a rulemaking proceeding. The stated goal of the OIR was to "determine whether to adopt, amend or repeal regulations governing safety standards for the use of 25kv electric lines to power high-speed trains." The Authority, along with interested parties, including utilities and railroads, engaged in a series of five technical panel meetings over 11 days to review, discuss and attempt to reach a consensus on the proposed General Order (GO). On December 30, 2013, the Safety and Enforcement Division (SED) of the PUC issued the Technical Panel Report including the revised proposed GO. The revised GO included modifications the panel meetings reached through consensus, however, several remaining items were left without a full consensus. On July 8, 2014, the PUC issued the Final Scoping Memo and the determination that evidentiary hearings would be required to resolve the remaining items including the definition of "agency" in the draft GO; whether or not natural gas pipelines that parallel or cross the right-of-way of the high-speed rail train need to be encased; whether lower voltage lines that cross over the high-speed rail lines have to be routed through a separate solid structure; how overhead and underground crossings may intersect with the high-speed rail line; to what extent may the earth be used as a return path for residual current; what training rules should be adopted for operators of the high-speed rail system; and, how to harmonize the proposed new GO with existing GOs 126, 52 and 26-D.

Actions Taken: The Authority has reached agreement with all parties to the proceeding on all terms of the General Order. The Authority presented the settlement General Order to the PUC on January 26, 2015. The General Order is currently pending adoption by the PUC, with an anticipated adoption at the March 2015 PUC Commissioners meeting.

RIGHT-OF-WAY

Before construction can begin on a given parcel of land, the Authority must obtain legal possession of that parcel. Thus, the acquisition of property rights is directly linked to the ability to meet CP 1 project deadlines. Property acquisition is affected by the timing of achievement of environmental milestones, receipt of funding, completion of multiple levels of governmental review and approval processes and the cooperation of property owners. Delays in the acquisition process could affect the CP 1 contractor's ability to meet project deadlines and costs.

For more detail on this topic, please see this report's Risk Management section.

Actions Taken: The Authority is mitigating and managing the risk associated with right-of-way in a variety of ways, including development of a highly detailed acquisition plan, vetting the acquisition plan with contractors and prioritizing acquisition to meet initial contractor work-zone requirements and securing technical expertise and additional capacity. The Authority is also working to streamline administration of the right-of-way process in order to mitigate for schedule challenges that gave a late start to property acquisition.

THIRD PARTY AGREEMENTS

The Authority is in the process of negotiating numerous agreements to facilitate design, cost apportionment and relocations of utilities, facilities and railroads that are impacted by the design and construction of the high-speed rail project. Due to the complexity of the high-speed rail project and the necessity of developing new relationships with these entities which will extend through construction to operation, some of these agreements have taken longer to finalize than anticipated. These stakeholder concerns include: compliance with the federal requirements such as Buy America; possible impacts of the high-speed rail project on future growth; maintenance of facilities, or services provided by these entities; designing relocations to be compatible with the safety standards of high-speed rail; and, ensuring continuation of service during construction. Third parties are also concerned with setting precedents with a new State Agency and project funding, and are therefore very cautious in negotiating agreements. Failure to execute these agreements in a timely fashion can impact the design phase of and construction of CP 1, CP 2-3 and CP 4.

Actions Taken: The Authority is addressing these concerns on a number of fronts. For the railroads, the Authority is moving forward with design work and coordination to address concerns about future growth and protection of services, including intrusion barriers. Issues related to the electrification of the train are being handled through the rulemaking process with the PUC in technical and all-party workshops for a new General Order. The Authority is working in collaboration with utilities and the FRA for early identification of any potential Buy America issues, and negotiations are continuing on agreements to resolve remaining issues and development of a working relationship with stakeholders.

Risk Management

SB 1029 PROJECT UPDATE REPORT

Section (h)

A thorough discussion of various risks to the project and steps taken to mitigate those risks.

Identifying and managing project risk is essential to successfully delivering the high-speed rail program. Most of the risks identified in this section – Right-of-Way, Third Party Agreements, and Technical – are not unique to the high-speed rail program, and are part of the delivering any infrastructure program. The Authority is utilizing a state-of-the-art approach to risk management, including extensively detailed calculation of variables to quantify risk and the incorporation of lessons learned by global experts from other high-speed rail programs. To that end, the Authority has developed, and begun to integrate, a quality management system, designed to manage and mitigate quality-related risks and to ensure that the high-speed rail program meets or exceeds acceptable industry and government standards.

The Authority is also working with the California Legislature's Peer Review Group (PRG), not just to implement provisions of SB 1029 (Budget Act of 2012), but to also gain the benefit of their perspective and guidance to continually improve the program.

The risk management program provides the Authority with a formal, systematic approach to identifying, assessing, evaluating, documenting and managing risks that could jeopardize the success of the program. These include specific engineering, environmental, planning, right-of-way, procurement, construction, organizational, stakeholder, budget and schedule risks, or other potential inabilities to deliver the required results.

OVERVIEW OF KEY RISK AREAS

ENVIRONMENTAL APPROVALS

The risk associated with environmental approvals may be broadly separated into two categories: (1) the risk of obtaining approvals in the requisite time necessary to avoid delays to construction; and, (2) the risk associated with conditions of the approval (e.g. work windows). While the working relationship between our staff and the staff at FRA and the various resource agencies, including USACE, USEPA, USFWS, SWRCB, CDFW, is constructive, we do continue to experience delays at least partially and perhaps largely due to review periods that are extending longer than anticipated. Due to the interdependencies between various approvals/permits granted by different agencies, it may take delays of only one or two documents/permits at one or two agencies to delay the entire process. The conditions and restrictions associated with these permits or approvals are another area of uncertainty, as is the relationship between property acquisition and ability to implement pre-construction requirements. The acceleration of the Phase 1 Sections of the Program targeting ROD's in 2017, which includes the urban sections in Northern and Southern California are presenting opportunities to streamline existing environmental processes. This includes the Permitting process, which is being accelerated for issuance soon after ROD's are issued. Per terms of the contract with the DB contractor, meeting these conditions will be the responsibility of the DB contractor, but they will not be fully known until the permit is in hand and not achievable until the property(ies) in question are acquired.

MANAGEMENT AND MITIGATIONS

We continue to manage this risk by increasing staff levels and maintaining intergovernmental collaboration while complying with all approval processes in addition to the risk transfer alluded to above.

Specifically:

- Coordinate with the United States Department of Transportation on establishing all Phase 1 Sections of the Program on the Federal Permitting Dashboard, to ensure accountability and coordination with Federal permitting Agencies, the FRA, and Authority.
- Obtain written commitments for accelerated review periods (Authority to get funding agreements).
- Establish close working relationships with state and federal agencies to expedite permits whenever feasible and continue to keep agencies informed of the schedule requirements and how they impact the schedule.
- Establish MOU/Memorandum of Agreement (MOAs) with the required agencies.
- Authority to pay for third party resources dedicated to support high-speed rail environmental reviews now in place.
- Continue to work with the FRA to prioritize resource allocation.
- Authority to develop and fund Permission to Enter (PTE) agreement and access with private land owners to facilitate early access to properties.
- Pursue early access to parcels and funding of survey work whenever feasible.
- Regional Coordinators to develop a outreach and communication plan for coordination with property owners (environmental and engineering staff to coordinate to minimize the impacts on the community).
- Early and informal consultation of the materials required for the development of alternatives for formal submittal.
- Develop strategy anticipating delayed decisions and reviews.
- Obtain process concurrence from lead and permitting agencies.
- Integrate environmental considerations earlier into the Alternative Analysis process.
- Preliminary design schedule and deliverables to be carefully aligned with environmental permitting process in order to allow sufficient time for review by the environmental team.
- Targeted environmental permitting/process analysis to be performed.
- Regional consultants to define the impacted areas and mitigation sites, and include standard mitigation measures in EIS/EIR.

- Coordinate with State and Federal Resource and Regulatory Agencies on Integrated Regional Planning to optimize development and conservation solutions at the Regional Scale and landscape level. This advanced planning for conservation and mitigation will allow sustained construction for the project.

FINANCING AND FUNDING

A number of risks exist for the overall program related to funding and financing. Funding risks include failure to receive the anticipated amount of public funding at the requisite time and failure to manage the timing of committed funds against the cash flow requirements of the program. Both of these funding risks could delay the development of the program. Financing risks include failure to attract lenders and/or investors, as well as potential increases in interest rates. Both of these financing risks could increase the cost of borrowing and investment, delaying construction until borrowing can be put in place or threaten the ability to raise financing. While the Central Valley civil infrastructure is fully funded, there remains funding risks related to meeting the administrative requirements for full and timely receipt of the state and federal funding already identified for the Central Valley project.

MANAGEMENT/MITIGATIONS

The near-term funding risk is mitigated by the identification of all necessary sources for the $6 billion cost. The ultimate scope of the Central Valley project will be adjusted over the course of the multiple phases of construction procurement, such that the total miles to be constructed will fit within the available funding. Long-term funding risk has been reduced by the Authority securing a long-term, continuous funding stream of auction proceeds from the Cap and Trade program. These proceeds consist of one time amounts of $250 million in FY 14-15 and 25 percent of total auction proceeds generated starting in FY 15-16 plus future loan repayment of $400 million. Cap and Trade provides an important additional funding stream that can be used for project costs.

In order to mitigate future funding and financing risks, we continue to:

- Utilize phased implementation to align construction costs with funding.
- Implement innovative delivery models that transfer risk, drive down costs and accelerate schedule.
- Work with the private sector to advance and accelerate private sector participation.
- Work with private sector lenders and investors to define requirements for financing secured by Cap and Trade.
- Utilize American Recovery and Reinvestment Act (ARRA) reserves to preserve funding for the minimum systems and track connections.
- Work with legislators, the USDOT the private sector and other stakeholders to maintain support for funding the programs, such as the High-Speed Intercity Passenger Rail Program; the Passenger Rail Investment and Improvement Act of 2008; the FTA New Starts Program; the Transportation Investment Generating Economic Recovery Discretionary Grant program; the Passenger Rail Investment and Improvement Act reauthorization, etc. and investigate other future funding sources.

- Engage private sector entities to discuss timing and requirements for private investment and delivery strategies to reduce costs and attract investment.
- Monitor the Cap and Trade proceeds to understand the level of future funding that the program may generate.
- Work closely with the FRA regarding ARRA grant funding requirements.
- Analyze the Authority's ability to utilize innovative Federal financing tools, such as Railroad Rehabilitation & Improvement Financing program and the Transportation Infrastructure Finance and Innovation Act program.
- Perform scenario and sensitivity analysis to test the project's financial performance under different ranges of inputs (see Ridership).
- Develop financing strategies aligned with successful high-speed rail projects in other parts of the world, including the Channel Tunnel Rail Link (HS1) in the United Kingdom. Financing is timed to align with project cash flows to enhance project value.

LEGAL

In the normal course of business associated with implementing a complex transportation infrastructure project, public agencies typically address a range of litigation challenges and adjudicatory administrative processes related to project funding, environmental clearances, property acquisition and contract disputes. These litigation challenges have the potential to affect project schedules, costs and financing.

MANAGEMENT AND MITIGATIONS

The Authority works closely with affected stakeholders to address issues before they become formal lawsuits or, for legal issues raised through lawsuits, the Authority typically seeks to resolve them directly with the stakeholders through settlement discussions. In addition to court resolution processes, the Authority seeks to use alternative dispute resolution such as mediation or arbitration. For litigation purposes, the Authority is represented by the California Attorney General's office except in those cases where additional expertise may be required.

OPERATIONS AND MAINTENANCE COSTS

Without a directly comparable system operating in the U.S., there is a risk that current estimates for operations and maintenance (O&M) costs are different than eventual actual costs. Currently, development of pre-revenue O&M costs are captured as part of the testing and start-up costs in the capital cost estimate and are estimated as percentages of the system elements that are subject to the testing and startup operations.

MANAGEMENT AND MITIGATIONS

To further refine its understanding of the system's O&M costs, the Authority undertook a comprehensive effort to develop a bottom-up O&M cost model for the 2014 Business Plan. The new model includes a detailed estimate of each cost category based on the current information about the system, service plans, federal regulations, and industry standards that is available. The model produces a separate estimate from the top-down 2012 Business Plan estimate and helps validate the results of the 2012

effort. The model is also capable of producing both high and low cost scenarios to further evaluate the potential range of O&M costs based on current system design/plans.

A thorough reassessment of appropriate contingency was undertaken to develop risk-based contingencies based on a number of applicable reference projects (for a particular O&M cost category), guidance contingency percentages defining limits, and a group of experts' judgment regarding the uncertainty or risk surrounding a particular O&M category's cost. These assessments were then averaged and combined with the guidance contingency percentages to determine a recommended contingency percentage for the particular O&M cost element.

Additionally, the Authority has undertaken an effort to understand the risks associated with the O&M forecasts more thoroughly. To do that, the Authority conducted Monte Carlo Simulations that analyzed the risk to the total cost estimate based on the accuracy of other O&M forecasts (reference cases) and to specific cost categories based on uncertainties internal to those categories (bottom-up). The two Monte Carlo simulations were run as an interim step in the development of the forecasts but they showed that current contingency percentages covered the majority of the scenarios in the reference case and nearly all scenarios in the bottom-up case.

RAILROAD AGREEMENTS

Given the interactions between the Authority's alignment in the Central Valley and the existing freight railroad right-of-way, there is a need to negotiate several agreements with the railroad companies. Given the ongoing communication with both the Union Pacific Railroad and the BNSF Railway Company, the Authority has made progress in finalizing a series of important agreements within the Merced to Bakersfield Corridor. Specifically, the Authority and the UPRR have executed an Engineering, Construction and Maintenance (ECM) Agreement, an Insurance and Indemnification (I&I) Agreement, and an Environmental Liability Agreement. In addition, the Authority and UPRR have reach agreement on several templates for Grade Separation Agreements and Right of Entry Agreements. The Authority and UPRR are still working to finalize a required Easement Agreement for UPRR properties that will be impacted within the Central Valley.

The Authority and BNSF have executed a Confidentially Agreement, a Memorandum of Understanding and a Reimbursement Agreement. Negotiations are ongoing with the BNSF to reach agreements to inform design and construction of modifications to BNSF facilities and right-of-way and operational requirements. The Authority is also in negotiations with the San Joaquin Valley Railroad to finalize an Insurance and Indemnification Agreement.

There is also risk related to fulfilling the obligations of the agreements once they are in place. In addition, there may be significant additional costs to the program associated with any disruptions to service experienced by BNSF and UPRR during construction. If the remaining agreements cannot be reached with the railroad companies in a timely manner, then design work in progress or already completed may be affected, leading to cost increases or schedule delays that could become significant depending upon the length of the delay.

MANAGEMENT AND MITIGATIONS

While the Authority is responsible for securing the agreements with the railroad companies, the Authority intends to transfer much of the risk related to performance under the agreements to the DB contractors. The DB contract mandates that the contractor will be responsible for fulfilling the Authority's obligations under the agreements with continued participation by the Authority.

The Authority has executed reimbursement agreements with the following railroads/operating agencies: Orange County Transportation Authority, Southern California Regional Rail Authority, Capitol Corridor Joint Power Authority, San Joaquin Regional Rail Commission, BNSF and UPRR. In addition, the Authority has executed MOUs with both BNSF and UPRR. The Authority has recently executed an Engineering, Construction and Maintenance Agreement with the UPRR. The Authority has also made substantial progress in negotiating Purchase a Agreement for the parcels required for CP 1. The Authority and BNSF are also working cooperatively to identify engineering solutions for mitigating the adjacency issues within CP 1 and CP 2-3. Substantial progress has also been made between the Authority and BNSF in negotiating the template for the overpass agreements that will be required for CP 1, the insurance and indemnification requirements, construction and maintenance questions. Importantly, to expedite the development of these agreements, BNSF has agreed to negotiate a series of master agreements, along the main subject areas. These agreements would establish the roles and responsibilities for the parties to reduce future delays throughout the Central Valley.

RIDERSHIP AND FAREBOX REVENUE

The financial viability of the program is dependent on public funding for early construction, and then on ridership revenues to support access to private capital as the program matures. Although the Authority is using best practices in its modeling, given that the program is entirely new, and no high-speed rail system currently operates in the U.S., a risk exists that the actual ridership demand and revenue will differ from the projections currently being used. The impact to the program could be wide ranging and include the following:

- Decreased commercial and financial viability
- Lower-than-expected project revenue
- Increase in the public funding required
- Loss of stakeholder support

MANAGEMENT AND MITIGATIONS

Demand and ridership estimates have been reduced and peer reviewed and a range of revenue scenarios have been evaluated for sensitivity. High, medium, and low revenue estimates illustrate that the project will generate a positive operating cash flow.

The model developed for the 2014 Business Plan was enhanced with additional features and the latest available input data to address SB 1029 requirements. Four main sources of data were updated complementing previous dataset and widening the range of perspectives. The most recent dataset was developed in conjunction with Caltrans to provide better consistency with other California model suites.

Additional features include more detailed access/egress mode choice model, variable forecast horizon years, streamlined model structure and faster run times.

As part of the 2014 Business Plan forecasting effort, the Authority developed a Risk Analysis Model to estimate a ridership and revenue forecast range and an associated probability for each of the Business Plan scenarios. The risk model was used to develop Monte Carlo Simulations for each of the Business Plan scenarios and associated forecast year. The risk analysis model included a range of assumptions relating to various risk factors having the greatest combination of uncertainty and impact on the results.

Main risk factors considered in this analysis include:

- Change in demographic growth rate
- Change in household income and size
- Change in statewide and regional spatial distribution
- Automobile fuel cost
- Highway capacity
- Airline ticket prices and frequency of service
- Change in overall amount of long distance travel
- Amount of travel induced by the introduction of high-speed rail

For each risk factor, minimum, most-likely and maximum values were estimated based on best available research and analysis. These served as inputs to Monte Carlo simulations which allowed the Authority to quantify the full range of potential ridership and revenue outcomes together with the probability of each outcome. Based on this distribution of outcomes, low, medium and high projected values for ridership and revenue were also determined. The 'low' projection is more likely than not to be exceeded by actual future ridership. It just as likely that the actual results will be greater than the medium projection as that the medium projection will exceed actual results. The 'high' projection will have a correspondingly smaller probability that it will be met or exceed by actual results. Together, these values provide a better picture of the range of potential ridership and revenue scenarios than a single point estimate as well as quantify the probability for each potential outcome. Applying Monte Carlo simulations to each 2014 Business Plan scenario, the risk model provided a probability distribution of ridership and revenue outcomes resulting from identified risk factors together with a sensitivity analysis highlighting the main drivers for ridership and revenue. For additional details, please see the 2014 Business Plan Ridership and Revenue Technical Memorandum.

RIGHT-OF-WAY

Before construction can begin on a given parcel of land, the Authority must obtain legal possession of the parcel. Thus, the possession of property directly impacts the ability of a contractor to commence construction. The process of real property possession under public acquisition law includes the completion of environmental milestones, receipt and access to funding, participation of multiple levels of

governmental review and approval processes and the cooperation of property owners. This process may include condemnation through the courts to obtain legal possession.

The right-of-way appraisal and acquisition process is active across the entire first construction section which has been defined as CP 1A, CP 1B, CP1 C, CP 2-3 and CP 4. CP 1A and CP1B started first and the majority of the learning curve and teething issues have been worked through during this effort. While the right-of-way acquisition process on the CP 1A and CP 1B continues to lag behind the estimated baseline acquisition schedule provided in the awarded CP 1 contract, the process has begun to trend more positively. It is important to note that the forecast for CP 2-3 and CP-4, with the learning curve issues behind the Authority, are in a better position to support the construction start dates. In line with the management and mitigation measures outlined in the Authority's November 15, 2014 Project Update Report, the Authority has worked with its DB contractor to implement a series of measures to mitigate impacts to the CP1 contract completion date (see details below). Because CP 1 is not on the critical path for the Central Valley, any potential delays to right of way acquisition are not expected to create an overall delay in the schedule. The appropriation of Cap and Trade auction proceeds to the high-speed rail program has largely eliminated funding availability as a primary risk driver for CP 1 by allowing for timelier payment to property owners and preventing the revision of appraisals.

The Authority continues to seek opportunities to improve the right-of-way acquisition process which have strengthened its ability to meet its projected acquisition schedule for CP 2-3 and CP-4 and point to improved project delivery outcomes for subsequent construction packages. While different parcels present different challenges in the right-of-way acquisition schedule, the primary risk drivers are the following:

- Acceptance rate on First Written Offers
- Learning curve associated with the Authority's distinct acquisition and condemnation processes for Authority staff, contractors and review agencies.
- Staff performance at all state agencies
- Coordination of processes with the State Public Works Board (SPWB)
- Railroad agreements
- Necessary design refinements and the impact on environmental clearance and right-of-way process

MANAGEMENT AND MITIGATIONS

The Authority continues to mitigate and manage the risk associated with right-of-way in a variety of ways, including development of a highly detailed acquisition plan, vetting the acquisition plan with contractors and prioritizing acquisition to meet initial contractor work-zone requirements and securing technical expertise and additional capacity. Since March 2014, the Authority has worked to establish better communication with impacted property owners, four more right-of-way consultants have been hired, and assigned a dedicated right-of-way program manager charged with strategic planning and identifying and addressing procedural bottlenecks.

Steps being taken include:

- Joint work with CP 1 DB contractor to potentially re-sequence or accelerate portions of the work in the most efficient manner based on parcel availability.
- Application of improved assumptions for the CP 2-3 right-of-way acquisition plan.
- Consultation with DGS and the SPWB to reduce review and approval processes.
- Focused training on distinct aspects of the Authority's right-of-way process (e.g. partial acquisition appraisals, RON/condemnation process) for all right-of-way consultants and reviewing and approving agencies.
- Coordination with all review agencies with respect to the project status and expected workload.
- Coordination with Caltrans Legal to manage the potential caseload.
- Continue regular meetings with right-of-way and DB contractor to identify status of parcel acquisition and provide that priority parcels receive proper attention.
- Implementation of recommendations from Authority-led Value Analysis study.
- Hiring additional staff with institutional knowledge of the right-of-way acquisition process as well as obtaining "loaner" staff from Caltrans.
- Provide clear expectations to the right-of-way consultants and manage the work effort with the intent to adhere to the timing and quality requirements as outlined.
- Available cap and trade state funding establishing prompt payments.
- Benefiting from being on the back side of the learning curve.
- Team understanding of the detailed and organized the process flow required under Public Acquisition Law.
- Improved data management and weekly reporting capabilities, including numerous reports to provide visibility on the process, progress and status with improved forecasting.
- Identification of bottlenecks in the process for ROW management to resolve.

STAFFING AND ORGANIZATIONAL STRUCTURE

During peak construction years, the annual construction outlay will exceed a billion dollars annually. The Authority's challenge is to attract and retain the appropriate number of experienced staff and consultants to meet the demands of the program during the peak years to mitigate and manage multiple construction contracts, contract change orders, configuration management, funding, finance, contract administration, project management and other capital outlay program issues specifically related to the high-speed rail program. Without adequate staffing and expertise to support and make timely and informed decisions necessary to advance the program, delays and cost increases become a greater risk.

MANAGEMENT AND MITIGATIONS

The risk(s) associated with staffing and organizational structure have been addressed with new key hires as follows:

1. Chief Administrative Officer
2. Deputy Director of Business Analytics and Commercial Implementation

The Authority has made significant progress in filling the positions authorized by the Legislature. As of February 2015, there are 148.5 staff members. In the next several months, the number of staff members is expected to increase to 162.

In addition, the Authority requested and received, as part of SB 852, provisional authority to hire an additional 35 positions to support delivery of the program. These positions will support the Authority's Program Management Division, which includes Transportation and Commercial Planning, Project Management, Environmental Planning, Right-of-Way, Engineering, Design and Construction, Contract Compliance and Operations and Management. These positions are necessary to effectively manage and oversee design, acquisition and construction of the program. Hiring of these positions will commence pending Joint Legislative Budget Committee notification.

STAKEHOLDER SUPPORT

The program could experience adverse effects should public support weaken, both at the local and state levels. Locally, interest groups could attempt to prevent or delay advancement of the system by hampering the local authorization and permitting processes or inhibiting local collaboration. At the state level, a decline in public support could translate into unnecessary problems with fiscal processes and oversight functions. Maintaining public support at both levels through education and outreach, while clearly vital, also poses its own risks to the system if expectations are not prudently managed and mitigated. If the Authority does not clearly articulate both the program's costs and benefits, or agrees to mitigations and their associated costs in an incremental manner without first determining the cost implications for the overall program, there is a risk that public support will erode and/or the program's overall costs could exceed current estimates.

MANAGEMENT AND MITIGATIONS

Mitigation of this risk overlaps to some extent with staffing risk, as described above. Regional Directors in Northern California, the Central Valley and Southern California were hired in 2012, and the Authority's corresponding regional offices all opened in 2013. The Regional Directors and their staff have a program-level understanding of the cost implications of potential program decisions, and they use this information to act as a point of contact for local and regional stakeholders when addressing their needs and concerns related to potential project effects in their regions. Regular stakeholder and/or public meetings are held by all Regional Directors and their staff to facilitate communication opportunities and relationships between the high-speed rail program and its myriad publics. At the state level, coalition building and ongoing legislative communication are the cornerstones of a concerted public affairs effort which also includes collaboration with the Regional Directors. Finally, a Small Business Advocate, a position created in 2012, and small business outreach team serve as the main points of contact between

the Authority and small businesses. This coordinated effort conducts outreach sessions to educate small businesses regarding the high-speed rail program and opportunities, partners with other State agencies to provide resources to small businesses, and advocates for California certified small businesses.

TECHNICAL

The program will be measured by public acceptance and in compliance with Prop 1A passed by voters in 2008, which impose legal, political, financial, and technical challenges. Transportation programs have varying degrees of technical issues throughout each phase of a major capital program that include the environmental phase, preliminary engineering and final design through construction and startup of revenue operations. Technical issues are usually evaluated in an analytical manner and resolved through established design procedures and standards that meet best practices in the industry.

Since high-speed rail systems do not currently operate in the United States, the Authority assessed European and Asian high-speed rail systems in order to develop guidance and technical requirements that could be adapted to the US market. With the majority of alignment segments in the program still largely in the project level environmental phase, a concerted effort was made to develop criteria and provide technical guidance to support the regional environmental teams as alignment alternatives are developed and project impacts evaluated and appropriate mitigation measures considered to eliminate or minimize impacts on the environment.

MANAGEMENT AND MITIGATIONS

Technical challenges will be identified throughout development of the program with solutions developed by engineers and industry experts involved in the implementation of the system. Several of the significant engineering challenges and steps being taken to provide solutions are listed below:

- Adjacent Railroad Hazard Risk Assessment – Models have been developed that quantify the risks of potential derailment by adjacent freight railroads and allow the risks to be evaluated and ranked as to their significance. Discussions on mitigation measures such as intrusion barriers, earth berms and increased track separation are continuing with the freight railroads. Refinement of model parameters including trainset length, weight and configuration, train speed, coupler rotation and offset of barrier from track is continuing in order to assess the adequacy of the intrusion barrier to mitigate the impact of alternate derailment scenarios. The Authority is working with the Volpe National Transportation Systems Center (Volpe Center) to develop a model using a longer trainset with the intent to validate the anticipated impact forces. This work is continuing to confirm the appropriateness of the design parameters for use in the design of intrusion protection barriers.

- Earthquake faults throughout Northern and Southern California regions pose challenges particularly for the alignments though the Tehachapi Mountains between Bakersfield and Palmdale and the San Gabriel Mountains between Palmdale and the San Fernando Valley. Mitigations include crossing active faults on at-grade alignments where practical or crossing faults in underground structures with seismic fault chambers or oversized tunnel segments that accommodate shifts in track alignment so that tracks and systems can be repaired and revenue service restored. The Southern California segments are proceeding into a project level

environmental phase and engineers supported by seismic and tunnel experts are continuing to conduct analyses during establishment of environmental footprints. Technical solutions will be based on practices that balance cost, reliability and risk for the project.

- Mountainous terrain also poses challenges in establishing vertical alignments that achieve the high-speed operational requirements without requiring the extensive use of capital-intensive underground structures and support facilities. Balancing the design requirements with the existing topography may require the use of long tunnels and tall aerial viaducts or high embankments to support the high-speed tracks. Due to potentially long haul distances in mountainous terrain to quarry sites to obtain fill material or disposal sites for tunnel muck, balanced cut and fill sections have been evaluated to avoid an excessive number of tunnels or embankments within the alignments under consideration. Engineers are continuing to develop design concepts to support the project definition phase and identification of environmental impacts.

- Tunnels are being evaluated in the mountainous terrain in Southern California between Bakersfield and San Fernando Valley. The Authority conducted a tunneling workshop with industry participants in 2014 which included,both national and international contractors to provide feedback on constructability, subsurface investigation, risk, contract packaging, delivery methods and commercial aspects. The Authority has recently established a Tunnel, Fire & Life Safety and Security Working Group to establish requirements across the entire program and to provide recommendations on technical solutions by discipline experts in operations, engineering, rolling stock, alignment and procurement. The Working Group will review applicable codes, guidance, and regulatory authority, review program work to date, identify hazards, risk, mitigation measures and access/egress strategies from tunnels as well as ventilation and smoke control strategy.

- Groundwater resources in tunnel alignments are being identified and will be modeled to evaluate potential area of impacts on groundwater notably in deep tunnels with high groundwater pressure. Groundwater resources include wells, springs and seeps, and perennial streams. Control of groundwater inflows will require design solutions such as pre-excavation grouting, secondary tunnel linings for water-tight structures and establishment of a groundwater resource monitoring program with mitigations measures to be implemented during pre-construction and construction phases.

- Developing and completing phased geotechnical investigation programs to support the environmental review process and evaluation of geologic conditions, seismic ground motions, ground water depths and hydrostatic pressure are required for the development of design, construction and to secure permits. The Authority has established a geotechnical steering committee to review and make recommendations for work programs and is moving forward with a Phase 1 investigation program in the Palmdale to Burbank section.

- In regions of the Central Valley where the high-speed rail alignment will be constructed, regional subsidence has occurred in the soils due to consolidation settlement of alluvium that occurs in response primarily to groundwater pumping, hydro compaction, and oil and gas ex-

traction. In prior 'wet' years, the associated decrease in groundwater pumping had resulted in a steady recovery of water levels and a reduced rate of subsidence. Further data and analytical work is necessary and the Authority is finalizing a procurement document to hire a consultant to evaluate available data in the region relevant to subsidence, consult with local agencies that may have similar concerns and develop an instrumentation and monitoring program to record the occurrence of subsidence and to document potential impacts to high-speed rail tracks and facilities as a result of subsidence.

THIRD-PARTY AGREEMENTS

The program faces a number of challenges, both general and location specific, associated with third-party agreements. There are a significant number of project dependencies that are introduced to a longitudinal project. Simply put, key activities necessary to construct the project are not under the direct control of the Authority. For example, construction of a section of high-speed rail or overcrossing may be dependent on the relocation of a section of existing rail which may in turn depend on the relocation of a fiber-optic cable or major utility. The relocation of fiber-optic cable or major utility in many locations will be done by third-party(s) operating under their own business constraints and according to their own schedule.

UTILITIES

Prior to selecting a preferred alternative, the program faces information limitations regarding the physical location of many utilities (both major and minor), ownership of utilities, and, generally, a limited understanding of how this and other third-party work is best integrated with construction of high-speed rail infrastructure and systems to provide a schedule and cost estimates with a high degree of confidence. While the Authority is currently in negotiations with the identified utility owners who will be impacted, there may be some utilities for which the Authority does not have enough information in order for DB contractors or utility owner to price the cost of the relocation or removal. There is also a risk that such relocation or removal may require additional right-of-way.

Cooperative agreements must be followed up with sufficient technical and operations detail, without which there will be no effective way to establish a realistic scope and schedule, which must precede financial detail and subsequent financial agreements. Who is doing "what" and "when" needs to be reflected in contract documents. As noted above, the "what" can be difficult to determine given the level of planning and design, which can make it difficult to determine the appropriate "when" with a high level of confidence.

MANAGEMENT AND MITIGATIONS

The Authority is working to mitigate and manage the risk associated with utilities in a variety of ways, including working closely with the affected utility companies in managing utility design and construction requirements, and in finalizing all cooperative utility agreements. In June 2013, Governor Brown signed SB 85 (Committee on Budget and Fiscal Review, Chapter 35, Statutes of 2013) that established a framework for the reimbursement or payment, and apportionment, of utility relocation costs, clarifying the Authority's utility relocation process on land acquired for the high-speed rail project. Additionally, the Authority has reached agreement on the General Order, pending adoption by the CPUC that resolves design and coordination with the utilities.

Endnotes

1. The Board authorized amendments to these contracts on the dates shown.

2. The Current Contract Value of the expired contracts are set equal to the Expenditures at closeout. This provides a reduction in the total Current Contract Values.

3. Projected value (through FY 17-18). A portion of the PMT costs are now allocated to construction funding.

4. San Francisco to San Jose is part of the blended system. Caltrain is leading the environmental process for electrification.

5. The Sacramento to Fresno contract value, inclusive of the Merced to Sacramento and Merced to Fresno Sections, is shown in the Merced to Fresno Current Contract Value. The projected cost is lower due to the termination of the Merced to Sacramento section under the AECOM contract reducing the projected cost and expenditures

6. The Fresno to Palmdale contract value, inclusive of the Fresno to Bakersfield and Bakersfield to Palmdale sections, is shown in the Fresno to Bakersfield Current Contract Value. The projected cost is lower due to the reduction in work scope and eventual termination of the Bakersfield to Palmdale section under the URS contract reducing the projected cost and expenditures.

7. Architectural & Engineering contracts for these sections were re-procured and contracts have been executed.

8. The future plans of this contract are currently under consideration for amendment or re-procurement.

9. The reduction in work scope as a blended alignment in this report lowered the projected cost.

10. The Altamont corridor is under the direction of the SJRRC. The agreement between SJRRC and Authority has not been completed regarding Authority financial support of the environmental document. 11Agency costs consist of multiple contracts with an estimate to complete.

12. Total Provision Sums ($53,000,000) = Utility Provisional Sum ($25,000,000) + Construction Contract Work Provisional Sum ($20,000,000) + Building Hazardous Materials Provisional Sum ($8,000,000)

13. One-seat ride means that passengers do not need to switch trains, even if the train operates over two systems (e.g., moving north on dedicated high-speed rail infrastructure and then moving onto Caltrain tracks at San Jose, assuming electrification of Caltrain corridor as soon as 2020 as proposed by Caltrain.

14. Completion date does not include construction of Central Valley Wye.

15. Caltrain's Peninsula Corridor Electrification Project environmental review was completed in early 2015.

16. The Palmdale to Los Angeles project section was split into two sections, Palmdale to Burbank and Burbank to Los Angeles, in Summer 2014. The baseline dates for receipt of Record of Decision for these sections reflect the baseline date for the Palmdale to Los Angeles project section. The revised dates for receipt of Records of Decision reflect the anticipated dates for these two new sections.