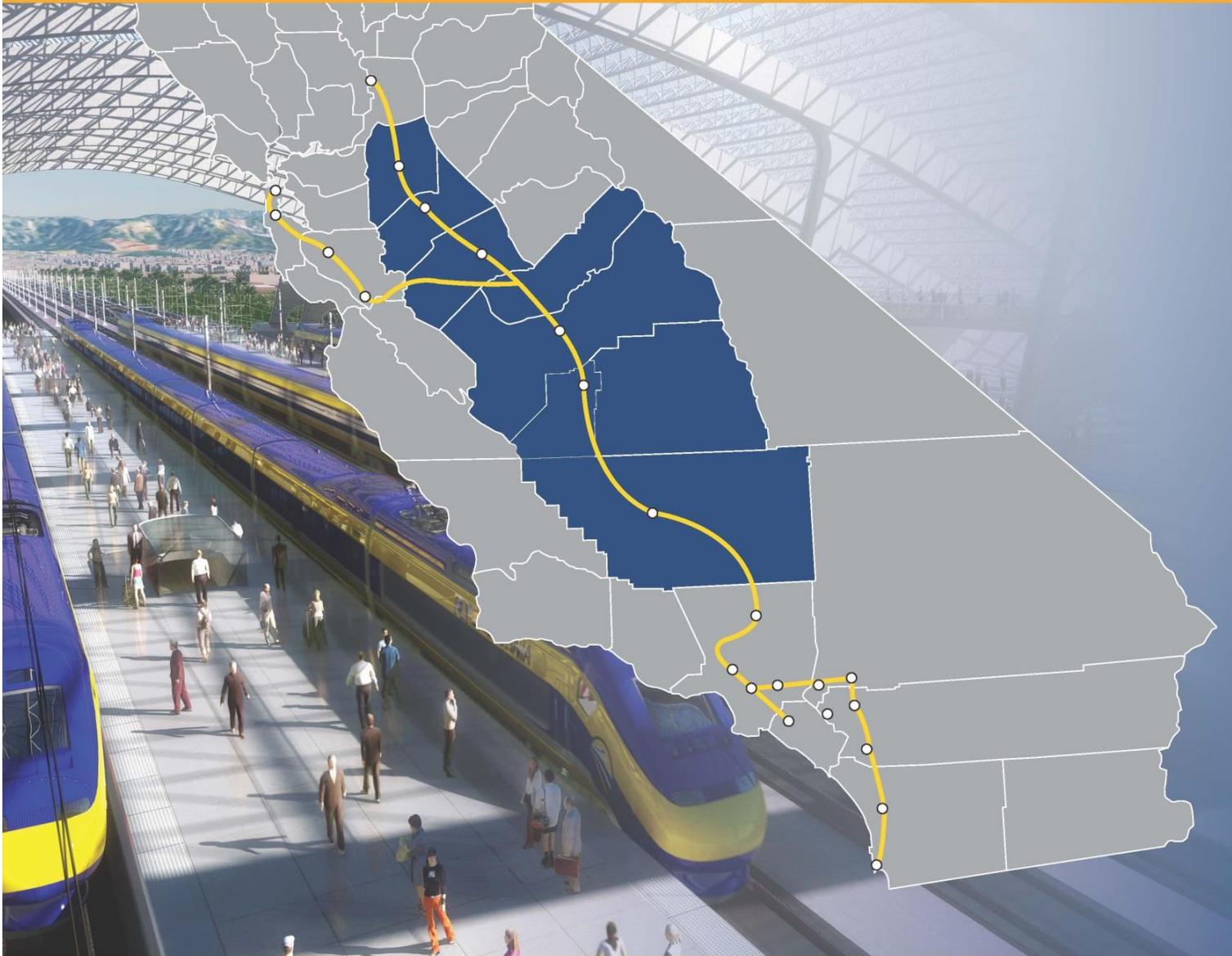




# California High-Speed Rail and the Central Valley Economy

January 2015



**PARSONS  
BRINCKERHOFF**

in association with Oliveira Advisory Services

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**January 2015**

Dear CEO Jeff Morales and Members of the Board:

We are pleased to present you with this Summary Report of *California High-Speed Rail and the Central Valley Economy*—our study of the economic conditions, trends, issues and opportunities in the Central Valley, where work on the California high-speed rail system is underway.

The Authority has consistently demonstrated its commitment to fostering greater economic opportunity in the Central Valley with policies and actions such as its small and disadvantaged business program and policies designed to ensure training and hiring opportunities for disadvantaged workers. In order to further this commitment and gain a deeper understanding of the economic issues in the Central Valley, the Authority commissioned this independent study so that it could further align its efforts with those of others who are collaborating to bring more prosperity to the Valley.



Previous economic studies that were prepared for the Authority's business plans provided a higher and broader level of analysis. Our work builds on those studies but provides a more in-depth analysis of the Central Valley. It is grounded in economic and demographic data but is also informed by the knowledge and insights of 86 stakeholders representing a range of organizations and institutions that are engaged daily in workforce preparation and economic development issues in the Valley. We synthesized what we *learned* with what we *heard* to develop the findings presented in this report. Our goal was to provide you with a basis for identifying additional *actions* you can take to support economic development in the Central Valley.

We would like to clarify how we used the term "Central Valley" for purposes of the study. While it typically refers to the long, broad valley stretching from Redding to Bakersfield, we used the term more narrowly and to be consistent with how the Authority uses it. Specifically, our outreach to stakeholders focused on the six counties where the system is starting: Fresno, Kern, Kings, Madera, Merced, and Tulare. Our economic and demographic data review is drawn from those six counties plus two others— San Joaquin and Stanislaus—to be consistent with the approach used for prior analyses.

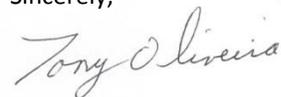
As the high-speed rail system is built and expanded to the San Francisco Bay Area and the Los Angeles basin, journey times will shrink and the people who live, work and do business in the Central Valley will be better connected to each other—and to the state's major metropolitan economies—in a way that they have never been connected before. These new linkages and other direct impacts of the project, such as job creation and station area development, will undoubtedly be important components of a larger strategy to improve the state of the economy in the region, which was hit hard by the recent recession and which continues to lag the rest of the state.

The Central Valley is California's agricultural heartland, and its economy has evolved differently than the rest of the state. Its economy will continue to be centered on agriculture; however, as the region's population continues to grow and as high-speed rail provides greater access between it and California's economic centers, new opportunities will emerge that can bring more balance to the Valley's economy. This is a vision that the Authority can support by further collaboration with those organizations that are engaged in achieving it.

We want to thank the many individuals and organizations who so generously shared their time, their perspectives and, in some cases, their meeting space with us. If there is one thing we took away from all of our conversations, it is that although the Valley faces many hurdles, they are being tackled by many tenacious individuals and organizations that are positive about and committed to economic advancement. These include, for example, the California Partnership for the San Joaquin Valley, which provides a collaborative framework for creating a prosperous economy, quality environment, and social equity throughout the Valley, and the Central Regional Consortium, a partnership between workforce agencies, economic development agencies and community colleges.

While the study's focus is the Central Valley, we do not believe the issues and opportunities discussed in this Summary Report are limited to the Valley but have a broader application in how the state can better integrate its economy. Indeed, a key finding from our study was the perception by a number of stakeholders that the Central Valley is an island that is isolated from the rest of the state by geographic, transportation and economic barriers. By better connecting the region to the rest of the state's economy and creating new economic development opportunities, the high-speed rail system can be a key factor in helping break down some of those barriers. We believe that this will not only help move the Valley, but the state as a whole, toward a stronger and more thriving economy.

Sincerely,

A handwritten signature in cursive script that reads "Tony Oliveira". The signature is written in black ink and is positioned above the printed name.

Tony Oliveira

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## Acronyms

Authority	California High-Speed Rail Authority
BART	Bay Area Rapid Transit
C <sup>6</sup>	Central California Community Colleges Committed to Change
CCJE	California Center for Jobs and the Economy
CETF	California Emerging Technology Fund
CLC	Central Labor Council
CP	Construction Package
CPSJV	California Partnership for the San Joaquin Valley (or Partnership)
CRPC	Community and Regional Planning Center
CSU	California State University
DBE	Disadvantaged Business Enterprise
DVBE	Disabled Veteran Business Enterprise
EDC	Economic Development Corporation
ESW	Engineers for a Sustainable World
FAX	Fresno Area Express
FMTK	Fresno, Madera, Tulare, and Kings Labor Council
FSU	Fresno State University
GDP	Gross Domestic Product
GGRF	Greenhouse Gas Reduction Fund
GHG	Greenhouse Gas
IOS	Initial Operating Section
MB	Microbusiness
MBDA	U.S. Minority Business Development Agency
MOU	Memorandum of Understanding
NAICS	North American Industry Classification System
OCED	Office of Community and Economic Development
RDC	San Joaquin Valley Rural Development Center
RICI	Regional Industry Clusters Initiative
SB	Senate Bill
SB	Small Business
SBA	United States Small Business Administration
SJVBC	San Joaquin Valley Regional Broadband Consortium
SJVHC	San Joaquin Valley Housing Collaborative
SJVP	San Joaquin Valley Partnership (Partnership)
TIGER	Transportation Investment Generating Economic Recovery
UC	University of California
VTA	Santa Clara County Valley Transportation Authority
WIB	Workforce Investment Board

## EXECUTIVE SUMMARY

### Connecting California

The California High-Speed Rail Authority (Authority) is responsible for planning, designing, building and operating the first high-speed rail system in the nation. Work is underway in the Central Valley, and the Authority's intent is to develop an Initial Operating Section (IOS) by 2022. When it is fully implemented, the high-speed rail system will provide fast, direct rail connections between California's two economic mega-regions—the San Francisco Bay Area (which includes Silicon Valley) and the Los Angeles basin—through the rapidly growing communities in the Central Valley. The system will extend 800 miles and travel at speeds capable of exceeding 200 miles per hour, significantly improving mobility and connectivity throughout the state and serving as a tool for furthering state and local economic development goals.

In addition, the Authority is working with regional partners to implement a statewide rail modernization plan by investing billions of dollars in local and regional rail lines to meet the state's 21<sup>st</sup> century transportation needs. In 2012, the California State Legislature approved and Governor Jerry Brown signed Senate Bill (SB) 1029 (Budget Act of 2012) into law authorization for a nearly \$8 billion investment in statewide rail modernization, including \$5.8 billion to build the first section of high-speed rail in the Central Valley between Madera and Bakersfield (\$2.6 billion in California Proposition 1A bond funds and \$3.2 billion in federal funds).<sup>1</sup> More recently, the Legislature approved and Governor Brown signed into law SB 852 (Budget Act of 2014), which appropriated \$250 million from the Greenhouse Gas Reduction Fund (GGRF) for the high-speed rail system.<sup>2</sup> The subsequent trailer bill, SB 862, continuously appropriates 25 percent of the annual proceeds of the GGRF for high-speed rail purposes, beginning in the 2016 fiscal year, and makes an additional \$400 million available for high-speed rail from that fund.<sup>3</sup>

### Economic Challenges and Opportunities in the Central Valley

California is an economic powerhouse. It is home to 54 Fortune 500 companies such as Chevron, Wells Fargo and Disney, 20 of which are in the communications and information technology sector, including Apple, Hewlett-Packard, Google, Intel and Cisco.<sup>4</sup> It is a focal point for innovative and cutting edge startups, as well as many small and medium-sized businesses, all of which are bedrock to the state's economy. Its agricultural industry—much of it centered in the Central Valley—leads the nation in producing over 400 different commodities.

Much of California's success is attributable to its past and current public investments in infrastructure—such as the Golden Gate Bridge, the State Water Project and 50,000 miles of freeways and highways—and its three-tier University of California (UC) higher education system. This includes world-renowned universities, such as UC Berkeley, UC Davis, UC Merced and UCLA, which are not only institutions of higher learning but also hubs for

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<sup>1</sup> [www.leginfo.ca.gov/pub/11-12/bill/sen/sb\\_1001-1050/sb\\_1029\\_cfa\\_20120705\\_124919\\_asm\\_floor.html](http://www.leginfo.ca.gov/pub/11-12/bill/sen/sb_1001-1050/sb_1029_cfa_20120705_124919_asm_floor.html)

<sup>2</sup> [www.leginfo.ca.gov/pub/13-14/bill/sen/sb\\_0851-0900/sb\\_852\\_bill\\_20140615\\_enrolled.pdf](http://www.leginfo.ca.gov/pub/13-14/bill/sen/sb_0851-0900/sb_852_bill_20140615_enrolled.pdf)

<sup>3</sup> [www.leginfo.ca.gov/pub/13-14/bill/sen/sb\\_0851-0900/sb\\_862\\_bill\\_20140617\\_enrolled.pdf](http://www.leginfo.ca.gov/pub/13-14/bill/sen/sb_0851-0900/sb_862_bill_20140617_enrolled.pdf)

<sup>4</sup> [www.ceo.com/entrepreneurial\\_ceo/two-charts-showing-states-with-the-most-fortune-500-companies/](http://www.ceo.com/entrepreneurial_ceo/two-charts-showing-states-with-the-most-fortune-500-companies/)

research and innovation that can spark economic growth. The California State University (CSU) system is the largest state university system in the nation; CSU Bakersfield and CSU Fresno are both located in the Central Valley and have approximately 8,000 and 23,000 enrollments respectively.<sup>5</sup> The Valley is also home to 122 community colleges that provide workforce training, a range of certificates and degree programs and preparation for transfer to four-year institutions or a wide array of vocations. There are also a number of highly regarded private universities, including Stanford and the University of Southern California. These businesses, institutions and public infrastructure investments are the foundation of California's economic prosperity and are what keeps California's economy diverse and growing.

Despite the fact that, for the most part, California's economy is thriving and is recovering from the recent recession, the Central Valley is still struggling economically.<sup>6</sup> The Central Valley represents California's agricultural heartland and remains a major supplier of fruits, nuts, vegetables and other agricultural products to the United States as well as foreign markets. In 2013, it represented approximately 10 percent of the Valley's gross domestic product compared to 2 percent statewide.<sup>7</sup> However, while there are pockets of success and growers have enjoyed reasonable margins on their output, the region is still characterized by persistent high unemployment and relatively low wages for large segments of the population.

If California were a country, and measured solely by Gross Domestic Product (GDP), it would have the 8th largest economy in the world—larger than the Russian Federation and just behind Brazil.

At the same time, the Central Valley presents conditions, including a fast-growing and young population base, that can present opportunities for economic growth if they are successfully leveraged with investment in infrastructure and workforce training. State and regional leaders are committed to addressing the range of issues, challenges and opportunities that the Central Valley faces through organized, concerted actions, and the Authority's engagement with those efforts could be highly productive and beneficial to the region.

Building and operating high-speed rail will directly employ thousands of Californians, and the first of those jobs are being created in the Central Valley. Work on the first segment between Madera and Fresno is underway; jobs are being created now and thousands of both direct and indirect jobs will continue to be created once construction hits full gear. After the high-speed rail system is fully operational, it is projected to directly employ about 1,500 people full-time in maintaining and operating the system, with many of those jobs likely to be in the Central Valley.

When the system extends from the San Francisco Bay Area to the Los Angeles basin, the Central Valley will be linked to the state's major metropolitan economies with fast, frequent and reliable high-speed rail service and integrated with regional rail systems, including Bay Area Rapid Transit (BART) in the San Francisco Bay Area, the Santa Clara Valley Transportation Authority (VTA) and Caltrain between the San Francisco Peninsula and the Silicon Valley and LA Metro in the Los Angeles basin. Connections will also be possible with local transit systems such as

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<sup>5</sup> [www.calstate.edu/PA/2013Facts/enrollment.shtml](http://www.calstate.edu/PA/2013Facts/enrollment.shtml)

<sup>6</sup> [www.bls.gov/web/laus/laumstrk.htm](http://www.bls.gov/web/laus/laumstrk.htm)

<sup>7</sup> [www.bea.gov/regional/](http://www.bea.gov/regional/)

Fresno Area Express (FAX) in Fresno, Getbus in Bakersfield and TheBus in Merced. Over time, enhanced connectivity and improved access to the more prosperous economic mega-regions will change the economic dynamics of the Central Valley and could hasten the diversification of its economy. In the long run, it will be positioned to be more fully integrated into the larger state, national and global economies.

## Study Purpose

The Authority recognizes the significance of the infrastructure investment it is making in the Central Valley and its potential to affect the regional economy. It is committed to fostering greater economic opportunity in the region through a range of policies and initiatives to help residents maximize benefits from this investment—including helping people obtain jobs and ensuring small and disadvantaged businesses participate in the program.

To help advance this commitment, the Authority sought to deepen its understanding of the economic issues and opportunities in the Central Valley. Prior economic analyses prepared for the Authority’s business plans provided a relatively broad and high-level understanding of the economic conditions and potential benefits of high-speed rail across the state. Through this study, the Authority sought a more in-depth, on-the ground analysis so that it could identify additional steps to ensure that its investments and actions support regional and local economic goals and objectives.

The three objectives that guided this study were to help the Authority to:

1. **Develop a deeper understanding** of the economic issues, conditions, plans and objectives in the Central Valley
2. **Establish a dialogue** with a range of organizations working to advance economic development in the Central Valley and explore how the high-speed rail program could support those objectives
3. **Identify ways to engage and collaborate** with those that participated in the study and other California organizations and stakeholders—starting with the first construction, then with initial operations and, ultimately as the Valley is fully connected to the rest of the state, with high-speed rail

## Study Approach

The study, conducted by a research team retained by the Authority, combines both *quantitative* and *qualitative* analyses to gain a deeper understanding of current economic trends and issues in the Central Valley. It was specifically designed so that this deeper understanding was informed not only by data but by the perspectives of those individuals who are engaged daily in workforce preparation and economic development in the region. Figure ES-1 below illustrates the steps taken to complete this study.

Figure ES-1—Study Approach



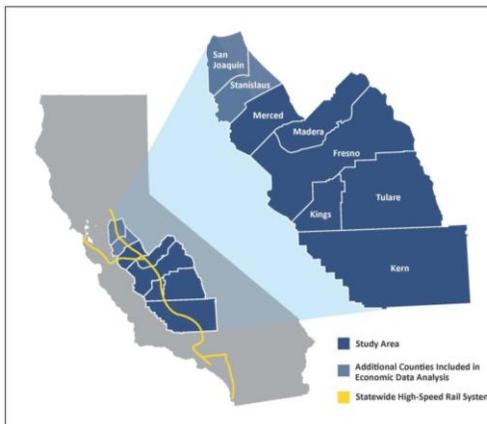
The research team began the study by gathering and analyzing data on economic and demographic trends and conditions on eight counties in the Central Valley (Fresno, Kern, Kings, Madera, Merced, Tulare, San Joaquin, and Stanislaus Counties illustrated in Figure ES-2 below) as compared to statewide trends. In addition, the research team also surveyed approved or pending regional and county economic development plans, focusing only on the six Central Valley counties where work on the high-speed rail system has begun and where the first stations are to be located. The research team also drew upon economic research previously conducted for the Authority’s 2012 Business Plan, including a literature review focusing on how improved access and connectivity from high-speed rail can increase employment and boost economic productivity, particularly among key economic clusters.

#### Defining the Central Valley for the study

For purposes of the study, the term “Central Valley” generally refers to the six counties through which the high-speed rail system will travel and where the initial stations are planned—in Fresno, Kern, Kings, Madera, Merced and Tulare Counties.

For purposes of aggregating data to portray a comprehensive narrative of the region, the economic and demographic data analysis also includes Stanislaus and San Joaquin Counties.

Figure ES-2—Central Valley Study Area



This quantitative data collection and analysis served as a foundation for understanding Central Valley economic issues and how high-speed rail could potentially support regional and local economic development plans and goals. It also served as a framework for engaging with individuals representing local/regional organizations, institutions and partnerships whose primary mission is focused on addressing the Central Valley’s economic challenges by advancing education, employment and business opportunities. This involved holding a series of roundtable discussions and inviting representatives from those organizations to share their knowledge, insights and perspectives. Information gathered from the research and the roundtables served as the basis for a series of more focused one-on-one interviews designed to delve further into specific topics and how organizations are working to address the challenges. A

total of 86 participants participated in the series of roundtables and interviews. Throughout the process, draft summaries of each roundtable and interview were shared with participants to ensure that all of the information captured was reflected accurately; summaries were then revised based on their feedback.

A number of themes emerged from the research and the conversations with stakeholders—and both the analytic research and these themes served as the basis for the findings presented in this study. A more detailed description of the overall methodology and process has been included in Appendix A.

This study is organized as follows:

- Section 1 summarizes the research conducted on the region’s key demographic and employment indicators and the potential for high-speed rail to facilitate greater economic activity (with a more detailed report included in Appendix B).
- Section 2 summarizes the findings and themes from the review of the economic data, the roundtable meetings and the one-on-one interviews.
- Section 3 summarizes what the research team heard and the themes that emerged from the roundtable discussions and the follow-on individual interviews.

## Key Findings

These findings are a synthesis of what the research team learned from the economic and demographic data and the information and perspectives offered by the stakeholders who participated in the roundtables and interviews.

***The Central Valley economy is lagging behind the rest of the state and is in the midst of a dynamic change with external forces, shifts, challenges and opportunities that state and regional leaders have sought to address. High-speed rail is an important piece of a broader strategy that recognizes the need for infrastructure investment to better integrate the Central Valley’s economy with the Los Angeles basin and the San Francisco Bay Area economies and to evolve to a more balanced, diversified and resilient economy that offers more opportunity to those who live and work there.***

Farming and related services have been and still are a major contributor to the Valley’s economy. They have been a source of prosperity for some, although that wealth has not permeated equally throughout the economy; a relatively large proportion of residents are unemployed or living on subsistence wages. Structural factors of the economy, such as a heavy reliance on low-wage, low-education industry sectors, and demographic realities, such as low educational attainment levels, collectively hinder residents’ opportunities to advance economically and the region’s ability to attract new businesses that could offer higher wage jobs and generate new sources of income for the Valley. Without fundamental structural changes to its economy, including more balance and diversification, the Central Valley risks falling further behind as incomes lag and as the wider state, national and global economies continue to shift to a knowledge-based, service-driven economy.<sup>8</sup>

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<sup>8</sup> For the purposes of this economic overview and analysis, the ‘knowledge economy’ is categorized as a combination of the NAICS sectors: “Professional & Business Services,” “Financial Activities,” and “Information” (NAICS codes are used by business and government to classify business establishments according to type of economic activity). This analysis relies on the aggregate of these three industry categories as a proxy for the knowledge economy, with the understanding that there is a correlation between the number of jobs in these industries and the number of knowledge-based jobs within a region. For more discussion on this topic, see Section 1 and Appendix B of this report.

The face of the Central Valley economy is changing in response to a number of natural forces and economic imperatives, including the long-term physical and geographical threats to the agricultural economy such as the persistent drought and the region's sprawling development patterns. In response to these forces, economic and policy leaders are seeking to attract value-added manufacturing companies to the Central Valley. A number of these relate to, and are extensions of, the agricultural sector, such as juice, general fresh food processors and cheese producers—including one of the world's largest mozzarella cheese plants. The region has also seen growth in the energy sector, including renewable energy production—biofuels, solar and wind—as well as hydraulic fracturing. These and other industries are helping to bring higher wage jobs to the Valley than it has historically experienced.

Central Valley stakeholders, leaders and consortiums are responding to these shifts by working to chart a new path forward—one that protects agriculture but also brings more balance to the economy. Diversifying its economy by attracting more value-added and higher paying knowledge-based jobs would enable the Central Valley to better integrate with the more prosperous parts of the California economy and potentially offer new sources of economic development. Otherwise, the gap between the Central Valley and the more globally competitive Los Angeles basin and San Francisco Bay Area economies could continue to widen, with the risk that the Valley could fall further behind.

Diversifying the Central Valley economy does not mean moving away from agriculture but capturing more of the higher value-added, knowledge intense components that *support* it as well as attracting *new* economic sectors that would bring greater balance. High-speed rail is an important factor in that broader strategy not only because of the near-term jobs being created but, more importantly, because of the critical access and connections it will provide. Connecting the Valley to the rest of the state is integral to the region's ability to foster greater business-to-business interaction and enhance its attractiveness to businesses and employers.

***The Central Valley's population is growing, but regional employment, income and educational attainment levels continue to lag the rest of the state—including the critically important knowledge economy.***

Over the past two decades, as the Central Valley's population has grown from 2.7 million to almost 4 million—a growth rate faster than that of the rest of the state—unemployment has consistently been higher than the state as a whole and has never dropped below 8 percent. As a region, it suffered from one of the highest unemployment rates in the country during the recession, reaching a high of nearly 17 percent in 2010. Figure ES-3 depicts the unemployment trends in the Valley, as compared to the state. As of 2013, the unemployment rate had decreased to 13.6 percent; however, the 2014 mid-year average unemployment rate of 12.6 percent is still a persistently high figure, and almost 5 percentage points higher than California's current unemployment rate of 7.9 percent.<sup>9</sup> Regional income levels also trail the rest of the state; the state's per capita income of \$28,341 is 46 percent higher than the Central Valley per capita income of \$19,409.<sup>10</sup>

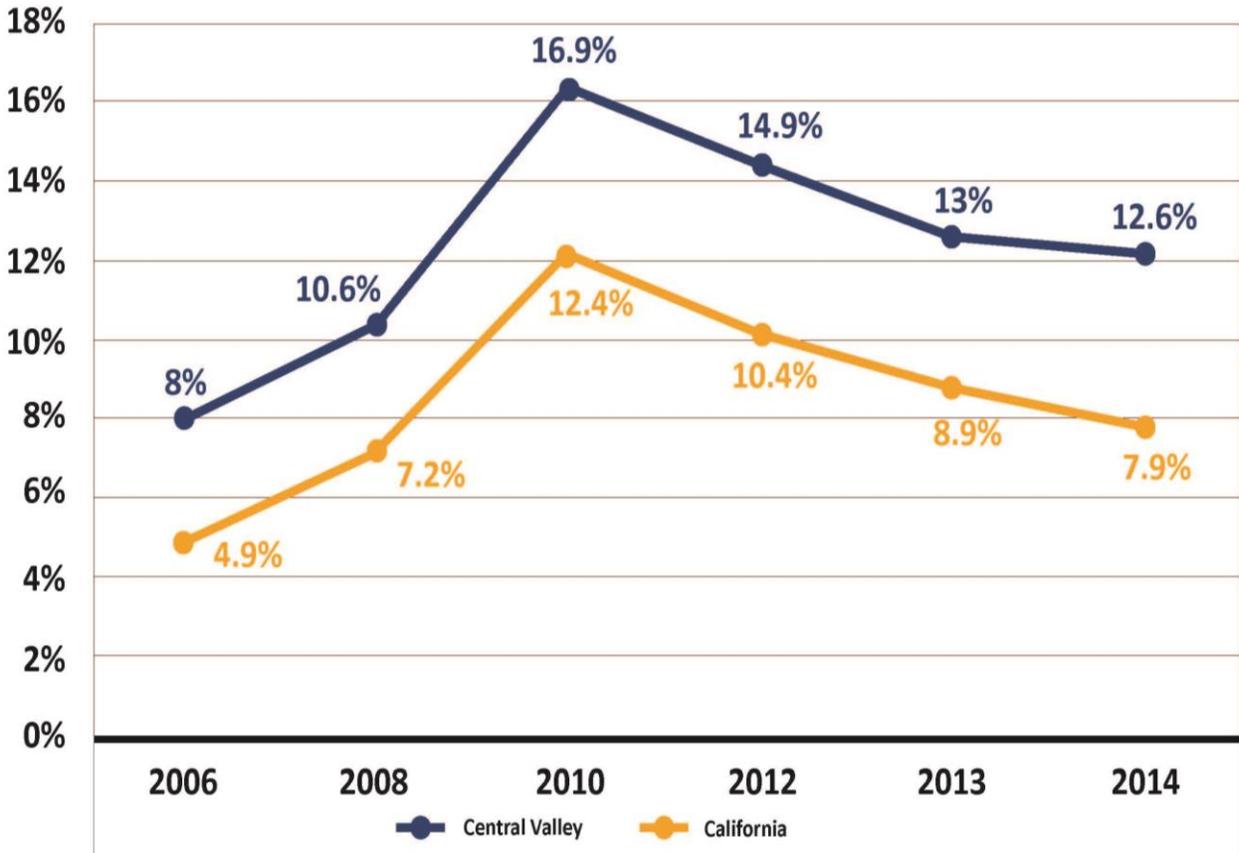
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<sup>9</sup> California Employment Development Department, 2014:

[www.labormarketinfo.edd.ca.gov/LMID/Labor\\_Force\\_Unemployment\\_Data.html](http://www.labormarketinfo.edd.ca.gov/LMID/Labor_Force_Unemployment_Data.html)

<sup>10</sup> American Community Survey: <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>

Figure ES-3—Unemployment Rates in the Central Valley vs. California, 2006-2014



Underlying these employment and income dynamics are a number of demographic realities, including relatively low educational attainment levels and the fact that the economically significant knowledge-based employment sectors are considerably under-represented in the region. These sectors have become increasingly important to economic prosperity and competitiveness over time and, if the Valley is unable to more fully tap into them, risks falling further behind.

***The Central Valley is repeatedly characterized as an “island” that is isolated from the rest of the state by transportation, geographic and economic barriers, and the high-speed rail system is seen as a means to help break down those barriers.***

Although the Central Valley lies in the center of the state, a number of stakeholders commented that living and working in the region is akin to living on an island disconnected from the rest of California. Bounded by the Tehachapi Pass to the south and the Coast Ranges to the west, the Valley faces unique and complex hurdles, including a lack of vital linkages to the state’s more prosperous metropolitan centers. Lack of connectivity—both within the Valley and to the Los Angeles and San Francisco economic mega-regions—was frequently cited as a critical obstacle that has impeded the region’s ability to attract or grow businesses, create more jobs and grow its economy.

The faster travel times and the improved connectivity that high-speed rail will bring to the Central Valley has the potential to fundamentally transform the regional economy. Evidence has shown that cities brought within two hours of a major economic center accrue the most economic benefit from rail.<sup>11</sup> This has important implications for Bakersfield, Fresno and other Central Valley cities, all of which will be within two hours by rail to both San Francisco and Los Angeles as the high-speed rail network has the potential to increase business-to-business interaction between southern and northern California and better integrate the Central Valley into the broader state economy.

At the same time, a number of stakeholders raised concerns that increased connectivity might lead to a “bedroom community effect” where people live in the Central Valley and commute to the Los Angeles basin or the San Francisco Bay Area—when the goal is to generate more job opportunities in the Valley.

***Stakeholders were generally positive about the steps the Authority has taken to improve communications and its policies and initiatives to create opportunities for small and disadvantaged Central Valley businesses and workers.***

**The Authority has taken several steps to ensure that small businesses and residents benefit from construction of the high-speed rail program. These include:**

- Establishing a Small Business (SB) Program that established a 30-percent goal for SB participation, including Disadvantaged Business Enterprises (DBE), Disabled Veteran Business Enterprises (DVBE) and Micro-Businesses (MB) (the overall 30 percent SB goal includes a 10 percent DBE participation goal and a 3 percent DVBE goal).
- Partnering with the U.S. Minority Business Development Agency (MDBA) to support minority-owned business participation in initial system construction. An MDBA Business Center in Fresno provides minority-owned firms with management and technical assistance, information on contracting opportunities and helps businesses become certified.
- Adopting a policy that requires design-build construction and consultant teams to develop and implement a small business performance plan to achieve the Authority’s small and disadvantaged business goals.
- Requiring construction contractors to adhere to the National Targeted Hiring Initiative and ensuring that a minimum of 30 percent of all project work be performed by National Targeted Workers who reside in Disadvantaged Areas and those designated as Disadvantaged Workers.
- Providing a range of outreach and support activities, including a quarterly small business newsletter, preparing step-by-step instructions for SBs, DVBEs and MBs to become certified, and establishing a Business Advisory Council to provide input and advice to the Authority in implementing practices that effect and/or impact the small business community.

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<sup>11</sup> Chen, Chia-Lin; Hall, Peter (2009), “The Impacts of High-speed Trains on British Economic Geography: A Study of the UK’s IC125/225 and its Effects” University College London, London, UK

Roundtable participants acknowledged that the Authority had made sustained efforts in the last two years to improve communication with Central Valley communities, including more frequent outreach by Authority Board members and senior management. Several expressed appreciation for the opening of an Authority office in Fresno and the appointment of a Regional Director, noting that the Authority staff has become a much more visible presence in the community. The Authority's policies that support small, disadvantaged veteran and women-owned businesses and encourage hiring of disadvantaged workers was positively received, as was the requirement that the design-build construction contractors appoint jobs coordinators to ensure that the Authority's policies are met.

***As uncertainty about the program diminishes, stakeholders will feel more able to plan and make training, hiring and business decisions.***

The roundtables and interviews were conducted through the first half of 2014. During this period, uncertainty about the future of the program was a prevailing question. Specifically, a number of stakeholders noted the uncertainty surrounding when work in the Central Valley would be fully underway and whether the Authority would have sufficient funding to connect the Valley to the Los Angeles basin and the San Francisco Bay Area. They commented that this uncertainty was affecting a number of decisions ranging from what types of training programs should be created to what types of new businesses opportunities might be developed or attracted to the region.

Representatives from universities and community colleges noted that uncertainty has created hesitation about whether to expend resources on training and they expressed a reluctance to do so in the event that opportunities do not materialize as anticipated. Some Economic Development Corporation (EDC) representatives noted that, although they want to use high-speed rail as part of their "marketing pitch" to lure new businesses to the region, it is challenging to make that pitch until there is more confidence that the system will be built as planned.

Because of this uncertainty, many stakeholders are focused on more immediate near-term needs, issues and decisions rather than on longer-term changes and opportunities that will occur when faster connections to the Los Angeles basin and the San Francisco Bay Area are available. It is important to note that these discussions took place before the Authority's funding picture improved through the ongoing commitment of the GGRF; these concerns should diminish as the Authority is able to show progress and communicate more clearly how it plans to advance the system with those new funds. As that occurs, organizations and individuals will likely have greater confidence in moving forward with plans and decisions.

***High-speed rail is one element of a broader set of planned infrastructure investments in the Central Valley—with about \$30 billion in planned regional investments through 2020.***

According to a public infrastructure analysis prepared for the Office of Community and Economic Development (OCED) at Fresno State University (FSU) on behalf of the California Partnership for the San Joaquin Valley, there is

approximately \$30 billion in planned expenditures for public infrastructure in the broader Central Valley through 2020, not including the \$5.8 billion that the Authority is spending on its first construction section.<sup>12</sup>

Major investments are planned in the Central Valley for water and wastewater systems, flood control, broadband infrastructure, energy facilities and hospitals and education and correctional facilities. Together with high-speed rail, these projects will provide a significant infusion of capital into the region and create a number of local hiring and small business opportunities; many of these projects can be expected to require similar skills and experience as the high-speed rail program. The challenge for the Central Valley is to ensure the local workforce is prepared to take full advantage of these opportunities so that the region can maximize the economic benefits of these investments.

***Workforce preparation was a common concern, as was a desire to keep jobs local and a need for greater clarity about what types of jobs will be needed and when.***

Workforce Investment Boards (WIBs), community colleges and universities are working to ensure that more of the local workforce is trained so that they can effectively compete for higher paying jobs. Because there is a lead time associated with developing curriculum and training programs, they need to identify what jobs will be available and what workforce skills will be needed as early as possible. This will enable them to prepare programs that respond to those needs. A common refrain in many of the discussions was the need for more timely information regarding what *types* will be needed, how *many* will be needed and *when* they will be needed.

Further, this concern also focused on needing more systematic and effective lines of communication between and among the trade unions, community colleges, state universities and the WIBs involved in workforce development. Regular engagement with these workforce organizations will help reduce these uncertainties and enable them to plan ahead on how they can maximize the use of their limited resources to prepare workers.

***Stakeholders expressed optimism that the region's economy will ultimately benefit from improved connectivity to the rest of the state—but also want to ensure access and seamless multimodal connections at the stations.***

For the most part, the stakeholders conveyed a general sense of hope and optimism that the Central Valley economy will benefit from increased connectivity to the state's other economic centers. This included greater opportunities to access certain higher education degrees or job opportunities, as well as to more frequently conduct business in other cities connected by the high-speed rail corridor. The potential for more high-tech companies to locate some of their functions in the Central Valley where the cost of living is lower was also noted.

There are concerns however, that "last-mile" planning needs to happen in order to create multimodal connections between the high-speed rail stations and regional transit systems to maximize the system's multimodal benefits. Connectivity was cited as being particularly important for the smaller cities in the Central Valley, including Dinuba, Reedley and Kingsburg, since they are located farther from planned stations but want to also share in the economic opportunities afforded by high-speed rail. While these multimodal linkages were presented as a

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<sup>12</sup> [www.hsr.ca.gov/docs/programs/construction/National\\_Targeted\\_Hiring\\_Initiative\\_Plan.pdf](http://www.hsr.ca.gov/docs/programs/construction/National_Targeted_Hiring_Initiative_Plan.pdf)

challenge, it was in the context of maximizing opportunities and benefits to the broader region, not just the cities with stations.

***Several stakeholders expressed interest in exploring the use of the high-speed rail corridor for fiber optic and broadband expansion—regarding broadband access as an important component to advancing education and training opportunities and ensuring businesses remain economically competitive.***

The need to bridge the digital divide by expediting and implementing broadband and information technology access to the region’s underserved and unserved communities is a high priority for the Central Valley and is regarded as critical to its ability to catch up to other parts of the state.<sup>13</sup> Closing the digital divide is a mechanism to improve literacy, social mobility, economic equality and ultimately promote overall economic growth.

The Authority has already begun to explore issues and options for using the corridor for broadband and telecommunications in concert with other state agencies, and it could also engage with organizations in the Central Valley that are working to advance broadband access. The California Emerging Technology Fund (CETF) is involved in a broad range of activities and investments to advance its mission, including research, advocacy and providing grants; it also works in partnership with other organizations, including the San Joaquin Valley Regional Broadband Consortium (SJVBC). High-speed rail is a potential opportunity that could complement CETF’s efforts and other strategies that are being used to bridge the digital divide in the Valley.

***Central Valley organizations engaged in business attraction and retention see an opportunity to use high-speed rail as part of their “marketing pitch.”***

Some stakeholders observed that in Merced County, which is in close proximity to the high-tech regions of northern California, a number of local workers have left to work for companies in the San Francisco Bay Area. Others noted, however, there has been some recent activity where high-tech companies are exploring the possibility of moving some of their functions into the region, which could be a step toward retaining workers and growing the local job base. Merced County is determining how to place itself in a competitive position to respond to leads; high-speed rail could be used as part of the marketing pitch to highlight the many things that Merced has to offer, including UC Merced, which is the largest research university in the region.

Fresno County is recovering faster than most other places in region, and the Fresno County EDC advised that it had also seen an increase in business activity and interest from other companies looking to possibly relocate there. Some businesses are starting to hire again, including sectors that were previously struggling, such as manufacturing. Stakeholders engaged in business development and retention are taking steps to be more business friendly but noted that it is still a challenge to attract new businesses. Some see an opportunity to use high-speed rail as part of their marketing program but said that this will be more effective once there is greater certainty about when high-speed rail service will begin. This uncertainty should diminish as the Authority communicates how the GGRF will be used to implement the system.

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<sup>13</sup> “Digital divide” is a term that refers to the gap between those demographics and regions that have access to information and communication technology and those who do not or that have limited access

***Tourism and recreation emerged as potential opportunities to stimulate more economic development —with high-speed rail seen as a mechanism for bringing more state, national and international travelers to the region.***

A number of stakeholders view high-speed rail as a potential catalyst to bring more national and international travelers to the region and to create more tourism business opportunities for outdoor recreation, agri-tourism, cultural attractions and conferences. Since high-speed rail will increase access to national parks and other destinations throughout the region, it has the potential to draw visitors already traveling to attractions in the Los Angeles and San Francisco areas who might want to add another California destination to their itinerary.

**Travel and tourism is important to California's economy. In 2013:**

- Travel spending directly supported 965,800 jobs
- 6.6 million overseas travelers visited California—a 20.6% share of all overseas travel to the U.S.—and they spent \$12.8 billion<sup>16</sup>

In 2013, there were 227 million person-trips to and through California, generating over \$109 billion in spending.<sup>14</sup> According to information provided by stakeholders, the National Park Service estimates that Yosemite National Park, Sequoia National Park and Kings Canyon National Park contribute \$1.5 billion annually to the Central Valley, and once high-speed rail is operational, there is potential for this to increase.<sup>15</sup> Tours such as the Majestic Mountain Loop make it possible for visitors to visit Sequoia National Park, Kings Canyon National Park and Yosemite National Park in one trip. Some stakeholders suggested that stations should be developed so that they also function as visitor hubs.

The Authority's current ridership forecasts include travel by state residents *within* California but do not yet project how many travelers or tourists from *outside* the state may use the system, although this is planned for a future update. Tourism could be an important part of the high-speed rail market, particularly with easy access and connections to prime destinations. Incorporating visitation numbers for Yosemite, other national parks and destinations in the Central Valley could be useful in helping determine how the regional tourism industry might be enhanced or expanded with high-speed rail.

***Some stakeholders saw potential for stations and station area development plans to provide a catalyst for economic revitalization and development—although this was tempered somewhat by uncertainty about program timing and funding.***

The Authority is working with Central Valley cities to initiate or advance their station area planning processes; the Authority supports these efforts financially through station area planning grants which, to date, have been awarded to Fresno, Merced and Gilroy. These planning processes focus on meeting the needs of the residents of each city by ensuring that citizens and stakeholders are involved in planning and that development plans align with

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<sup>14</sup> <http://industry.visitcalifornia.com/Find-Research/Latest-Tourism-Research/>

<sup>15</sup> This statistic is reported as it was represented by participants during one-on-one interviews and has not been independently verified.

<sup>16</sup> <http://industry.visitcalifornia.com/Find-Research/Latest-Tourism-Research/>

desired development to enhance economic revitalization. An overarching goal is for stations to serve as important regional transportation hubs and act as an incentive for people to live nearby or for businesses to locate in or near them as well. As noted previously, some stakeholders expressed concern about the uncertainty regarding when the system will be built and whether high-speed rail connections will materialize. Further discussions with these and other stakeholders would be helpful in addressing these concerns and for exploring what type of economic development around stations is both feasible and desirable.

***There is significant interest in seeing the Authority collaborate with the region's higher education institutions on a range of issues and initiatives—from job training to research and advancing applied sciences, which are the foundation of new business and employment opportunities.***

The community colleges and state universities located in the Central Valley have the potential to contribute valuable skills, ideas and knowledge to the program. As a major base of advanced research in the region, UC Merced is well-positioned to conduct research for the Authority or its private partners and to offer advanced degrees in fields that would prepare students for high-speed rail employment opportunities. UC Merced could leverage opportunities in research and technology on a range of topics, such as renewable energy and environmental mitigation techniques, or by sponsoring robotics or computer modeling simulation programs, some of which could generate patents or commercial applications that might also foster new economic activity in the Central Valley.

FSU already offers comprehensive Civil Engineering and Construction Management degree programs that have large-scale infrastructure design and management curriculum built into the programs. Over the last three years, FSU has also offered semester-long seminar courses and workshops related to high-speed rail.

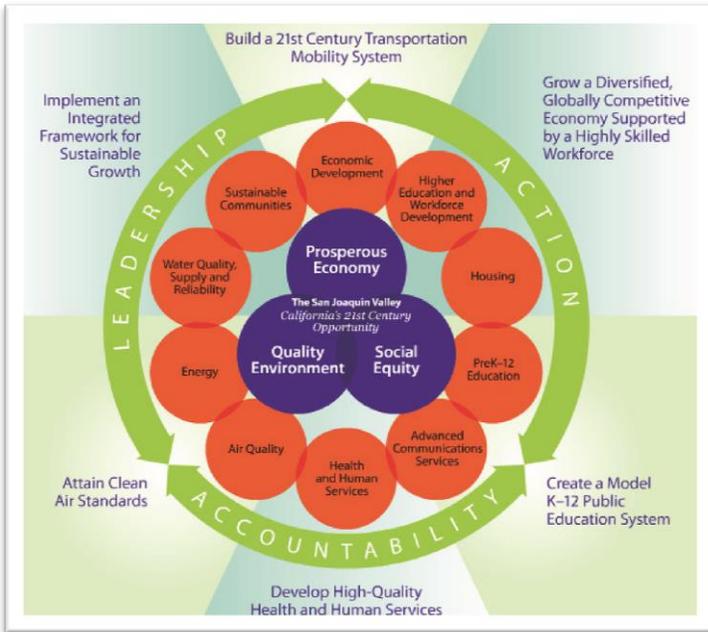
The various community colleges in the Central Valley offer students the opportunity to gain skills for job entry, obtain an Associate's degree or vocational certificates and prepare for four-year academic programs. Some colleges partner with WIBs and/or building trades to develop curriculums tailored for workforce preparation or work directly with businesses to prepare workers for specific jobs for new or expanding businesses.

The higher education stakeholders who participated in the roundtables or were interviewed expressed interest in exploring ways they can best use their resources to provide relevant training for their students or otherwise advance research for the high-speed rail program. Collaborating with these higher education institutions could enable the Authority to leverage knowledge for the program and simultaneously help these institutions better prepare its students to work on it.

***State and regional leaders have formed a range of partnerships and are taking concerted action to address the Central Valley's longstanding economic challenges and to change its trajectory to one of opportunity, growth and revitalization.***

A number of partnerships and consortiums have formed around a variety of issues, such as the Central California Community Colleges Committed to Change (C<sup>6</sup>) which, among other things, is developing accelerated workforce training programs, and the SJVBC.

**Figure ES-4—Six Major Initiatives of the California Partnership for the San Joaquin Valley**



The San Joaquin Valley Partnership (Partnership) provides a broad regional framework focused on creating a prosperous economy, a quality environment and social equity throughout the Valley. Its Board, which is appointed by the Governor, is comprised of elected and appointed officials from the region and from state government, including six state cabinet secretaries. Educational, economic development, labor, workforce development and health organizations are also on the Board, as are business leaders. The Partnership has formed work groups focused around a range of initiatives outlined in Figure ES-4, including building a 21<sup>st</sup> century transportation system, sustainable planning practices, attaining clean air standards and growing a diversified, globally competitive economy supported by a highly skilled workforce.

These and other consortiums provide opportunities for the Authority to continue to work in partnership with stakeholders and leaders in the Valley to ensure that the high-speed rail system is an integral component of economic recovery and advancement.

## SECTION 1. ECONOMIC CONDITIONS, TRENDS AND OPPORTUNITIES

A detailed analysis of the Central Valley economy was prepared as part of this study and is included in Appendix B. It reviews the region's current and historic economic climate by examining key demographic and employment indicators and trends and comparing them to the state of California. It also discusses factors currently driving economic change in the Central Valley and the extent to which high-speed rail might facilitate greater economic activity and diversity by linking the region to the state's more prosperous economic mega-regions. This section summarizes the major highlights from that analysis.<sup>17</sup>

### Overview

This Central Valley region represents California's agricultural heartland and is a major supplier of fruits, nuts, vegetables and other agricultural products to the United States as well as to foreign markets. While there are pockets of success and growers have enjoyed reasonable margins on their output, the region is characterized by persistent high unemployment and relatively low wages for large segments of the population. The Central Valley has generally experienced a weaker and more volatile economic trajectory compared to the state. It also experienced a substantially greater economic downturn as a result of the great recession of 2008 through 2009, and it has undergone a much weaker recovery since then compared to the rest of the state. By almost every common economic measure—income, poverty and unemployment—the Central Valley economy lags far behind the broader state economy. More recently, the Valley has experienced an exceptionally severe drought, which has created its own set of impacts and economic challenges.

Basic agricultural production is characterized by low wages, skill levels, and educational attainment on the part of the workforce; seasonal fluctuations; and unequal distribution of income, with a large share of the population earning subsistence wages. Meanwhile, the rest of the state economy is propelling toward a knowledge economy, which the Central Valley has been unable to fully tap into thus far.<sup>18</sup> At the same time, the Central Valley presents conditions, including a fast-growing and young population base, that can present opportunities for economic growth if they are successfully leveraged with investment in infrastructure and workforce training.

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<sup>17</sup> For the purpose of this detailed economic analysis, the Central Valley is defined as including Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus and Tulare Counties.

<sup>18</sup> For the purposes of this economic overview and analysis, the "knowledge economy" is categorized as a combination of the NAICS sectors "Professional & Business Services," "Financial Activities," and "Information." The key challenge in the formalization and modeling of the knowledge economy is the somewhat elusive definition of "knowledge" and the method of data reporting. The organizing categories by which the government collects and reports data on employment is driven by industry rather than job functions, and as such, the ability to quickly and easily identify a region's "knowledge economy" is a challenge. For example, a maintenance worker in a bank would fall under the Professional & Business Services industry sector, whereas a robotics engineer in a factory would fall under the Manufacturing industry sector. Drilling down to finer-level NAICS subcategories would allow for a more accurate snapshot of the knowledge economy, but this would require a level of effort that is beyond the scope of this economic analysis. As such, this analysis relies on the aggregate of the aforementioned industry categories as a rough proxy for the knowledge economy, with the understanding that there is a correlation between the number of jobs in these industries and the number of knowledge-based jobs within a region.

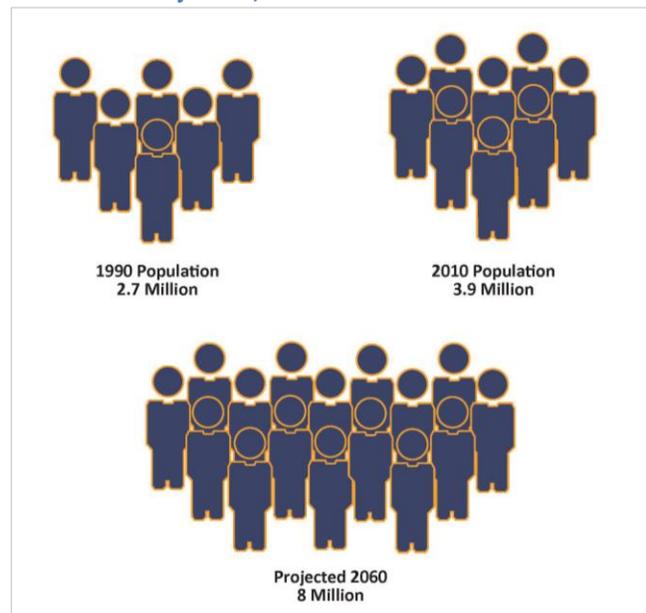
## Demographic and Economic Analysis

The following section highlights the key demographic and employment trends in the Central Valley, as compared to the state of California. Key findings from the analysis include the following:

### Population<sup>19</sup>

- As of 2010, the Central Valley region had a population of almost 4 million people, the majority of which is concentrated in Fresno, Bakersfield and Stockton, which are the area's primary urban centers.
- Over the past 30 years, the region's population has nearly doubled, driven primarily by a migrant boom, and is growing at a faster rate than California.
- Despite recent economic challenges, this rapid population growth is expected to continue, with the region's population expected to more than double again—to over 8 million by 2060 (Figure 1-1).
- Strong regional population growth is generally seen as a promising demographic trend as it leads to increased aggregate demand for goods and services, provides a larger labor talent pool and provides a more diversified tax base.

**Figure 1-1—Central Valley Historical Population Growth Trends and Projection, 1990-2060**



### Age<sup>20</sup>

- The Central Valley has a high proportion of young residents, with 40 percent of the region's population under the age of 24.
- More than 25 percent of the population is within the prime working ages of 25 to 44.
- The region's median age of 32 is noticeably less than the median age of 36 for California overall.

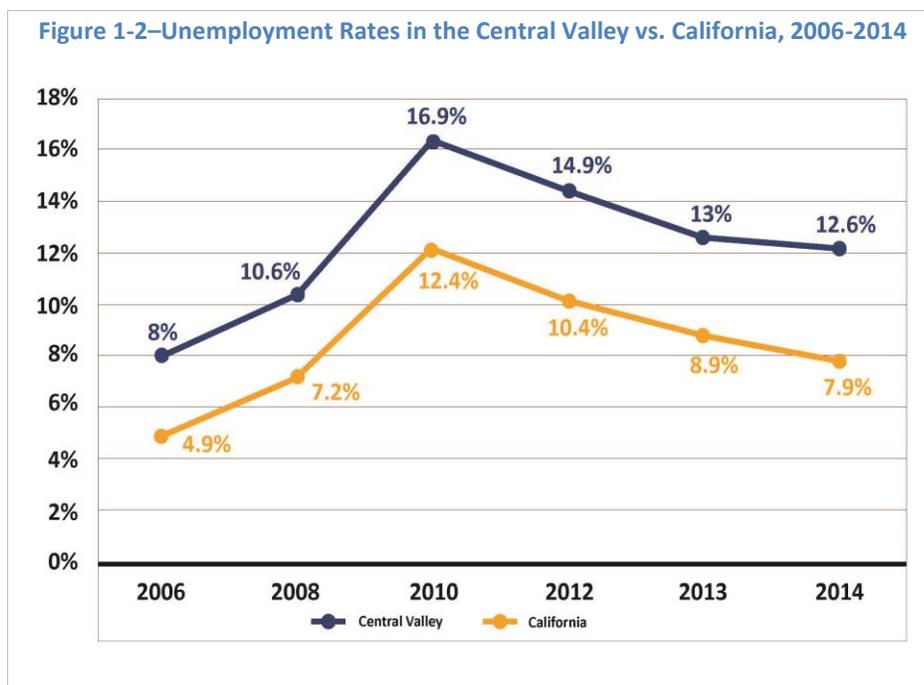
<sup>19</sup> American Community Survey, 2012: <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>

<sup>20</sup> American Community Survey, 2013: <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>

- A high proportion of young residents are typically considered to be an asset in the context of shifting to a stronger and more diversified economy; a younger population is more easily able to adapt to the specific skill sets and flexibility required in many high-value industry sectors.

### Employment<sup>21</sup>

- The region had 1.32 million jobs as of 2013, compared to 15.6 million jobs statewide.
- Historically, job creation has not kept pace with population growth; while the region currently represents 11 percent of statewide population, it only represents 9 percent of the state’s workforce.



- The region lost 93,000 jobs between 2007 and 2010; the annual increases in employment since the depth of the recession have been promising, but this growth is far below the level required to keep up with projected population growth.
- The region suffered from one of the highest unemployment rates in the nation during the recent recession, reaching a high of nearly 17 percent in 2010.
- The 2014 mid-year average unemployment rate decreased to 12.6 percent, still a stubbornly high figure, and still more than 4 percentage points higher than the state’s.

<sup>21</sup> California Employment Development Department, 2013: [www.labormarketinfo.edd.ca.gov/](http://www.labormarketinfo.edd.ca.gov/)

- The region is dominated by agricultural and public sector jobs. Nearly half of all employment within the region is comprised of three predominant industry sectors: Government, Farm-Based Activities, and Educational & Health Services.
- By way of comparison, “knowledge economy” employment, a term typically defined as industry sectors that make intensive use of technology and human capital rather than physical inputs or natural resources, lags significantly in the region; core knowledge sector employment makes up only about 12 percent of the Central Valley employment market, while it makes up nearly 25 percent of the state’s employment.
- About 46 percent of California’s \$2.1 trillion economy is driven by the knowledge sector; only 21 percent of the Central Valley’s \$130 billion economy is based in the knowledge sector.
- The fact that the regional unemployment rate has consistently been higher than the statewide unemployment rate points to a significant and persistent segment of the Central Valley workforce that is unable to fully engage in the economy, even in prosperous times.

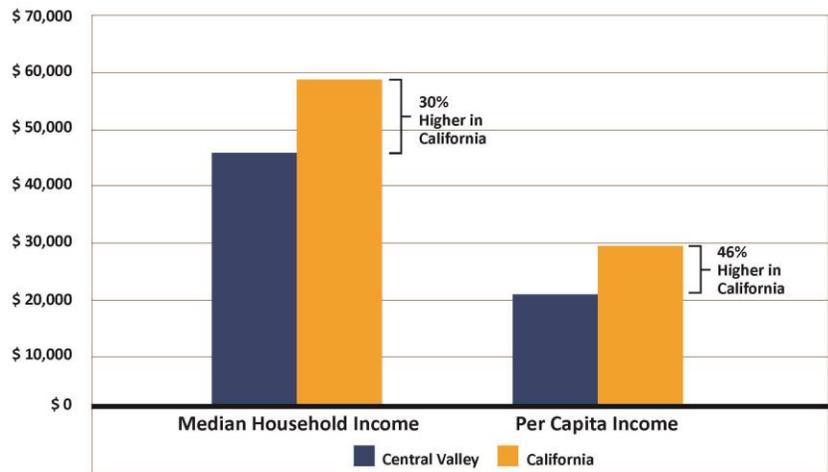
**Why does the knowledge economy matter?**

The knowledge economy is now recognized as the driver of productivity and economic growth in an increasingly competitive modern global economy. Average wages per employees working in these sectors in California range from \$78,000 to \$115,000—considerably higher than the economy-wide average of \$58,000.

**Income<sup>22</sup>**

- Median household incomes in the region averaged approximately \$44,900 annually, while at the state level this figure was 30 percent higher, at \$58,300 annually, as illustrated in Figure 1-3.
- When accounting for the fact that the Central Valley has a larger average household size (3.31) than the state overall (2.97), the income disparities become even more pronounced: the regional per capita income is \$19,400, while in California it is 46 percent higher, at \$28,300.

**Figure 1-3—Annual Income Levels in the Central Valley vs. California, 2012**



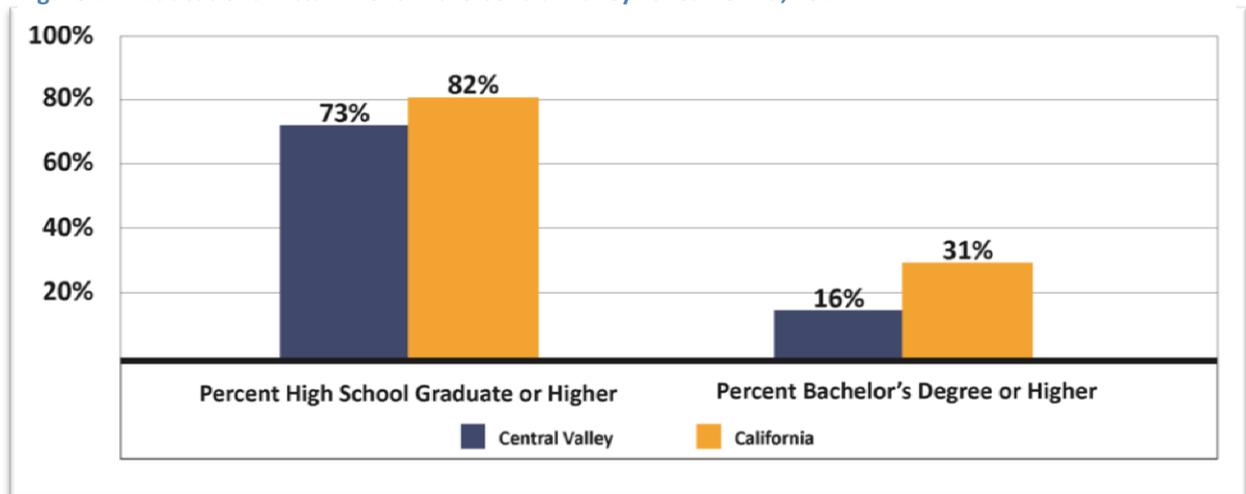
<sup>22</sup> American Community Survey, 2012: <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>

- Twenty percent of the region’s families and nearly 25 percent of its residents live below the poverty line, as compared to 13 percent and 17 percent in the state, respectively.

### Education<sup>23</sup>

- More than a quarter of the regional population does not hold a high school diploma, and the proportion of the regional population with a bachelor’s degree or higher is only 16 percent, nearly half of the level seen in California overall.

Figure 1-4—Educational Attainment in the Central Valley vs. California, 2012



- To some extent, these economic and demographic indicators point to a chicken-and-egg scenario in the Central Valley—an industry base that is focused primarily on farming and the public sector requires relatively lower levels of education. This is one factor that discourages residents from pursuing higher levels of education and, subsequently, deters key knowledge industry employers from locating in the region due to a lack of qualified workers.

## Future Economic Prospects and Opportunities

In the near-term, economic opportunities are associated with the infrastructure development planned in the Central Valley—including, but not limited to, high-speed rail—that will increase short-term trade activity for construction and other industry sectors. This will also attract knowledge industries and generate more employment and increased demand for better-trained, higher wage employees. The almost immediate investment of almost \$6 billion for high-speed rail construction will provide a much-needed infusion of capital into the Central Valley economy.

<sup>23</sup> American Community Survey, 2012: <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>

In the longer term, the enhanced connectivity to the state's two economic mega-regions will provide opportunity for greater access to education, improved linkages between the Central Valley and the San Francisco Bay Area and the Los Angeles basin, and the potential for employers to site facilities in the Valley where land is generally less expensive and the cost of living is lower.

Regional economists have increasingly focused on specific groups of related industries that, together, comprise what are called "industry clusters." Typically, economists and policy makers seek to foster industry clusters that have dynamic growth potential and pay high wages. Transportation linkages have been identified as one of the contributors to cluster growth and to competitive advantage.<sup>24</sup> High-speed rail facilitates increased face to face interactions among high-value activities such as scientific and technical research and universities, corporate headquarters, global finance and business services, and media and cultural centers. High-speed rail is uniquely suited to link areas into mega-regions and to strengthen the major economic clusters. Mega-regions provide the basis for competing at a global scale—the Los Angeles and San Francisco mega-regions compete with existing and emerging global cities in Asia, Latin America and elsewhere.

The importance of focusing on economic clusters as the centerpiece of an economic development strategy is recognized by the California Partnership for the San Joaquin Valley (CPSJV), which commissioned a report, the *Regional Industry Cluster Analysis and Action Plan* that was published in 2012 as part of its Regional Industry Clusters Initiative (RICI).<sup>25</sup> The study provides an important perspective on the Central Valley economy as well as insight into how public policy might be targeted to build on the dynamic potential clusters in the regional economy. The study identified seven key clusters—Agriculture, Health and Wellness, Energy, Logistics, Manufacturing, Water Technology and Public Sector Infrastructure—and offers insights into the types of economic growth that could be accomplished with supportive public policies to improve education and training and to fill infrastructure gaps.

An *Economic Impact Analysis Report* was prepared for the Authority's 2012 Business Plan.<sup>26</sup> The Report included a literature review that surveyed the range of economic impacts of high-speed rail that had been studied and observed around the world, including impacts on productivity, business competition, market extension and economies of specialization and business interaction. The research showed that there is a strong consensus among academic researchers—across fields such as economics, geography, business and management—that high-speed rail fosters increased economic productivity and contributes strongly to a region's competitive advantage.

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<sup>24</sup> Saskia Sassen, *The Global City: New York, London, Tokyo*. 2000. Princeton; Sassen, *Cities in a World Economy*. 2000. Thousand Oaks California.

<sup>25</sup> Applied Development Economics, with Araken Arisian, Virginia Hamilton, *San Joaquin Valley Regional Industry Cluster Analysis and Action Plan*, prepared for Office of Community and Economic Development, California State University, Fresno, on behalf of the California Partnership for the San Joaquin Valley, September 2012.

<sup>26</sup> [www.hsr.ca.gov/docs/about/business\\_plans/BPlan\\_2012EIR.pdf](http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2012EIR.pdf)

As discussed in the 2012 Report, experience from high-speed rail systems around the world has demonstrated that cities brought within two hours of a major economic center accrue the most economic benefit from rail.<sup>27</sup> This has important implications for Bakersfield, Fresno and other Central Valley cities, all of which will be within two hours by rail to both San Francisco and Los Angeles. In France, for example, a two-hour trip time has been critical to generating a significant amount of new trips that reflect increased economic activity between Paris and Lyon, the two largest metropolitan areas in France. Smaller cities that lie along a high-speed rail route *between* two major metropolitan regions can also benefit from new connections to larger economic centers. For example, Kakegawa, Japan is a medium-sized city of 72,000 people that is midway between Tokyo and Osaka. When Japan's high-speed rail system, the Shinkansen, was originally developed, the service did not stop in Kakegawa and, thus, there were no local benefits from it. However, following the construction of a station in 1988, the city experienced an increase in employment, tourism and conference activity.

By helping the Central Valley become more fully integrated with the state's major metropolitan economies, the California high-speed rail system has the potential to help hasten diversification of the regional economy. As seen in other international examples, under the right conditions, high-speed rail investments can generate substantial increases in employment and economic productivity by improving overall accessibility and creating much greater connections to the larger economy among key economic clusters.

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<sup>27</sup> Chen, Chia-Lin; Hall, Peter (2009), "The Impacts of High speed Trains on British Economic Geography: A Study of the UK's IC125/225 and its Effects" University College London, London, UK

## SECTION 2. KEY FINDINGS

### Introduction

The following findings are derived from both the research and data gathered on the Central Valley's current economic conditions (discussed in Section 1) and the perspective, knowledge and perceptions shared by stakeholders in the roundtable meetings and one-on-one interviews (which are summarized in Section 3: What We Heard).

### Workforce Challenges and Opportunities

The Central Valley is facing persistent high unemployment that is matched with relatively low educational attainment. The 2014 mid-year average unemployment rate of all the counties in the Central Valley was 12.6 percent and, at its peak in 2009 and 2010, the average regional unemployment rate was 16.9 percent.<sup>28</sup> More than a quarter of the regional population does not hold a high school diploma, compared to 18 percent statewide.<sup>29</sup> The proportion of the regional population with a bachelor's degree or higher in 2012 was only 16 percent, which is nearly half of the state level of 31 percent.<sup>30</sup>

These factors are the underlying reason why the knowledge sector industries, which are those sectors that rely on knowledge, skilled labor, information exchange and innovation to drive productivity and sales, are significantly underrepresented in the regional economy. A more detailed analysis of these economic trends is presented in Section 1.

Diversifying the economy beyond a focus on agriculture, by attracting more value-added and knowledge sector jobs, will enable the Central Valley to better integrate with the broader, more prosperous California economy and potentially offer new sources of economic development and opportunity for the region. Although agriculture has historically been the face of the Central Valley economy, it is being threatened by a record drought and sprawling, unsustainable development patterns. Inability to bring more balance to the Valley economy could cause the gap between the region and the more globally connected Los Angeles basin and San Francisco Bay Area economies to widen further with the risk not only that the Valley might fall further behind but that it could potentially create a drag on California's economy.

As the region's relatively young population continues to grow at a faster pace than the state, the gap between skills and workforce demand in the region could become more pronounced if it is not addressed. The workforce needs to be trained so that they have adequate skills and so that those skills are transferrable and will allow them to move between different jobs as opportunities arise. However, the uncertainty expressed by those participating in the roundtables regarding whether the program would ultimately be completed and the lack of clarity about the types of jobs that are needed is creating hesitation about how colleges and agencies should target their resources

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<sup>28</sup> California Employment Development Department

<sup>29</sup> American Community Survey, 2012

<sup>30</sup> American Community Survey, 2012

toward training. Given the limited resources available, this is a particularly important issue. Workforce development agencies and community colleges expressed the need for timely information from contractors on the timing and the number and types of jobs that will be available. This will enable them to improve the matching process and encourage, advise and prepare the workforce to participate. Stakeholders did note, however, that the Authority's requirement that design-build contractors use job coordinators has been helpful in this process.

With the new infusion of Cap and Trade funds and as uncertainty about the program diminishes, stakeholders will likely be better able to plan and make training, hiring and business decisions.

The desire to "keep jobs local" was another primary concern that came up in the discussions surrounding workforce preparation and opportunities, with workers concerned about having to compete for high-speed rail jobs with workers from outside of the region. Although the Building and Construction Trades Council's Book rules (which outline priorities for dispatching union workers according to jurisdiction) will give priority in hiring to local members over outside labor and allow many of the union-dispatched jobs to stay in the region, once the building trades clear all the workers from "Book 1," there is a concern that unions outside the region would be able to come in. Similarly, new businesses that locate in the Valley will create new jobs, but the local workforce may have to compete with outside labor that may move into the region to capitalize on high-speed rail opportunities.

An estimated \$36 billion in infrastructure investments are planned over the next 10 years in the San Joaquin Valley, above and beyond the high-speed rail program.<sup>31</sup> Given that, there needs to be a broader conversation about the overall outlook for career paths, including those that will continue long after work on the high-speed rail program is completed in the Valley, rather than a narrow focus on high-speed rail jobs. Maintaining a broader perspective on training and jobs will help decrease the emphasis on the uncertainties surrounding high-speed rail and more emphasis on preparing people to work on a range of public infrastructure projects, which is a growing sector in the Valley. The high-speed rail program can be and has been promoted as an opportunity to get small and disadvantaged businesses certified and workers trained, enabling them to compete for work not just on high-speed rail but on or other public infrastructure projects as well. Businesses and workers that are not able to work on the first design build construction package (CP1) may be able to work on the others (CP2-3, CP4) or other state projects as they become available, and there will be a bigger pool of resources that are in the queue and ready to go.

Stakeholders were generally very supportive of the steps that the Authority has taken to improve communications and the policies that have been adopted to support jobs and small businesses, such as the guidelines that require general contractors to hire a jobs coordinator to interact with agencies in the region. The Authority has gone beyond the minimum hiring requirement and has disseminated a policy and action plan to contractors and agencies to keep them current on procedures. The Authority has also been very proactive in hosting public forums to disseminate information and achieve an understanding of local workforce needs and has established open channels with agencies in the region. Stakeholders also expressed appreciation that the Authority was conducting this particular study and was reaching out to those involved in and working on these issues as part of it.

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<sup>31</sup> <http://industry.visitcalifornia.com/Find-Research/Latest-Tourism-Research/>

## Transportation Connectivity and Integration

The high-speed rail program will provide a variety of transportation benefits to the San Joaquin Valley, including taking cars off of State Route 99, improving circulation for goods movement, connecting the Valley to the Los Angeles basin and the San Francisco Bay Area (which includes the Silicon Valley) and increasing connectivity within the Valley. The high-speed rail system also offers the opportunity to make a number of multimodal connections that do not currently exist. Local transit networks can use high-speed rail stations in much the same way that some Amtrak stations are used today. There are concerns, however, about how to create these multimodal linkages between the high-speed rail system—at the station hubs—and regional transit systems in order to maximize the system’s benefits. These linkages will be particularly important to connect visitors to different attractions in the region. Coordination between train schedules, transit schedules and scheduling of events for both domestic and international visitors will be a challenge but also an opportunity.

Representatives of the smaller cities in the Valley located farther from high-speed rail stations noted that access and connectivity will be very important so that they might benefit from the system as well. Opportunities exist for those smaller cities to be included in the station area planning processes that are being funded in part by planning grants from the Authority. These plans can examine station connectivity, including improving transit service to and between nearby population centers.

The connectivity that high-speed rail will bring has significant implications for the region’s economic growth and development. The Central Valley was characterized by many stakeholders as an “island” that is relatively isolated from the rest of the state because of geographic and economic barriers. There are limited reliable transportation options for residents to travel to other parts of California without having to endure long travel times. Connecting the San Joaquin Valley with the rest of California will be a critical component to breaking down this isolation by attracting more jobs and people to the region and better connecting Central Valley residents and businesses to the more prosperous economic centers in northern and southern parts of the state.

Connectivity is more than just about moving people, but can also be the mechanism for transferring mass amounts of data throughout the state. Recognizing that, some stakeholders discussed the potential to use the high-speed rail system right-of-way for other uses, such as broadband to digitally connect more Valley residents, increase educational opportunities and ensure businesses are able to remain economically competitive. The California Emerging Technology Fund has researched how the high-speed rail right-of-way can be leveraged to close the digital gap in the Valley. The digital divide reflects the economic and opportunity gaps in the San Joaquin Valley but data show that the availability of high-speed broadband can help accelerate economic development.

A number of issues will have to be considered and addressed, however, to leverage the right-of-way for broadband use since most of the communication networking of data and entertainment connectivity is privately held. The Authority has begun to engage in discussions both with the private sector and other public agencies to better understand the design challenges and opportunities and to begin to quantify the economic prospects the right-of-way may offer. Timing is one key challenge since the system’s implementation schedule means that the ability to connect the southern and northern ends of the state with high-quality data and communication capabilities is still in the future. Due to the staging of construction, it may not be practical to install an underground conveyance conduit in the short-term because it may need to be altered as more advanced stages of construction begin.

## Business Development Opportunities

Central Valley cities and counties are struggling with how to attract businesses to the area and become more business friendly; this is especially challenging with space constraints, lack of supporting infrastructure and the halt of construction in some areas of the Valley. High-speed rail and the improved connectivity it will provide, however, can be incorporated into the “marketing pitch” to attract prospective businesses into the region, highlighting the opportunities in the southern San Joaquin Valley to be more closely connected to the Los Angeles basin and for the northern San Joaquin Valley to be more connected to the Bay Area.

However, uncertainty surrounding the program and when it will be implemented affects how and when high-speed rail can be incorporated into the “marketing pitch” and decision-making involving what types of new businesses and opportunities may be developed, potentially attracted to the region and whether existing businesses should expand. In other cases, for example in Kern County, some businesses may be hesitant to expand and are choosing to delay growth pending final decisions on the final alignment.

In sum, most stakeholders envision numerous opportunities for workers and business to become involved in the high-speed rail program, but this will require further communication by the Authority on the implementation timeline. In addition, small and disadvantaged businesses need to know that in order to improve their opportunities for high-speed rail work, they need to be certified through the state to take advantage of the Authority’s aggressive small business goals. These goals make it possible for many smaller firms to support construction in areas as far-reaching as paper shredding, printing and so forth.

## Tourism

The 14 million international travelers who visit California each year provide an opportunity for the Central Valley to leverage high-speed rail to grow its tourism and recreation industries with attractions that include Yosemite National Park, Sequoia National Park, agri-tourism and various cultural and historical landmarks.<sup>32</sup> The hospitality sector, and particularly the restaurant and hotel industries in Visalia within this sector, tends to be very positive about opportunities to bring more visitors to the area, particularly since Visalia acts as a hub for much of the visitation to Tulare County. For Fresno County, the high-speed rail program can be a catalyst to bring a mobile group of domestic and international visitors to many destinations in the region. Visitor-oriented businesses in Fresno County recognize the opportunity of high-speed rail as it provides the connectivity and enhanced mobility to increase both business and pleasure trips.

Some stakeholders highlighted agri-tourism a major opportunity in the region. Examples of agri-tourism include tours for families and school children, “you-pick” flower or produce farms, watching cheese-makers, bed and breakfasts and rural weddings. Growing the this industry will require supporting potential venues on how to capitalize on the process of raising fresh food and how to advertise this to visitors and assisting them on how to properly plan and manage service, liability and insurance risks. As visitors become more aware of how large and

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<sup>32</sup> <http://industry.visitcalifornia.com/Find-Research/Latest-Tourism-Research/>

diverse the California agricultural industry is and its contributions to the domestic and international food supply, this could spur more visitors and tourism in the Valley.

High-speed rail can also improve access and mobility to cultural and historical landmarks, including those that are located in smaller cities in the Valley. For example, Dinuba is a destination for an annual parade for Korean visitors to celebrate their independence from Japanese colonialism; high-speed rail could increase access to Dinuba for this celebration.

An increase in tourism in the Central Valley will pose opportunities as well as communication and planning challenges to effectively coordinate travel, intermodal connections and scheduling of events in the region for large groups of tourists.

## Station Area Development

The potential exists for stations to act as a catalyst for growth in the surrounding downtown areas and increase business activity. The Authority is beginning to work with some local jurisdictions on the design of the areas surrounding the stations and is identifying the internal functional components of the stations, but has not yet started architectural designs of the building themselves. The station area planning work is being conducted by local jurisdictions funded in part by grants from the Authority; the grants total \$4.5 million from the federal government and are being matched by another \$4.5 million in state and local funds.

Station area planning can provide a vision for each station area that builds upon each city's plans and policies, maximizes long-term benefits and identifies strategies for future development, passenger access and parking and intermodal connectivity. Station area planning will help make the area surrounding the stations more attractive for people to live and work by prioritizing infill development. Successful station area planning requires the appropriate zoning to allow for the type of development that will contribute to business development. Incentives can be used as a mechanism for attracting development into the downtown area, and these efforts will ensure planning for downtown development supports each city's vision and goals for development. In the past five years, for example, Fresno has developed new downtown plans and a form-based downtown development code to accommodate the anticipated more intense growth being planned in the area.

One of the biggest challenges of station area planning is timing and planning around the program's uncertainties. As has been previously noted, greater program certainty will help accelerate and focus planning efforts. Consensus between property owners, business owners, residents and advocates is also a concern since these stakeholders have different perspectives and varying wants and needs.

## Education, Research and Technology

Local community colleges and universities have the potential to contribute valuable skills, ideas and knowledge to the program.

UC Merced could position itself as a training ground for high-speed rail workers that could go beyond this program. The University could leverage opportunities in research and technology, renewable energy and various electronic applications that are integral components of high-speed rail; there is also potential for a spinoff of jobs as a result of the program for patents and technology. Other ways the university can be involved in the program include sponsorship of robotics and computer modeling simulation programs and involving its natural sciences programs

with the mitigation requirements of the program. The high-speed rail program will also complement the University's 2020 Project, an initiative to provide significant amounts of new teaching and research facilities, housing, athletics and support space. As the program matures, it will potentially provide opportunities for UC Merced to:

- Engage in engineering-related knowledge transfer
- Serve as a national repository for high-speed rail-related transportation development knowledge
- Become a potential testing ground for leading-edge transportation research or a sustainable transportation institute

The University also has several student groups that provide forums for engagement in the program, including the Engineers for a Sustainable World (ESW), which promotes sustainability through engineering and works to expose students to engineering projects and work done by professors and private-sector professionals.

CSU Bakersfield offers the opportunity to capture the knowledge of its young engineers and students from the social sciences and business schools for the program. CSU Bakersfield will be offering a high-speed rail course in collaboration with Tsinghua University in Beijing, China to prepare its students for the program. The class will be an interdisciplinary effort between the electrical engineering, mechanical engineering and computer science departments and the professor overseeing it has established a working relationship with a counterpart in Beijing to assist in organizing and structuring the class.

Fresno State has offered semester-long seminar courses and workshops relating to high-speed rail and FSU is working closely with the Fresno County EDC and other industry partners on plans to increase course offerings and capacity in high-speed rail-related curriculum and research. Students are taking courses that will prepare them to take on employment in high-speed rail-related industries and have been recognized for their interest and technical awareness of the program.

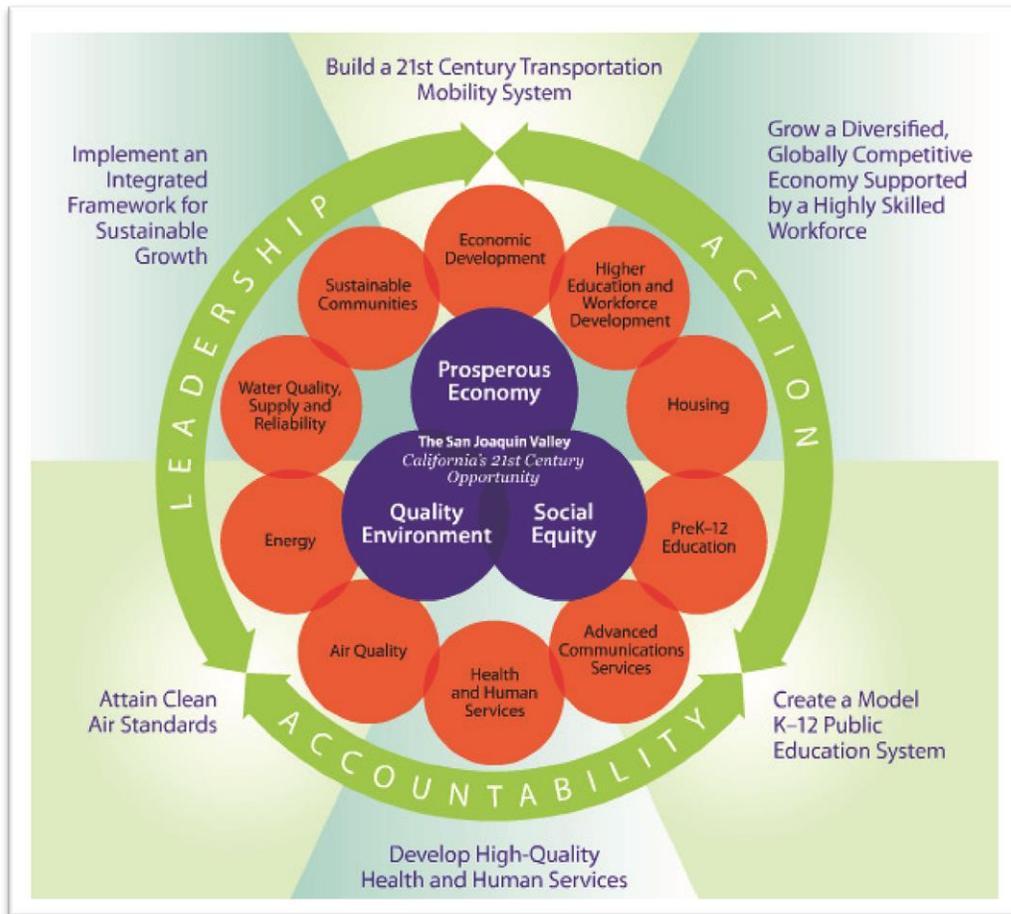
A collaboration of Central Valley educational institutions could be possible to further understand the opportunities the high-speed rail program could bring to the region. The educational institutions have relationships they can build on to assess their respective strengths and advance the study on a range of fronts, from the mechanical design of the program to researching the social connectivity and mobility opportunities the program could bring to the region. These educational institutions present opportunities to partner on a range of issues and initiatives that could advance new economic and job opportunities, including job training and innovations in sciences and engineering.

## Regional Partnerships

To ensure that Central Valley workers have access to high-speed rail opportunities, the region's economic development agencies, workforce agencies and community colleges and universities are working on ways to coordinate their efforts to prepare for the types of jobs that will be needed. Regionally, a lot of work has been done to form consortiums and partnerships among the various agencies in the region that focus on economic issues and opportunities.

One of the most successful consortiums in the state is the San Joaquin Valley Partnership, which was created in 2005 as a public-private sector partnership to address persistent economic, environmental and social challenges and disparities, as compared to other regions in California and nationally. The partnership, which is administered by the Office of Community and Economic Development at Fresno State, is a strong and effective collaboration between public, private and non-profit leaders and experts who are all committed to the common goal of achieving sustainable economic development and improving the quality of life for all residents in the San Joaquin Valley. Figure 2-1 identifies the six initiatives that the Partnership focuses on.

**Figure 2-1—Six Major Initiatives of the California Partnership for the San Joaquin Valley**



The region's community colleges have also been fairly successful in regional consortium efforts, particularly in the areas of worker education and readiness. Partnerships are an important forum for participants to coordinate, communicate and share information with each other and present opportunities for the Authority to collaborate as well.

## SECTION 3. SUMMARY OF WHAT WE HEARD

### Roundtable Meetings

A series of eight roundtable meetings were held—six at the county level, one focused on small cities and one at the regional level. The roundtable discussions were focused on a range of issues and questions to better understand how high-speed rail might affect the Central Valley economy. Each meeting was led by a facilitator and structured in such a way to allow for open discussion by all meeting participants around a range of topics. The roundtables were designed to seek participants' perspectives of the economic issues, challenges and opportunities in the Central Valley and to hear their perceptions of how the high-speed rail program might affect the Central Valley economy both in the short- and long-terms.

It is important to note that in these discussions, participants shared facts and data verbally that were not verified; any facts or data stated in this section do not represent research conducted or verified by the research team.

### Fresno County

Fresno County is recovering faster than most other places in region:

- The Fresno County EDC has seen a 10-fold increase in business activity and interest from other companies that are exploring the possibility of relocating to Fresno County.<sup>33</sup>
- New businesses are starting to hire again, including those sectors that were previously struggling, such as manufacturing.

The Fresno County EDC is working on how it can become more business friendly and add incentives to attract businesses and allow them to expand easily. Fresno has incorporated high-speed rail into its marketing pitch to attract other businesses to move to the region; however, the uncertainty of the timeline of the program is making it difficult for businesses to make a firm commitment to move.

Despite these positive indicators, workforce recovery is still lagging behind economic recovery. This has resulted in a big push to encourage more people to pursue the education and training necessary to take advantage of high-speed rail opportunities and also be able work on other infrastructure projects after construction of high-speed rail in Fresno is finished.

The Fresno WIB has tried to stay ahead of the curve in preparing the workforce for the program by working closely with the trades in the pre-apprenticeship programs and keeping lines of communication open with the Authority and the contractor for CP 1. The WIB has also worked closely with the Fresno County EDC, community colleges, the Central Labor Council (CLC) and a number of other agencies within the Fresno jurisdiction to qualify members of the workforce for the high-speed rail and other infrastructure job opportunities.

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<sup>33</sup> This statistic is reported as it was represented by participants during the roundtable meetings and has not been independently verified.

High-speed rail has impacted business retention for those businesses that are located in the alignment and may choose to leave the area or to close down permanently. Approximately 350 businesses are located on the alignment through Fresno, and about 200 of those businesses will have to relocate.<sup>34</sup>

The Fresno County EDC has a contract with the City of Fresno, County of Fresno and the Authority to ensure that displaced businesses are relocated within the County, and as of December 2013, there has not been a single business that has been lost. There have been quite a few success stories for finding locations, and many of these businesses are in better locations now than they were previously since portions of the alignment goes through blight. Other businesses do not want to continue with their business, and the Fresno EDC is helping them obtain an appropriate price for their land. Cosmopolitan Tavern has been in the same location for 110 years, but the area they are moving to is in the parking lot of the convention center, which will increase their business significantly since people can walk to Cosmopolitan Tavern for lunch.

In 2013, the Fresno EDC assisted 126 businesses with its relocation program. The agency ensures that these businesses receive all of the benefits and money that they are entitled to. Businesses often feel scared, confused and nervous upon receiving a notification, and the Fresno EDC ensures these businesses have someone to walk them through the process every step of the way.

The City of Fresno recently made changes to its zoning code to provide the foundation necessary for more development in the downtown area. The revised code will create 17 new zone districts that will focus on form rather than focus on land use. The form-based code will establish design criteria that will ensure new development is consistent with the existing fabric of the neighborhood and is pedestrian-friendly. In January 2012, the Authority signed a contract pledging \$700,000 in federal funding and \$200,000 in state funding for the City of Fresno to develop a Station Area Plan; the contract was amended in June 2014 to extend the duration for 1 year. In addition, the City of Fresno has also received a \$15.9 million Transportation Investment Generating Economic Recovery (TIGER) grant to reconstruct Fulton Mall.<sup>35</sup>

### Madera County

Madera County has experienced a slower economic recovery than other counties in the region:

- Many businesses in the County have had to scale back during the recession and have not recovered yet.

The City of Fresno's TIGER grant will go toward the reconstruction of Fulton Mall to reintroduce vehicle traffic and include streetscape improvements and bicycle and pedestrian amenities to help restore economic vitality to the downtown area.

<sup>34</sup> This statistic is reported as it was represented by participants during the roundtable meetings and has not been independently verified.

<sup>35</sup> [www.dot.gov/policy-initiatives/tiger/tiger-2013-award-fact-sheets](http://www.dot.gov/policy-initiatives/tiger/tiger-2013-award-fact-sheets)

- The strongest industry in Madera is still agriculture; the higher production value of tree and specialty crops and food processing has helped with local economic recovery.
- The commercial vacancy rate in Madera County is only 1 percent and yet there are no new facilities being built to attract new businesses because many industrial parks lack power and water infrastructure and financing for new structures. At the same time, the City of Madera has 1,300 vacant housing lots.<sup>36</sup>
- Although potential opportunities exist for smaller manufacturing environments and the high-tech manufacturing sector, the overall economic climate is still too tight for businesses to act on these opportunities.

Madera County is facing challenges with its workforce because many workers in the area are poorly educated and do not possess the skills necessary to compete for higher-skilled jobs. Approximately 32 percent of the 25 and over age group does not have a high school diploma or GED, and less than 20 percent of this same group has a college and/or advanced degree.<sup>38</sup> Those individuals who are more highly educated tend to move to bigger cities where they can earn higher wages.

Workers that have been laid off from the local construction and manufacturing industries are seeking assistance from the Madera Workforce Investment Board to become trained in better paying and more stable jobs, such as truck driving and health care. In addition, the workforce needs to be equipped with transferrable skills for when construction on the Madera-to-Fresno section is finished and construction begins on the next segment.

In addition to workers not having the necessary skills to compete for higher-skilled jobs, workforce conditions are exacerbated by the fact that people who may typically be expected to retire are staying in their jobs longer, which has resulted in fewer open positions for people just entering the workforce. The teen unemployment rate is high (approximately 40 percent), since jobs typically held by teens are now being held by older members of the workforce.<sup>37</sup>

Until a decision is made about the location of the rail alignment, there is uncertainty regarding how to plan for agriculture in the long-term; these concerns are heightened by challenges associated with climate change, suburbanization and land use patterns.

Since Madera County will not have a station, there are concerns that residents will not be able to take full advantage of high-speed rail without a commitment to ensuring intermodal connectivity. Because of this, there is

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<sup>36</sup> This statistic is reported as it was represented by participants during the roundtable meetings and has not been independently verified.

<sup>37</sup> This statistic is reported as it was represented by participants during the roundtable meetings and has not been independently verified.

<sup>38</sup> This statistic is reported as it was represented by participants during the roundtable meetings and has not been independently verified.

strong interest in “last-mile” planning and exploring other ways to improve access and connectivity between the closest station—in Fresno—and other population centers within the County.

### Merced County

Merced County participants reported that the County’s economy is recovering, but at a slower pace than the state:

- Agriculture has been a driving force of economic recovery, particularly in value-added sectors such as high value crops and food processing.
- Sales tax revenues and per capita income have improved, and 4,200 new jobs have been added in the last four years.<sup>39</sup>
- Construction and infrastructure spending has helped spur economic activity and the rate of home foreclosures has declined.
- The rental market of homes is fairly robust and the vacancy rate has dropped to 3 to 5 percent, with the inventory of single-family homes down to a three-month supply.<sup>40</sup>

Although these are positive indicators of economic recovery, the County is being cautious about its economic condition; water shortages are causing physical constraints to local economic growth; and financing new construction is challenging without builders who are willing to take on the risk and with job growth still lagging.

Since the County is located in close proximity to the high-tech regions of northern California, a significant number of people leave to work for companies in the Bay Area. However, there has been some recent activity from high-tech companies moving into the region, which could be a step toward retaining local workers. The County is working on how it can place itself in a competitive position to respond to leads; high-speed rail could be used as part of the marketing pitch to highlight the many things that Merced has to offer, including UC Merced, which is the largest research university in the region.

Merced County’s proximity to other high-tech regions in northern California is extremely advantageous; it presents a great opportunity to capitalize on this proximity, which will be enhanced by the high-speed rail system. The County has recently seen high-tech oriented work, including rocket testing, conceptual testing of products and some manufacturing, come in from the Bay Area.

The WIB is working to ensure that more of the workforce is trained for higher paying jobs. The WIB is involved in recognizing and preparing criteria for the local workforce to qualify for high-speed rail and other jobs for infrastructure projects as they come to fruition, such as the expansion of the southern end of Highway 99 to a

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<sup>39</sup> This statistic is reported as it was represented by participants during the roundtable meetings and has not been independently verified.

<sup>40</sup> This statistic is reported as it was represented by participants during the roundtable meetings and has not been independently verified.

six-lane facility from the Madera County line to the Mission interchange that is currently under construction in Merced County.

Merced Community College is participating in workforce readiness by identifying needs and using its contract education program to respond to those needs quickly. The College is also leveraging grants to introduce services to businesses, diversifying the way it is able to provide services.

The City of Merced has begun developing how it will approach station area planning. The County is in the process of revising its zoning code and once it is complete, it will enable the City to speed up the review process for any development that occurs around the station. The City Council has set a high priority to include housing in the Station Area Plan, some of which could help accommodate UC Merced's growing student population.

Some concerns were expressed regarding impacts to agricultural land that might occur as Merced is a very productive region in row, tree and specialty crops, and has a significant processing and dairy industry. Since the high-speed rail trains will enter Merced at-grade, there are also concerns that the overpasses that are installed will divide the community.

### Kern County

The economy in Kern County is driven by the energy generation industry and a number of spinoff industries such as wind generation, increased oil production, agribusiness and commercial warehousing. Kern County is one of the leading areas in the state for economic recovery:

- The County was one of the first to recover all jobs lost from the recession in 2011.<sup>41</sup>
- In 2013, over 1,300 new single-family residential permits were issued, and there were 3 to 4 large construction projects for apartments.<sup>42</sup>
- Commercial development is still lagging, although there has been some infill and national chains that are entering the region.
- Other indicators of economic growth include increasing sales and property taxes and a large construction pipeline, which consists of renewable energy, highway and warehousing projects.

Despite all of this economic activity, the unemployment rate still remains in the double digits.<sup>43</sup>

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<sup>41</sup> This statistic is reported as it was represented by participants during the roundtable meetings and has not been independently verified.

<sup>42</sup> This statistic is reported as it was represented by participants during the roundtable meetings and has not been independently verified.

<sup>43</sup> This statistic is reported as it was represented by participants during the roundtable meetings and has not been independently verified.

A number of leaders in the area are interested in how increased connectivity to southern California could benefit the overall economy of Kern County, particularly since this connectivity will enable the County to leverage existing relationships with southern California and the rest of the Central Valley. While some participants in the other roundtables expressed concern about the possibility that some residents might live in the region and commute to work either in the northern or southern ends of the state, some of those in the Bakersfield meeting seemed to indicate that having improved connectivity might actually be a real opportunity to their community.

Most of the interest in the high-speed rail program in Kern County comes from the direct link to Los Angeles since Bakersfield has stronger ties to southern California than the rest of the Central Valley and high-speed rail provides the opportunity to leverage these relationships.

Kern County participants want to identify labor requirements for the high-speed rail program so that they can plan accordingly. Since Bakersfield is not part of the first phase of construction, there is a sentiment that workers will fall behind on construction job opportunities. In order to be able to respond quickly to job needs and put its workforce in a competitive position for available jobs, the County requires a better understanding of the types of jobs and skills that will be needed. Kern County is committed to keeping jobs within the Central Valley to prevent a surplus of temporary workers coming into the area that cannot be supported and sustained in the long-term.

Kern County could be a significant contributor to alternative energy supply for the high-speed rail program since the County has seven times the alternative energy generation than the next largest county in California.<sup>44</sup>

CSU Bakersfield sees the high-speed rail program as an opportunity to get its young engineers and students from the social science and business departments involved to capture knowledge for the program and to leverage transportation as an opportunity to address community issues.

The current hybrid alignment will affect a number of Bakersfield facilities, and the City of Bakersfield would like more information about mitigation of the program's impacts. Although the system will increase connectivity to other regions, there are also concerns that the rail infrastructure will divide portions of the community. Many businesses are hesitant to expand until the final alignment of high-speed rail is selected and approved. It was expressed specifically in the meeting that even though both awareness and possible mitigation may be necessary to preserve historical sites in downtown Bakersfield, the program could be a real opportunity to boost revitalization efforts in the central part of the City.

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<sup>44</sup> This statistic is reported as it was represented by participants during the roundtable meetings and has not been independently verified.

## Kings County

The economy in Kings County is on the upswing, but there are concerns related to how water constraints will affect future growth since the economy is agriculturally driven. However, the future outlook still remains positive:

- There is interest in industrial development and food processing; for example, distribution companies and milk processors are looking at larger parcels within industrial parks.
- Participants from the City of Corcoran reported some growing interest in both retail and industrial development, while the Cities of Lemoore and Hanford reported that economic development is stagnant.
- Despite the varying levels of economic growth, all three cities have seen some activity in new housing construction.

The Kings County Housing Authority has a waiting list for Section 8 Housing of over 6,000 applicants, but funding constraints have hindered the Housing Authority from increasing its capacity to meet the demand. The waiting time for Section 8 housing has increased from 2-to-3 years to 7-to-10 years.<sup>45</sup>

Kings County Community Action provides food, shelter and other services to individuals who are trying to transition back to work. There has been an increase in the need for the organization's services, particularly with the closure of two large retail department chains, Mervyns and Gottschalks, in 2008 and 2009, respectively. The County's overall unemployment rate is approximately 14.8 percent, and this rate is much higher in smaller cities, ranging from 29 to 31 percent.<sup>46</sup>

The building trades in the region are actively working to train workers for high-speed rail as opportunities become available. The Fresno, Madera, Tulare, and Kings Building and Construction Trades Council has a four-week pre-apprenticeship program for carpenters, laborers, operating engineers, electricians, plumbers, sheet metal, concrete masons, iron workers and surveyors. The program has been very successful in Fresno, Madera and Tulare Counties, and Kings County was scheduled to have such a program in 2014. The skills that participants gain from the pre-apprenticeship program are not only applicable to the high-speed rail program, but also to other infrastructure projects throughout the Central Valley.

Recognizing that the youth is the future of the workforce, Kings Community Action is trying to invest in the community's youth to ensure they get on the right path for when they are ready for employment. The YouthBuild program, in partnership with Tulare County, trains youth to work on the construction or rehabilitation of affordable housing.

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<sup>45</sup> This statistic is reported as it was represented by participants during the roundtable meetings and has not been independently verified.

<sup>46</sup> This statistic is reported as it was represented by participants during the roundtable meetings and has not been independently verified.

## Tulare County

Tulare County is experiencing a slow but steady economic recovery:

- There has been an increase in construction permits and residential and commercial activity, but this is mostly a result of existing businesses expanding rather than new ones moving into the region.
- A new juice processing plant, a new cheese processing plant and new distribution centers for Alltech, a company that provides animal nutrition and health products, have come into the County.
- Agribusiness has been expanding steadily in the region, particularly in areas with sufficient water and soil suitable for higher value crops, such as nuts and fruits.

A challenge that workers face is that many sectors that have experienced growth in the County do not pay sustainable wages, including retail and hospitality industries. The College of Sequoias and the Tulare County WIB formed a partnership to identify which sectors they need to provide training for; much of the demand for training is for technical skills in areas such as welding, industrial maintenance and manufacturing mechanics, but there is also demand for training in more stable sectors such as healthcare that also pay higher wages. The Tulare County WIB is working to identify opportunities for workers before it expends resources on training programs.

Tulare County is looking for ways to capture opportunities from the high-speed rail program in the short- and long-terms, but there are concerns as to the extent of potential opportunities since the County will not have a station. However, solar energy was identified as a potential resource the County can contribute to the program; the County has been fairly aggressive in the development of solar generation in its jurisdiction, with 110 megawatts currently online and an additional 100 megawatts permitted and ready for construction.<sup>48</sup>

Developers in Tulare County have partnered with a solar energy company for green solar training—80 percent of the workers have been placed and, as one project is completed, another project begins, resulting in a rotation of 400 to 600 people who have remained employed over the past 2.5 years.<sup>47</sup> Solar energy could be a resource that the high-speed rail program can tap into if the Valley is able to understand its requirements for renewable energy ahead of time.

The County of Tulare Association of Governments is applying for a grant to study the intermodal connections between the proposed Hanford station with Visalia and other communities in Tulare County. Since Tulare County has seven transit systems, there is opportunity to leverage these systems to provide connectivity to the high-speed rail system.

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<sup>47</sup> This statistic is reported as it was represented by participants during the roundtable meetings and has not been independently verified.

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## Small Cities

The small cities roundtable was focused on the current economic conditions of smaller cities in the Central Valley, including Dinuba, Kingsburg and Reedley, and how the high-speed rail program might create benefits for the citizens of these communities:

- Reedley reported a 33 percent unemployment rate with 70 percent of the city's population in the low income category.<sup>49</sup> Reedley has a large concentration of agribusiness, but also has a mix of retail, commercial and light industry. In 2011, Dinuba was the fastest growing city in the Central Valley per capita and fourth in the state.<sup>50</sup> Dinuba is doing much better economically since it has several larger commercial businesses located in the city, including a Best Buy distribution center, Ruiz Foods and Odwalla Juice—all of which have a national presence. Ruiz Foods and Odwalla employ 40 percent of the city's residents; the two commercial companies provide steady work with very short commutes for residents.<sup>51</sup> Despite the employment opportunities from these large commercial businesses, Dinuba still has a 20 percent unemployment rate.<sup>52</sup>
- Kingsburg is a bedroom community with a significant number of the adult population working outside of the City. The City has a higher median income than many cities in the Central Valley.<sup>53</sup> The housing sector has been relatively flat, but this was attributed in part to the previous Council which wanted to manage growth. A recent annexation may provide opportunity to bring new business development to the City and support a stronger local economic base. High-speed rail was identified as an opportunity to increase tourism.
- Dinuba is a destination for the Korean population since some refugees fled to Dinuba when Korea was invaded by Japan. Every year, Dinuba Koreans celebrate their declaration of independence from Japanese rule with a parade reenactment of the exact path their predecessors took in 1920 to commemorate the acts of defiance their homeland took against colonial rule. The event is attended by hundreds of Koreans,

Although these smaller cities are located farther from planned stations, opportunities still exist for these cities to be part of the station area plans being funded by planning grants from the Authority. These plans can look at station connectivity, including how to improve transit service to population centers.

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from within the local community and all parts of California, including San Francisco and Los Angeles. The high-speed rail program could provide improved access to Dinuba for this celebration and reinforce Dinuba as a destination point for its historic monuments.

Many smaller cities in the Central Valley have a difficult time identifying economic opportunities and understanding how the high-speed rail program can positively impact their communities since these cities will not have stations and there is uncertainty about whether the program will be implemented. However, once high-speed rail becomes more tangible, it could motivate smaller cities to get more involved in how they can take advantage of opportunities. Participation in the Employment Connection Commission, which meets quarterly, could be a valuable tool to disseminate information about the program for these smaller cities and inspire more understanding of and interest in program opportunities. Dinuba, Kingsburg and Reedley hope that businesses that have to relocate due to the right-of-way clearing requirements may relocate to their communities.

### Regional Meeting

The regional meeting was attended by many of the same stakeholders who participated in the County meetings, but the focus of the discussion was on regional collaboration and resource sharing in order to maximize opportunities from the high-speed rail program. Participants were particularly interested in how the region could improve the matching process between available jobs and qualified workers.

The most valuable resource that agencies, organizations and educational institutions can share with each other is information. The Fresno Regional Workforce Investment Board has been working over the past three years to establish information related to the job types and skills needed throughout the lifecycle of the high-speed rail system. The agency has been able to identify job titles through work with high-speed rail systems in Spain and France but is still struggling with projecting when jobs will become available.

Despite the uncertainties surrounding the timing of when jobs will be available, there is a push for qualified applicants of pre-apprenticeship programs to apply now instead of waiting on high-speed rail opportunities, since the skill sets needed for the trades do not change and are transferrable to other infrastructure projects.

The Madera County WIB has been placing a broader emphasis on its training to prepare workers not only for high-speed rail, but also for other public infrastructure projects. The agency directs people to the trades at the Central Labor Council to look into the pre-apprenticeship programs. Pre-apprenticeship programs in Madera, Fresno and Tulare have been very successful and have created a reserve of workers that are ready to go when job opportunities become available.

Looking into the long-term future is a challenge for regional economic and workforce organizations because of the many immediate concerns that need to be addressed in the near term, including workforce training and business relocation. However, although the longer-term economic outlook is difficult to entertain in the present, there was a mutual agreement that the project has the potential to truly transform the economic landscape of the region.

The push to prepare workers now is also met with a concern; specifically, putting someone through training without knowing if there will be a job waiting for them upon completion is particularly hard on workers who cannot afford to be in training and not working for an extended period of time. In order to address this issue, many community colleges in the region, in an effort to build more flexibility into training, are exploring how to condense

curricula or create stackable credentials, which consists of a sequence of credentials that accumulate over time to receive an Associate's degree. The Building and Construction Trades Council would like people to be able to obtain an Associate's degree at the end of a five-year apprenticeship program, so the workforce no longer has to choose between a career in trades or college; they are hoping to achieve this through partnering with community colleges. If an apprenticeship program was part of an Associate's degree, for example, trade members who do not finish their careers in trades (particularly in the more physically demanding trades) would not have to start again from the beginning but could build on their completed coursework. The trades have been very involved in the process from the onset through the CLC and through each of the regional councils where the Authority is currently engaging local jurisdictions (there are 23 CLCs in California). Labor councils organize, mobilize, and give working families a voice in the political process. The regional councils bring unions from many industries together to take action on local and statewide issues. During many of the meetings and interviews, the Fresno, Madera, Tulare, and Kings Labor Council (FMTK) was represented. The FMTK has been instrumental in working with the WIB in Fresno that, in turn, has reached out to other WIBs, EDCs and community colleges to assist in the CLC program to train and qualify the local workforce in the trade qualifications for apprenticeship.

A number of consortiums throughout the Central Valley meet regularly and are valuable resources for coordination and communication for this effort, including the following:

- **The Central Valley Higher Education Consortium** was formed to increase higher education attainment within the Central Valley to meet workforce preparation needs. The Consortium consists of state and community colleges and universities in the region, all of which have varying views regarding how and when to expend training resources. While Reedley College is ready to jump right into opportunities to ensure its students are prepared for multiples careers in all types of industries, Fresno State is hesitant about whether to expend resources since there are still uncertainties surrounding the program. The Consortium can help facilitate this and other related discussions.
- **The Central Regional Consortium** is a partnership between workforce agencies, economic development agencies and community colleges. This consortium could be a valuable forum for dialogue about what jobs are available for the high-speed rail program and who is responsible for these positions. Universities are well positioned to take on the training responsibilities for higher-skilled positions in areas such as engineering, but this is highly contingent on knowing exactly what types of skills are needed.
- **The State Center Consortium** works to combine all of the secondary institutions and as many of the businesses and industries in the region to ensure the region is providing pathways to careers. The Consortium has not focused as much on training or career technical education, but instead has worked on connecting students (both college-bound students and students not interested in going to colleges) with trades. However, budget cuts have left the State Center Consortium with very limited resources; the Consortium's previous work has no momentum to move forward without the necessary staff or resources.

## One-on-One Follow-up Interviews

Following the roundtables, the research team identified six topics for additional exploration and follow-up through a series of more focused one-on-one interviews:

- Tourism and visitation
- Workforce development
- Right-of-way opportunities
- Station area planning
- Regional collaboration and consortiums
- Technology development
- Collaboration at the higher-education level

The purpose of these interviews was to delve deeper, gather more information and better understand some of the issues, challenges and opportunities identified in the research and roundtable discussions. The summaries below represent the inputs and perspectives of 19 individuals comprising 13 organizations and educational institutions that were interviewed.

### Tourism and Visitation

High-speed rail will impact the tourism industry in the Central Valley, and connectivity is a major part of this discussion since the system will increase access to national parks and other destinations throughout the region.

The Visalia Visitors Bureau and Chamber is working to disseminate information to prepare businesses when large events are happening, such as the World Ag Expo during which every hotel in the region fills up and restaurants are at capacity. The general sentiment is that businesses will be able to adjust and adapt to increased visitation. However, retail businesses will be able to adjust much faster than those venues that require long-term capital investment, such as hotels.

Visitor-oriented businesses have generally been very positive about the potential impacts high-speed rail will bring to their businesses, including revenues resulting from increased visitation. The Fresno Visitors Bureau has a planned visitor center at or in the Fresno Station that will be equipped with the latest technological and public information services tool available and will offer a range of services to ensure visitors are aware of all of the Valley's recreational and cultural attractions and can have a seamless trip to their intended destination.

The annual World Ag Expo, which is held in Tulare, is the world's largest annual agricultural exposition. In 2014, there were 1,500 exhibitors and 100,000 attendees representing more than 50 countries.<sup>54</sup>

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<sup>54</sup> This statistic is reported as it was represented by participants during one-on-one interviews and has not been independently verified.

Fresno County is looking to expand its tourism destinations. Sporting-related visitation is the number one tourist attraction, and there is potential to expand this sector since the infrastructure for sporting activities, such as bicycle riding and golf, is already in place with the SaveMart Center and The Fresno Convention and Entertainment Center. In addition, since the region has many lakes and rivers, there are opportunities to use the water sport capacity for activities such as fly fishing and water skiing.

Since Visalia is in proximity to Yosemite, Kings Canyon and Sequoia National Parks, the area is conducive to camping, hunting and off-road activities. The Visalia Visitors Bureau acknowledges the potential to maximize national park tourism for both domestic and international visitors and is also dedicated to promoting the area's culture, natural scenery, music and art and expanding the industry to include more family-oriented attractions. A new ImagineU Children's Museum facility is currently under construction in Visalia, and Tulare County recently built a farm labor history museum that focuses on the culture of various eras and ethnic communities.

Although agri-tourism is another huge opportunity, some practical and public policy issues need to be resolved before the industry can be expanded. In Visalia, many agricultural businesses are reluctant to open their doors to the public because of security and privacy concerns having to do with agricultural compliances, dust control and a number of environmental issues. Liability is also a major concern.

Expanded growth opportunities from tourism will help reduce the high unemployment rate in the region. However, some individuals are concerned that the increase in demand for labor will also increase the cost of labor. Home builders are interested in capitalizing on the opportunities of connectivity, but there is concern that this could result in a bedroom community effect. It will require proper planning and adjustment to accommodate these changes over time.

According to the findings from the one-on-one interviews, the National Park Service estimates that Yosemite National Park, Sequoia National Park and other national parks in the region contribute \$1.5 billion annually to the Central Valley economy and 41 percent of visitors stay outside of the parks.<sup>55</sup> These numbers will likely increase once the high-speed rail system is operational.

### Workforce Development

The Fresno WIB is a working model for workforce preparation since it has been very involved in the current planning that has been necessary to recognize and prepare the workforce for high-speed rail opportunities. The WIB has worked very closely with the building trades, which have been very cooperative in identifying what training is needed and the best way to leverage training facilities to prepare the workforce.

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<sup>55</sup> This statistic is reported as it was represented by participants during one-on-one interviews and has not been independently verified.

In 2013, the Fresno WIB, along with the Kern/Inyo/Mono Counties WIB and the Stanislaus County Alliance Worknet, received a \$1.5 million grant from the discretionary program of the Federal Workforce Investment Act; these funds are being used for a pre-apprenticeship training program to prepare candidates for the labor unions for CP1.<sup>56</sup> Although the grant is being used to train the local workforce for the high-speed rail program, the training also qualifies them for a number of infrastructure projects that are either planned or currently in progress in the Central Valley or other parts of the state. The Fresno WIB emphasized that the preparation of the workforce could not have occurred without the full support and hard work of the building trades in the Fresno region.

The pre-apprenticeship training program is a prime example of how collaboration between the WIBs, community colleges and building trades can help the workforce gain economic mobility in jobs that pay sustainable wages to support their families.

Stakeholders have been very receptive to efforts the Authority has made to improve communications regarding job information, including the requirement for contractors to have a jobs coordinator and dissemination of a policy and action plan to all contractors involved. Agencies have been kept up-to-date on these procedures.

In addition, a number of consortiums have been set up in the Central Valley to facilitate information dissemination and establish working plans for the high-speed rail program. The most important strategy for improving information sharing is transparency and ensuring everyone is speaking the same technical language when it comes to job specifications and classifications. It is important that agencies and individuals proactively stay informed in real time so that no opportunities are lost. To accomplish this, agencies must understand the prerequisites to qualify for the trade programs since the trades best understand the needs of the contractor. The Fresno WIB is committed to continuing its efforts with the various Valley collaborations it is involved with to prepare the workforce and is willing to help others in the region remain current on what is happening with the high-speed rail program.

### Right-of-Way Opportunities

The CETF has worked on closing the digital gap in the Central Valley (and throughout the state) and was interviewed to better understand how the high-speed rail right-of-way may be leveraged to expand broadband connectivity throughout the state. The availability of high-speed broadband accelerates economic development by spurring job generation and improving business

The CETF has provided several grants to organizations to promote broadband adoption and distance learning for expansion of access to education; a consortium in the City of Firebaugh (involving the school district and the West Side Technology Center in partnership with the Greenlining Institute and the California Community Builders for the San Joaquin Villas affordable housing project) and the San Joaquin Valley Regional Broadband Consortium have both received grants to promote broadband access.

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<sup>56</sup> [www.fresnobee.com/2013/04/17/3262017\\_15-million-grant-to-fund-job-training.html?rh=1](http://www.fresnobee.com/2013/04/17/3262017_15-million-grant-to-fund-job-training.html?rh=1)

efficiencies.<sup>57</sup> The CETF's main focus is on areas with the lowest broadband deployment and adoption rates, including the San Joaquin Valley. The CETF accepted the Strategic Action Proposal Plan from the California Partnership for the San Joaquin Valley (SJVP) as its base plan and made an immediate investment of \$200,000 during its first year of operation in 2007 to UC Merced to advance telehealth-telemedicine in the region.<sup>58</sup>

The CETF considers the San Joaquin Valley Regional Broadband Consortium an effective partnership that can act as a model for the rest of the state to form regional consortiums to promote broadband expansion. The CETF advocates that broadband deployment be incorporated in the right-of-way planning of all major infrastructure projects throughout the region and state, including the high-speed rail program, and is willing to partner with the Authority in examining the potential use of its right-of-way for broadband.

### Station Area Planning

Some jurisdictions are working to start or advance their station area planning processes, while others have not yet started. The City of Fresno has been working over the last several years to develop plans and development codes that will align with desired development in the downtown area. The City is looking to revitalize its downtown area so that it is more vibrant than what currently exists and is focused on ensuring that the input of all stakeholders is considered in the planning process. There are concerns that the high-speed rail program is still a moving target, which makes it difficult to plan around these uncertainties.

The Fresno Station will be a regional hub and will also serve as an incentive for people who may want to live in the downtown area and commute to the Bay Area. In particular, if downtown is attractive and livable, many of these people will want to live in proximity to the station. This will help to minimize urban sprawl and build on the City's overall goals of focusing on infill development. However, there are parallel concerns that the station may intensify urban sprawl if Fresno becomes a bedroom community for Bay Area commuters.

### Regional Collaboration and Consortiums

Representatives from the Office of Community and Economic Development (OCED) at Fresno State University and from West Hills College were interviewed to understand the opportunities that may exist in regional coordination efforts that are currently underway.

The OCED recognizes that partnerships are an effective way to communicate and share information efficiently and proactively. The OCED is involved in several consortiums that work to advance economic development and business retention, workforce training, housing, education and a number of social issues. These partnerships include:

- **California Partnership for the San Joaquin Valley (SJVP Partnership)** was formed to address challenges that are hindering the improvement of quality of life and other socioeconomic opportunities in the region.

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<sup>57</sup> Getting Connected for Economic Prosperity and Quality of Life, California Emerging Technology Fund: [www.cetfund.org/files/000\\_110315\\_CETF\\_Update2.pdf](http://www.cetfund.org/files/000_110315_CETF_Update2.pdf)

<sup>58</sup> This statistic is reported as it was represented by participants during one-on-one interviews and has not been independently verified.

- **San Joaquin Valley Regional Broadband Consortium (SJVBC)** facilitates the deployment and utilization of advanced communication services and information technology throughout the region.
- **San Joaquin Valley Housing Collaborative (SJVHC)** identifies regional solutions to promote affordable housing through dialogue among state, federal and local stakeholders.
- **Community and Regional Planning Center (CPRC)** facilitates the dissemination of technical assistance, consulting and support to the regional stakeholders to shape the economic future for the region.
- **Regional Industry Clusters Initiative (RICI)** supports regional economic performance, sustainability and shared opportunities for Valley residents, businesses and communities in the areas of manufacturing, energy, water, agriculture, logistics, construction and health care.
- **San Joaquin Valley Rural Development Center (RDC)** acts as a hub to provide technical assistance for public agencies in small and underserved communities by connecting them to experts who can provide specialized consulting to which they may not otherwise have access. Services include business services, clean energy, economic development, finance, grant writing, health and human services, housing, nonprofit capacity, planning, project design and construction, trade development, transportation and water infrastructure.

The Central California Community Colleges Committed to Change (C<sup>6</sup>) is a consortium that was formed as a natural progression of ongoing collaborative work between community colleges. Although community colleges within the consortium work together on various projects, they do not work as a single consortium with a single focus.

The consortium recently received a grant from the U.S. Department of Labor to develop accelerated workforce training programs at 11 California community colleges to reduce the time it takes for workers to obtain a degree or certification at community and technical colleges, thereby increasing retention and completion rates. C<sup>6</sup> identified several barriers workers face in completing training programs, including a complex educational system that is difficult to navigate, family obligations, time restraints and a lack of basic skills to complete the program. The programs are designed to overcome these barriers through a range of strategies.

The first two years of the project will be spent designing and implementing high quality training programs, and the third year of the project will focus on expanding the capacity and sustainability of the programs.

### **Technology Development and Collaboration at the Higher-Education Level**

The FSU Economic Department, CSU Bakersfield and UC Merced provided input into how they can leverage potential high-speed rail opportunities. The interviews focused on what these institutions are currently doing and what is planned for in the future that may enhance connectivity and mobility in the region.

- **UC Merced** has supported the high-speed rail program through letters of support and advocacy within the California Partnership for the San Joaquin Valley. In the long-term, UC Merced sees itself as a repository for knowledge generated during the planning, designing and building of the system and a pipeline for the number of private and public sector jobs responsible for operating and maintaining the system. UC Merced shares many interests with the Authority, such as bringing education, innovation and economic development to the Valley. Given these common interests, there are opportunities for the university to

collaborate with or support the program in the areas of research, renewable energy and various technology applications that are integral components for high-speed rail.

- In 2013, the University launched its 2020 Project, a plan to expand its campus to accommodate its growing student population, which is projected to increase to 10,000 students by 2020 and 25,000 students when the university is fully built out. The 2020 Project and the projected student growth give the university a strong interest in improving connectivity, mobility and intermodal planning. Since the university is located near a planned station, it could also be a strong driver in attracting ridership.
- **CSU Bakersfield** has maintained interest in the public policy and engineering aspects of the development of the system. As an example, the university sponsored a community class that served as a forum for residents of the region to openly discuss the high-speed rail program in an academic setting. CSU Bakersfield has also developed a class on high-speed rail, in partnership with Tsinghua University in Beijing, China, that is expected to begin sometime in 2014 that will be taught by a professor with experience in the high-speed rail industry in China. CSU Bakersfield also seeks to stay up to date with the newest technologies used globally in the high-speed technology sector.
- **FSU** already offers comprehensive Civil Engineering and Construction Management degree programs that have large-scale infrastructure design and management curriculum built into the programs. Over the last three years, FSU has offered semester-long seminar courses and workshops relating to high-speed rail. Last spring, the university offered the first of a series of day-long technical workshops for professionals and others interested in the technical aspects of the high-speed rail program. In addition, some students and alumni are already working as interns in high-speed rail-related projects. A number of FSU engineering students have been very active, speaking at public events, including Authority Board meetings, and have been recognized for their interest and technical awareness. FSU is working on plans to increase course offerings and capacity in high-speed rail-related curriculum and research, and working closely with the Fresno County EDC and other industry partners in the planning and implementation phases.

## Stakeholder Roles

Given the economic challenges that exist in the Central Valley, a number of entities are working to improve the socioeconomic conditions in the region. The following section represents a summary of the roles of key stakeholders that are responsible for workforce and socioeconomic development in the region, as informed by the roundtable meetings, the one-on-one interviews and additional research. Each of the key stakeholders has a mission and purpose that overlaps with the interests of other entities, which can facilitate future collaborations to position the Central Valley to maximize the benefits of the high-speed rail program and advance its economic development.

### *EDC and WIB Roles*

The agencies that stand in the forefront of economic development and workforce improvement efforts in the Central Valley are the Economic Development Agencies (EDCs) and the Workforce Investment Boards (WIBs). The objectives of both organizations are complementary; EDCs work to attract, retain and expand businesses in the region to create job opportunities, while WIBs focus on workforce education and training to ensure individuals are

being trained in the skills necessary to fulfill employment needs. These organizations are nonprofit and/or government entities.

The regional WIBs are part of the California Workforce Investment Board, which was established by Executive Order in response to the mandate of the federal Workforce Investment Act of 1998 (Public Law 105-220). Statewide, there are 49 local workforce areas, and all six counties in the study are part of a local WIB, each of which has its own local charter. Membership on the Board represents the entities in their jurisdiction and has the responsibility to carry out the local, state and federal mandates of the Act and executive orders. The WIBs work very closely with other WIBs in the region and with state and federal organizations. The primary ways that they carry out their role is outlined by the California State WIB:<sup>59</sup>

- **Convener**—Bringing together business, labor, education and economic development to focus on community workforce issues
- **Workforce Analyst**—Developing, disseminating and understanding current labor market and economic information and trends
- **Broker**—Bringing together systems to solve common problems, or broker new relationships with businesses and workers
- **Community Voice**—Advocating for the importance of workforce policy, providing perspective about the need for skilled workers
- **Capacity Builder**—Enhancing the region's ability to meet the workforce needs of local employers

The WIBs of the six-county area in the study are actively working with the Authority, labor and other agencies in the region to identify what the needs and requirements are for the new opportunities that will emerge from the program.

The county EDCs work to retain existing businesses through outreach and support mechanisms, as well as attract new business opportunities to their jurisdiction and/or to the region. Each of the six county EDCs belong to the California Central Valley EDC, which is a regional marketing group whose mission is to promote job creation in the Valley.

The county EDCs work closely with each other, and each of their Boards are made up of representatives of cities and other government and non-government agencies in their own jurisdictions. Many of the chief executive officers and/or the directors of the EDCs, as well as other members of their boards, are also members of or active participants in many of the broader collaboratives in the region, including WIBs, housing authorities, community college outreach programs and a number of other public policy and workforce attainment-oriented organizations.

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<sup>59</sup> [www.cwib.ca.gov/local\\_boards.htm](http://www.cwib.ca.gov/local_boards.htm)

### *Higher Educational Institutions Roles*

Educational institutions in the Central Valley have made it a priority to develop a highly skilled workforce by increasing access to and participation in higher education and by increasing retention and completion rates of certification and degree programs. Construction of the high-speed rail system has spurred significant interest in preparing the workforce for the building and construction trades, with recognition that there will also be career opportunities in areas such as engineering and environmental sciences. In order to prepare the workforce for high-speed rail jobs, the educational institutions are faced with tackling challenges, such as financial constraints and language barriers, that can make it difficult for students to enter or complete a certificate program or degree.

In addition to workforce preparation, educational institutions also act as repositories of knowledge; they have a great depth of expertise, innovation and research to share with the community and play a vital role in impacting the social, economic and environmental landscape of the Central Valley. California has a three-tiered higher education system:

- **Community colleges**—Community colleges offer students the opportunity to gain skills for a career and job entry, obtain an Associate’s degree or vocational certificates and four-year academic transfer preparation. In some instances, community colleges may partner with WIBs and/or building trades to develop curriculums for workforce preparation. They may also work directly with businesses to prepare workers for specific tasks and jobs related to new or expanding businesses. Community colleges are interested in how they can best use their resources to prepare students to work on the program. There are 122 community colleges in the Central Valley.
- **State universities**—State universities offer four-year degrees, advanced degrees, and certificate programs; some campuses offer joint-doctoral degrees. State universities may conduct some research, but the research initiatives tend to have a more community-oriented focus. State universities have expressed interest in making both policy, technology and engineering contributions to the program. There are three state universities in the Central Valley.
- **Research universities**—Research universities offer four-year degrees, advanced degrees, certificate programs, professional degrees and doctorate degrees. Many graduate students choose careers in science and engineering, while some students pursue teaching and research careers at universities around the world. Research universities focus on academic research aimed at developing innovation and solving challenges in areas such as science, technology and health. This research typically has a broad application across the state and nation. Research universities often are able to secure partnerships and funding for initial breakthrough technologies in all sectors of the Central Valley, including agriculture, air quality and water issues. Similar to state universities, research universities are interested in making policy, technology and engineering contributions to the program. There is one research university in the Central Valley.

## **SECTION 4. APPENDICES**

## APPENDIX A—STUDY METHODS AND PROCESS

### Overview

The study, conducted by a research team retained by the Authority, was designed to combine both quantitative and qualitative analyses to gain a deeper understanding of current economic trends in the Central Valley and identify how the high-speed rail program will affect the economy, including any opportunities and challenges in the short-, medium- and long-term. Equally important, the study was designed so that this deeper understanding was informed by the perspectives and experience of stakeholders throughout the region.

Initial efforts focused on researching and evaluating the current economic conditions in the region using quantitative data independently of how local entities viewed those economic conditions. The review of economic data focused on all eight counties of the Central Valley (i.e., Fresno, Kern, Kings, Madera, Merced, Tulare, San Joaquin, and Stanislaus Counties) for the purpose of aggregating the data to portray a comprehensive narrative of the region. In order to understand how the regional and local entities and organizations plan to advance economic development in the Central Valley, the research team also reviewed various economic plans and policies from the region including general plans, EDC analytics, WIB strategies, housing authority statistics, local and regional Council of Governments transportation and infrastructure policies and a number of collaborative action plans including those of educational institutions. This effort (and the subsequent stakeholder outreach effort) focused on a subset of six Central Valley counties because these counties are where initial construction begins (i.e., Fresno, Kern, Kings, Madera, Merced and Tulare Counties).

After developing a comprehensive understanding of the economic trends, plans, policies and strategies driving the Central Valley economy, the research team conducted a series of roundtables to engage with representatives from county, city and regional agencies. Discussions during these roundtables were focused on understanding current economic conditions, opportunities and challenges and identifying how participants perceived the high-speed rail program could impact the economy, either positively or negatively. After reviewing initial findings from the interviews, the research team then identified areas for further exploration during a series of structured one-on-one interviews with representatives from Visitors Bureaus, Chambers of Commerce, EDCs, WIBs, infrastructure and educational institutions from the six county study area. The interview questions were meant to build on discussions from the roundtables and delve deeper into particular issues. The final step of the design was to assemble a comprehensive narrative of current economic conditions and key themes and findings from the research and the interviews and identify a set of recommendations for the Authority to consider ways that it may effectively support the region's employment and economic development goals.

## Study Process

The study process consisted of the five steps outlined in the graphic below.



### 1. Analyze the current economic conditions

For the purpose of this step in the study, Central Valley refers to the economic region defined by the California Economic Strategy Panel as comprising the following eight counties: Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus and Tulare. To develop a deeper understanding of the economic climate in the Central Valley, data was gathered from a number of sources, including government and other independent sources. The research team examined the region's key demographic and employment indicators focusing on several key variables including population, employment, industry sectors, income and educational attainment. The data was evaluated on an aggregated basis as well as disaggregated on a county by county basis. The analysis was also informed by a range of data and reports provided by stakeholders involved in the study including, for example, a review of the *2012 San Joaquin Valley Regional Industry Cluster Analysis and Action Plan* prepared for the Office of Community and Economic Development at California State University, Fresno.

### 2. Survey of economic development plans

The research team reviewed economic development and relevant strategic plans prepared by a number of regional and local entities and organizations in the six county region (i.e., Fresno, Kern, Kings, Madera, Merced and Tulare Counties), including Economic Development Corporations (EDCs), Workforce Investment Boards (WIBs), city and county planning departments, educational institutions, Housing Authorities, Councils of Government (COGs), Convention and Visitors Bureaus, Chambers of Commerce, labor organizations and regional collaborations and partnerships. These documents were used to provide a broader context of the economic issues and planning objectives in the region, the types of institutional or organizational collaborations that are currently in place and what initiatives they might be pursuing and the types of questions that should be pursued further in the next steps of the study. Together, the first two steps were designed to provide a clearer picture of the economic conditions and a framework for identifying questions to explore through outreach to stakeholders in roundtable and one-on-one discussions.

**3. Conduct a series of roundtables with representatives of Economic Development Corporations, Workforce Investment Boards and other relevant stakeholders**

The research team conducted a series of eight roundtable discussions, six at the county level, one focused on small cities and one at the regional level, with the goal of deepening its understanding of the Central Valley economy and how high-speed rail might affect it and what approaches are being used to address key issues and opportunities. In consultation with Authority staff, the research team planned how to structure the meetings, identified stakeholder attendees to be invited, facilitated the roundtable discussions and prepared meeting summaries to share with participants to ensure that their input was accurately captured.

Six roundtable meetings were held in Fresno, Madera, Merced, Kings, Kern and Tulare Counties. Each meeting, which included a mix of participants from local EDCs, WIBs, housing authorities, planning departments, building trades, community colleges, universities and COG representatives, began with a program overview and update provided by Authority staff and an opportunity for participants to ask follow-up questions. Agendas were used as a guide to facilitate discussion, but latitude was used as long as discussions focused on the selected topics: current economic conditions, business opportunities, workforce, housing, agriculture and infrastructure. A set of questions was also used to help frame the issues and to pose questions to the participants, including seeking to understand how high-speed rail might impact each category and what potential opportunities might be advanced by the program.

The regional roundtable meeting brought back a number of participants from each of the county meetings to focus on the extent of current regional coordination and communication and opportunities to increase coordination information sharing in order to maximize efforts and effectiveness. As with the county meetings, the agenda was structured but open discussion was encouraged so that participants could identify issues or offer information they viewed as important to the analysis.

The small cities roundtable meeting was designed to seek input from the smaller cities in the six county region and to hear their views on current economic conditions and potential opportunities that might be associated with the construction of high-speed rail and the increased connectivity it would bring to the region. Participants in this meeting included city managers and assistant city managers of Dinuba, Kingsburg and Reedley.

Altogether 77 individuals representing a range of interests and organizations participated in these eight roundtables. Summaries of each roundtable meeting are included in Appendix D and a detailed list of participants is included in Appendix F.

**4. Conduct one-on-one follow-up interviews**

At the conclusion of the roundtable meetings, the research team identified several preliminary findings and key themes along with areas where more detailed information or additional perspective would provide a deeper understanding of the issues and/or better inform potential recommendations. To gather more in-depth information, the research team conducted a series of follow up one-on-one interviews with representatives of several entities which were structured around specific questions in the following target areas of inquiry: tourism, chambers/business interests and impacts, educational opportunities and

opportunities for collaboration on research, agricultural impacts, broadband/right-of-way opportunities and station area planning. These interviews also generated additional data and reports for the research team to review as part of its overall research and analysis. Summaries of each one-on-one interview are included in Appendix E and a detailed list of participants is included in Appendix F.

The research team used the additional information and perspective from these interviews to revise and refine its findings.

**5. Prepare study**

The final study represents a compilation of the economic data collected from the review of the current economic, demographic data and economic development plans (steps 1 and 2 of the study process), and the information, views and perspectives that were discussed with stakeholders in the roundtable meetings and the one-on-one interviews that followed (steps 3 and 4 of the study process). The findings presented in this report are a synthesis of both the data and the information derived from the stakeholder discussions—and were developed to provide the Authority with a comprehensive narrative of the economic conditions, challenges and opportunities in the Central Valley and the potential role of high-speed rail in that context.

## APPENDIX B—ECONOMIC CONDITIONS AND TRENDS REPORT

## Central Valley Economic Conditions, Trends and the Potential Impact of High-Speed Rail

### Introduction

This report reviews the economic climate within the Central Valley by examining the region's key demographic and employment indicators and trends, and by comparing it to the state of California. In compiling this report, we identify many of the region's demographic realities and economic challenges. Those challenges are generally well known and have been extensively reported in the media. They include high poverty rates, high unemployment, lower than average educational levels, and a slower and more sporadic recovery from the 2008-2009 recession than the rest of the state. More recently, the Valley has experienced an exceptionally severe drought, which has created its own set of impacts and economic challenges.

Against that backdrop, we also provide additional context within which to consider the role that high-speed rail might play in helping transform the Central Valley's economy. We discuss factors currently driving economic change in the Central Valley and the extent to which high-speed rail could hasten greater diversification of the its economy—from one presently dominated by basic agricultural production to a more balanced one that is better connected to the state's major metropolitan economies and in which the region adds more value from within to its natural resource base of agriculture, energy production and parklands and open space.

We conclude with a discussion of potential economic futures with high-speed rail in place drawing upon a growing body of economic research indicating that—under the right conditions—high-speed rail could stimulate substantial increases in employment and economic productivity by improving overall accessibility and creating new and better connections to the larger California economy among key economic clusters. As we discuss, research indicates that in some cases high-speed rail investments have had transformative effects on a surrounding economy.

## The Central Valley Demographics and Economy

### Overview

The economy of the Central Valley has historically lagged the rest of California—a relatively prosperous state by most measures. The Central Valley experienced a substantially greater economic downturn as a result of the recession during 2008-09, and it has undergone a much weaker recovery from the recession compared to the rest of the state. By almost every common economic measure—income, poverty levels, unemployment—the Central Valley economy lags far behind that of the state.

Of course, the economy of the Central Valley is not—and has never been—an entirely bleak picture: the Central Valley region represents California’s agricultural heartland, and it remains a major supplier of fruits, nuts, vegetables, and other produce nationwide as well as to foreign markets. Agriculture is a key driver of the state’s economy and growers in the Valley have historically enjoyed reasonable margins on their output. However, basic agricultural production is characterized by lower wages, skill levels, and educational attainment on the part of the workforce; seasonal fluctuations; and a distinct unequal distribution of income, with a large share of the population earning subsistence wages.

Economic and policy leaders are committed to bring more balance to the regional economy by seeking to attract value added manufacturing companies to the Central Valley. A number of these relate to, and are extensions of, the agricultural sector such as juice, general fresh food processors and cheese producers—including one of the world’s largest mozzarella cheese plants. The region has also seen growth in the energy sector, including renewable energy production—biofuels, solar and wind—as well as hydraulic fracturing. These and other industries are helping to bring higher wage jobs to the Valley than it has historically experienced.

Meanwhile, the rest of the state economy is propelling forward at an increasingly faster rate to a knowledge-based economy.<sup>60</sup> Innovators and entrepreneurs have established California as a hub for innovation, particularly in the Los Angeles basin and the San Francisco/Silicon Valley mega-regions, positioning it to be competitive in a highly

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<sup>60</sup> For the purposes of this economic overview and analysis, the ‘knowledge economy’ is categorized as a combination of the NAICS sectors “Professional & Business Services,” “Financial Activities,” and “Information” (NAICS codes are used by business and government to classify business establishments according to type of economic activity). The key challenge in the formalization and modeling of the knowledge economy is the somewhat elusive definition of ‘knowledge’ and the method of data reporting. The organizing categories by which the government collects and reports data on employment is driven by industry rather than job functions and, as such, the ability to quickly and easily identify a region’s ‘knowledge economy’ is a challenge. For example, a maintenance worker in a bank would fall under the Professional & Business Services industry sector, whereas a robotics engineer in a factory would fall under the Manufacturing industry sector. Drilling down to finer-level NAICS subcategories would allow for a more accurate snapshot of the knowledge economy, but this would require a level of effort that is beyond the scope of this economic analysis. As such, this analysis relies on the aggregate of the aforementioned industry categories as a proxy for the knowledge economy, with the understanding that there is a correlation between the number of jobs in these industries and the number of knowledge-based jobs within a region.

competitive global economy where knowledge and information has increasingly become the catalyst for economic growth. Although the Central Valley has emerged as an agricultural technology hub in a number of sustainable applications, such as irrigation and water filtration, it has been unable to fully tap into this increasingly important knowledge economy, in part because of the low educational attainment levels as compared to the rest of the state. At the same time, the Central Valley presents conditions, including a fast-growing and young population base, that can present opportunities for economic growth if they are successfully leveraged with investment in infrastructure and workforce training.

## Demographic and Economic Analysis

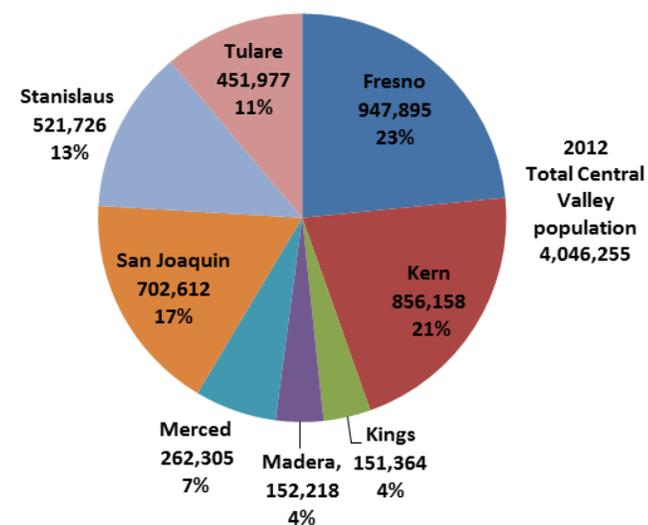
To understand the demographic and economic underpinnings of the Central Valley, this section evaluates the region through a number of indicators, including population, age, employment, income and educational attainment, applying a statewide perspective throughout in order to understand the contrast between Central Valley and California. More detailed county-by-county summaries are shown at the end of this report.

At first sight, the core demographics characteristics of the region are promising, with a fast-growing and relatively youthful population base. However, the region’s economy has relied heavily on low-wage, low-education industry sectors which is reflected in the income and educational attainment levels within the region.

### *Population Breakdown: Central Valley Population Concentrated in Three Largest Counties*

For the purposes of this data review, the Central Valley defined by the eight counties is shown in Figure 4-1.<sup>61</sup> As of 2012, the region had a population of approximately 4 million, the majority of which is concentrated in the area’s primary urban centers—Fresno, Bakersfield, and Stockton. The respective counties of these cities—Fresno, Kern and San Joaquin—make up over 60 percent of the Central Valley population. The remainder of the region is characterized by a low and dispersed population. This dynamic is expected to continue, as these three counties accounted for nearly two-thirds of the entire Valley’s population growth over the past decade.

**Figure 4-1—Central Valley Counties by Population**



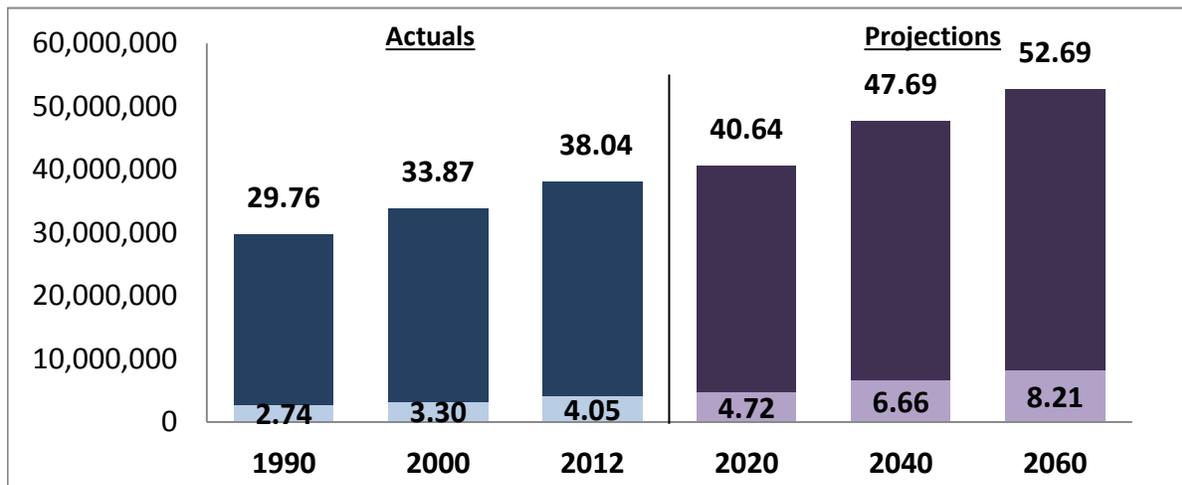
Source: American Community Survey, 2012

<sup>61</sup> For purposes of this analysis “Central Valley” refers to the definition as identified by the California Economic Strategy Panel, and included the following eight counties: Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus and Tulare (the Economic Strategy Panel was subsequently replaced by the Governor’s Office of Business and Economic Development).

*Population Growth: Central Valley is a Fast Growing Region for California*

Figure 4-2 shows the regional and state population levels since 1990 and long-term growth projections through to 2060. The Central Valley’s population has nearly doubled over the past 30 years, driven primarily by a migrant boom. Since 1990, the Central Valley’s population has increased 48 percent, from approximately 2.7 million in 1990 to over 4 million by 2012—considerably higher than the 28 percent growth seen in California over the same period. Central Valley’s growth in population has been consistent across its constituent counties.

**Figure 4-2—Central Valley and California Population, 1990 to 2060**



Source: US Census, California Department of Finance; 2012

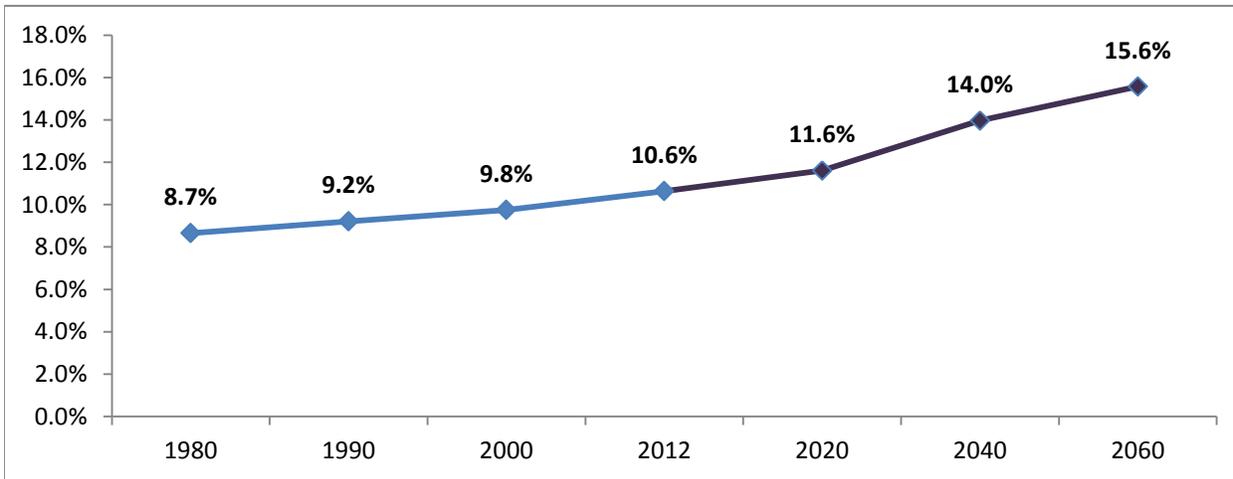
Despite recent economic challenges, this rapid population growth is expected to continue going forward. Through 2060, the region’s population is expected to more than double, to approximately 8.2 million people. Over the same period, the state’s growth is estimated to be approximately 39 percent, to 52.7 million.<sup>62</sup>

Strong regional population growth is typically regarded as a promising demographic trend because it leads to increased aggregate demand for goods and services, it provides a larger labor-based talent pool, and provides a more diversified tax base. Beyond macro-economic benefits, population growth also offers an opportunity to inform and reshape development patterns, an issue particularly relevant to the Central Valley, a region characterized by sprawling, low-density development. When combined with sustainable land use policies, strategic transportation investments, such as high-speed rail, can help inform where the more than 4 million extra residents over the next fifty years will live, and how physically and economically integrated they will be to the rest of the state.

<sup>62</sup> Source: US Census, California Department of Finance; 2012

As a result of the region’s high growth rates, it constitutes a growing proportion of the state’s population, as seen in Figure 4-3. The Central Valley’s proportional share of California’s total population steadily increased from approximately 9 percent in 1990 to nearly 11 percent in 2012. It is projected to continue increasing steadily to 16 percent by 2060.

**Figure 4-3—Central Valley’s Population as a Proportion of California**

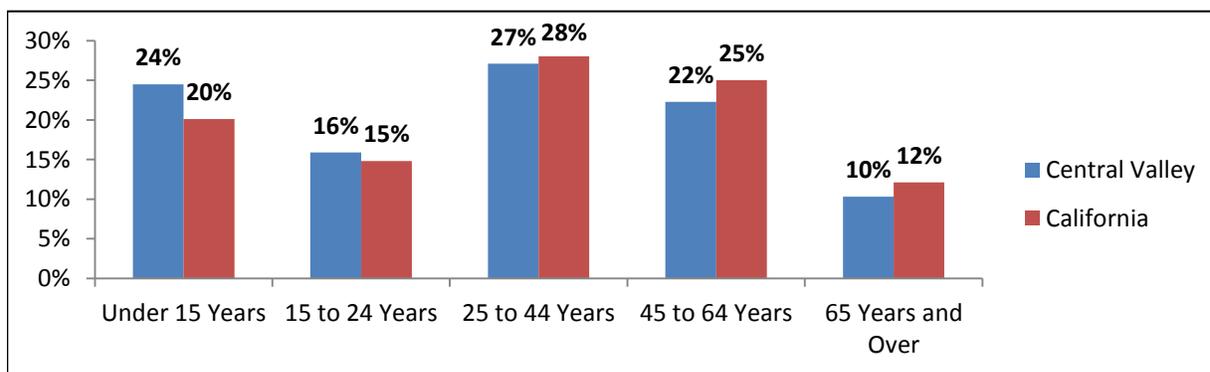


Source: US Census, California Department of Finance; 2012

*Population by Age: Central Valley’s High Proportion of Young Residents*

One of the demographic advantages of the Central Valley population base is the high proportion of young residents. As seen in Figure 4-4, 40 percent of the region’s population is under the age of 24, and more than a quarter of the population is within the prime working ages of 25 to 44—which are considered assets in the context of shifting to a stronger and more diversified economy. Specifically, a younger population is more easily able to adapt to the specific skills and flexibility required in many high-value industry sectors. The Central Valley’s median age of 32 is noticeably less than 36 for California overall.

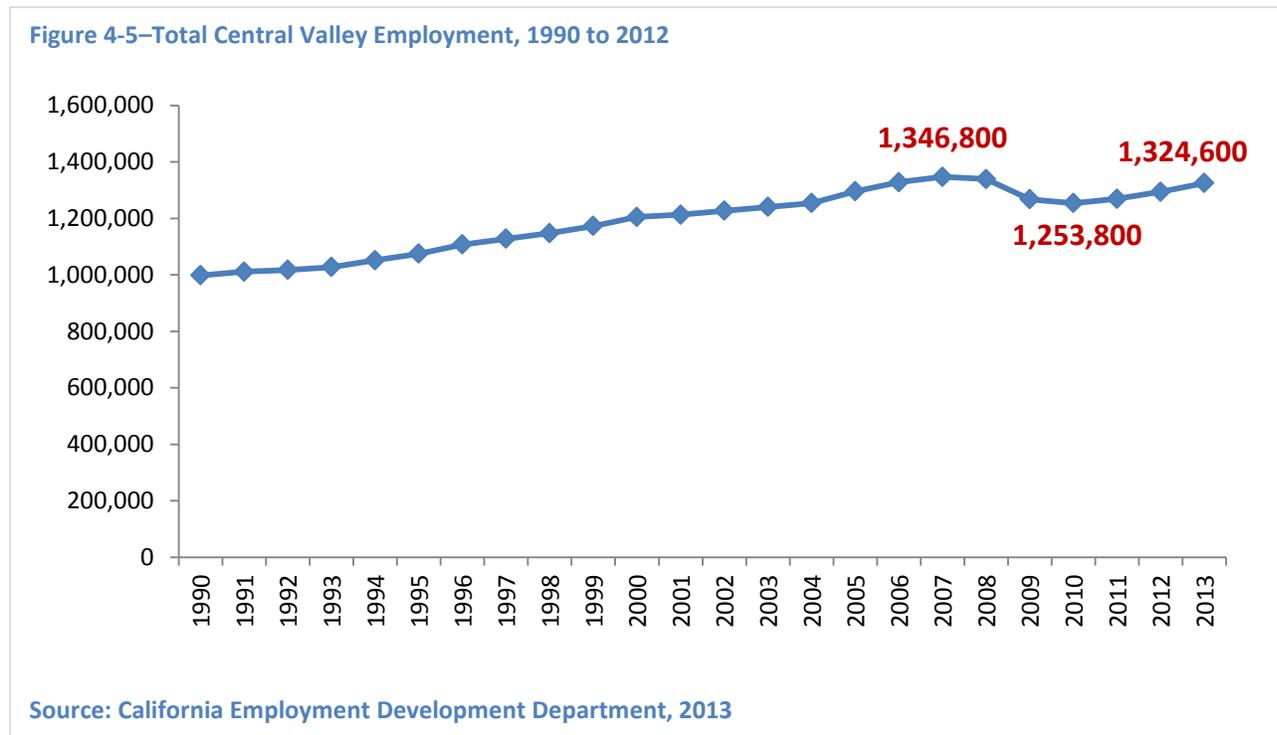
**Figure 4-4—Central Valley vs. California Population by Age**



Source: American Community Survey, 2013

*Historic Employment: Regional Employment Growth not Keeping Pace with Population Growth*

Figure 4-5 shows employment trends within the Central Valley over the past two decades. Employment in the Central Valley has increased from 998,000 jobs in 1990 to approximately 1.32 million jobs as of 2013, equaling an average annual employment growth rate of 1.2 percent.

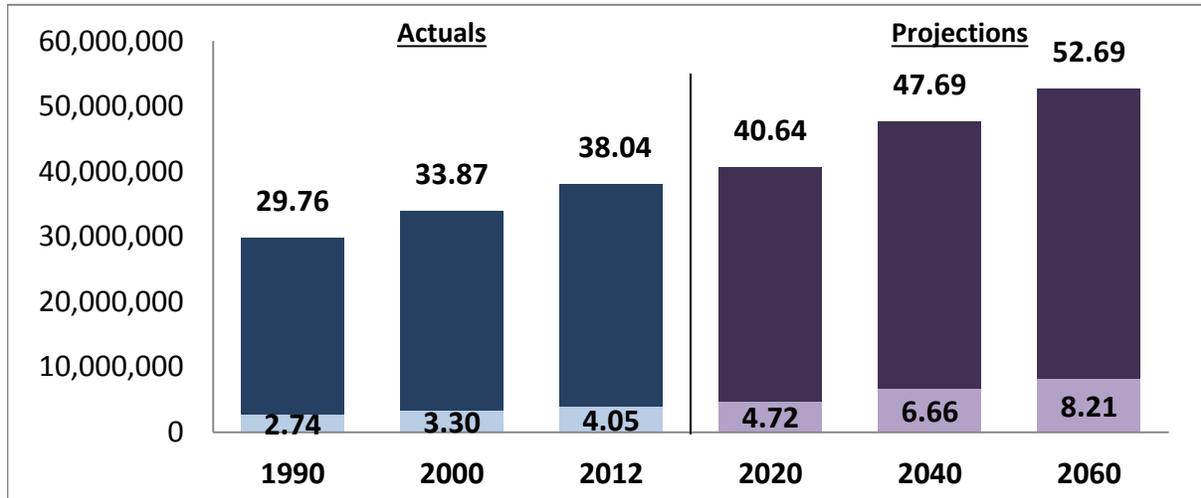


Job creation has not, however, kept pace with population growth, which had an average annual growth rate of 2.2 percent over the same period. As a result, while the region currently represents 11 percent of statewide population, it only represents 9 percent of the state’s workforce.

While some of the discrepancy can be justified due to the high proportion of residents below working age, this still does not explain the under-representation of jobs within the region. Sustainable regional economic growth depends on the creation of jobs to match population growth, as high labor force participation is critical to a dynamic economy. Furthermore, job growth attracts a young, educated workforce which, in turn, attracts more employers.

Looking more specifically at the impacts of the last recession and subsequent recovery, Figure 4-6 also shows that the Central Valley lost 93,000 jobs between 2007 and 2010. As of 2013, it had recovered nearly 71,000 of these jobs, still 2 percent shy of the economic peak in 2007. There have been consistent but modest annual improvements in employment since the depth of the recession but this growth is below the level required to keep up with the projected population growth shown in , Figure 4-6 below.

Figure 4-6—Central Valley and California Population, 1990 to 2060



Source: U.S. Census, California Department of Finance, 2012

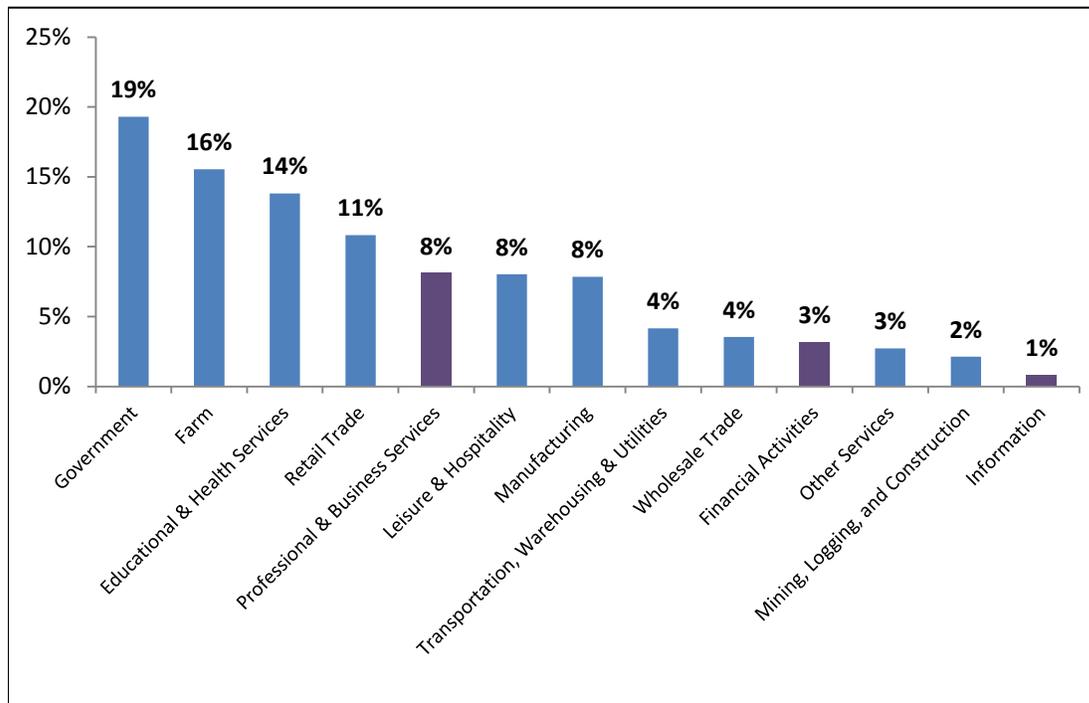
*Employment Breakdown: High Proportion of Central Valley Jobs in Farming and Public Sectors*

The current breakdown of the Central Valley job market is shown in Figure 4-7. The three predominant industry sectors are Government, Farm-Based Activities, and Educational & Health Services. Combined, these three sectors make up nearly half of all employment within the region. The farming sector, making up 16 percent of all regional jobs and constituting nearly half of all farm employment within the state, has a long history in the region and is a key component of the Central Valley economy. The agricultural sector is continuing to adopt more efficient and therefore less labor intensive technologies which typically results in fewer jobs requiring higher skills. At the same time, California is in the third year of a severe drought which is having a major impact on this sector. These trends combined with overall reduced public expenditures in recent years, have caused the economic recovery in the Central Valley to be sluggish to date.

In comparison, knowledge industries—comprised of the Professional & Business Services, Financial Activities, and Information sectors—represent only 12 percent of the Central Valley employment market. The “knowledge economy” is comprised of sectors that rely upon knowledge, skilled labor and information exchange to drive innovation, productivity and sales. It relies more on intellectual capabilities than on physical inputs or natural resources and is recognized as the driver of productivity and economic growth in an increasingly competitive modern global economy.

How the Central Valley compares to the state overall in terms of the knowledge sector, as well as a discussion of the economic significance of the knowledge industries, are covered in the preceding sections.

**Figure 4-7—Central Valley Employment by Industry**



Source: California Employment Development Department

*Industry Comparison: Knowledge Sector Employment in the Central Valley Lags California*

To better understand Central Valley employment, a location quotient analysis is shown in Figure 4-8, in order to compare concentrations in specific employment sectors in the region to the state.

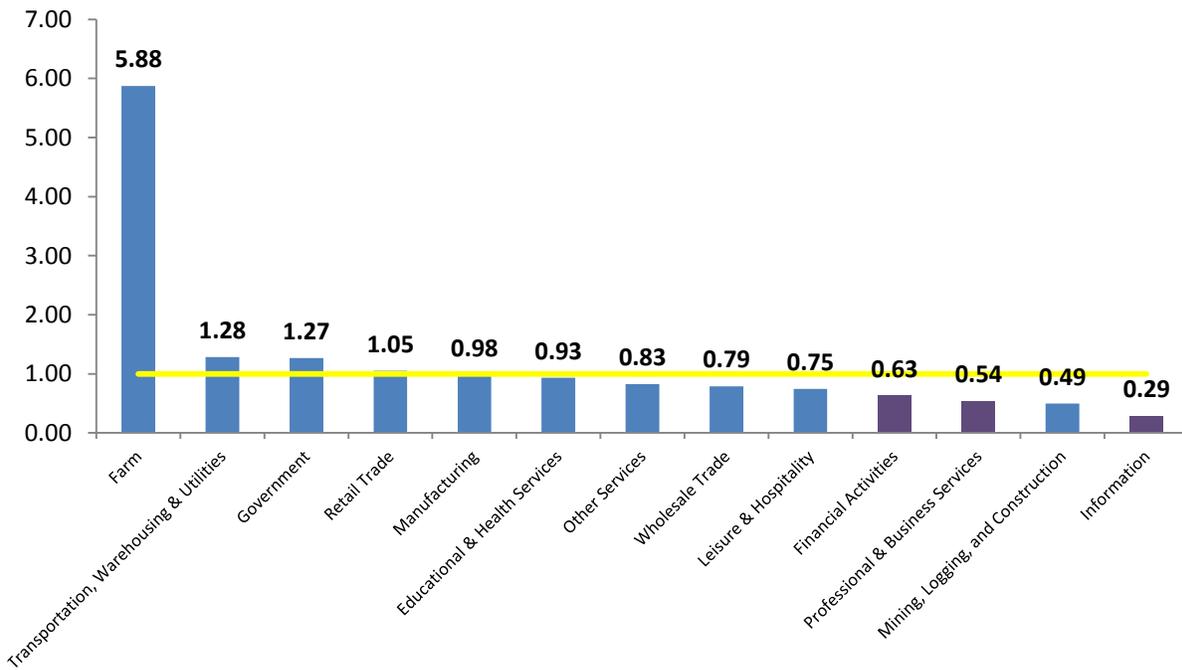
For any given industry sector:

- A location quotient of 1.0 denotes that the proportion of total employment in the region is the same as the state proportion.
- A location quotient that is less than 1.0 indicates that the proportion in the region is lower than the state proportion.
- A location quotient that is greater than 1.0 means that the proportion of employment in that sector is higher than the rest of the state.

In terms of location quotient, heavily represented industries in the region include:

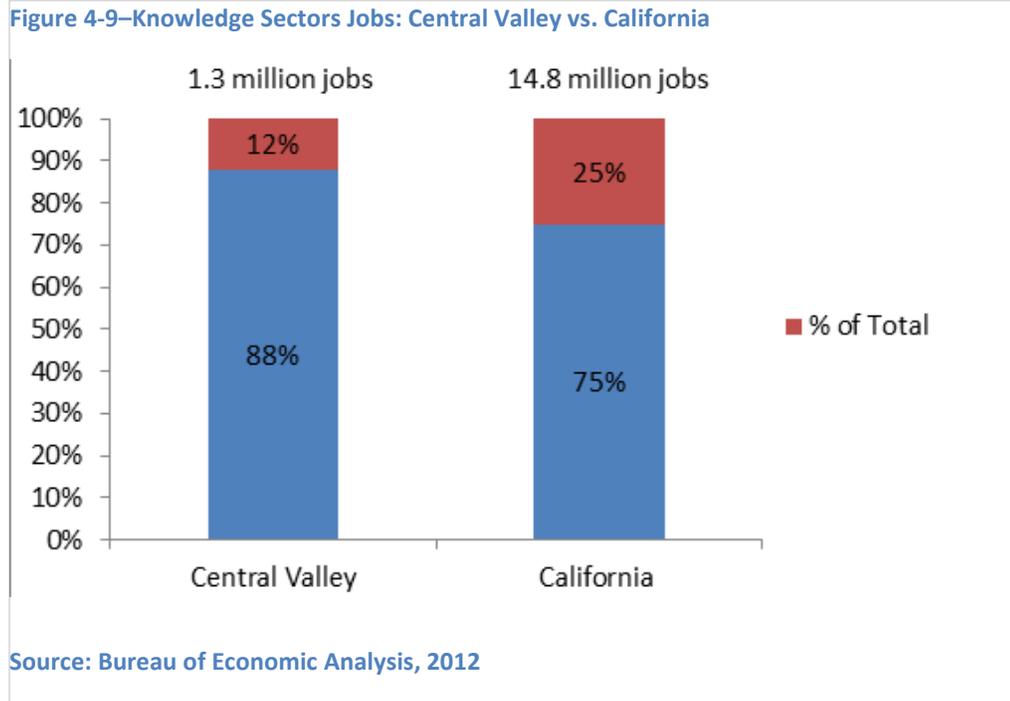
- Retail Trade
- Government
- Transportation, Warehousing & Utilities
- Farming

Figure 4-8—Central Valley vs. California Location Quotients by Industry



Source: California Employment Development Department, 2013

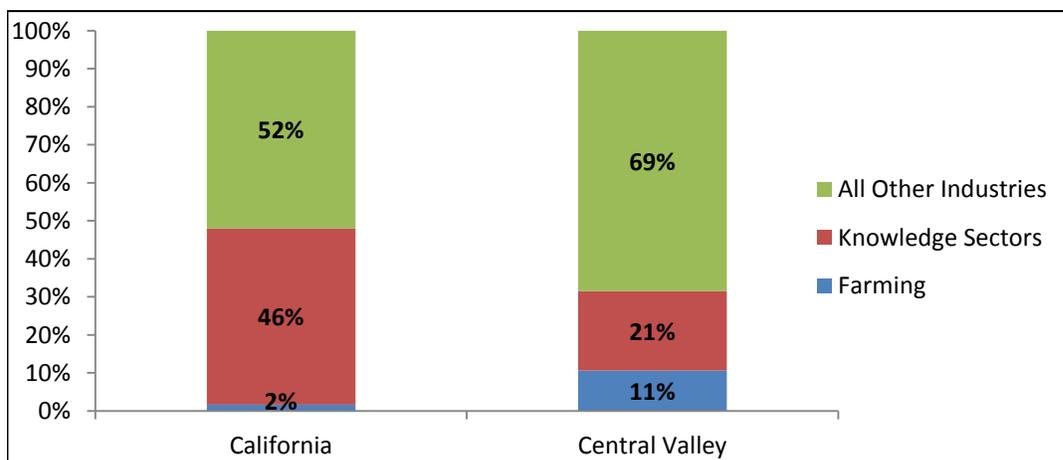
Not surprisingly, farming’s proportional representation is nearly six times its representation at the state level. In comparison, knowledge sector industries are considerably underrepresented in the region and, in fact, comprise three of the four lowest represented sectors, ranging from 0.29 to 0.63.



As shown in Figure 4-9 the knowledge sector comprises of only 12 percent of the employment in the region, as compared to nearly 25 percent of California’s employment.

The importance of the knowledge sector is even further highlighted by the proportion of the economic output (otherwise known as Gross Product) that it constitutes, as shown in Figure 4-10. In California, 46 percent of the \$2.1 trillion economy is driven by the knowledge sector. In the Central Valley, only 21 percent of the \$130 billion economy is based in the knowledge sector. Moreover, the Central Valley contributes only 6 percent to the state economy, far less than the 11 percent of population and 9 percent of total employment, which indicates the low value-added of the jobs currently within the region.

**Figure 4-10—Proportion of GDP by Industry Sectors, California vs. Central Valley**

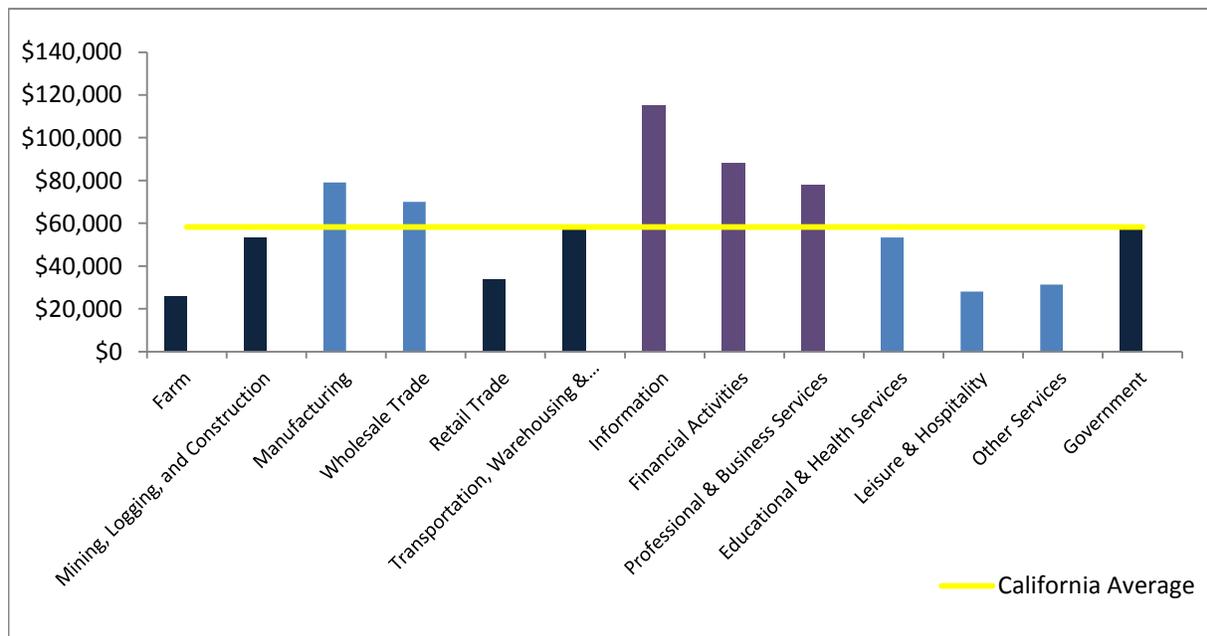


Source: Bureau of Economic Analysis, 2012

*The Knowledge Economy: Why Does It Matter?*

As indicated earlier, the knowledge sector is now recognized as the driver of productivity and growth in the current economic paradigm. To demonstrate how this is the case specifically in California, Figure 4-11 and Figure 4-12 illustrate the average wages and economic output (GDP) per employee for each major industry sector in California, respectively.

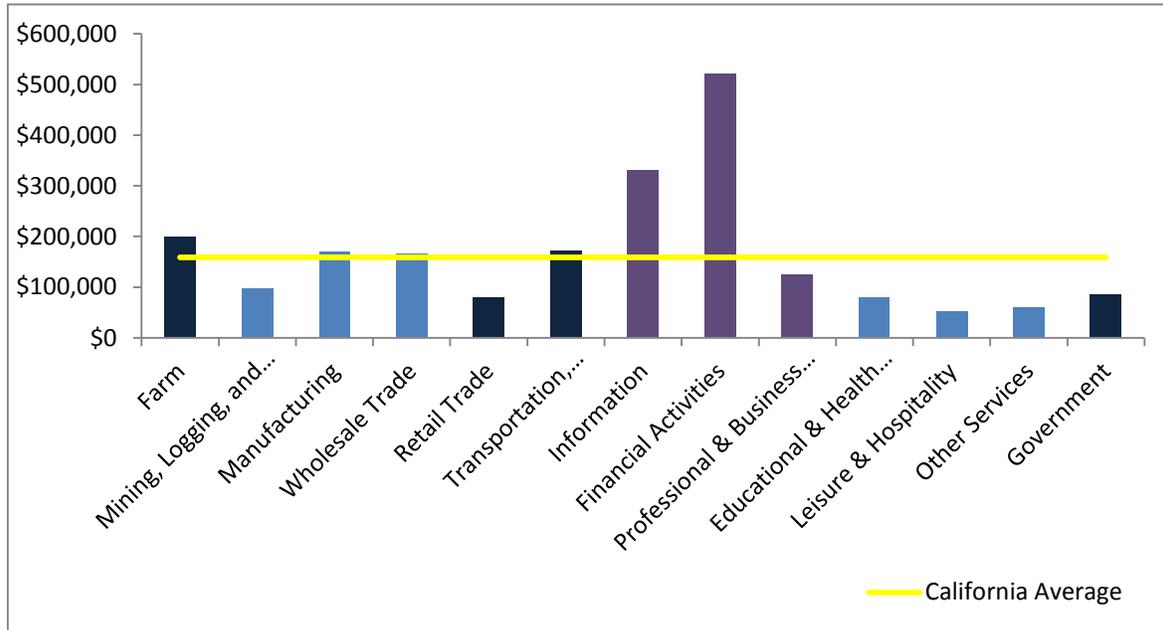
**Figure 4-11—Average Wages per Employee by Industry, California**



Source: Bureau of Economic Analysis, 2012

The average economy-wide wage per employee in California in 2012 was \$58,000 (shown as the yellow line). In contrast, average wages per employee in the knowledge industries (shown as the purple bars) were considerably higher, ranging from \$78,000 to \$115,000. As a point of comparison, the sectors in which the Central Valley has a comparative advantage (industries with Location Quotients greater than 1, shown in the black bars) all have wage levels that are less than the economy-wide average.

Figure 4-12—Average Economic Output (GDP) per Employee by Industry, California

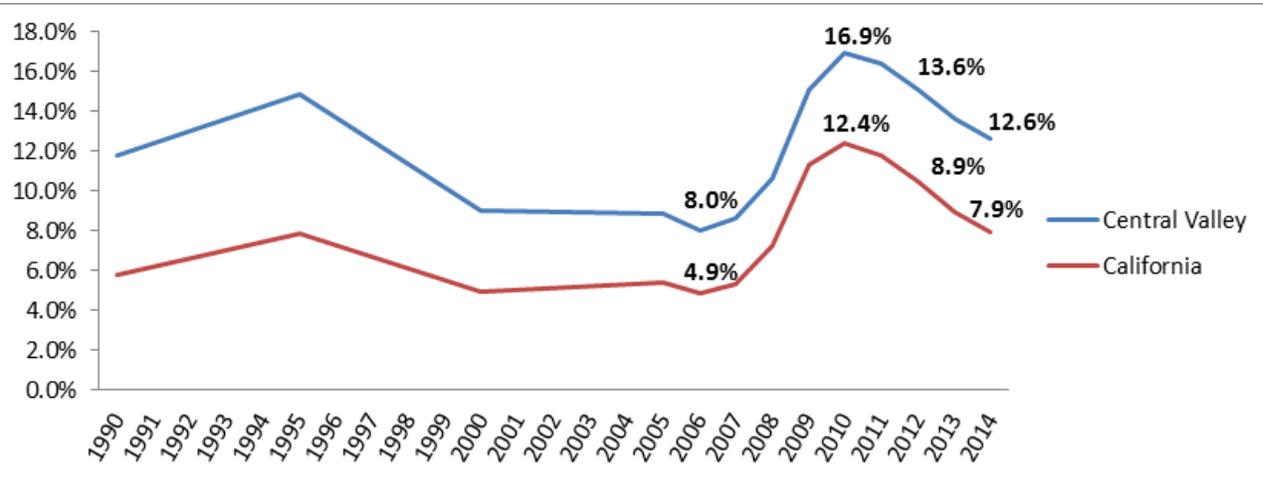


Source: Bureau of Economic Analysis, 2012

A similar pattern is seen for economic output per employee, with knowledge sector (shown as the purple bars) showing output levels ranging between \$124,000 and \$521,000 per employee, as compared to the California industry-wide average of \$130,000 (shown as the yellow line). Although the Farming and Transportation, Warehousing & Utilities sector in the Central Valley has stronger than average output levels, the Retail Trade and Government sector is less than the industry-wide average. Unemployment: Central Valley’s Consistently High Rate

Over the past two decades, unemployment in the Central Valley has consistently been higher than that of the state; it has never gone below 8 percent, even during the economic boom, as illustrated in Figure 4-13. As a region, it suffered from one of the highest unemployment rates in the country during the recession, reaching a high of nearly 17 percent by 2010. As of 2013, the unemployment rate had decreased to 13.6 percent and the 2014 mid-year average unemployment rate of 12.6 percent is still a persistently high figure, and almost 5 percentage points higher than California’s current unemployment rate of 7.9%.

Figure 4-13—Unemployment Rate, Central Valley vs. California



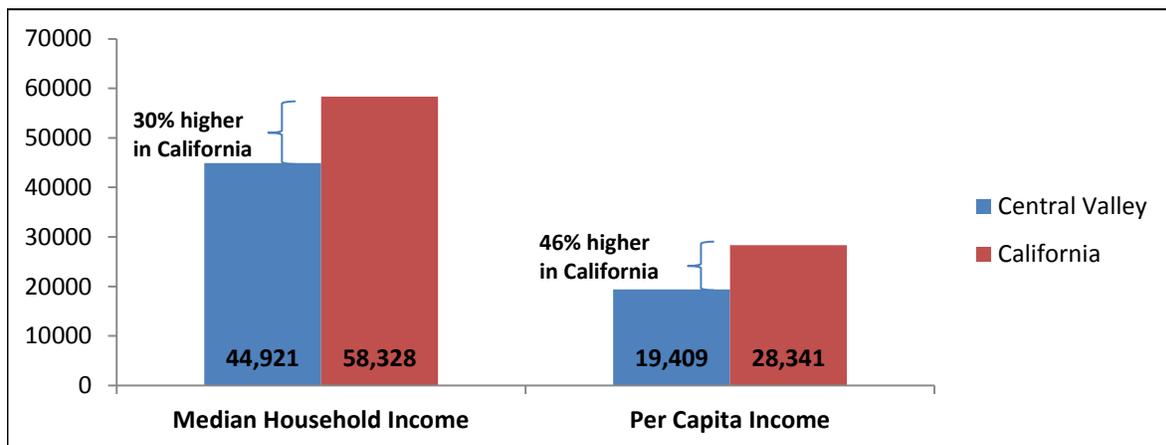
Source: California Employment Development Department, 2014

While the Central Valley’s unemployment rate trajectory has mirrored that of California, the region has consistently shown rates at least three percentage points or higher than the state even during the economic peak of 2006. This points to a significant and persistent segment of the Central Valley workforce that is unable to fully engage in the economy even in prosperous times, which is driven by structural issues including the existing industry make-up of the regional economy.

*Regional Income Levels: Central Valley Less Prosperous Than California*

The structure of the Central Valley’s economy, and its consistently high unemployment rate, has had a detrimental impact on the earning potential of the regional population. Figure 4-14 shows income indicators for the Central

Figure 4-14—Income Levels, Central Valley vs. California



Source: American Community Survey, 2012

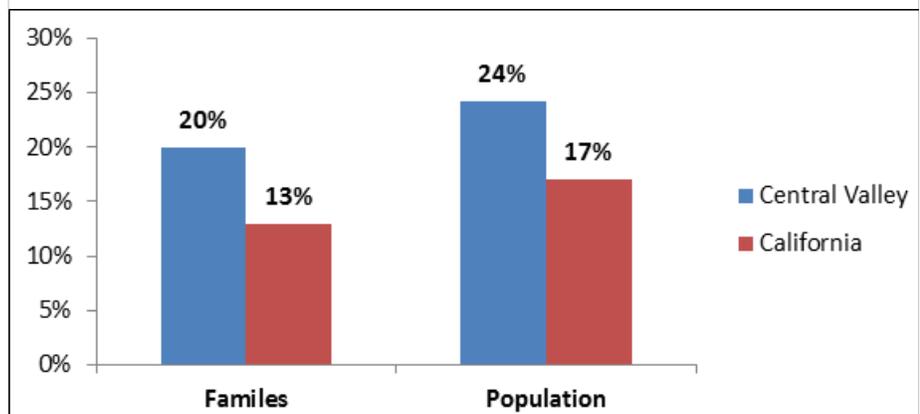
Valley as compared to California. Median household incomes in the region averaged approximately \$44,900 annually, while at the state level this figure was 30 percent higher, at \$58,300 annually.

When accounting for the fact that the Central Valley has a larger average household size (3.31) than the state overall (2.97), the income disparities become even more pronounced. Per capita income, which is defined as the income per resident, provides a metric of income that accounts for total population, including dependents and non-working population. In the Central Valley, per capita income is \$19,400, while in California it is 46 percent higher, at \$28,300.

*Poverty Levels: More Central Valley Residents Living Under Poverty Line*

Income disparities between the region and the state are also reflected in the proportion of the population living below the poverty line. As shown in Figure 4-15, one-fifth of families and nearly one-quarter of residents in the Central Valley live below the poverty line, as compared to 13 percent and 17 percent in the state, respectively.

**Figure 4-15—Poverty Levels, Central Valley vs. California**



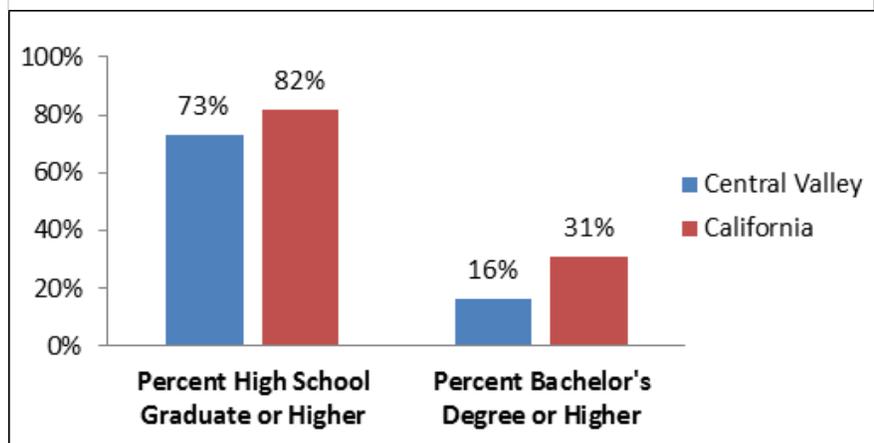
Source: American Community Survey, 2012

*Educational Attainment Levels: Region is Challenged to Attract Knowledge Industries*

More than a quarter of the Central Valley population does not hold a high school diploma. While there are a number of higher education institutions in the Central Valley, the proportion of the regional population with a bachelor's degree or higher is only 16 percent, nearly half of the level seen in California overall, as illustrated in Figure 4-16.

This has created a chicken-and-egg scenario in the region—as an industry base focused primarily on farming and the public sector requires relatively lower levels of education, which in turn discourages residents from pursuing higher levels of education, which in turn deters key knowledge industry employers from locating in the region.

**Figure 4-16—Educational Attainment, Central Valley vs. California**



Source: American Community Survey, 2012

## Future Economic Prospects and Opportunities

### The Current Economic Paradigm

Without fundamental structural changes to its economy, the Central Valley risks falling further behind as incomes lag and as the wider state, national and global economies continue to shift to a knowledge-based, service-driven economy. There are a number of factors that are likely to increase the urgency for structural economic changes to the Central Valley, even before accounting for the construction of high-speed rail. These include:

- Long-term physical challenges to the agricultural economy including drought and unchecked low density development patterns.
- Continued low educational attainment levels which discourages businesses that require a skilled and knowledge based (or STEM) workforce from locating in the region.
- Increased demand for alternative energy production—solar and oil shale (hydraulic fracturing)—which creates new economic opportunities but also could put upward pressure on agricultural land value and increases incentives to remove agricultural land from production.

As seen in the other areas of California, a more balanced, diversified economy could yield significant long-term economic benefits in terms of higher employment rates, higher wages and greater economic output.

## The Potential Impacts of California High-Speed Rail on the Central Valley Economy

### *Potential Immediate Impacts: Capital Infusion and Job Impacts*

In the nearer term, there are opportunities associated with the infrastructure development that is planned and/or already underway in the Central Valley—including but not limited to high-speed rail. This will increase short-term trade activity for construction and other industry sectors, while attracting knowledge industries and generating more employment and increased demand for better-trained, higher-wage employees.

There is currently approximately \$36 billion in planned infrastructure investments for the San Joaquin Valley region.<sup>63</sup> The almost immediate \$6 billion investment in the region from the construction of high-speed rail will provide a much-needed infusion of capital into the Central Valley economy, and is projected to bring 100,000 direct and indirect jobs to the region over the next five years.<sup>64</sup> These and other investments can help lay the groundwork for the Central Valley to catch up to the rest of the state.

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<sup>63</sup> <http://sjvpartnership.org/wp-content/uploads/2013/05/RICI-Report-of-Strategy-Meetings.pdf>

<sup>64</sup> [www.hsr.ca.gov/docs/about/business\\_plans/BPlan\\_2012EIR.pdf](http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2012EIR.pdf)

The aforementioned factors are self-reinforcing. In combination, they may increase regional competitiveness and allow a greater number of firms to take advantage of relatively lower costs of production. Ultimately, they may contribute to continual income growth, employment gains, and increased economic activity.

### *Potential Transformative Impacts: Mega-Regions and Industry Clusters*

In the longer term, the enhanced connectivity to the state's two economic mega-regions—the Los Angeles Basin and San Francisco/Silicon Valley—will provide opportunity for greater access to education, improved linkages between the Central Valley and those more prosperous regions, and potential for employers to site facilities in the Valley where land is generally less expensive and the cost of living is lower.

A key to understanding the benefits of high-speed rail is related to how modern knowledge-based economies compete and grow, as economic growth increasingly depends on the development of business clusters. Business clusters are characterized by complex networks and synergies among industries and institutions, involving a range of inter-related activities extending from research and innovation, financing, production, management, public policy, and infrastructure. The importance of transportation linkages as one of the contributors to cluster growth and competitive advantage has been consistently noted.<sup>65</sup>

While better accessibility contributes to an area's productivity and to the strengthening of business clusters in general, high-speed rail is uniquely suited to linking areas into "mega-regions" and to strengthening their major economic clusters. Clusters are stronger, more productive and more competitive when the "density" of interactions increases. Mega-regions, anchored by one or more Global Cities<sup>66</sup>, provide the basis for competing at a global scale—and California's San Francisco and Los Angeles mega-regions will increasingly compete against existing as well as many more emerging global cities in Asia, Latin American and elsewhere. The competition from these—many of which already have or are developing advanced high-speed rail networks—will be intense.

There is a growing body of theory related to the economic and social interactions that characterize mega-regions and the benefits of high-speed rail in strengthening them. Research has shown the potential for competitive advantage arising from increased diversity of economic and social interactions<sup>67</sup>, and the importance of expanded and more efficient connectivity to support those interactions, which the high speed rail system would greatly enhance.<sup>68</sup>

One illustrative example of how high-speed rail can facilitate these benefits for a major state industry cluster—the Silicon Valley technology sector—is described below:

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<sup>65</sup> For example, Michael Porter, "Location, Competition, and Economic Development: Local Clusters in a Global Economy" *Economic Development Quarterly*, Vol. 14. No 1. February 2000.

<sup>66</sup> Saskia Sassen, *The Global City: New York, London, Tokyo*. 2000. Princeton; Sassen, *Cities in a World Economy*. 2000. Thousand Oaks California.

<sup>67</sup> Saskia Sassen, "Megaregions: Benefits Beyond Sharing Trains and Parking Lots?", in *The Economic Geography of Megaregions*, published jointly by the Policy Research Institute for the Region, Woodrow Wilson School, Princeton and the Regional Plan Association as part of *America 2050*. 2007

<sup>68</sup> Globalization and World Cities Project, for list of Alpha and Beta cities, see [www.lboro.ac.uk/gawc/citilist.html](http://www.lboro.ac.uk/gawc/citilist.html)

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### How key California industry clusters will benefit—the example of Silicon Valley

High-speed rail will bring activities closer, creating even stronger links to the Silicon Valley and between the Silicon Valley/San Francisco Bay Area and the Los Angeles Basin. This will help:

- ❖ Create a denser technology cluster—internal economies of scale within the technology cluster will benefit all technology firms; sharing of resources and the knowledge base will be enhanced.
- ❖ Increase access to a wider variety and number of skilled workers within the same fields and improve access to other important inputs, such as product vendors and logistics services.
- ❖ Increase the availability and access to high value-added “content contributors” such as entrepreneurial resources, research and development, financial, and legal services; many of these resources exist in the Los Angeles Basin.
- ❖ Better connect Silicon Valley producers to new markets and potential customers, such as the creative-industry cluster centered in the Los Angeles Basin.
- ❖ Reduce business costs, enhance and expand the quality of inputs (labor, financing, and ideas), and link new and expanded markets.

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### *Industry Clusters in the Central Valley*

The importance of focusing on economic clusters as the centerpiece of an economic development strategy is apparent to business development organizations in the Central Valley; the California Partnership for the San Joaquin Valley (CPSJV) recently commissioned a report, the *Regional Industry Cluster Analysis and Action Plan* (RICAA).<sup>69</sup> That study, a joint undertaking of consultants and the California State University, Fresno, provides an important perspective on the San Joaquin Valley economy as well as insight into how public policy might be targeted to build on the dynamic potential of economic clusters in the Valley.

The study identified seven key clusters:

- Agriculture
- Health and Wellness
- Energy
- Logistics

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<sup>69</sup> Applied Development Economics, with Araken Arisian, Virginia Hamilton, *San Joaquin Valley Regional Industry Cluster Analysis and Action Plan*, prepared for Office of Community and Economic Development, California State University Fresno, on behalf of the California Partnership for the San Joaquin Valley, September 2012.

- Manufacturing
- Water Technology
- Public Sector Infrastructure

These clusters are defined in detail in the report and each is analyzed across a wide variety of metrics, such as employment size, industry concentration relative to other areas, and growth rates. The RICAA draws out a number of policy implications—“key cluster action plan priorities.” The overriding finding common to all the clusters in the study is that the regional economy, including the key clusters, is “undersupplied” by regional producers which the report characterizes as “leakages” or “supply gaps” including undersupply of resident skilled workers. By focusing on improving workforce training, building up infrastructure, such as broadband, transportation, energy and utilities systems, nurturing innovation relevant to core economic strengths, such as value added agricultural production, and other policies, the report provides an economic policy document of considerable usefulness.

While regional economies such as the Central Valley’s cannot exist as “closed systems” (i.e., they cannot satisfy all their supply needs from within the region), there is little doubt that for structural reasons, including lower levels of education and training, infrastructure and supply chain gaps among others, the Central Valley economy is almost certainly supplying a larger than average proportion of its economic necessities from outside the region. Thus, the RICAA offers a glimpse into what types of regional economic growth could be accomplished with supportive public policies to improve education, training, and fill infrastructure gaps—including high-speed rail, which would significantly enhance accessibility within, to and from the Central Valley.

### *The Role of High-Speed Rail in Cluster Growth and Economic Development*

There is a strong consensus among academic researchers—across fields such as economics, geography, business and management—that high-speed rail fosters increased economic productivity and contributes strongly to a region’s competitive advantage. High-speed rail uniquely facilitates increased face to face interactions among high value activities—for example, among scientific and technical research and universities, corporate headquarters, global finance and business services, and media and cultural centers. Some key highlights from the literature—as well as implications for the Central Valley economy—include:

- The economic benefits of high-speed rail and other major transport improvements have been captured by recent research. Researchers such as Daniel Graham at the University of London—a major contributor to new methods of economic evaluation of transportation investments in the United Kingdom—have documented the impact of high-speed rail in achieving “agglomeration” economies, which arise because of the advantages that result to firms from the spatial concentration of economic activities.<sup>70</sup>
- A growing body of literature suggests that agglomeration benefits are significant. One researcher found that traditional economic models underestimate the economic impact of high speed rail investment

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<sup>70</sup> Graham, Daniel J. “Agglomeration Economies and Transport Investment”, Discussion Paper No. 2007-11, International Transport Forum, Joint Transport Research Centre, OCED, (December, 2007)

associated with agglomeration benefits by 10 to 80 percent.<sup>71</sup> Other studies from Europe, using sophisticated economic models, suggest that agglomeration related economic benefits will account for up to 40 percent of total benefits, with a likely range of 10 to 20 percent<sup>72</sup>. Studies of Japanese cities with high speed rail stations showed areas achieved average population growth rates of 1.6 percent while bypassed cities grew at one percent. Similarly, intermediate German cities connected via high-speed rail to Frankfurt and Cologne experienced a 2.7 percent increase in GDP due to the increase market accessibility to the larger cities.<sup>73</sup>

- Empirical evidence has shown that cities brought within two hours of a major economic center accrue the most economic benefit from rail.<sup>74</sup> This has important implications for Bakersfield, Fresno, and other Central Valley cities, all of which will be within two hours by rail to both San Francisco and Los Angeles. The high speed rail network in California has the potential to increase business-to-business interaction between Southern and Northern California, integrate the economies of the Central Valley, and provide capacity in the congested airport hubs for higher value transnational and international connections.
- The greatest *volume* of urban redevelopment attributable to high-speed rail—together with other factors—will likely occur in the major metropolitan regions of the Bay Area and the Los Angeles Basin. Major economic centers such as San Jose and San Francisco will become more fully integrated with each other and with cities on the other side of the state such as Los Angeles and Anaheim. At the same time, Cities in the Central Valley with high-speed rail stations will see clustering of development around stations and general downtown redevelopment as a result of better connections among the Valley cities and to Los Angeles and San Francisco. High-speed rail stations may represent the single largest positive change factor in these downtowns in many years. Some Specific development opportunities could include business or medical services and back office development.
- There may also be good potential for manufacturing in the Central Valley for some types of higher value added products, and some possible synergies with the intermodal/logistics hubs being planned in the Central Valley. The nature and extent of such downtown and station area redevelopment impacts in the Central Valley cities will be a function of market factors, but also the extent to which local officials and planners create the right conditions for it to occur including planning and infrastructure support, zoning support, financial incentives, and other factors.

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<sup>71</sup> Preston, John; Larbie, Adam; Wall, Graham. *The Impact of High Speed Trains on Socio-Economic Activity: The case of Ashford (Kent)*. 4th Annual Conference on Railroad Industry Structure, Competition and Investment, Universidad Carlos III. Madrid, 2006.

<sup>72</sup> de Rus, G. (ed.), *Economic Analysis of High Speed Rail in Europe*, Fundacion BBVA, Bilbao Spain 2009.

<sup>73</sup> Ahlfeldt, Gabriel M. and Feddersen, Arne, *From Periphery to Core: Economic Adjustments to High Speed Rail*LSE, University of Hamburg. 2010

<sup>74</sup> Chen, Chia-Lin; Hall, Peter (2009), "The Impacts of High speed Trains on British Economic Geography: A Study of the UK's IC125/225 and its Effects" University College London, London, UK

## Conclusion

Due to its unique geography and natural resources, the Central Valley economy has historically been based predominantly on farming and related industry sectors. While generating economic prosperity for the Valley, these have historically been low-wage, relatively low-output and low-education industry sectors. In the meantime, other parts of the state, including the Los Angeles Basin and the Silicon Valley/San Francisco areas, have developed a more diversified industry base with more balance across industry sectors and a much higher proportion of knowledge sector employment. The Central Valley's agriculture-based economy is increasingly facing a number of physical and structural challenges and changes the most significant of which is the current drought and related water shortages, the extent and intransigence of which is difficult to predict. In addition, the agricultural sector is shifting to less labor-intensive technologies and greater skill specialization which requires high education and skill levels but which also creates fewer jobs.

Given these trends and challenges, and absent fundamental structural changes to bring it into greater balance, the Central Valley risks falling even further behind as incomes lag and as the wider state, national and global economies continue to shift to a knowledge-based, service-driven economy; this despite the fact that the region demonstrates promising demographic trends, including a fast-growing and relatively youthful population base.

A range of strategies and policies are clearly required to help effect such a fundamental economic shift. Infrastructure investment, such as high-speed rail, has the potential to hasten diversification of the Central Valley economy—from one dominated by basic agricultural production to a one that is linked to and fully integrated with the state's major metropolitan economies. As seen in other international examples, under the right conditions high-speed rail investments can generate substantial increases in employment and economic productivity by improving overall accessibility and creating much greater connections to the larger economy among key economic clusters, with research indicating that in some cases, high-speed rail investments have had transformative effects on a surrounding economy.

## Appendix: County Level Data

**Table 1: Historic Population, Central Valley vs. California (1980 to 2010)**

	1980	1990	2000	2010	<b>Growth Rate</b>	
					(1980 - 2010)	(2000 - 2010)
<b>California</b>	<b>23,667,764</b>	<b>29,760,021</b>	<b>33,871,653</b>	<b>37,253,956</b>	<b>1.5%</b>	<b>1.0%</b>
Fresno	514,621	667,490	799,407	930,450	2.0%	1.5%
Kern	403,089	543,477	661,645	839,631	2.5%	2.4%
Kings	73,738	101,469	129,461	152,982	2.5%	1.7%
Madera	63,116	88,090	123,109	150,865	2.9%	2.1%
Merced	134,558	178,403	210,554	255,793	2.2%	2.0%
San Joaquin	347,342	480,628	563,598	685,306	2.3%	2.0%
Stanislaus	265,900	370,522	446,997	514,453	2.2%	1.4%
Tulare	245,738	311,921	368,021	442,179	2.0%	1.9%
<b>Central Valley</b>	<b>2,048,102</b>	<b>2,742,000</b>	<b>3,302,792</b>	<b>3,971,659</b>	<b>2.2%</b>	<b>1.9%</b>
Central Valley as a % of California	8.7%	9.2%	9.8%	10.7%		

Source: US Census, note 2010 estimates for April

**Table 2: Population Growth, Central Valley vs. California (2010 to 2060)**

	<b>Estimates</b>	<b>Projections</b>				<b>Growth Rate</b>		
	2010	2015	2020	2040	2060	(2010 - 2020)	(2010 - 2040)	(2010 - 2060)
<b>California</b>	<b>37,309,382</b>	<b>38,801,063</b>	<b>40,643,643</b>	<b>47,690,186</b>	<b>52,693,583</b>	<b>0.9%</b>	<b>0.8%</b>	<b>0.7%</b>
Fresno County	932,377	988,970	1,071,728	1,397,138	1,615,401	1.4%	1.4%	1.1%
Kern County	841,146	911,750	1,057,440	1,618,681	2,055,622	2.3%	2.2%	1.8%
Kings County	152,656	157,314	176,647	235,129	282,305	1.5%	1.5%	1.2%
Madera County	151,328	161,556	185,056	278,011	373,929	2.0%	2.0%	1.8%
Merced County	255,937	273,156	301,376	436,188	553,114	1.6%	1.8%	1.6%
San Joaquin County	686,588	725,884	810,845	1,213,708	1,538,313	1.7%	1.9%	1.6%
Stanislaus County	515,205	540,853	589,156	759,027	953,580	1.4%	1.3%	1.2%
Tulare County	443,066	473,785	526,718	722,838	836,850	1.7%	1.6%	1.3%
<b>Central Valley</b>	<b>3,978,303</b>	<b>4,233,268</b>	<b>4,718,966</b>	<b>6,660,720</b>	<b>8,209,116</b>	<b>1.7%</b>	<b>1.7%</b>	<b>1.5%</b>
Central Valley as a % of California	10.7%	10.9%	11.6%	14.0%	15.6%			

Source: California Department of Finance Note: 2010 estimates for July

**Table 3: Concentration of Regional Population by County**

	1980	1990	2000	2010
<b>Central Valley:</b>	<b>2,048,102</b>	<b>2,742,000</b>	<b>3,302,792</b>	<b>3,971,659</b>
Fresno	25.1%	24.3%	24.2%	23.4%
Kern	19.7%	19.8%	20.0%	21.1%
Kings	3.6%	3.7%	3.9%	3.9%
Madera	3.1%	3.2%	3.7%	3.8%
Merced	6.6%	6.5%	6.4%	6.4%
San Joaquin	17.0%	17.5%	17.1%	17.3%
Stanislaus	13.0%	13.5%	13.5%	13.0%
Tulare	12.0%	11.4%	11.1%	11.1%

Source: US Census, note 2010 estimates for April

**Table 4: Employment by Industry in the Central Valley (1990 to 2012)**

	1990	1995	2000	2005	2007	2012	Growth Rate	
							1990— 2012	2007— 2012
<b>Central Valley:</b>								
<b>Total All Industries</b>	998,000	1,075,000	1,205,100	1,295,600	1,346,800	1,293,600	1.2%	-0.8%
<b>Total Farm</b>	166,300	190,200	202,400	180,700	186,900	195,700	0.7%	0.9%
<b>Total Nonfarm</b>	831,700	884,700	1,002,600	1,115,000	1,159,900	1,097,900	1.3%	-1.1%
Mining, Logging, and Construction	64,900	51,700	66,800	94,100	89,100	63,500	-0.1%	-6.6%
Manufacturing	108,800	107,000	114,300	112,900	115,100	103,000	-0.2%	-2.2%
Trade, Transportation & Utilities	174,900	185,800	201,900	227,700	239,700	233,600	1.3%	-0.5%
Wholesale Trade	35,000	33,500	35,800	41,600	45,200	44,600	1.1%	-0.3%
Retail Trade	111,000	116,200	125,800	140,900	145,500	136,500	0.9%	-1.3%
Transportation, Warehousing & Utilities	29,000	36,300	40,400	45,300	49,200	52,400	2.7%	1.3%
Information	14,700	14,200	15,200	14,900	14,500	10,900	-1.4%	-5.5%
Financial Activities	40,900	39,000	42,000	47,700	48,800	41,600	0.1%	-3.1%
Professional & Business Services	61,900	73,200	97,700	102,100	107,700	102,000	2.3%	-1.1%
Educational & Health Services	79,900	95,400	108,400	128,000	138,000	151,600	3.0%	1.9%
Leisure & Hospitality	64,900	75,900	83,900	95,900	102,400	101,000	2.0%	-0.3%
Other Services	28,200	30,500	34,400	36,500	37,500	35,000	1.0%	-1.4%
Government	193,000	211,900	238,200	255,600	267,500	256,200	1.3%	-0.9%

Source: California Employment Development Department

**Table 5: Employment by Industry, Central Valley vs. California (2012)**

	<u>Central Valley</u>	<u>Proportion of Total</u>	<u>California</u>	<u>Location Quotient</u>
Total All Industries	1,293,600	100%	14,797,100	
<b>Total Farm</b>	<b>195,700</b>	<b>15%</b>	<b>402,500</b>	<b>5.6</b>
<b>Total Nonfarm</b>	<b>1,097,900</b>	<b>85%</b>	<b>14,394,500</b>	<b>0.9</b>
Mining, Logging, and Construction	63,500	5%	617,600	1.2
Manufacturing	103,000	8%	1,252,800	0.9
Trade, Transportation & Utilities	233,600	18%	2,725,100	1.0
<i>Wholesale Trade</i>	<i>44,600</i>	<i>3%</i>	<i>676,800</i>	<i>0.8</i>
<i>Retail Trade</i>	<i>136,500</i>	<i>11%</i>	<i>1,561,800</i>	<i>1.0</i>
<i>Transportation, Warehousing &amp; Utilities</i>	<i>52,400</i>	<i>4%</i>	<i>486,500</i>	<i>1.2</i>
Information	10,900	1%	430,400	0.3
Financial Activities	41,600	3%	774,600	0.6
Professional & Business Services	102,000	8%	2,235,100	0.5
Educational & Health Services	151,600	12%	1,879,200	0.9
Leisure & Hospitality	101,000	8%	1,599,100	0.7
Other Services	35,000	3%	505,700	0.8
Government	256,200	20%	2,375,100	1.2

Source: California Employment Development Department

**Table 6: Industry Location Quotients by County vs. California (2012)**

	<u>Fresno</u>	<u>Kern</u>	<u>Kings</u>	<u>Madera</u>	<u>Merced</u>	<u>San Joaquin</u>	<u>Stanislaus</u>	<u>Tulare</u>
<b>Mining and Logging</b>	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0
<b>Manufacturing</b>	0.8	0.6	1.2	1.0	1.4	1.0	1.5	1.0
<b>Trade, Transportation and Utilities</b>	1.0	0.9	0.7	0.6	0.9	1.4	1.1	1.0
<b>Information</b>	0.4	0.3	0.2	0.3	0.2	0.4	0.2	0.2
<b>Financial Activities</b>	0.7	0.6	0.5	0.3	0.4	0.7	0.6	0.5
<b>Professional and Business Services</b>	0.6	0.6	0.2	0.4	0.4	0.5	0.5	0.5
<b>Educational and Health Services</b>	1.2	0.9	1.0	1.2	0.9	1.3	1.3	0.7
<b>Leisure and Hospitality</b>	0.8	0.7	0.6	0.6	0.6	0.8	0.9	0.6
<b>Other Services</b>	0.9	0.7	0.4	0.5	0.6	0.9	0.9	0.6
<b>Government</b>	1.2	1.3	2.2	1.4	1.5	1.1	1.0	1.4
<b>Total Farm</b>	5.5	7.1	5.5	9.4	6.6	2.8	3.1	8.9

Source: California Department of Finance and California Employment Development Department

**Table 7: GDP and Wages per Employee in California (2012)**

	GDP/Employee	Wages/Employee
Total All Industries	\$129,730	\$58,259
<b>Total Farm</b>	<b>\$198,129</b>	<b>\$25,973</b>
<b>Total Nonfarm</b>	<b>\$129,049</b>	<b>\$58,581</b>
Mining, Logging, and Construction	\$97,251	\$53,381
Manufacturing	\$170,223	\$79,122
Trade, Transportation & Utilities	\$116,655	\$47,069
<i>Wholesale Trade</i>	<i>\$165,823</i>	<i>\$70,078</i>
<i>Retail Trade</i>	<i>\$78,867</i>	<i>\$33,708</i>
<i>Transportation, Warehousing &amp; Utilities</i>	<i>\$170,826</i>	<i>\$58,411</i>
Information	\$331,430	\$114,823
Financial Activities	\$520,866	\$88,032
Professional & Business Services	\$123,882	\$78,016
Educational & Health Services	\$79,315	\$53,325
Leisure & Hospitality	\$52,414	\$28,065
Other Services	\$59,966	\$31,378
Government	\$86,317	\$58,318

Source: Bureau of Economic Analysis

**Table 8: Unemployment Rate, Central Valley vs. California (1990-2013)**

	<u>1990</u>	<u>1995</u>	<u>2000</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2013</u>
<b>California</b>								
<b>Central Valley</b>	<b>11.8%</b>	<b>14.9%</b>	<b>9.0%</b>	<b>8.8%</b>	<b>8.0%</b>	<b>8.6%</b>	<b>10.6%</b>	<b>13.0%</b>
<b>County</b>								
Fresno	11.7%	14.1%	10.4%	9.0%	8.0%	8.6%	10.5%	12.9%
Kern	10.9%	13.8%	8.2%	8.4%	7.5%	8.2%	9.8%	11.8%
Merced	11.3%	14.6%	10.0%	9.5%	8.4%	8.7%	10.5%	13.5%
San Joaquin	13.5%	15.0%	8.7%	7.9%	7.0%	7.5%	9.4%	11.4%
Kings	12.9%	17.1%	9.6%	10.0%	9.4%	10.1%	12.5%	14.7%
Madera	9.9%	12.3%	7.0%	7.9%	7.4%	8.1%	10.4%	12.8%
Stanislaus	11.9%	15.5%	7.8%	8.5%	8.0%	8.7%	11.0%	13.0%
Tulare	12.4%	16.7%	10.4%	9.5%	8.5%	9.2%	10.8%	14.0%
<b>California</b>	<b>5.8%</b>	<b>7.9%</b>	<b>4.9%</b>	<b>5.4%</b>	<b>4.9%</b>	<b>5.4%</b>	<b>7.2%</b>	<b>8.1%</b>

Source: California Employment Development Department

**Table 9: County share of total Central Valley Employment (1990-2013)**

	<u>1990</u>	<u>1995</u>	<u>2000</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2013</u>
Fresno County	25.3%	26.4%	25.2%	24.7%	24.7%	24.7%	24.7%	24.5%
Kern County	20.0%	19.4%	19.5%	20.0%	20.4%	20.5%	20.8%	21.9%
Kings County	2.9%	3.0%	3.2%	3.2%	3.3%	3.4%	3.4%	3.3%
Madera County	3.1%	3.6%	3.6%	3.8%	3.8%	3.8%	3.8%	3.9%
Merced County	5.8%	5.7%	5.9%	5.9%	5.8%	5.8%	5.7%	6.0%
San Joaquin County	17.8%	17.5%	17.5%	17.4%	17.2%	17.2%	16.9%	16.4%
Stanislaus County	13.9%	13.5%	13.9%	13.8%	13.5%	13.4%	13.3%	13.0%
Tulare County	11.1%	11.0%	11.2%	11.1%	11.2%	11.2%	11.4%	11.1%

Source: California Employment Development Department

**Table 10: Employment Growth by Industry, Central Valley vs. California (to 2020)**

<b>Industry Title</b>	<b>California</b> <b>Projected Ten-Year Annual Growth Rate (to 2020)</b>	<b>Central Valley</b> <b>Projected Ten-Year Annual Growth Rate (to 2020)</b>
Total, All Industries	1.55%	1.48%
<b>Total Farm</b>	<b>0.15%</b>	<b>0.78%</b>
<b>Total Nonfarm</b>	<b>1.58%</b>	<b>1.60%</b>
Mining, Logging, and Construction	2.29%	3.26%
Manufacturing	0.04%	0.62%
Trade, Transportation, and Utilities	2.01%	1.88%
<i>Wholesale Trade</i>	<i>2.32%</i>	<i>2.07%</i>
<i>Retail Trade</i>	<i>2.01%</i>	<i>1.63%</i>
<i>Transportation, Warehousing, and Utilities</i>	<i>1.55%</i>	<i>2.36%</i>
Information	0.80%	0.76%
Financial Activities	1.34%	1.01%
Professional and Business Services	2.12%	2.35%
Educational Services (Private), Health Care, and Social Assistance	2.31%	2.08%
Leisure and Hospitality	2.30%	1.97%
Other Services (excludes 814-Private Household Workers)	1.29%	1.48%
Government	0.40%	0.73%

Source: California Employment Development Department

**Table 11: Projected Ten-Year Annual Growth Rate (to 2020) Central Valley Counties vs. California**

<u>Industry Title</u>	<u>Fresno</u>	<u>Kern</u>	<u>Kings</u>	<u>Madera</u>	<u>Merced</u>	<u>San Joaquin</u>	<u>Stanislaus</u>	<u>Tulare</u>	<u>California</u>
Total Employment	1.5%	1.7%	1.4%	1.7%	1.4%	1.7%	1.5%	1.4%	1.55%
Total Farm	0.7%	1.1%	0.7%	2.3%	0.5%	0.4%	0.1%	1.0%	0.15%
Total Nonfarm	1.7%	1.9%	1.6%	1.4%	1.6%	1.9%	1.6%	1.7%	1.58%
Mining, Logging, and Construction	0.0%	2.5%	2.0%	1.7%	3.2%	0.0%	5.0%	2.3%	2.29%
Manufacturing	0.8%	1.4%	3.0%	2.5%	0.7%	0.2%	0.4%	0.7%	0.04%
Trade, Transportation, and Utilities	1.8%	1.9%	2.1%	1.4%	2.0%	2.6%	2.1%	1.8%	2.01%
Information	1.1%	1.1%	0.0%	0.0%	0.0%	0.5%	0.8%	0.0%	0.80%
Financial Activities	1.0%	1.4%	2.0%	1.3%	1.2%	1.3%	0.7%	1.0%	1.34%
Professional and Business Services	2.4%	3.0%	1.6%	3.3%	2.5%	2.4%	2.8%	3.4%	2.12%
Educational Services, Health Care, and Social Assistance	2.3%	2.4%	2.0%	2.0%	2.4%	2.4%	1.6%	2.6%	2.31%
Leisure and Hospitality	2.2%	2.3%	2.3%	1.5%	2.4%	2.3%	1.7%	2.0%	2.30%
Other Services	1.4%	1.4%	1.8%	-1.3%	1.3%	2.1%	1.6%	1.8%	1.29%
Government	0.8%	0.7%	0.6%	0.7%	1.1%	0.8%	0.8%	0.9%	0.40%

Source: California Employment and Development Department

**Table 12: Income Indicators, Central Valley vs. California (2012)**

<u>County</u>	<u>Median Household Income</u>	<u>Per Capita Income</u>
Fresno County	\$41,627	\$19,010
Kern County	\$45,910	\$19,738
Kings County	\$45,935	\$18,619
Madera County	\$42,039	\$16,704
Merced County	\$43,597	\$17,838
San Joaquin County	\$50,722	\$21,652
Stanislaus County	\$46,405	\$20,608
Tulare County	\$40,302	\$16,843
<b>Central Valley</b>	<b>\$44,921</b>	<b>\$19,409</b>
<b>California</b>	<b>\$58,328</b>	<b>\$28,341</b>

Source: American Community Survey

**Table 13: Proportion Below Poverty Line, Central Valley vs. California (2012)**

<b>County</b>	<b><u>Families</u></b>	<b><u>Population</u></b>
Fresno County	24%	28%
Kern County	20%	24%
Kings County	17%	21%
Madera County	19%	24%
Merced County	21%	24%
San Joaquin County	15%	18%
Stanislaus County	16%	20%
Tulare County	26%	30%
<b>Central Valley</b>	<b>20%</b>	<b>24%</b>
<b>California</b>	<b>13%</b>	<b>17%</b>

Source: American Community Survey

**Table 14: Education Levels, Central Valley vs. California (2012)**

	<b><u>Percent High School Graduate or Higher</u></b>	<b><u>Percent Bachelor's Degree or Higher</u></b>
Fresno County	72%	19%
Kern County	72%	15%
Kings County	73%	12%
Madera County	70%	13%
Merced County	68%	13%
San Joaquin County	78%	19%
Stanislaus County	78%	16%
Tulare County	68%	15%
Central Valley	73%	16%
California	82%	31%

Source: American Community Survey

## APPENDIX C—SUMMARY TABLE OF KEY THEMES FROM ROUNDTABLES AND INTERVIEWS

### Regional Themes

Topic	Challenges	Opportunities
Business Climate	<ul style="list-style-type: none"> <li>• Many local economies have not yet recovered from the recession, creating challenges for business expansion</li> <li>• Addressing short-term economic challenges and overall uncertainty surrounding whether the HSR program is going forward make it difficult for agencies to plan for long-term opportunities created by high-speed rail</li> <li>• Communication and dissemination of information about opportunities from the Authority has been uneven with some areas feeling more “plugged in” than others</li> <li>• Counties are struggling with how to attract businesses to the area and become more business friendly; this is especially challenging with space constraints, lack of supporting infrastructure, and the halt of construction in some areas of the Valley</li> <li>• Business retention is a parallel challenge, specifically how counties can get businesses to stay in the San Joaquin Valley, high-speed rail construction can be a threat to business retention as some businesses that have to relocate may not reopen or may leave the area</li> <li>• There are concerns about the loss of agricultural land potentially being damaging to the core economy in the Valley</li> </ul>	<ul style="list-style-type: none"> <li>• High-speed rail and the improved connectivity it will provide can be incorporated into the “marketing pitch” to attract prospective businesses into the region; specifically, there are opportunities in the southern San Joaquin Valley to be more closely connected to Los Angeles and for the northern San Joaquin Valley to be more connected to the Bay Area</li> <li>• There are numerous opportunities for workers and businesses to become involved in the high-speed rail program, but this will require:             <ul style="list-style-type: none"> <li>○ Improving communication on the implementation timeline so that counties can attract businesses using high-speed rail as a draw; there need to be timeline estimates and critical touch points that are identified along the way</li> <li>○ Improving communication about opportunities for small and disadvantaged business enterprises (and how to get certified)—this is especially critical for smaller communities</li> </ul> </li> <li>• The Authority’s aggressive small and disadvantaged business goals make it possible for many smaller firms to support the construction in areas as far-reaching as paper shredding, printing, etc.</li> <li>• The high-speed rail system offers opportunities for agri-tourism and to capitalize on counties that are currently gateways to National Parks and on other cultural/natural landmarks, e.g., gear/bicycle rentals, lodging, etc.</li> <li>• The Authority’s plans to run on renewable energy can help be a catalyst for the continued growth in renewable energy such as solar in the Valley though there are challenges for</li> </ul>

Topic	Challenges	Opportunities
		<p>continued renewable energy development due to agricultural land loss issues</p> <ul style="list-style-type: none"> <li>○ The maintenance facility and the surrounding region could become hub for high-speed rail; in France, the maintenance facility had a training facility on the upper level and was surrounded by an industrial park, which creates tremendous opportunities for businesses</li> <li>○ Since the current alignment goes through a lot of blight, business relocation could be an opportunity for businesses to relocate to better locations</li> </ul>
<p>Workforce</p>	<ul style="list-style-type: none"> <li>● Persistent high unemployment and relatively low educational attainment of the workforce creates challenges for the community’s economic vitality</li> <li>● The lack of clarity about the types of jobs that are needed is creating hesitation about how colleges and agencies should be targeting their resources for training</li> <li>● The workforce needs to be trained so that workers are adequately skilled and have transferrable skills that will allow them to move between different jobs</li> <li>● Workforce development agencies and community colleges need information from the contractor on timing, number of jobs, and types of jobs so that they can advise, prepare, and encourage the workforce to participate</li> <li>● Due to the design-build model, a lot of construction decisions are up to the contractor, which adds another challenge to the matching process of jobs to workers</li> <li>● Although there is a push to prepare workers now, putting someone through training without knowing if there will be a job waiting for them upon completion is especially hard on workers who cannot afford to be in training and then out of work for an extended period of time</li> <li>● Once the building trades clear all the workers from Book 1, there is a concern that unions outside the region would be able to come in</li> </ul>	<ul style="list-style-type: none"> <li>● Keeping a broader perspective on training and jobs (i.e., not focus exclusively on high-speed rail jobs) will help mitigate the uncertainties surrounding high-speed rail opportunities; in other words, place more emphasis on preparation to work on public infrastructure projects generally, which is a growing sector in the Valley</li> <li>● There is an estimated \$30 billion in infrastructure needs and related funding commitments over the next 10 years for the San Joaquin Valley</li> <li>● Rather than wait on high-speed rail opportunities, qualified applicants for pre-apprenticeship programs can apply to get on the list now; workers that prepare themselves now will be better off when high-speed rail opportunities arise</li> <li>● Community colleges and Workforce Investment Boards (WIBs) would be better able to support training and workforce development efforts for the program if there was more information on what the workforce needs are, how many people need to be ready, what they need to be prepared for, and when they need to be prepared; this would help the local community colleges and WIBs to plan for these needs             <ul style="list-style-type: none"> <li>○ It takes time for local community</li> </ul> </li> </ul>

Topic	Challenges	Opportunities
	<ul style="list-style-type: none"> <li>• New businesses that come into the Valley will bring in new jobs, but there is a concern that the local workforce may have to compete with outside labor that may move into the region</li> <li>• Rather than a singular focus on jobs, there needs to be a broader conversation about the overall outlook for career paths that will continue long after the high-speed rail program is over</li> </ul>	<ul style="list-style-type: none"> <li>colleges to be able to develop the appropriate curricula and secure qualified instructors to teach those courses                             <ul style="list-style-type: none"> <li>○ Community colleges also need to know what priorities they should consider when planning for their growth (e.g., Willow Community College is seeking a local bond measure to expand and modernize its facilities and the college wants to pinpoint exactly what the needs are to make the most of its resources)</li> </ul> </li> <li>• There needs to be a better way to identify vacant positions and available local workers that would significantly improve the matching process when high-speed rail jobs become available</li> <li>• High-speed rail can be leveraged to help retain the local workforce, particularly among those workers that leave the San Joaquin Valley to work elsewhere</li> <li>• The program can provide jobs that will pay living wages, potentially improving the socioeconomic status of those workers significantly</li> <li>• Local community colleges and universities can be valuable resources to the program; students can contribute their skills, ideas, and knowledge</li> <li>• Condensing training programs or creating stackable credentials (a sequence of credentials that accumulate over time to receive an Associate’s degree) will give workers more flexibility with obtaining certifications and Associate’s degrees</li> <li>• The trades’ Book rules will give priority in hiring to local members over outsiders, allowing many of the union-dispatched jobs to stay in the San Joaquin Valley community</li> </ul>
Housing	<ul style="list-style-type: none"> <li>• Many Counties are facing an affordable housing shortage with Section 8 lists very long or full; little affordable housing is being built</li> <li>• Some communities are concerned about temporary housing capacity (e.g., rentals, multi-family units) and local residents getting priced out if workers from outside</li> </ul>	<ul style="list-style-type: none"> <li>• The program is an opportunity for smart growth and infill</li> <li>• There is an opportunity to establish partnerships like those in Fresno with the EDC for business relocation assistance and for housing assistance</li> </ul>

Topic	Challenges	Opportunities
	<p>the region start coming in because the local workforce is not prepared/trained, or if there is not enough slack in the construction labor market</p> <ul style="list-style-type: none"> <li>• There is a challenge of relocating displaced businesses and residents and finding comparable spaces</li> <li>• There are concerns that the high-speed rail system may lead to the Valley becoming a bedroom community for the Bay Area to Los Angeles region if proper planning is not done to prevent his</li> </ul>	
Agriculture	<ul style="list-style-type: none"> <li>• Some concern about the loss of agricultural land, although the threat to agricultural land is offset by reduced sprawl potentially associated with the high-speed rail program</li> <li>• There is also concern about climate change as a threat to agriculture</li> <li>• The onset of new technologies may displace workers in the agricultural industry</li> </ul>	<ul style="list-style-type: none"> <li>• Agriculture and manufacturing are both strong industries in the Valley</li> <li>• Agri-tourism was identified as a strong opportunity; taking advantage of the greater connectivity that high-speed rail will bring between the San Joaquin Valley and the rest of California could create new opportunities</li> </ul>
Infrastructure	<ul style="list-style-type: none"> <li>• Some areas lack the water resources for business expansion since water is scarce throughout the entire region</li> <li>• Concern that high-speed rail and related infrastructure might divide communities</li> <li>• Since the Authority is perceived as being very funding-constrained, there is a concern that the appropriate amount of time and investment will not be put in to developing a pragmatic approach to making a quality program happen, resulting in a system that is “built on the cheap”</li> <li>• Cities with old infrastructure are concerned whether their infrastructure will be able to support the burdens placed on their energy and water systems by the addition of high-speed rail and the changes it will bring</li> </ul>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>
Transportation Connectivity and Integration	<ul style="list-style-type: none"> <li>• Concern about whether there will be linkages between the high-speed rail system and regional transit systems; counties need to plan for connectivity and multi-modality in order to maximize the high-speed rail system’s benefits</li> <li>• Linkages from high-speed rail stations to major destination points is a concern for the tourism sector</li> </ul>	<ul style="list-style-type: none"> <li>• The high-speed rail system will take cars off of Interstate 99 and improve circulation for goods movement; since the system will have its own dedicated tracks, freight will be impacted only to the extent that demand for freight increases</li> <li>• The system offers the opportunity to make multi-modal connections that do</li> </ul>

Topic	Challenges	Opportunities
	<ul style="list-style-type: none"> <li>• There needs to be a focus on last mile planning to ensure the Valley is able to maximize the connectivity of high-speed rail</li> <li>• The system’s long implementation schedule means the ability to connect the southern and northern ends of the state with high-quality data and communication capabilities is still in the distant future</li> <li>• There is a digital divide in the San Joaquin Valley that reflects both economic and opportunity divide</li> </ul>	<p>not currently exist</p> <ul style="list-style-type: none"> <li>• Local transit networks can use high-speed rail stations as hubs in much the same way that some Amtrak stations are used today</li> <li>• There are opportunities to explore the potential to use the high-speed rail right of way for broadband to digitally connect Valley residents</li> <li>• Smaller cities can utilize planning grants from the Authority to be a part of station area planning</li> <li>• Increased (and cost-effective) connectivity will also improve access to healthcare facilities that are located further away</li> </ul>
Tourism	<ul style="list-style-type: none"> <li>• Growing the agri-tourism industry in the San Joaquin Valley is a challenge because of security, privacy, and liability concerns; agriculture will need to have assistance on how to handle visitors and how to properly plan and manage service, liability, and insurance risks</li> <li>• An increase in tourism in the Valley will pose communication and planning challenges to coordinate travel, intermodal connections, and scheduling of events in the region for large groups of tourists</li> </ul>	<ul style="list-style-type: none"> <li>• High-speed rail will make it easier for tourists to travel up and down the Valley, increasing tourism to the region</li> <li>• As more visitors become aware of how large the California agricultural industry is and its contributions to domestic and international food supply, this will spur more visitation to the Valley</li> <li>• There are opportunities to grow the sporting industry, especially since supporting infrastructure is already in place for events and activities such as bicycle riding and golf</li> <li>• The current ridership forecasts only take into account travel by California residents; integration of visitation numbers for destinations in the Valley, such as Yosemite, could be useful in modeling ridership specific to tourism projections for the Valley</li> <li>• The general sentiment is that businesses will be able to adjust and adopt to his increased visitation (and opportunity); however, retail businesses will be able to much faster than those venues that require long-term capital investment, such as hotels</li> </ul>
Station Area Development	<ul style="list-style-type: none"> <li>• One of the biggest challenges of station area planning is timing and the difficulties with planning around the program’s uncertainties</li> <li>• Consensus between property owners, business owners, residents, and advocates may also be a challenge since these</li> </ul>	<ul style="list-style-type: none"> <li>• Stations can help grow the surrounding downtown areas (by prioritizing infill) and provide opportunities for businesses</li> <li>• For counties with stations, station area development presents an opportunity to provide additional housing</li> </ul>

Topic	Challenges	Opportunities
	<p>stakeholders have different perspectives and varying wants and need</p>	<p>developments in walkable, compact neighborhoods</p> <ul style="list-style-type: none"> <li>• There may be opportunities to leverage other outside grants to complement station area planning efforts</li> <li>• There may be opportunities to use incentives to attract desired development in downtown areas</li> </ul>
<p>Education, Research, and Technology</p>		<ul style="list-style-type: none"> <li>• Local community colleges and universities can contribute their valuable skills, ideas, and knowledge to the program</li> <li>• UC Merced could position itself as the training ground for high-speed rail workers that could go beyond this program                         <ul style="list-style-type: none"> <li>○ The university could leverage opportunities in research and technology, renewable energy, and various electronic applications that are integral components for high-speed rail; there is potential for a spinoff of jobs as a result of the program for patents and technology</li> <li>○ Other ways the university can be involved in the program include sponsorship of robotics and computer modeling simulation programs, and getting its natural sciences program involved with the mitigation requirements of the program</li> <li>○ The university could serve as an incubator for high-speed rail technology</li> </ul> </li> <li>• CSUB sees the program as a valuable opportunity to capture the knowledge of its students; the university will be offering a high-speed rail course in collaboration with a university in China to prepare its students to work on construction of the high-speed rail system</li> <li>• FSU has an urban planning program which could focus on the greater connectivity and mobility that the high-speed rail system could bring to the region for both local residents and other individuals that may move through the region for personal or business reasons</li> </ul>

Topic	Challenges	Opportunities
		<ul style="list-style-type: none"> <li>• A collaboration of Valley educational institutions could be possible to further understand the opportunities that the high-speed rail system could bring to the region; the educational institutions have relationships they can build on to assess respective strengths and advance the study on a range of fronts, from the mechanical design of the system to researching the social connectivity and mobility opportunities the system could bring to the Central Valley</li> </ul>
<p>Regional Partnerships</p>	<ul style="list-style-type: none"> <li>• Political pressure and the feeling from some communities regarding whether or not the program will happen makes it difficult for partnership participants to be open and focused on the same issues</li> <li>• Needs and priorities vary across different communities in the Central Valley which can make it difficult to determine the best way to target resources</li> <li>• There is a constant challenges of feeling more inclusive in the high-speed rail program planning, but this requires willingness by the particular organization for stay engaged and understand the process that is currently taking place</li> </ul>	<ul style="list-style-type: none"> <li>• Regionally, there has been a lot of work done to form partnerships, and there are several consortiums that can be valuable resources for coordination, communication, and information sharing</li> <li>• Information is one of the most important resources to be shared; there are multiple consortiums in the central region that tend to communicate and share information very efficiently and proactively—these consortiums have cross participation by the many partnering agencies in the area</li> <li>• Community colleges have also been successful in the regional consortium efforts, especially in the areas of worker education and readiness</li> </ul>

## County Themes

County	Key Themes
<b>Madera</b>	<p><i>Business Climate and Opportunities</i></p> <ul style="list-style-type: none"> <li>• Madera has seen a slow recovery from the recession and is still dealing with its impacts; construction has been halted and development has been pulled back significantly with the onset of the recession</li> <li>• While agriculture has consistently been a strong industry, any impacts to agriculture may trickle down to some small businesses but would not likely have impacts on the Madera County economy</li> <li>• Businesses are slow to expand and hire new workers; people who might be expected to retire are staying at their jobs longer, resulting in fewer open positions</li> <li>• There are space constraints for business expansion since there is not a lot of availability for manufacturers looking for 20,000 square feet or more, and there are challenges to having the necessary supporting infrastructure and funding for construction of industrial parks</li> <li>• There may be opportunities for high-tech manufacturing that can supply elements to the program even when it expands beyond the region</li> <li>• Opportunities that arise from the high-speed rail program need to be better communicated to Madera residents; small businesses and the workforce both need to know what preparations they need to make well in advance</li> <li>• Opportunities to tap into Madera’s proximity to Yosemite, which will require improving multi-model accessibility for towns on the path to Yosemite in order to capitalize on the tourists that pass through</li> </ul> <p><i>Workforce</i></p> <ul style="list-style-type: none"> <li>• Many of the workers are not highly skilled or educated and cannot compete for higher-skilled jobs (32 percent of Madera’s population aged 25+ does not have a high school diploma or GED); people who might typically be expected to retire are staying in their jobs longer</li> <li>• There are many people that are coming to the Madera Workforce Investment Board offices who had been previously laid off from construction and manufacturing jobs, and want instead to be trained in jobs that are fairly stable despite what happens with the economy (i.e., healthcare, truck driving, etc.)</li> <li>• Workers need transferrable skills for when construction on the Madera to Fresno section is finished; training becomes a question of how to leverage existing funding and partnerships with communication colleges and local organizations</li> <li>• If workers receive training, they need to be able to get to the training—alternative delivery methods would be useful</li> </ul> <p><i>Housing</i></p> <ul style="list-style-type: none"> <li>• Concern of local workers being priced out if more jobs become available as a result of the program, and if more people come into the area to compete for these jobs; there is little capacity in Madera to absorb additional housing demand</li> <li>• The supply of affordable housing in the County is very low since redevelopment has halted; in addition, the Section 8 housing list has been closed for 15 years</li> <li>• Concern of sprawl and suburbanization if Madera becomes a “bedroom community” of HSR commuters; this needs to be mitigated with sustainable planning (i.e., Smart Valley Places)</li> <li>• The housing supply in Madera is low; there are 1,300 or more vacant residential lots, which is a huge inventory compared to the size of Madera, but since construction has been halted, those vacant lots do not translate into housing units</li> </ul>

County	Key Themes
	<ul style="list-style-type: none"> <li>• There are challenges in developing multi-family housing and zoning is not always conducive to this; there are also not a lot of rentals since there is a stigma that renters do not take care of the property</li> </ul> <p><i>Agriculture</i></p> <ul style="list-style-type: none"> <li>• The agriculture industry is facing challenges associated with climate change, suburbanization, and the use of land (and change to infrastructure) where the rail will pass through</li> <li>• Despite the outreach efforts through the EIR, there was some feeling of uncertainty about the exact path of the rail alignment creating uncertainty about what to plan for in the long-term</li> </ul> <p><i>Infrastructure</i></p> <ul style="list-style-type: none"> <li>• There is a need for improved connectivity between Fresno station and Madera, especially since Madera is so large mile-wise, to maximize the high-speed rail system’s benefits to the community</li> </ul>
<b>Fresno</b>	<p><i>Business Climate and Opportunities</i></p> <ul style="list-style-type: none"> <li>• The economy in Fresno is recovering faster than most places within the Valley; businesses are expanding and hiring people, the manufacturing industry is rebounding, and there is an increased interest from new companies to move to Fresno</li> <li>• The maintenance facility is an opportunity for the County to become a hub for high-speed rail—similar to the maintenance facility in France, which had a training facility on the upper level and was surrounded by an industrial park</li> <li>• Downtown station planning is underway to create a foundation for development in the downtown areas; Fresno is also utilizing a CHSRA funding planning grant for a Station Area Master Plan</li> <li>• Business displacements are just as much as a concern as agricultural land displacement</li> <li>• There needs to be some thought into what kind of businesses Fresno wants to attract (i.e., cluster analysis)</li> </ul> <p><i>Workforce</i></p> <ul style="list-style-type: none"> <li>• Many companies come to Fresno because of the inexpensive cost of labor and fewer regulations than other parts of the state, but when they find somewhere cheaper to do business and leave, the result is a number of unemployed workers</li> <li>• The perception of not having a qualified workforce is a major obstacle as this has been to prospective companies from moving to Fresno</li> <li>• Providing the labor force with the education and training they need to find jobs even after construction of the high-speed rail system within Fresno is completed continues to be a challenge; there is a big push to encourage more people to get their high school diploma or GED</li> <li>• Having a maintenance facility in Fresno brings opportunities for more jobs in the area</li> <li>• The system to match workers with vacant positions is paper-based; there is a need for a more efficient way to capture this information and improve the matching process</li> </ul> <p><i>Housing</i></p> <ul style="list-style-type: none"> <li>• The alignment of the rail will eliminate areas of blight, but there is difficulty in relocating displaced low income/semi-homeless residents (e.g., from Motel Drive) since supply of adequate comparable housing is low</li> <li>• There is also the challenge of dealing with landlords that are trying to evict their tenants early with fake notices—if these tenants leave early, then they are no longer eligible for relocation services</li> <li>• There is a supply of bank-owned homes (although the number has dwindled in the past few</li> </ul>

County	Key Themes
	<p>years), including empty homes in rural areas</p> <p><i>Agriculture</i></p> <ul style="list-style-type: none"> <li>• There is interest in expanding value added agricultural production and agri-tourism, and promoting the local foods movement; the County has adopted an agri-tourism ordinance that sets the framework to grow the industry</li> <li>• There may be opportunity to leverage the manufacturing industry to support value-added agricultural processing</li> </ul> <p><i>Infrastructure</i></p> <ul style="list-style-type: none"> <li>• Communication about how the high-speed rail system will affect the County’s existing infrastructure could be improved; residents and businesses want to know how power lines will be affected during construction</li> <li>• A potential opportunity currently being studied is the use of the high-speed rail corridor for fiber optics or other linear development projects</li> </ul>
<b>Merced</b>	<p><i>Business Climate and Opportunities</i></p> <ul style="list-style-type: none"> <li>• The County is already seeing some high-tech oriented work come in from the Bay Area, including rocket testing, conceptual testing of products, and some manufacturing</li> <li>• High-speed rail is an opportunity for the County to incorporate the high-speed rail system into its marketing pitch to prospective companies to attract new businesses from other regions</li> <li>• The high-speed rail system will also improve connectivity to other parts of the state, presenting the opportunity to increase tourism in the region; last year, the Gateway to Yosemite in Merced had 137,000 visitors, an 8 percent increase from the previous year             <ul style="list-style-type: none"> <li>○ The intermodal connection to the Gateway to Yosemite could generate economic activity, including hotels and other lodging, gear and bicycle rentals, tubing rentals, and other recreational businesses</li> </ul> </li> </ul> <p><i>Workforce</i></p> <ul style="list-style-type: none"> <li>• There is a need to identify the skill sets needed for the program and how entities, including the Workforce Investment Board (WIB) and community colleges can get information from the contractor to provide the workforce with necessary training</li> <li>• Merced Community College is redesigning its programs to fast track its graduates in 18 weeks to get them on the job faster; the College also offers contract education and is leveraging grants to introduce services to businesses</li> <li>• The University of California, Merced can be a valuable resource to the program and has the potential to become a place to convene builders, engineers, business leaders, and economists             <ul style="list-style-type: none"> <li>○ Opportunities the university can leverage include research and technology, renewable energy, and various electronic applications that are integral components for high-speed rail; there is potential for a spinoff of jobs as a result of the program for patents and technology</li> <li>○ The natural science program within the University could also be involved with the mitigation requirements of the program</li> <li>○ In addition, UC Merced could sponsor programs in robotics and computer modeling and simulation to help develop the workforce in regards to agriculture needs, factory simulation, and high-speed rail</li> </ul> </li> </ul> <p><i>Housing</i></p> <ul style="list-style-type: none"> <li>• During the economic downturn, single family homes were previously used as a resource for UC Merced student housing, but since the economy is improving, the University cannot rely on these homes as a source of housing</li> </ul>

County	Key Themes
	<ul style="list-style-type: none"> <li>• UC Merced is working on expanding its campus to accommodate 10,000 students; the 2020 initiative plans to add 1 million square feet of residential, academic, and student life space</li> <li>• The County is beginning to outline how it will approach Station Area Planning and has revised its current zoning code to allow the City of Merced to speed up the review process for any development that occurs around the station</li> </ul> <p><i>Agriculture</i></p> <ul style="list-style-type: none"> <li>• The dairy and agriculture processing industries are becoming more innovative with recent advances in technology</li> <li>• There are concerns that agricultural land loss will change the character of the region</li> </ul> <p><i>Infrastructure</i></p> <ul style="list-style-type: none"> <li>• Since high-speed rail trains will enter Merced at-grade, there are concerns that the overpasses installed will divide the community; a related concern is that schedule pressure and funding constraints may lead to shortcuts that will not produce a quality system</li> <li>• As demand to attend UC Merced grows, especially when the high-speed rail system goes live, the bus system will need to expand to accommodate growth and connect students between the campus and downtown</li> </ul>
<b>Tulare</b>	<p><i>Business Climate and Opportunities</i></p> <ul style="list-style-type: none"> <li>• The County has recently seen a new juice processing plant, a new cheese processing plant, and new distribution centers for Alltech, a company that provides animal nutrition and health products, come into the region</li> <li>• Tulare County has a niche for solar projects; there are about 110 megawatts that have been built that are currently online and another 100 watts are permitted and getting ready for construction</li> <li>• Developers partnered with Soleos for green solar training—80 percent of workers have been placed—as one project finishes, another project begins, resulting in a rotation of 400 to 600 people that are able to remain employed over the past 2.5 years             <ul style="list-style-type: none"> <li>○ High-speed rail can help tip the scales towards more solar development if its energy needs can be fulfilled from projects in the Valley and if those energy needs are understood early</li> </ul> </li> <li>• The County has also identified the large scope of support services (everything from coffee vendors to office supplies) that will be needed (aside from labor) to make the program happen; this will provide additional opportunities for the County</li> </ul> <p><i>Workforce</i></p> <ul style="list-style-type: none"> <li>• Many of the industries that are growing in the region, including retail, hospitality, hotels, and restaurants, do not pay workers sustainable wages</li> <li>• The high-speed rail system provides the opportunity to connect the region to other metropolitan areas and expand career opportunities for residents, but there are concerns as to how much Tulare County can benefit from the system since it will not have a station</li> <li>• The WIB is faced with the challenge of training people and then having those people find jobs within a certain timeframe, otherwise training is a disallowed cost for the organization</li> <li>• There is high interest in high-speed rail, but the Employment Connection Center is lacking the specific details on how to advise, prepare, and encourage the workforce</li> </ul> <p><i>Housing</i></p> <ul style="list-style-type: none"> <li>• There are concerns that the high-speed rail system could lead to a housing boom resulting from people moving into the County but commuting to northern or southern California, although local general plans and state requirements will help mitigate this</li> </ul>

County	Key Themes
	<p><i>Agriculture</i></p> <ul style="list-style-type: none"> <li>• The current alignment will bisect some parcels of agricultural land and there is uncertainty surrounding how this will impact the industry</li> <li>• There is also a concern with how landowners will have access to their properties if the system will bisect multiple points within the community; the County would like to see these concerns continue to be taken into consideration and incorporated into the design of the system</li> </ul> <p><i>Infrastructure</i></p> <ul style="list-style-type: none"> <li>• The County Association of Governments is looking into applying for a grant to examine potential intermodal connections between Visalia and the Hanford Amtrak station and to provide seamless transitions between inter-city rail and the County’s seven transit systems</li> </ul>
<b>Kern</b>	<p><i>Business Climate and Opportunities</i></p> <ul style="list-style-type: none"> <li>• The uncertainty surrounding the system, including funding gaps and how the system will be powered, has affected the County’s perception of opportunities; some businesses are hesitant to expand because they are within the current alignment and instead, are choosing to put off growth and are not putting as much money back into the economy</li> <li>• Without good information from the Authority, the County does not know how best to take advantage of opportunities that may be out there; cities and businesses are having trouble planning for growth for fear of getting in the way of the current alignment</li> <li>• The County would like to see the Authority focus on the timeline and crafting a pragmatic approach; without feeling as though there is no luxury of time to create a quality program that will provide the maximum amount of benefits</li> <li>• The high-speed rail system will increase connectivity to the Los Angeles region, which will provide the opportunity to strengthen existing relationships with businesses and institutions and create new relationships; Bakersfield has stronger ties to southern California than the rest of the San Joaquin Valley</li> <li>• Although there are concerns of how high-speed rail will impact historical areas and how these impacts will be mitigated, the program provides an opportunity to revitalize Downtown Bakersfield and change the character of the area to encourage mixed use, walkable neighborhoods</li> <li>• Kern County has seven times the alternative energy generation than the next largest County in California and that generation can potentially be leveraged to power the system</li> </ul> <p><i>Workforce</i></p> <ul style="list-style-type: none"> <li>• There is a strong interest in finding out what the labor requirements for the program are so the County can plan accordingly</li> <li>• The County has a priority to keep as many jobs within the Valley so that it will not end up with a surplus of workers that cannot be supported and sustained in the long-term; there are some concerns that the mobile workforce could lead to an increase in criminal activity</li> <li>• Since Bakersfield is not part of the first phase of construction, the County is concerned that it will fall behind on opportunities; the local workforce may have to compete with other skilled workers that have already worked on the program and have more relevant experience as the system moves south</li> <li>• The system will also allow people to have homes in Bakersfield and travel to Los Angeles quickly for jobs and business opportunities</li> <li>• The California State University, Bakersfield (CSUB) sees the program as a valuable opportunity to capture the knowledge of its young engineers and students from the social sciences and business</li> </ul>

County	Key Themes
	<p>schools for the program; next quarter, CSUB will be offering high-speed rail courses in collaboration with a university in China to prepare its students for the program</p> <ul style="list-style-type: none"> <li>○ The University would also like to find opportunities resulting from the program for low income residents</li> <li>● Kern County currently has a maintenance of way facility that the heavy maintenance facility could be co-located with; if the heavy maintenance facility ends up in Kern, a lot of jobs could be generated for the area</li> </ul> <p><i>Housing</i></p> <ul style="list-style-type: none"> <li>● The high-speed rail system may put a strain on short-term rental and housing availability for as long as a mobile workforce stays in the County</li> <li>● There are also concerns about where displaced residents will be relocated</li> </ul> <p><i>Agriculture</i></p> <ul style="list-style-type: none"> <li>● The County has seen an increase in agriculture activities and this industry continues to be central to the economy</li> </ul> <p><i>Infrastructure</i></p> <ul style="list-style-type: none"> <li>● The County is concerned with the high price tag of construction for the Initial Operating Section (IOS); the County suggested that a more viable option may be to introduce an interim phase that is smaller in size and scale which may help gain more interest within the community</li> <li>● The opposition towards the program is not at the concept of high-speed rail, but is targeted towards the impacts that the program will have as it is currently proposed; the County would like to see more specific information provided for the mitigation of the program impacts</li> <li>● There are concerns that the initial plan to elevate the rail line to 70 feet will rip through the fabric of the central business district</li> </ul>
<b>Kings</b>	<p><i>Business Climate and Opportunities</i></p> <ul style="list-style-type: none"> <li>● Business opportunities resulting from the program are made uncertain by the lack of clarity on the existence and timing of a station in Hanford</li> <li>● Hanford could have development immediately surrounding the station, or the station could have a smaller footprint but increased access from downtown and other areas; the planning decision is less intuitive for Hanford than for a City such as Fresno</li> </ul> <p><i>Workforce</i></p> <ul style="list-style-type: none"> <li>● The pre-apprenticeship program is an opportunity for the local workforce to prepare now for current opportunities to work on infrastructure projects and for when high-speed rail opportunities arise; IBEW practices local hiring and for them, Book 1 workers are in Fresno, Madera, Tulare, and Kings Counties and they will have priority for hiring opportunities</li> <li>● The job opportunities resulting from the program are met with a concern that some number of jobs will be lost and that this number has not been fully measured</li> </ul> <p><i>Housing</i></p> <ul style="list-style-type: none"> <li>● The housing market has picked up since the economic recession, but the County still has affordable housing shortages</li> <li>● The County continues to look for opportunities to find balance between housing and jobs</li> </ul> <p><i>Agriculture</i></p> <ul style="list-style-type: none"> <li>● There are concerns of agricultural land loss and the potential for the program to change the</li> </ul>

County	Key Themes
	<p>agricultural foundation of the community, and how water shortages will affect the County's agriculturally driven economy</p> <ul style="list-style-type: none"> <li>Some communities are also concerned that growth resulting from the program will come at the expense of agricultural land</li> </ul> <p><i>Infrastructure</i></p> <ul style="list-style-type: none"> <li>The current alignment that is proposed will restrict growth for the city of Corcoran, which is bordered by Tulare County to the east, the state prison to the south, flood planes to the west, and the high-speed rail system will go through the north, potentially constraining future growth</li> <li>The perceived threat that the Amtrak service will be discontinued creates fear that the high-speed rail system would end up limiting access and connectivity between local communities and potentially eliminating Amtrak stations in Hanford and Corcoran</li> </ul>
<b>Regional</b>	<p><i>Business Climate and Opportunities</i></p> <ul style="list-style-type: none"> <li>Consortia are a valuable resource for the region's economic development agencies, workforce agencies, and community colleges and universities to share and disseminate information on job and business opportunities</li> <li>The Fresno County Economic Development Corporation has a contract with the city and County of Fresno to assist displaced businesses with relocation; this service acts as a retention program to keep displaced businesses in the County if not the region, and this is a great model for other Counties to follow</li> <li>Looking forward into the future is a challenge for the regional economic and workforce organizations because so many concerns need to be addressed in the present, including high unemployment, workforce training, and business attraction</li> </ul> <p><i>Workforce</i></p> <ul style="list-style-type: none"> <li>The Madera County Workforce Investment Board has been marketing a lot of its training by trying not to place the emphasis solely on high-speed rail in order to get more workers trained to be in the pipeline to work on public infrastructure projects, which is a growing sector in the Valley</li> <li>Creating stackable credentials will allow more flexibility with obtaining certifications and Associate's degrees; if people are able to get an Associate's degree at the end of a 5 year apprenticeship program, the workforce will no longer have to choose between a career in the trades or pursuing a college degree</li> </ul> <p><i>Housing</i></p> <ul style="list-style-type: none"> <li>There are concerns that high-speed rail may lead to the Valley becoming a bedroom community and a suburb of the Bay Area of Los Angeles</li> </ul> <p><i>Agriculture</i></p> <ul style="list-style-type: none"> <li>The region wants to be conscious of preserving agricultural land from sprawl that might result from the program</li> </ul> <p><i>Infrastructure</i></p> <ul style="list-style-type: none"> <li>The high-speed rail program presents the opportunity for increased internet capability through adding another fiber band that goes through the right of way; there are pockets of Tulare County, for example, that have no internet access whatsoever</li> <li>The high-speed rail program will take cars off of Interstate 99 and have some positive impacts on circulation for goods movement; since the system will have its own dedicated tracks, freight will be impacted only to the extent that demand for freight increases</li> </ul>

County	Key Themes
<p><b>Small Cities</b></p>	<p><i>Business Climate and Opportunities</i></p> <ul style="list-style-type: none"> <li>• A lot of the smaller cities in the San Joaquin Valley do not see the connection they have to the program nor the opportunities they can reap from the program; part of this is an education and communication issue where small cities do not know how they can get their businesses and workforce involved</li> <li>• Dinuba, Kingsburg, and Reedley are hoping that displaced businesses can relocate to their cities</li> <li>• The high-speed rail program could provide improved access for the Korean population to get to Dinuba for the annual independence celebration in the city</li> </ul> <p><i>Workforce</i></p> <ul style="list-style-type: none"> <li>• Reedley is looking at how to prepare its workforce with the necessary skills so that they can work on high-speed rail jobs and how to get workers to and from jobs sites; getting the workforce involved with apprenticeship programs will help expose them to different trades and help them pick a trade that interests them</li> <li>• Reedley College has world class agriculture and aeronautics programs; there are opportunities for the College to get involved with the program and to partner with workforce organizations for job preparation</li> </ul> <p><i>Housing</i></p> <ul style="list-style-type: none"> <li>• There is some housing vacancy in the smaller cities to accommodate the future high-speed rail workforce if necessary</li> </ul> <p><i>Agriculture</i></p> <ul style="list-style-type: none"> <li>• There are concerns that the loss in agricultural land may affect packing facilities for fruits and vegetables, but the Authority has agreements to create offsets in perpetuity that would preserve farmland; for every acre taken, there will be at least one acre preserved</li> </ul> <p><i>Infrastructure</i></p> <ul style="list-style-type: none"> <li>• Connectivity to stations is a concern for small cities so they can make sure that their residents will be able to take advantage of the system</li> </ul>

## APPENDIX D—ROUNDTABLE MEETINGS NOTES

## Fresno County Economic Analysis Roundtable Summary December 4, 2013

### Current Business Climate and Economic Trends

Although the Central Valley has been slower to recover from the recession as compared to other parts of California, Fresno County is recovering faster than most other places within the Valley. In the last nine months, the county's Economic Development Corporation has seen a tenfold increase in both business expansion and interest from other companies to move to Fresno County. New businesses are starting to hire people, and industries that were previously struggling, such as manufacturing, are beginning to rebound. Within the local community, Fresno is working on how to become more business friendly, specifically how to streamline processes and add incentives to attract businesses and allow them to expand.

The labor/workforce recovery has lagged behind the business/economic recovery of the region so while businesses are turning around, they are not yet hiring many workers. There are still workforce issues on a daily basis, but within the ranks of organized labor, things have improved. Fresno has previously marketed itself on its weaknesses—mainly the cheaper labor and fewer regulations than other parts of the state. However, this “race to the bottom” was not a sustainable way to grow the economy.

There is a perception from prospective businesses that Fresno County does not have a qualified workforce, and this has been the number one obstacle for the past two to three years because it has deterred prospective companies from moving to Fresno. For those businesses who have located in Fresno, some end up finding even lower cost places to do business and when they move, they leave a number of unemployed workers that the Workforce Investment Board is left trying to find new positions for.

Providing the labor force with the education and training they need to find jobs even after construction of the high-speed rail system within Fresno is completed continues to be a challenge. There has been a big push to encourage more people to get their high school diploma or GED; many schools are revamping their curriculum by enhancing science, tech, engineering, and mathematics courses to better align with what the job market has to offer. Currently, enrollment in the community college system is up, which typically indicates a weak economy. Prop 30 was passed last year, which gave community colleges more money and for example, enabled Willow Community College Center to add more course offerings. The college may seek a local bond measure in 2014 to add more facilities and to modernize facilities. However, in order to ask the voters to support a bond measure, the college would like assistance from the business community to identify the highest priorities for which it should be building. The College wants to pinpoint exactly what the needs are so it can make the most of its resources to prepare the workforce.

There has been an increase in construction and industrial applications which indicates an upswing in the economy. Generally, residential housing has been taking the lead, but this past year was a good year for commercial development. There has also been a steady increase in permit activity—for fiscal year 2014, Fresno County Public Works and Planning has added 5 additional positions within the Building Department. There are more single family homes and retail establishments, and existing businesses are expanding. Despite the increase in activity, a disparity still seems to exist between different parts of Fresno—in some areas, the shopping centers are bustling so much so

that a parking space is difficult to find, whereas other areas are littered with blight and are still in need of basic services and infrastructure improvements.

Fresno City Office of Development and Resource Management is in the process of making changes to the city's zoning and establishing urban design standards to provide the foundation for development in the downtown areas. There are 17 new zone districts that will be created, and these districts emphasize form (whether or not a building fits into the context) rather than use. The agency has received a \$16 million TIGER grant for Fulton Mall, and is moving forward with its Station Area Master Plan with funding provided by the Authority. There is concern about transit linkages to the high-speed rail system, and how to make the downtown hub multi-modal.

An additional opportunity that was identified is agri-tourism. The improved connectivity of the Central Valley to other parts of the state provides an opportunity for Fresno to establish an agri-tourism industry, especially since agriculture continues to be one of the largest industries in the area. The county has adopted an agri-tourism ordinance that sets the framework to grow the industry.

## Opportunities and Challenges

### Business climate and opportunities

High-speed rail has become a big selling point for Fresno to use in attracting businesses to the area because the system will provide connectivity to the Bay Area and other parts of California. However, without a clear timeline, it has become a hard sell to get businesses to commit to moving to Fresno. The county also wants to think strategically about which businesses are most appropriate to go after.

The question of how to retain residents, especially with younger, educated residents, has also been both a challenge and an opportunity. Other cities have higher wages and can offer a better quality of life, but there is a lot of opportunity in the Central Valley today and even more once the high-speed rail system is in operation.

### Workforce

The prospect of jobs coming into Fresno as a result of construction of the system comes with the challenge to equip and prepare the workforce with the necessary skills. This is made difficult by the lack of clear communication on the Authority's contractors' exact labor needs. In order to prepare for these jobs ahead of time, the county needs to know how many people need to be ready and what they need to be prepared for. However, with the design-build model, a lot of the construction decisions are up to the contractor, despite the requirements that are laid out. Currently, the process for matching contractors with workers from a union is relatively slow and paper-based, increasing the challenge of preparing workers and matching appropriate skills to opportunities. Fresno County is seeking a better way to capture vacant positions and workers, as this would significantly improve the matching process when high-speed rail jobs become available.

There is a great deal of anticipation within the labor workforce of what high-speed rail will mean, and how the impact of the community benefits agreement on locals jobs will ripple into the community. In addition, there may be opportunities for the Authority to get involved with local school districts to build the next generation of workers in the region.

## Housing

As jobs become available within Fresno and if outside labor starts moving in when construction on the system begins, Fresno does have some capability to absorb the additional capacity. The alignment of the rail will eliminate some areas of blight within the city and a concern is the relocation of displaced residents, many of whom are semi-homeless or low income. The Authority is required to find displaced residents safe, decent, and comparable housing but this has been challenging due to limited supplies of equivalent housing. Another challenge is dealing with landlords that are trying to evict their tenants early with fake notices—if these tenants leave early, they are no longer eligible for relocation services. The first step to mitigating this concern is quantifying the number of displaced residents. Fresno Unified could be a resource to help quantify the number of displaced residents and to conduct research by sending flyers home with students. There may also be some demand for furnished studios from construction workers coming in from other areas.

## Agriculture

Agriculture continues to be the largest business in the county. Over the past year, the almond processing industry has seen a lot of growth. Although there is concern about agriculture land loss, the total amount of land being taken out as a result of the program is a small fraction compared to the loss of agricultural land by sprawl. Future opportunities for agriculture include growing the agri-tourism industry, since high-speed rail will offer improved connectivity to bring more people to Fresno, and promoting the local foods movement, and encouraging businesses to buy local.

## Infrastructure

One potential opportunity currently being studied is the use of the high-speed rail corridor for fiber optics or other linear development projects.

Communication about how the high-speed rail system will affect the county's existing infrastructure could be improved. Concerns have arisen about how power lines will be affected and whether property owners can operate during construction. The Fresno Economic Development Corporation has been having community meetings for the past 4 years with people from different areas along the alignment to prepare them for relocation.

The maintenance facility also brings opportunities for Fresno to become a hub for high-speed rail. The Fresno Economic Development Corporation visited a high-speed rail maintenance facility in France, which had training on the upper level and was surrounded by an industrial park. This maintenance facility represents a vision for Fresno as a place where people will come and learn about high-speed rail.

## **Kern County Roundtable Summary January 24, 2014**

### **Current Business Climate and Economic Trends**

Along with Silicon Valley and Orange County, Kern County is one of the leading areas in the state for economic recovery; the County was the first to recover all jobs from the recession in 2011. Kern County is driven by the energy generation industry and spinoff industries including wind power generation, increased oil production, agricultural activities, and commercial warehousing. Since these industries are viable sources for jobs and economic growth and because there is uncertainty surrounding what types of jobs will result from the program and when they will be available, there has been less interest in high-speed rail opportunities than there has been in other communities.

The city of Bakersfield is the major economic hub of the County. In 2013, over 1,300 new single family permits were issued and there were 3 to 4 large construction projects for an apartment project. Housing is not up to where it used to be historically but the city is getting close to historical trends. Commercial development is still lagging behind, although there has been some infill (in the form of larger buildings being split up for smaller businesses) and national chains are beginning to enter the region. Other indicators of economic growth include consistent growth in sales and property taxes, and the County's current construction pipeline, which includes a \$4 billion hydrogen-energy project, large renewable energy projects, and highway and warehousing projects.

The County's unemployment rate is still in the double digits, underscoring the need for continued diversification. Although the percentage remains the same, the number of unemployed people is actually increasing since the population growth rate is also increasing. In addition, there are currently 10,000 people on the Section 8 housing list, but only 3,000 vouchers. There has been one affordable housing project developed each year for the past 10 years, but this is still not enough to accommodate the need. In addition, people living in Section 8 housing are low-skilled, making it challenging for them to find employment.

### **Opportunities and Challenges**

#### **Business climate and opportunities**

There is a lot of uncertainty surrounding the program including funding gaps and how exactly the system will be powered, which has affected the County's perception of opportunities. Many businesses, especially in the city of Bakersfield, are hesitant to expand because they are within the current alignment and instead, are choosing to put off growth and are not putting as much money back into the economy. There is a concern that the complexity of the program, the time it will take to bring it to fruition, and external pressures the Authority is facing may lead to hasty decisions. There is also a frustration that without good information from the Authority, the city of Bakersfield and Kern County do not know how best to take advantage of opportunities that may be out there. The County would like to see the Authority focus on the timeline and crafting a pragmatic approach; without feeling as though there is no luxury of time to create a quality system that will provide the maximum amount of benefits.

Most of the interest in the city of Bakersfield for the program comes from the direct link to Los Angeles; there could be opportunities from major oil firms, such as Chevron, Aera, and Occidental that the program could lead to greater interaction between the Los Angeles region and Bakersfield. Bakersfield has stronger ties to southern

California than the rest of the Central Valley and high-speed rail provides the opportunity to leverage these relationships. The program may also allow people to live and work in Bakersfield at new satellite offices near the HSR station, or travel to and from Los Angeles quickly for jobs, meetings and business opportunities.

Although there are concerns of how high-speed rail will impact the city's historical areas and how these impacts will be mitigated, the program provides an opportunity to revitalize Downtown Bakersfield and change the character of the area to encourage mixed use. Connecting the station with the local bus system, bicycling, and walking could result in development that would not otherwise be there. There are also opportunities for transit oriented development to provide more housing and other amenities within the community.

There are concerns of the inability to maintain current information for a program of such a large scale. For example, it took several tries for the city of Shafter to get Paramount Logistics Park acknowledged in the environmental document. With uncertainty of where things will go, it is difficult for cities and businesses to plan for growth for fear of getting in the way of the current alignment.

Kern County has seven times the renewable energy generation than the next largest County in California. Currently with a generation capacity of 5,500 megawatts, the County has a goal of 10,000 megawatts of renewables by 2020. This could be a potential business opportunity for the County to contribute to the program as well as an opportunity for the system to help resolve long term transmission and storage issues related to the County's renewable energy goals.

## Workforce

There is a strong interest in finding out what the labor requirements for the program are so the County and impacted cities can plan accordingly. All of the Workforce Investment Boards (WIBs) and other workforce organizations in the Central Valley could get together and discuss what needs to happen in order to best position the workforce. Keeping as many jobs within the Valley is a priority for the County so that it will not end up with a surplus of workers that cannot be supported and sustained in the long-term. There are also concerns that the mobile workforce brought in for the program could lead to an increase in criminal activity. It is important for the County and impacted cities to be able to program what its needs will be in order to help prepare the community and reduce poverty.

There is a sentiment that since Bakersfield is not part of the first phase of construction for the IOS, residents in the cities and County will fall behind on construction job opportunities. There is concern that many San Joaquin Valley-wide programs are Fresno-centric. As the rail system moves south, the local workforce may have to compete with other skilled workers that have already worked on the program and have more relevant experience. The County needs some kind of information (i.e., availability of jobs, types of workers, etc.) that it can act on so that its workforce is competitively positioned for these jobs.

The primary purpose of the California State University of Bakersfield (CSUB) is to prepare an educated workforce and support the economy of the region. In addition, the University has a commitment to ensuring low income residents complete their GED. There are opportunities for getting young engineers and students from the social sciences and business schools of the University involved to capture knowledge for the program, and to leverage transportation as an opportunity to address community issues. Next quarter, the California State University of Bakersfield will be offering high-speed rail courses in collaboration with a university in China to prepare its

students to work on the program. The University would also like to find opportunities resulting from the program for low income residents.

Kern County currently has a planned maintenance of way facility for the system that the heavy maintenance facility could be co-located with; if the heavy maintenance facility ends up in Kern, a lot of jobs could be generated for the area. The County could be a premiere location for building, operating, and maintaining high-speed rail technology. The heavy maintenance facility sites at Shafter have over 5 square miles of clean, industrially entitled land that could also accommodate and support spin-off industries.

Kern has an existing labor force experienced in oil and alternative energy production and related trades that have crossover potential for providing a qualified labor pool for the system. These industries are supported by related curriculum in the network of local community colleges and the university.

## Housing

The high-speed rail program may put a strain on short-term rental and housing availability for as long as a mobile workforce stays in the County. The current Downtown Bakersfield does not have high density housing or many high-rise buildings, so it is difficult to estimate the amount of increased housing that will result from the Bakersfield station. There is concern that the preferred rail alignment through Bakersfield will result in the demolition of a new, high density federally funded low income housing project. A related concern is where displaced residents will be relocated.

## Agriculture

The County has seen an increase in agriculture activities and this industry continues to be an economic driver and opportunity.

## Infrastructure

There is a concern regarding the high price tag of construction for the Initial Operating Segment (IOS). A more viable option may be to introduce an interim phase that is smaller in size and scale and possibly uses the existing Amtrak track; this may help gain more interest within the community. The city of Bakersfield is not opposed to the concept of the program, but is opposed to the impacts that the program will have as it is currently proposed. The current hybrid alignment will affect a number of city facilities, including the Bakersfield Homeless Shelter, Bakersfield High School, Mercy Hospital, and a new housing project that provides 85 affordable units. The city of Bakersfield would like to see more specific information provided for the mitigation of the program's impacts. It has proposed several options to correct the issues with the current alignment, but has not seen them embraced by the Authority.

There are concerns that the initial plan to elevate the rail line to 70 feet will rip through the fabric of the city and that the community could be stuck with a 70 foot structure with uncertainty about when it will be used. The city sees the program as paradoxical; though it will improve connectivity to other regions in the state, the current alignment will split portions of the community, creating a barrier that could impact internal commerce and neighborhood connectivity.

## **Kings County Roundtable Summary February 5, 2014**

### **Current Business Climate and Economic Trends**

The economy in Kings County is on the upswing, but the challenge of future growth without the necessary water and water treatment capacity remains a concern because of the County's agriculturally driven economy. Despite these concerns, the 30, 40, and 50 year horizon continues to look positive, especially with the significant interest in industrial development and food processing. There has been quite a bit of activity in the last six months in terms of interest from distribution companies that are looking at larger parcels within industrial parks and from milk processors. Milk processing has stabilized in the County, and the industry is anticipated to continue to do well since it is minimally impacted by water shortages. Despite the commercial interest, the County is not at the point right now where it has to entertain new industrial areas since there are existing facilities that are still vacant.

The unemployment rate countywide is about 14.8 percent, but that percentage is much higher in the smaller cities, ranging from 29 to 31 percent. The County is up to about 900 to 1,300 jobs added on a month to month basis and job growth is outpacing population growth. As the population increases, the countywide unemployment rate will dip to about 13 to 13.3 percent.

The Housing Authority is facing funding constraints even though the agency has 6,000 to 7,000 applications for Section 8 housing. The agency is leasing up units, but only going as fast as current funding allows. The waiting list for Section 8 housing used to be 2 to 3 years, but now it is 7 to 10 years.

Since Kings County is a fairly rural region, transportation investments are not driven by traffic congestion and instead are meant to be safety improvements and economic development tools. A recent project involved widening State Route 198, which is considered the only east-west connector between State Route 99 and Interstate 5 in the middle of the Valley, from a 2-lane facility to a 4-lane facility to improve goods movement and overall circulation. State Route 198 is also a primary commuter route between Lemoore, Hanford, and Visalia, and the Lemoore Naval Air Station, which is being considered as a potential site for the Navy's Joint Strike Fighter.

There are two other projects that are currently underway to provide economic development opportunities. Construction of an interchange at 19th Avenue will increase access to an underutilized industrial park and upgrades to the existing 12th Avenue interchange, including widening of ramps and a bridge and adding a loop ramp, will better serve the commercial area and development there and allow for a freer flow of traffic. The Kings County Association of Governments is looking at economic development impacts as a result of transportation projects and seeking to find a balance between where jobs and housing are located and where infrastructure improvements are needed. A major issue in the County is that the lack of transportation options is making it challenging for some unemployed citizens to get jobs in areas that they can actually get to.

Kings Community Action is one of the largest employers in the County, with 216 employees, although there has been a 10 percent decrease in employment in the past few years. The agency provides food, shelter, and other services that create a base for people who are ready to go to work. There has been an increase of individuals coming into the agency for services and the waiting list has expanded in the last 4 to 5 years. When Mervyns and Gottschalks, two retail department chain stores, filed for bankruptcy and permanently closed their doors, people came to the agency for help that probably did not think they would ever be there. Though the agency is trying to

keep ahead of the needs in the County, this has been difficult with decreased funding. However, with the state budget stabilizing, the agency is optimistic. The organization is trying to invest in the infrastructure of the community's youth and get them on the right path to ensure that when they are ready for employment, they have not done anything that would deter them from candidacy; for example, the YouthBuild program, in partnership with Tulare County, trains youth to work on the construction or rehabilitation of affordable housing. The agency is trying to make an investment for the long-term because the youth is the future of the workforce.

The City of Corcoran has a renewed interest in both retail and industrial development. Housing is starting to build again and there is interest in new subdivision development within city limits. Corcoran is concerned that as the high-speed rail program moves forward that the City needs to know how to best prepare for employment opportunities. There are also concerns about how the City can grow when it has aging infrastructure and no money to replace that infrastructure. The infrastructure needs include sewer lines and water treatment capacity.

Economic development in the City of Lemoore has flat lined. During the recession, the City stopped getting phone calls expressing interest in the region and housing projects came to a halt. However, there is a lot of renewed interest as housing has picked up; formerly bankrupt and unfinished housing projects are now under construction and moving pretty quickly. There is a new market rate apartment complex coming in north of Bush, along State Route 41. As far as industrial, the 19<sup>th</sup> Avenue interchange construction will provide great benefits to the City.

The region has not received an EDA grant in nearly 10 years; in 2003, the City of Lemoore received a \$2 million grant to develop an industrial park near Leprino Foods and enhance their wastewater treatment plant capacity. However, since the industrial park is in a flood zone, it is difficult to attract businesses there. There are also difficulties with getting Caltrans to approve projects on the other side of State Route 41, even though there are 1,400 acres waiting to be developed. The City of Lemoore has had to turn projects away because it does not have the water or wastewater capacity.

Hanford has experienced similar economic trends as Lemoore. There has been some single family development occurring as developers come in and take up bankrupt subdivisions that were left a few years ago, but there are no multi-family projects and no new housing projects. A study that was part of the general plan update showed that Hanford has a fairly big supply of industrial land that is ready to go, and to a lesser extent, there are some commercial vacancies. There is capacity to accommodate growth before new development is necessary. However, distribution centers want large properties that Hanford is not used to planning for. Hanford is reviewing a proposal for a new Costco at State Route 198 and 43 and if the proposal moves forward, it would provide positive commercial development. Hanford has had a long-term plan to grow east, but that plan is hindered by limited sewer capacity and infrastructure.

## Opportunities and Challenges

### Business climate and opportunities

There are efficiencies in the Central Valley that are attracting companies to look at locations in Kings County and high-speed rail could directly or indirectly impact this.

Business opportunities resulting from the program are made uncertain by the lack of clarity on the existence and the timing of a station in Hanford. If there is no station in Hanford then the County has a disadvantage over

communities that do have stations, such as Fresno and Bakersfield. If Hanford does have a station, there are uncertainties surrounding where the station would be located and what station development and access would look like. Hanford could have development immediately surrounding the station, or the station could have a smaller footprint but increased access from downtown and other areas. There is room to develop in Downtown Hanford and there are opportunities for infill development. However, planning decisions for the station are less intuitive for Hanford than they are for a city such as Fresno; the station in Downtown Fresno will help grow the area, but how the station will impact Hanford is less clear. The east side location for a potential station was initially talked about as a non-growth inducing area because it consists of primarily agricultural land. However, the prospect of Costco moving in has created more growth potential there. Reaping benefits from the program while minimizing impacts remains a challenge.

## Workforce

The job opportunities resulting from the program are met with a concern that some number of jobs will be lost. The impacts of the program on job loss have not been fully analyzed.

The Building Trades are actively working on training workers for when high-speed rail opportunities arise. The pre-apprenticeship program that started with the Fresno Housing Authority has evolved into a County system. The program runs for 4 weeks and is funded with a three year contract with the County. The success rate has been phenomenal. Of the 100 clients that have gone through the training, 48 have secured employment based on the certification they received from the program, and 14 of those 48 have gone into trades and apprenticeship programs. In addition, 21 clients have gone completely off of welfare. Fresno, Madera, and Tulare have pre-apprenticeship programs and Kings County is slated to have one this year. The organization received a \$1.5 million training grant from the California Workforce Investment Board (WIB) system to do building trade pre-apprenticeship programs, involving 7 trades and soon to involve 3 additional trades. The first pre-apprenticeship program last year was geared towards carpenters, laborers, operating engineers, electricians, plumbers, sheet metal, concrete masons, iron workers, and surveyors.

The requirements to get into the pre-apprenticeship programs are set by the delivering body and these often vary by trade; for example, for the electrical industry, the candidate is required to be 18 years or older, have a high school diploma or GED, a passing grade in algebra, and a valid driver's license. In addition, the candidate must also pass a drug test. Rather than waiting on high-speed rail opportunities, qualified applicants are encouraged to apply to get on the list now. Once a candidate applies for an apprenticeship program, they are given an aptitude exam, interviewed, then placed on the list. The high-speed rail program is a long one so there is plenty of time to take advantage of opportunities. People who got apprenticeships are working on schools, highways, and other infrastructure projects; rather than waiting on high-speed rail opportunities, the workforce can prepare themselves now and take advantage of current opportunities to work on infrastructure projects. IBEW practices local hiring, for them, Book 1 workers are in Fresno, Madera, Tulare, and Kings Counties and they will have priority when hiring opportunities arise in the region.

## Housing

The housing market has picked up since the economic recession, but the County still has affordable housing shortages. The County continues to look for opportunities to find balance between housing and jobs.

## Agriculture

There are concerns of agricultural land loss and the potential for the program to change the agricultural foundation of the community, and how water shortages will affect the County's agriculturally driven economy. Some communities are also concerned that growth resulting from the program will come at the expense of agricultural land.

## Infrastructure

The current alignment that is proposed will restrict growth for the city of Corcoran; Corcoran is bordered by Tulare County to the east, the state prison to the south, flood planes to the west, and the high-speed rail system will go through the north. This will have impacts on constraining future growth.

A concern was raised about the future of the Amtrak San Joaquin service in the Central Valley, specifically the stations at Corcoran and Hanford. However, it was noted that the service is currently in the process of being transferred to the San Joaquin Joint Powers Authority (SJJPA), a JPA made up of local government officials. Decisions regarding future San Joaquin service will be made by the JPA, independent of the Authority.

## **Madera County Roundtable Summary December 3, 2013**

### **Current Business Climate and Economic Trends**

Madera has seen a very slow recovery from the recession and is still dealing with the impacts. The strongest industry in Madera is agriculture, which has done well in the past few years even though other sectors have not fared as well. However, when farmers do well, the impacts may trickle down to small businesses, but are not felt throughout all of Madera County. Food manufacturing has also done well; there are a handful of food product processors and packaging manufacturers in Madera, such as Georgia Pacific and Constellation Brands, that have managed to weather through the recession, while other manufacturers have had to scale back and lay off workers.

On the open market, there are less than 800 or more vacant residential lots, which amounts to a sizable inventory compared to the size of Madera.

Although there is currently a 1 percent vacancy rate for industrial space, which indicates that the market is strong enough to keep these buildings filled and that companies want to stay in Madera. However, the county is struggling with how to get more industrial/manufacturing buildings in the area to relieve the current price pressure on large industrial spaces. Although there are a few designated (zoned) industrial parks, there is not a lot of availability in terms of space for more manufacturers (especially for buildings that are 20,000 square feet or more). Part of the challenge of increasing the capacity is related to supporting infrastructure (roads, water, power, etc.).

There are opportunities in smaller manufacturing environments, and given the right amount of space, there is potential for businesses to expand and have a positive impact on the community. There may also be opportunities with high-tech manufacturing that can supply elements to the high-speed rail program even when it expands beyond the region. However, the overall climate is still very tight and there has not been a lot of movement.

Madera also faces challenges with its workforce—many of the workers in the area are not highly skilled or educated and cannot compete for higher-skilled jobs. Those individuals who are educated tend to move away to bigger cities where they can earn higher wages. Many people that are coming into the Madera Workforce Investment Board offices had been previously laid off from construction and manufacturing, and want to be trained in jobs that are fairly stable despite what happens with the economy (e.g., healthcare, truck driving, etc.).

There are not a lot of businesses that are expanding yet—businesses are only hiring 1-2 people at a time. People who might typically be expected to retire are staying in their jobs longer, which has resulted in fewer open positions for people just entering the workforce. The teen unemployment rate is also high (approximately 40 percent); jobs typically held by teens are now being held by older members of the workforce. In sum, Madera is faced with the challenge of what to do with limited opportunities and resources.

## Opportunities and Challenges

### Business climate and opportunities

There are designated industrial parks in Madera (zoning), but they aren't being constructed because many are lacking supporting infrastructure, and there is very limited funding for infrastructure construction. Site selectors end up going elsewhere where sites are ready and Madera loses out.

The high-speed rail system is an opportunity for Madera to capitalize on its workforce. Subcontracting with the local businesses and workforce can provide local stimulus and would also be a major opportunity to build more positive relationships and goodwill (e.g., having local people in the local community supporting property acquisition or surveying).

In order to tap into these opportunities, businesses need to know there are infrastructure projects and jobs available, what types of jobs will be needed, and when they will become available. Small businesses need to be informed about what preparations they need in order to be able to participate in the construction of the high-speed rail system. So communication with smaller communities, such as Madera, is critical, especially with regards to including more information about opportunities for small and disadvantaged business enterprises (and how to get certified).

One opportunity may be for the Authority to work with local irrigation districts where they may be creating ponds or working on excavation projects to see if that could become a source of material for the construction.

### Workforce

The high-speed rail program presents the opportunity for job creation and workforce development, especially since businesses in Madera have not been expanding and therefore, have not been hiring. The current workforce supply needs to be matched with and prepared for future demand. A significant portion of the county's workforce does not have higher level training or education. Approximately 32 percent of the 25 and over cohort does not have a high school diploma or GED, and less than 20 percent of this same cohort has a college and/or advanced degree. There continues to be an emphasis on more education and vocational training to help direct the workforce in the right direction to accomplish their goals. However, without a timeline and critical touch points and a clear understanding of what jobs will be available and what skills will be needed, it is difficult for community colleges anticipate and to prepare the appropriate curricula and get qualified instructors to teach the courses.

The workforce also needs to be equipped with transferrable skills for when construction on the Madera to Fresno section is finished and construction begins on the next segment. Communication and partnerships will be important. Fresno runs a program that takes individuals through an apprenticeship over four areas that would be most heavily affected during high-speed rail construction. Training and developing the workforce becomes a question of how to leverage existing funding, and how to work with unions and colleges to apply for other external grants that may be focused on training for demand occupations to ensure that training will result in employment at a living wage. While regional grants are helpful, local training delivery is the most effective in the Valley because many people in smaller communities have difficulty getting to training sites. Opportunities for creative lecture delivery (e.g., remote or distance learning) can help mitigate this.

Small and disadvantaged businesses need to know that in order to improve their opportunities for high-speed rail work, they need to be certified through the state to take advantage of the Authority's aggressive small business goals. The Small Business Development Center could be a resource in disseminating information for small business certification.

## Housing

Until many residents of Madera County are able to recover their basic socioeconomic status, there is a concern that workers are being priced out if more jobs become available as a result of the program and more people come into the area to compete for these jobs. The Section 8 housing list has been essentially closed for 15 years, and there is not a lot of affordable housing being developed due to the halt in redevelopment. The rental inventory in Madera is also sparse to absorb the additional capacity, and there are some challenges in developing multi-family housing.

## Agriculture

In 2011, Madera produced \$1.6 billion in agriculture products, and this figure is expected to exceed \$2 billion in the next few years. Almonds are the top crop, followed by milk, grapes, then pistachios. The introduction of technology can help improve production efficiency. Individuals need appropriate training for skills that are transferrable across other crops, especially if workers are displaced due to technological advances.

The agriculture industry, which is currently the strongest industry in the county, is facing challenges associated with climate change, suburbanization, and the use of land (and the change to infrastructure) where the rail will pass through. Uncertainty regarding the exact path of the rail alignment of the system also creates uncertainty about what to plan for in the long-term; this prompts a need for communication about the program in order to mitigate these uncertainties.

## Infrastructure

More regional transportation is needed since there is no station in Madera, and improving connectivity between the Fresno station and Madera will enable the County to maximize the system's benefits to the community. The Interregional Goods Movement report that was recently published addressed the issue of last-mile planning. More transit to help people get to the high-speed rail stations would be needed. Since the county is so large mile-wise, there is a question of how Madera can take advantage of what it has in order to help the workers in the region utilize jobs and education.

Smart Valley Places, which is a HUD grant, seeks to share best practices on sustainable planning (e.g., walkable neighborhoods, transportation, and economic development). The intention is to keep this program going even after the grant is finished in order to establish the idea of sustainable planning and to mitigate any potential threats to the community, including the spur of bedroom suburban development.

Water is an issue for the entire Central Valley, and in Madera, there is concern of water needs for business expansion since city wells are already stretched to their limit. Technology may be part of the mitigation.

There are many potential future opportunities in tourism due to Madera's proximity to Yosemite. This will require improving accessibility in order to capitalize on the tourists that pass through.

## Merced County Roundtable Summary January 22, 2014

### Current Business Climate and Economic Trends

Economic activity within Merced County is picking up but not growing as quickly as the state. There are several positive indicators that the County is recovering from the recession. There continues to be an upswing in the agriculture and food processing industries, and the County has seen an increase of 4,200 jobs in the last 4 years. Sales taxes are up and the tax revenues are anticipated to increase 5 to 7 percent in the next two fiscal years. Per capita income has increased to \$42,000 per household. Car sales are also on the rise.

Construction is on the uptick and infrastructure funding is doing well; there is a large construction site at the southern end of Highway 99 in the county, expanding the facility to six lanes from the Madera County line to the Mission interchange. Interchanges can be perceived as opportunities—upgrading freeways and providing safe access to major roadways up and down the Valley will improve access to job opportunities. Foreclosures have decreased significantly; at the end of the calendar year in 2008, there were 869 foreclosed homes, and that number is now just under 300. The rental market is also currently fairly robust. There is a 3 to 5 percent vacancy rate, and the inventory of single family homes is down to about a 3 month supply. The average price increased 26.4 percent in the last 12 months.

Another economic indicator of recovery is the increase in the amount of trash (both residential and commercial) that is thrown away. Transit is also doing well. For the first time in several years, Merced County Transit made its farebox recovery ratio target. The agency has also expanded its service to provide evening and Sunday service and this is an indicator that the County may be ready for more transit-oriented development.

Despite all of these positive indicators, economic recovery is still being approached with a cautious optimism. In the City of Livingston, there are physical constraints to local economic growth having to do with water. Although there have been a number of projects in the City, they are almost entirely made up of chain restaurants with financing coming in from outside sources. In the City of Atwater, there are 600 vacant lots that have utilities set up, but it has been difficult to secure financing for construction because builders have no willingness to take on the risk since they see a small margin of profit. Though new small retail and housing construction is making a rebound, the depth of job growth and the changes needed for substantial improvement are still lagging behind. Unemployment countywide is still at 14.3 percent.

### Opportunities and Challenges

#### Business climate and opportunities

High-speed rail is an opportunity for the County to incorporate the program into its marketing pitch to prospective companies to showcase everything the community has to offer. The County is already seeing some high-tech oriented work come in from the Bay Area, including rocket testing, conceptual testing of products, and some manufacturing. Some job growth is associated with this; a company that recently came to Merced County set a goal of 28 new employees in the first year—but at the end of the first year, it had 55 employees. High-speed rail is an opportunity to help bring this growth to a larger scale and open up the market in a way that has not been seen before. Things are already taking place on a smaller scale, but they are often times overshadowed because they

are not marketed and branded as effectively as they could be. There are more leads coming into Merced, some which the County can compete for, but there are others it is not as well positioned for. The County is working on how it can place itself in a competitive position in responding to leads. Since the County does not have an Economic Development Corporation, it is trying to formalize the relationship between the six cities and the County by taking a more regional approach. This includes becoming more active with broad-based organizations, such as the Central Valley Economic Development Corporation.

The University of California, Merced can be a valuable resource to the program and has the potential to become a place to convene builders, engineers, business leaders, and economists. Since the University has a science and mathematics focus and has made strides in solar energy, it can act as a local connection for solar energy to power the high-speed rail system. The natural science program within the University could also be involved with the mitigation requirements of the program. In addition, UC Merced could sponsor programs in robotics and computer modeling and simulation to help develop the workforce in regards to agriculture needs, factory simulation, and high-speed rail.

The high-speed rail program will place Merced closer to the Silicon Valley in the Bay Area (in terms of travel time) which is where a lot of investors reside. This may be a catalyst that can give the County higher paid jobs and a more educated workforce as the program progresses. The system will also provide improved connectivity to other parts of the state, presenting the opportunity to increase tourism in the region. Last year, the Gateway to Yosemite had 137,000 visitors, an 8 percent increase from the previous year.

Businesses in the region want to get information on how to get involved with the program but they do not always know how to obtain it; having brochures or information packets handy at local agencies would help facilitate with information dissemination.

## Workforce

Merced faces a challenge in retaining its workforce; 20,000 people leave the County to work in other areas. The County is working on increasing the skilled workforce and keeping the workforce in the County. As part of this, the County has identified the opportunity to identify the skillsets of those folks that are leaving in order to help attract businesses to Merced that would provide them with local opportunities. In addition some individuals within the pool of people leaving may actually match up with the skill sets needed for the program. Knowing what skills are needed and what jobs are available may help retain some of the workers that are leaving and therefore, keep those skill sets within the community.

There is also a need to identify the skill sets needed for the program and how entities, including the Workforce Investment Board (WIB) and community colleges, can get information from the contractor to provide the workforce with necessary training so that they are ready to take on high-speed rail jobs and the contractor will not need to go to the Bay Area or to other places to bring in high-skilled and low-skilled workers. Merced Community College is in the process of redesigning its current programs to fast track graduates with 18-week programs so that they can obtain their certificates of completion and start jobs faster. The industrial electronics program is also being redesigned so that students who complete the program will have courses that go towards electrician apprenticeships. The College needs to be able to learn the specifics of needs that it currently does not provide, since it can take a while to get programs up and running.

Merced Community College also offers contract education, which allows the College to respond to business needs quickly. The College is also leveraging grants to introduce services to businesses (e.g., responsive training grant), diversifying the way Merced College is able to provide services. The College is hearing more from businesses about internship potential within existing industries for its students. Internships are a tremendous opportunity, especially for attracting students who may favor the pace of life in the Valley to stay in the region. High-speed rail can be important not only in providing connections to business centers, but also to where these students came from. Merced College is also partnering with a local adult school to conduct a gap analysis, identifying gaps in adult education to determine how to better help people in the community receive their high school diploma or GED.

Although UC Merced is still nascent, the University is growing and trying to attract a mix of faculty to grow undergraduate and graduate research and high-speed rail offers the opportunity for the University to continue to mature. There are many opportunities from high-speed rail that the university can leverage, including research and technology, renewable energy, and various electronic applications that are integral components for high-speed rail. There is potential for a spinoff of jobs as a result of the program for patents and technology. UC Merced hopes to be a key anchor in the educational landscape within the Valley.

## Housing

Last fall, UC Merced had 17,000 applicants for the freshman class. The university typically accepts 600 students a year, but only 340 were accepted this year due to capacity constraints. The university is working on expanding its campus, which currently has a 6,200 student capacity) to accommodate 10,000 students. The Chancellor of the university started an initiative, the 2020 project, to add 1 million square feet of residential, academic, and student life space. With the recent economic downturn, single family homes became a resource for student housing, but as the economy is improving, the university cannot continue to rely on these homes as a source of housing. The university plans on adding 2,000 beds to the campus so half of the student population can live on campus by 2020.

The County is beginning to outline how it will approach Station Area Planning. A revision of the current zoning code is almost complete, which will allow the City of Merced to speed up the review process for any development that occurs around the station. Development around the station is expected to meet original forecasts in terms of the levels of retail, housing, and industrial. There is a high priority from the City Council to include housing in the Station Area Plan. Additional housing in the downtown area would also help accommodate UC Merced's growing student population.

## Agriculture

The County is seeing the dairy and agriculture processing industries becoming more innovative than before with recent advances in technology. There are concerns of agricultural land loss and that the program will change the agricultural character of the region. The high-speed rail program has transformational potential for the region, but people in the County are concerned that their lifestyle will go away, rather than improve.

## Infrastructure

There is a concern that since the high-speed rail trains will enter Merced at-grade, the overpasses installed as a result of the program will divide the community. Another related concern is that the appropriate amount of investment will not be made towards the program, resulting in shortcuts that will not produce a quality system.

As demand grows to attend UC Merced, especially when the system goes live, the bus system will need to expand to accommodate this growth. The County does not yet have a robust enough system to have frequent service for students to go from the campus to downtown.

## **Tulare County Roundtable Summary January 23, 2014**

### **Current Business Climate and Economic Trends**

Tulare County's economy continues to steadily grow, but this growth is not explosive. The County has seen an increase in construction permits and residential and commercial activity, but this is mostly attributed to current businesses expanding rather than new businesses coming into the area. However, the County has recently seen a new juice processing plant, a new cheese processing plant, and new distribution centers for Alltech, a company that provides animal nutrition and health products, come into the region. The agriculture industry is also growing; the County is trying to support and encourage larger agricultural processing businesses to come into unincorporated communities.

The College of the Sequoias continues to see demand for training and education and has partnered with the Workforce Investment Board (WIB) to think about sectors that they want to train people in, including manufacturing, healthcare, and others. The College continues to have high demand for people interested in technical programs such as welding, industrial maintenance, and manufacturing mechanics, and is currently piloting efforts to truncate its welding program so graduates have a higher level of skills in a shorter amount of time.

Demand for Community Action services, such as education/training, foreclosure assistance, and assistance with paying utility bills, has increased significantly over the past few years but is currently steady. The challenge with the current economic growth is that many of the areas that are growing (such as retail, hospitality, hotels, and restaurants) do not pay sustainable wages for families.

Transit ridership has increased on average 10 percent annually. Revenues from Measure R sales tax, diesel tax, and fuel tax, have increased 1 to 2 percent annually over the past few years. There has also been an increase in the number of regional transportation projects going into construction over the past two years.

Economic growth in unincorporated areas of the County is much more flat because communities do not have the necessary services, including water and sewer infrastructure, to be able to grow even if there is available land that is zoned for industrial development. These unincorporated communities are driven by agriculture production, dairy, and goods movement that rely on the highway system.

### **Opportunities and Challenges**

#### **Business climate and opportunities**

The high-speed rail system provides the opportunity to connect the region to other metropolitan areas and expand career opportunities for residents, but there are concerns as to how much Tulare County can benefit from the system since it will not have a station.

The County would like to find opportunities to leverage high-speed rail to generate revenues—an example would be by registering points of sale for the construction that it will take place in the County; sales taxes for construction

materials that are purchased for high-speed rail and installed in the County would go back to the County, rather than back to where the materials were purchased.

Tulare County has a niche for solar projects. There are about 110 megawatts that have been built that are currently online, and another 100 watts are permitted and getting ready for construction. Developers partnered with Soleos for green solar training—80 percent of workers have been placed—as one project finishes, another project begins, resulting in a rotation of 400 to 600 people that are able to remain employed over the past 2.5 years. Solar energy could be a resource that the program can tap into if the Valley is able to understand the requirements for renewable energy ahead of time.

## Workforce

The WIB in Tulare is focused on looking for opportunities for people to find jobs that pay sustainable wages before the WIB expends its resources on training programs. In order to do this, the WIB has identified five sectors of focus: manufacturing, green jobs, health care, agri-business, and logistics and transportation. One of the challenges the WIB is facing, however, is determining the best use of their resources. People that are trained with WIB resources need to find jobs within a certain timeframe, or else training is a disallowed cost for the organization.

There is a high interest in high-speed rail, but the Employment Center is lacking the specific details on how to advise, prepare, and encourage the workforce. The County needs to know what to prepare the workforce for, however, this should not discourage the County from taking a more proactive approach by starting to identify how many workers they are able to provide. The County has also identified the large scope of support services (everything from coffee vendors to office supplies) that will be needed (aside from labor) to make the program happen. This will provide additional opportunities for the County.

## Housing

There are concerns that the high-speed rail program will result in people moving into the County but commuting to northern or southern California. This could lead to another housing boom that will affect agricultural land. However, local general plans and some state requirements will help control the loss of agricultural land, especially since there is a push for more compact development on a statewide basis. The program is also an opportunity for smart growth and infill.

## Agriculture

The current alignment will bisect some parcels of agricultural land and there is uncertainty how this will impact the industry. There is also a concern as to how landowners will have access to their properties if the system will bisect multiple points within the community. The County would like to see these concerns be taken into consideration and incorporated into the design of the system.

## Infrastructure

The County Association of Governments is looking into applying for a grant to examine potential intermodal connections between Visalia and the Hanford Amtrak station (which is currently served by Amtrak feeder bus service and Kings Area Rural Transit) and to provide seamless transitions between the County's seven transit systems.

## Small Cities Roundtable Summary February 7, 2014

### Current Business Climate and Economic Trends

Reedley has an unemployment rate of 33 percent, and 70 percent of the City's population is low income, Hispanic, or non-English speaking. In addition, Reedley has a large undocumented population. Reedley is not entirely agricultural or industrial, but also has a mix of retail, commercial, and light industrial. Reedley is also home to a community college.

Dinuba is located 10 miles southeast of Reedley; though Dinuba has a lot of the same things as Reedley, the City is also different in that they have a Best Buy distribution center that serves the western division and several other large employers, including Ruiz Foods, a large Mexican food manufacturer, and Odwalla Juice. 40 percent of residents are employed by Ruiz Foods and Odwalla; these large employers keep residents within the community so they do not have to travel to other cities for employment. The unemployment rate in Dinuba is around 20 percent. Frost has impacted a lot of agriculture jobs in the region. The housing starts have remained good; in 2011, Dinuba was the fourth fastest growing city in the state per capita, and the number one fastest growing city in the Valley per capita. There are a few subdivisions that have remained steady in terms of growth, and there are single family dwellings that continue to be built. Dinuba is always looking to attract commercial businesses and new jobs into the area. The City currently has a Walmart and a vocational center, but it does not have a community college.

Kingsburg is a bedroom community; residents stay in the City at night but leave to go to work elsewhere during the day. The City has a higher median income than some of the other cities in the Central Valley. The City is relatively flat in terms of housing; some of this is intentional since the previous Council wanted to manage rooftop growth. This trend may reverse with the current Council. There are not a lot of vacancies in terms of homes, which are a little more expensive compared to surrounding areas and do not stay on the market for long. The City just completed an annexation, which may provide a few more opportunities to bring in more types of commercial businesses.

### Opportunities and Challenges

#### Business climate and opportunities

A lot of the smaller cities in the Central Valley do not see the connection they have to the program nor the opportunities they can reap from the program. Part of this is an education and communication issue; many small cities do not generally know how they can get their businesses and workforce involved. The Employment Connection Commission, which includes Workforce Investment Boards (WIBs), several colleges, and local agencies, meets on a quarterly basis and could be a valuable resource for residents to find out more about program opportunities. There is a prevailing attitude that the program will not happen, but if these people have some notion that it will, such as a groundbreaking, the attitude could change. However, before groundbreaking can happen, all the necessary parcels need to be acquired and design has to be completed. The program is moving forward and continues to work towards this.

There are other job possibilities outside of the construction realm, including engineers (advanced degrees) and contracts for support services ranging from paper shredding and office supplies to everything such as coffee. When

construction begins, there will be a need for support businesses which will generate economic activity. Disseminating information about opportunities to the Chambers of Commerce can help keep businesses informed and engaged.

Dinuba, Kingsburg, and Reedley are hoping that displaced businesses can relocate to their cities. Kingsburg is focusing on bringing in small businesses rather than big box stores since that is against the direction of the community.

Dinuba is a destination for the Korean population since Dinuba is where some refugees fled to when Korea was invaded by Japan. There are two monuments in Dinuba, the first one is dedicated to the Dinuba Presbyterian Church, which was the very first Korean church in the United States before it was closed in 1958 due to a dwindling Korean population. The second monument commemorates Korea's declaration of independence from Japanese colonialism. Every year, Dinuba Koreans celebrate their declaration of independence from Japanese rule with a parade reenactment of the exact path their predecessors took in 1920 to commemorate the acts of defiance their homeland took against colonial rule. The event is attended by hundreds of Koreans, from within the local community and all parts of California, including San Francisco and Los Angeles. The event is also broadcast to South Korea as it is a very meaningful part of the Korean culture. The high-speed rail program could provide improved access to get to Dinuba for this celebration and reinforce Dinuba as a destination point for its historic monuments.

There are opportunities for small cities in the Central Valley to be part of the station area plans being funded by planning grants from the Authority. These plans can look at station connectivity, especially since these smaller cities are further away from planned stations. This connectivity could include improving transit service to population points.

## Workforce

Reedley is looking at how to prepare its workforce with the necessary skills so that they can work on high-speed rail jobs and how to get workers to jobs sites. Getting the workforce involved with apprenticeship programs will help expose them to different trades and help them pick a trade that interests them.

Reedley has a very well-known community college that is very attractive; the College has world class agriculture and aeronautics programs. There are opportunities for the College to get involved with the program and to partner with workforce organizations to help prepare workers for jobs.

## Housing

Reedley will not have a lot of housing for the future high-speed rail workforce since the City does not have a lot of rental or multi-family units, and housing gets purchased pretty quickly. However, Dinuba does have some housing vacancies.

## Agriculture

There are concerns that the loss in agricultural land may affect packing facilities for fruits and vegetables. Reedley is a leading shipper of fresh fruit in the nation—the City has thirty fruit and vegetable packing and cold storage facilities. As part of its mitigation efforts, the Authority is working with farm bureaus to create offsets in perpetuity that would preserve farmland; for every acre taken, there will be at least one acre preserved.

## Infrastructure

The issue with powering the high-speed rail system with solar coming from Reedley is that Reedley is at the end of the line for PGE and the infrastructure is so old it does not have the capacity for solar energy. Agreements that are currently being worked out with PGE may help resolve these issues.

## **Regional Roundtable Summary**

### **February 6, 2014**

## **Opportunities and Challenges**

### **Business climate and opportunities**

To ensure that the Central Valley workforce has access to high-speed rail opportunities, the region's economic development agencies, workforce agencies, and community colleges and universities need to raise awareness about what jobs will be needed. Coordination between multiple sectors can help make the connections between available jobs and labor. Regionally, there has been a lot of work done to form partnerships, and there are several consortiums that can be valuable resources for coordination and communication.

The Central Valley Higher Education Consortium meets in Fresno twice a year and is a valuable communication avenue for figuring out how to work together to meet training needs. Although different institutions are sometimes in competition with one another, they also recognize that the program is long-term and that there are different kinds of expertise involved.

Conversations between labor unions and Workforce Investment Boards (WIBs) are done through partnerships such as the Central Regional Consortium, which includes workforce agencies, economic development agencies, and community colleges. There is the ability to have a dialogue about what jobs are available for the high-speed rail program and who is responsible for these positions. With higher skilled positions in areas such as engineering, universities are well positioned to take on the training responsibilities, but this may not always be the case and is ultimately dependent on what types of skills are needed.

The State Center Consortium works to combine all of the secondary institutions and as many of the businesses and industries in the region to make sure the region is providing pathways to careers. However, resources for the State Center Consortium are very limited. There is currently only one staff person since all other positions that were responsible for the different services were lost to budget cuts. The Consortium has not focused as much on training or career technical education, but instead has worked on connecting students (both college bound students and students not interested in going to colleges) with trades. The Consortium had done a lot of work, but that work is now sitting on a shelf collecting dust without the necessary staff or resources to keep the momentum going.

The Fresno County Economic Development Corporation has a contract with the city and County of Fresno to assist displaced businesses with relocation. The agency ensures that these businesses get all of the benefits and money that they are entitled to. Businesses often feel scared, confused, and nervous when they receive a notification. However, once they understand the process and have someone they can call along the way, it makes the process a lot better. In 2013, the agency assisted 126 businesses. This service acts as a retention program to keep displaced businesses in the City and the County, and part of doing this is creating a regional identity and a single identity of consistent information. There is a lot of misinformation out there, which makes communication and information dissemination so important. The Fresno County Economic Development Corporation's assistance for displaced business is a great model for other Counties to follow.

Tulare County expressed the desire for contractors to have agreements that would maximize the capture of sales tax at local jurisdictions where construction materials are being installed.

Looking forward into the future is a challenge for the regional economic and workforce organizations because so many concerns need to be addressed in the present, including workforce training and business relocation. The economy is changing so quickly and technology is evolving at such a rapid pace that it makes the economic outlook 20 years from now difficult to entertain.

## Workforce

From a university standpoint, there is a great deal of hesitation from Fresno State regarding whether to jump on these opportunities and expend resources on training; the university does not want to put all of its eggs in one basket, especially if opportunities do not pan out as planned. Reedley College, however, is ready to jump into opportunities and wants to ensure it is preparing students for multiple careers in all kinds of industries, including manufacturing and water. Uncertainty about high-speed rail has led to the perception that construction might be here only in the very short term and that the jobs it would create would not be careers. There has to be a broader conversation in terms of construction and career paths rather than a narrow focus on high-speed rail jobs. Rather than just talk about jobs, there needs to be a focus on the overall outlook for a career path. The Consortia can help facilitate this discussion.

Merced College is interested in the long-term implications of a possible major maintenance facility outside of Merced and what it can mean for the College, as workforce developers and trainers. It would be helpful for Merced College to sit down with the engineers that are designing the system and trying to figure out what kinds of skill sets are needed. The College is eager to build relationships with the people that are overseeing the construction of the system so they can work together to figure out how Merced College can contribute to the workforce pool.

Keeping a broader perspective on training and jobs will help draw less emphasis on the uncertainties surrounding high-speed rail and more emphasis on preparation to work on other infrastructure projects. The program can be sold as an opportunity to get businesses certified and workers trained, regardless of whether upcoming work will involve high-speed rail or other public infrastructure projects. Businesses and workers that are not able to work on CP1 may be able to work on CP2-3 or other state projects as they become available, and there will be a bigger pool of resources that are in the queue and ready to go. The Madera County Workforce Investment Board has been marketing a lot of its training in this manner; rather than placing an emphasis solely on high-speed rail, the agency is trying to get workers trained to be in the pipeline to work on public infrastructure projects, which is a growing sector in the Valley. The agency tells people that come through its doors to talk to folks at the trades and at the Central Labor Council to check out the pre-apprenticeship programs that they have. Workers who are able to get their foot in the door will have direct access to the opportunities that come through the region. This preparation, regardless of whether or not it will lead to high-speed rail work, is preparation to work on other infrastructure projects.

The Fresno Regional Workforce Investment Board has been working over the past three years to establish the job types and skills needed throughout the lifecycle of the high-speed rail system. The agency has been able to identify job titles through work with high-speed rail systems in Spain and France. However, the agency is struggling with the timing piece of when jobs will become available; though a couple of cohorts of training have been completed,

the more information the agency can obtain about the sequencing of work, the better. This is true not only for building trades, but also for engineering jobs that would hire college graduates. The agency has done everything to prepare itself and the workforce, but when a worker is put through 6 weeks of training and does not have a job opportunity to go to at the end of training, the result is frustration. There is a push to prepare workers now and not wait on the program, since the skill sets needed for the trades do not change and are transferrable to other infrastructure projects, such as schools or stadiums. Pre-apprenticeship programs in Madera, Fresno, and Tulare have been very successful and have created a reserve of workers that are ready to go when job opportunities become available. However, putting someone through training without knowing if there will be a job waiting for them upon completion is especially hard on workers who cannot afford to be in training and not working for long periods of time. The Workforce Investment Board in Madera is struggling with this challenge, but believes breaking down training into increments to advance forward or lattice into other areas could help mitigate this.

In the last few years, community colleges in the region have participated in a program on career technical education to help faculty learn how to condense curricula, allowing for greater capacity to get students in and out. There are some courses that have gone through the process and are up and running. Merced College is coming out of an uncertain period where some of its peer colleges in the region did not know if they would be able to open their doors at the start of each year; the College is now past that period and new money is on the way. Two years ago, Fresno City College was looking into what unions are training for, what programs are in existence, what programs are needed based on skill sets that are in demand, and how the College can create stackable credentials.

There is a lack of flexibility in the education community that has prevented the building trades from partnering with community colleges for training programs. The building trades wanted to involve the local State Center, but found out that it would take at least a year to develop a curriculum and there would be a fee to pay someone to put together that curriculum. The trades were in a time sensitive situation and had to step away because the timing was not right. The building trades would like people to be able to get an Associate's degree at the end of a 5 year apprenticeship program, so the workforce no longer has to choose between a career in trades or college; they are hoping to achieve this through partnering with the community colleges. Some of the trade's members do not end up finishing their careers in the trades, especially in the more physically demanding trades, but if the apprenticeship program was part of an Associate's degree, these workers would not have to go back to square one and instead, could build on their completed coursework.

Building trades practice local hiring with Fresno, Tulare, Madera, and Kings Counties. The book system is set up so that Book 1 gets the local jobs first that are dispatched through the local union. However, with a program as big as high-speed rail, once the building trades clear Book 1, unions outside the area would be able to come in. It becomes crucial that the Central Valley has workers that are lined up and ready to go to fill those additional jobs to avoid competition with outside labor. A similar concern is that new businesses that are coming into the Central Valley as a result of the program will result in outside labor moving into the region for those jobs, rather than the local workforce taking on those jobs.

## Housing

There are concerns that high-speed rail may lead to the Valley becoming a bedroom community and a suburb of the Bay Area or Los Angeles. Merced, Stockton, Modesto, and Bakersfield have all become bedroom communities to some extent, and they were all hit hard with the economic downturn.

## **Agriculture**

The region wants to be conscious of preserving agricultural land from sprawl that might result from the program.

## **Infrastructure**

The high-speed rail program presents the opportunity for increased internet capability through adding another fiber band that goes through the right of way. There are pockets of Tulare County, for example, that have no internet access whatsoever.

The high-speed rail program will take cars off of Interstate 99 and have some positive impacts on circulation for goods movement. Since the system will have its own dedicated tracks, freight will be impacted only to the extent that demand for freight increases.

## APPENDIX E—ONE-ON-ONE INTERVIEW NOTES

**Interviewee:** Al Smith, President & CEO, Fresno Chamber of Commerce

**Date/Time:** April 30, 2014, 10:00 am

**Purpose:** To quantify what high-speed rail could mean to the Fresno economy generally and for increasing tourism to Yosemite for domestic and international visitors through a Fresno gateway.

Fresno is located in the center of one of the most agriculturally rich areas of the world and is the easiest access point to the Yosemite Valley, and those two elements could attract new businesses including those designed for tourism.

### Questions:

**1. How will high-speed rail help promote a strong local economy and provide opportunities to help businesses prosper and grow?**

The high-speed rail project early on was a very popular notion with most members of the chamber but over a period of time people have become a little more skeptical and the issue somewhat controversial. Once the project begins to show it is really going to happen it will, however, bring solutions to a number of issues that would improve conditions in the region. Demographic studies show growth coming to the region and high-speed rail will help provide the needed additional modes of transportation for the existing and growing population. It will give the region an option over conventional car or current airport travel. The long narrow state of California is equivalent to traveling from Chicago, Illinois to Jackson, Mississippi and trying to put down more concrete to accommodate the growth in population and movement of people the length of the state is not practical.

**2. What is the general sentiment that businesses in Fresno County (and the larger San Joaquin Valley) have about high-speed rail?**

It has become controversial in some camps but Fresno overall has been very positive about the possibilities that it can bring to a region that is somewhat treated as an island. People have recognized that it could join the Valley as an active part of the rest of the state through connectivity. There is, of course, a concern about any part of production agriculture that is displaced even though the big picture and the net gain may be very positive for the Valley and the state. Political support at times has seemed to waver even at the congressional level from the California delegation. The Fresno Chamber really does not play an active role in tourism because the base of the membership is small businesses in Fresno and the support among the members, at this time, is split. This sentiment could change once there is an actual start of construction and it becomes a more tangible opportunity and businesses can see prospects for themselves and the region.

**3. What are the most current visitation statistics for visits to Yosemite via Fresno?**

The visitation center takes care of tracking those statistics and when the City pulled its funding from the tourism board it may have changed the focus as it may have become a more hotel/motel association with less focus on overall tourism impacts to the greater Fresno area.

**4. What are other tourism opportunities available in the region other than the national parks? Are there tourism opportunities Fresno is trying to grow and capitalize on?**

Fresno area tourism is also an area of water recreation opportunities due to the many lakes in the region. This water sport capacity offers opportunities for fly fishing, water skiing and a number of other family oriented water-related activities. The area is also well known for its great golfing venues and in some sense could be the “northern California Palm Springs” due to its weather, open spaces and many venues available in the region.

**5. How will the high-speed rail project impact tourism? Are there some areas that are anticipated to be impacted more than others? Which are they?**

The area can and will adjust and, since more than 80 percent of the businesses within the membership of the chamber are considered small businesses, they can quickly adapt to the opportunities that may come.

**6. What are the opportunities to bolster tourism and capitalize on the increased connectivity from the project?**

The connectivity capabilities could open many opportunities but there must be reasons to come and stay including the excellent concert and art venues that are available in the Fresno area. The infrastructure is in place in the area such as the SaveMart Center, the Convention Center and other venues suited for large and small tourism events.

**7. Do you see growth opportunities in agri-tourism from high-speed rail?**

Yes but it must be organized and capitalized on by recognizing the opportunities of displaying this region—as a part of greater California—with an extraordinary array of scenic venues from national parks, sport facilities, and of the many facets of agriculture including agriculture production and the valued added industrial facilities.

**8. What are some anticipated impacts of the project on the hospitality industry?**

It must be realized by all that all ships rise together and that if the region becomes economically healthier all citizens and businesses benefit. This also opens the door for the EDC's and other to attract business from outside the Valley to locate here; demographic studies seem to suggest young people are now wanting to come back to the region for quality of life and cost of living issues.

**9. Are there any other sources of data that you think may be valuable for us to incorporate into our analysis?**

See below.

**10. Is there anything else you would like us to know about that has not yet been discussed in this interview?**

No.

**References:**

Fresno Chamber (2014). <http://fresnochamber.com/>

Fresno COG (2012). San Joaquin Valley Demographic Changes 2010-2050  
[www.valleyblueprint.org/files/San%20Joaquin%20Valley%20Demographic%20Forecasts%20-%20Final%2027%20Mar%202012\\_0.pdf](http://www.valleyblueprint.org/files/San%20Joaquin%20Valley%20Demographic%20Forecasts%20-%20Final%2027%20Mar%202012_0.pdf)

**Interviewee:** Antonio Avalos, Chair of the Department of Economics at Fresno State University (FSU)

**Date/Time:** April 24, 2014, 1:00 pm

**Purpose:** To understand how technology is being developed at Fresno State that might relate to and/or support high-speed rail. Dr. Avalos is the head of the Department of Economics at Fresno State and was instrumental in the master plan that was written on value added conversion in the Valley.

**Questions:**

**1. What are some current technologies that are being developed at FSU that are compatible and can enhance opportunities of the high-speed rail system?**

There is large potential for the high-speed rail system to impact the agricultural industry and the mobility of the existing workforce. The ability to enhance connectivity and mobility could change the types of expertise that could become available to the Valley, which could then facilitate greater technological and mechanization to the agricultural industry. Demographic studies have indicated that the San Joaquin Valley has substantial growth potential in the future and mobility could be an important driver to the enhancement of the local economy. These changes may very likely shift the current compensation levels of the workforce.

**2. What studies at FSU indicate the changing labor demographics of the San Joaquin Valley and how does that interface with the goals of the high-speed rail opportunities?**

Demographic and socioeconomic studies indicate that there may be a mismatch between skills available and workforce demand in the region. This mismatch could become more pronounced if these changes are not recognized and planned for, especially as demographics continue to change in the Valley and different types of businesses emerge. FSU is currently conducting a research study to analyze the gap between workforce skills and demand. The study has two components; the first component focuses on interviewing intern participants about their skill levels and work experiences, while the second component involves interviewing the needs of the employer. No final analysis is available at this time.

**3. What role can FSU play in sustainable planning and design of new technologies, which encompasses bio designs and technologies that can interface with the design of the high-speed rail system?**

FSU has an urban planning program which could focus on the greater connectivity and mobility that the high-speed rail system could bring to the region for both residents in the region and other individuals that may move through the region for personal or business reasons. FSU has also recently launched a Sustainable Institute study program.

**4. Are there any other sources of data that you think may be valuable for us to incorporate into our analysis?**

The Fresno COG conducted several research projects on the demographics of the region which should be included as references.

**5. Is there anything else you would like us to know about that has not yet been discussed in this interview?**

None

**References:**

Fresno Council of Governments: <http://cers.calepa.ca.gov/>

**Interviewee:** Blake Konczal, Director of Fresno Workforce Investment Board (WIB)

**Date/Time:** April 29, 2014, 10:00 am

**Purpose:** To develop a more detailed understanding of the process the WIB has gone through to prepare for the opportunities of high-speed rail, focused specifically on improving the matching process for vacant positions, and discussing how/whether a more regional approach to preparing the workforce could be effective.

**Questions:**

**1. What specific procedures are in place to keep you in step with real time events that are happening with the high-speed rail program that would be important to your agency?**

The Authority adopted guidelines that the general contractors must hire and keep in place a jobs coordinator to interact with the agencies in the region, such as the WIB, to insure adequate information flow. The building trades have been very cooperative and proactive in disseminating information about the workforce opportunities. The federal government has a minimum hiring requirement but the Authority has gone beyond that and has disseminated its policy and action plan to contractors involved and agencies have been kept up-to-date on the procedures.

**2. What are some of the opportunities that you have been able to leverage through the grant that you received?**

The grant came from the federal Workplace Investment Act revenue that is available each year to the states. Most of these funds are distributed by federal formula but some funds are reserved by the state as discretionary grants. The grant we received was through the discretionary program and was earmarked for pre-apprenticeship training to prepare candidates to be referred to the labor unions for CP 1. The grant and the cooperation of the labor unions is facilitating the training of the local workforce to be able to take positions for many of the infrastructure jobs that are coming to the Valley.

**3. What role have the unions played in working with you to prepare the local workforce?**

The real progress that has been made on preparing the workforce in the area for this opportunity would not have been possible without the support and hard work of the local trades. It was necessary that the WIB agree to make sure that those workers that we trained and referred were qualified to meet the standards of the trades, such as math minimums, drug testing etc. Also, the trades had to agree to provide us feedback if a candidate was declined. It has been a good partnership of cooperation and trust. The cooperation is also helping to diversify the workforce in the region through explicit efforts to achieve such diversity. The WIB spends a great deal of time up front to insure that the proper candidates are attracted and selected, but this requires WIB's to have a full understanding of what the criteria is and what the trades need.

**4. What role can the WIB play in facilitating the matching process for vacant positions? How can the WIB proactively work with the Authority to obtain the necessary information?**

The most important thing is to understand the specific needs and how to fulfill the necessary requirements of the Authority and of the trades. The Authority has been very open and proactive in hosting public forums to help achieve understanding of the local workforce needs and to coordinate efforts between the agencies.

**5. How is information currently shared between the WIBs, community colleges, and the Authority?**

The Authority has been very effective in having public forums to disseminate information and has established open channels with the agencies in Fresno and the rest of the region. Several consortiums and collaboratives have been set up in the area to facilitate the dissemination of information and to establish working plans as it relates to the project. A good example is the Fresno Works Consortium which working hard to have the high-speed rail maintenance facility located in Fresno.

There seems to be some linkage and communications shortfalls between the trade unions and the community colleges but there is an effort currently going on to improve the situation and close that gap. This avenue of communication between the trade unions and the community colleges is very important especially for understanding the prerequisite requirements for the pre-apprenticeship programs and making sure they are completed and timely.

**6. What are some strategies for improving information sharing between these organizations?**

The most important strategy is transparency in purpose and in content. Transparency must also be in real time to insure agencies, contractors, and individuals do not lose out on the opportunity as it is unfolding and, in many cases, is far enough in advance because of required prerequisites. One of the challenges is making sure that everyone is speaking the same technical language when it comes to job specifications and classifications. There is some concern that the federal job specifications for high-speed rail have not been appropriately identified and or clarified to agencies trying to prepare the local and state workforce for this new type of project and these new types of jobs.

**7. Has the Fresno WIB explored a regional approach to preparing the workforce?**

Fresno may serve as a hub of a multicounty collaboration and that may reflect a positive for the Central Valley. But it does indicate the need for collaboration as the Central Valley is geographically and socioeconomically separated somewhat from the northern and southern ends of the state. That is, we are an economic region unto ourselves. The Fresno WIB is—and has always has been—vigorous in regional collaboration. Since the Central Valley is challenged by poverty and high rates of unemployment, the Fresno WIB and others in the area must prepare the workforce by necessity and it becomes a regional effort as the workforce even now in the Fresno region is made up of workers from around the valley, not just from Fresno. One of the things that the communities unfortunately have in common, which is helping to qualify for federal and state programs, is that they are in most cases part of the qualified poverty census tracks by the federal government.

**8. Are there any challenges to taking a more regional approach? What are they?**

There are always challenges that are both structural and political in nature. There are some jurisdictions that are fairly resistant to the project and therefore make it difficult for collaboratives to be open and

focused on the same issues. Another challenge, of course, is that needs can be very different within the Central Valley, depending on the current need of the particular community and/or jurisdiction. Sometimes it works to start smaller in tackling a problem, start with a subset and create success, and then broaden the approach.

**9. What communication protocols would best allow others in the region to stay involved and informed by the Fresno WIB efforts?**

True dedication to transparency, open communications, and an attitude of mutual benefit are critical elements of a foundation for success. That is easier said than done but a measure of initial success many times is the intent of the stakeholders. Agencies must stay involved and participate in an open and transparent manner that seeks to increase the opportunities for the workforce in the region.

**10. Are there any other sources of data that you think may be valuable for us to incorporate into our analysis?**

A valuable source is the current statistics available on the \$30 billion infrastructure needs and related funding commitments over the next 10 years for the Central Valley. This shows that even as we prepare people for the high-speed rail project, we are also preparing them for other construction-related jobs.

**11. Is there anything else you would like us to know about that has not yet been discussed in this interview?**

No

**References:**

California Five Year Infrastructure Plan (2014). [www.ebudget.ca.gov/2014-Infrastructure-Plan.pdf](http://www.ebudget.ca.gov/2014-Infrastructure-Plan.pdf)

LAO (2011). California Infrastructure Spending. [www.lao.ca.gov/reports/2011/stadm/infrastructure/infrastructure\\_082511.pdf](http://www.lao.ca.gov/reports/2011/stadm/infrastructure/infrastructure_082511.pdf)

LAO (2013). Cal Facts. [www.lao.ca.gov/reports/2013/calfacts/calfacts\\_010213.aspx](http://www.lao.ca.gov/reports/2013/calfacts/calfacts_010213.aspx)

**Interviewees:** Barbara Gilliland and Dan Hoyt, California High-Speed Rail Authority Project Management Team

**Date/Time:** April 3, 2014, 10:30 am

**Purpose:** To better understand the process that the Authority is undertaking to work with the Central Valley cities to support station jurisdictions seeking to use high-speed rail as one catalyst to support downtown redevelopment. Barbara and Dan are providing support to the Authority on station development and planning efforts.

**Summary:**

The Authority is currently working with local jurisdictions on the design of the areas around the stations and is identifying the internal functional components of the stations but has not started architectural designs of the buildings themselves at this point. The station area planning work is being conducted through grants from the Authority to local jurisdictions. The grants total \$4.5 million from the federal government being matched by another \$4.5 million in state and local funds.

A key element of station area planning is that proper zoning needs to be in place to allow for the type of area design to enhance growth of business development conducive to station success. Fresno has, for example, recently adopted these types of zoning changes. Fresno is also further along with advancing their station area planning efforts as they have a consultant on board and are finalizing the scope of work for them. The work will include community meetings, design work, evaluation of real estate opportunities, etc.

Other jurisdictions are working to start their station area planning processes but some jurisdictions are further along than others. There may also be opportunities to leverage other outside grants to complement the station area planning efforts.

**Interviewee:** Bradley Banks, System Manager, California High-Speed Rail Authority Program Management Team

**Date/Time:** April 4, 2014, 9:30 am

**Purpose:** To follow up on roundtable discussions suggesting that the system right of way might be used to potentially improve internet connectivity to the region.

**Summary:**

The possibilities of using the right of way required for the high-speed rail system for other potential uses has great possibilities for the Valley. However, it comes with both structural and economic challenges. Since most of the communication networking of data and entertainment connectivity is privately held and, by nature, is economically driven, it requires working with the private sector to explore the possibilities. The Authority is engaging with the private sector and with other California agencies (e.g., California Office of Emergency Services) to better understand the design challenges and opportunities and to begin to quantify the economic prospects the right-of-way may offer. One of the biggest challenges is time itself due to the system's extended implementation schedule where the ability to connect the southern and northern ends of the state with high-quality data and communication capabilities is some distance in the future. Due to the staging of construction, it may not be practical to install underground conveyance conduit in the short term because it may become damaged or need to be altered as more advanced stages of construction begin.

It would however be advantageous to advance this opportunity as this would support a different kind of connectivity—that is more than just track—and that can transfer mass amounts of data throughout the state.

**Interviewee:** Gail Zurek, Tourism and Marketing Manager, Visalia Convention and Visitors Bureau

**Date/Time:** April 9, 2014, 2:00 pm

**Purpose:** To identify what the high-speed rail system could mean to tourism in the Visalia area including through domestic and international visitors to the National Parks (Sequoias, Kings Canyon, etc.), local cultural resources, and other opportunities (e.g., the World Ag Expo).

**Summary:**

**1. What is the general sentiment that businesses in Visalia (and the larger San Joaquin Valley) have about high-speed rail?**

In general, the sentiment in the Visalia business community focused, on the tourism industry, would be qualified as neutral to positive dependent upon the level of entrepreneurial spirit. The hospitality sector and especially the restaurants and hotels tend to be very positive about opportunities to bring more visitors to the area, especially since Visalia serves as a hub for much of Tulare county visitation. The City of Visalia, and particularly the Visitor's Bureau, seems to think very regionally about visitor opportunities for the area.

**2. What are the most current visitation statistics for visits to the Sequoias via Tulare County/Visalia?**

The actual statistics by the National Parks Service are available in one of the documents provided during this interview, which was completed by the University of Idaho. It is estimated that currently about 20 percent of the visitation to the three parks in the central region (Yosemite, Sequoias, Kings Canyon) are international visitors. Superintendent Woody Smeck is the current superintendent for the Sequoia and Kings Canyon National Parks and would be an excellent resource for current statistics and trends in the region. Superintendent Smeck would also be an excellent resource to talk with about the Majestic Mountain Loop program, which connects the three parks together.

**3. What are other tourism opportunities available in the region other than the national parks? Are there tourism opportunities that Visalia is trying to grow and capitalize on?**

The national parks are a great attraction, but the whole outdoor type of venue draws a bigger audience of local, domestic, and possibly international visitors. These types of venues would include such experiences as visiting the wild oaks in the area, open space bike riding, and certainly the whole realm of possibilities of agriculture tourism. There is some agriculture tourism in the Visalia area and surrounding Tulare County, but it is an opportunity that could and should be expanded. Tulare is the home to the world's largest farm equipment show (World Ag Expo) which brings people from all over the world to visit and while they are here it could be an opportunity to expand their visitation possibilities.

Visalia is well known for its downtown walking tours and fine restaurants. The fresh food connection between the many crops grown in the region, fine restaurants, and visitation opportunities should be expanded.

Visalia is in the process of expanding visitation and tourism around families, where people would bring their children and truly make it a family experience. Part of that platform is a new children's museum being built currently in Visalia. With family as one of the new approaches to tourism expansion, the basic premise of historical Visalia and the region applies to all the different demographics, but also seems to work quite well with the older demographic. This may be due to the time to enjoy historical sites and possibly more financially able to travel.

**4. How will the high-speed rail project impact tourism? Are there some areas that are anticipated to be impacted more than others? Which are they?**

The biggest challenge will be the intermodal connections—the ability to help travelers get to Visalia and Tulare County once the high-speed rail system gets them to the region. Coordinating the scheduling of events, travel, and intermodal connections for both domestic and international visitors will be a challenge but a great opportunity. It is recognized that this will not happen immediately but scheduling and coordination should be a major part of preparing for the opportunity of significant growth possibilities for tourism utilizing high-speed rail as a vehicle for such expansion. Downtown Visalia could be an area that benefits most if the last mile connection is solved since it's already geared toward walking.

**5. What are the opportunities to bolster tourism and capitalize on the increased connectivity from the project?**

It is all about interconnectivity and planning—as the region is already very engaged in tourism—and the opportunity will be maximized by effectively and efficiently getting visitors to Visalia and the rest of the region. This may be easier for the parks (with existing or expanded shuttles) and sites in downtown Visalia but would pose larger challenges to agri-tourism.

**6. Do you see growth opportunities in agri-tourism with high-speed rail?**

There is some tourism in agriculture now with the Tulare Farm Expo being the largest. There are opportunities to expand the sector but it needs to be embraced by those operating agricultural entities in the region and the governmental bodies that oversee the safety, land use and security of the operations. Last mile connections will also be critical.

**7. What are some anticipated impacts of the project on the hospitality industry?**

Visalia is currently a visitor's mecca for downtown walking, dining, and historical visitation with the biggest challenge being communication and planning when large groups or events are in the area. The Visalia Visitor's Bureau and the Chamber work to disseminate information to ready the businesses when events are happening such as the Word Ag Expo when every hotel in the region fills up and restaurants are at capacity. It will take planning and coordination and some changes would take place, but from an economic point of view that is what is strived for now.

**8. Do smaller businesses have the capacity to accommodate increased visitation?**

Most of the businesses in Visalia would be considered small or medium sized in the hospitality sector and tourism industry in general. The individual businesses will be the ones that decide if they expand those

businesses or not, but Visalia as a community has been very successful to adapting to the economic growth it has had over the last several years in the tourism sector.

**9. Are there any other sources of data that you think may be valuable for us to incorporate into our analysis?**

They are Included in the references provided.

**10. Is there anything else you would like us to know about that has not yet been discussed in this interview?**

Consider consulting with Destination Management Organizations at the state and local levels as organized tourism in conjunction with the high-speed rail project could be very beneficial to tourism in general to the San Joaquin Valley.

**References:**

Sequoia Shuttle Serving Sequoia National Park- [www.ci.visalia.ca.us/depts/transit/sequoia\\_shuttle/default.asp](http://www.ci.visalia.ca.us/depts/transit/sequoia_shuttle/default.asp)

Historical Visalia Walking Trail- [www.visitvisalia.org/member/historical-walking-trail/517018/](http://www.visitvisalia.org/member/historical-walking-trail/517018/)

Visalia's Visitors Guide and Map: [www.visitvisalia.org/](http://www.visitvisalia.org/)

Sequoia, Kings Canyon & Yosemite National Parks, Majestic Mountain Loop:  
[www.majesticmountainloop.com/pdf/Majestic-Mountain-Loop-PR-DH-010913.pdf](http://www.majesticmountainloop.com/pdf/Majestic-Mountain-Loop-PR-DH-010913.pdf)

Art on Fire: [www.artsvisalia.org/Art%20on%20Fire.php](http://www.artsvisalia.org/Art%20on%20Fire.php)

The Sequoia Visitor, Where the Valley Meets the Sequoias:  
[www.vacationstationmagazine.com/CelebrateFallFunInTheSequoias.html](http://www.vacationstationmagazine.com/CelebrateFallFunInTheSequoias.html)

Sequoia & Kings Canyon National Parks: [www.ohranger.com/sequoia-kings-canyon](http://www.ohranger.com/sequoia-kings-canyon)

Visalia Hotel Capabilities: [www.visitvisalia.org](http://www.visitvisalia.org)

Historic Seven Sycamores Ranch: [www.sevensycamoresranch.com](http://www.sevensycamoresranch.com)

Trailblazing the Outrageous Outdoors: [www.vistvisalia.org](http://www.vistvisalia.org)

Destination Visalia: <http://downtownvisalia.com/explore/destination-visalia/>

Global Travel Trends, Visit California: <http://industry.visitcalifornia.com/media/uploads/files/editor/SFOutlook.pdf>

National Park Visitation and Economic Statistics: <https://www.uidaho.edu/cnr/park-studies-unit>

**Interviewee:** Thierry Prate, California High-Speed Rail Authority, Project Management Team

**Date/Time:** March 27, 2014, 10:00 am

**Purpose:** To better understand the ridership forecast analysis of travel markets and tourism.

**Summary:**

The ridership forecasts were updated in the 2014 Business Plan and have utilized the most current information from the California Household Travel Survey and other sources to estimate what ridership is anticipated. The modeling incorporates current travel patterns as well as socio-economic characteristics of households, and other relevant data state wide. However, the current modeling is constrained to only model travel by California residents so it may not fully account for the potential for domestic and international tourism (although this is planned for future updates).

One of the positive outcomes of the San Joaquin Valley economic study may be that it is focused on a specific area utilizing regional statistics and growth metrics especially in the area of tourism. Even though the Authority and its consultants are studying ridership based on state and historic international models, including some components of the weighting of tourism travel it is more focused on tourism centers in the south and northern California, such as Hollywood and the Napa Valley. The San Joaquin Valley economic study with specific focus on agriculture and destination locations such as Yosemite, the Sequoias, and various historical sites in the Valley could offer helpful information on potential tourism travel increases from both domestic and international visitors. The Authority currently does not have the visitation numbers for Yosemite, other national parks, and destination sites in the Valley and that could be useful in ridership modeling specific to tourism projections for the central region. International experience has shown that tourism can be a significant part of the high-speed rail market, especially when connected to prime destinations with easy access.

**Interviewee:** Frank Gornick, Chancellor, West Hills Community College District

**Date:** June 13, 2014

**Purpose:** To better understand the consortium efforts of the community college federal grant they administered on workforce readiness and how that might be replicated going forward; lessons learned from that effort could be helpful in understanding how they may be used for the emerging workforce needs in the Valley.

**Questions:**

- 1. What was the process for securing the federal grant? What were the qualifications for receiving the grant?**

See copy of the final application to qualify with the Department Labor.

- 2. How was the grant used for workforce readiness?**

The grant application narrative outlines the specific tasks of the grant.

- 3. Were the impacts of the grant measured? If so, what were some of the outcomes of the grant?**

The grant was intended to help qualify individuals for career paths desired.

- 4. Are there other workforce readiness initiatives that are unfunded but a priority for the College to implement?**

Yes, the outcomes were as outlined in the attachment.

- 5. Can this model be duplicated for other colleges?**

It can and should be duplicated throughout the state and the model should be expanded to include requesting state discretionary funds that come from the federal government and state discretionary funds for workforce applications.

- 6. Are there similar grants currently in the making?**

The consortium is in the process of reapplying to the Department of Labor.

- 7. What types of grants would best facilitate expanding opportunities from the high-speed rail program for community college students?**

Grants similar to the C-6 grant

- 8. Are there any other sources of data that you think may be valuable for us to incorporate into our analysis?**

9. **Is there anything else you would like us to know about that has not yet been discussed in this interview?**

**References:**

SJV Community College C-6 Grant Consortium: [http://c6.whccd.edu/labor/Documents/WHCL-C6-Consortium\\_Narrative\\_Final.pdf](http://c6.whccd.edu/labor/Documents/WHCL-C6-Consortium_Narrative_Final.pdf)

**Interviewee:** Lee Ann Eager, President & CEO, Fresno Economic Development Corporation (EDC)

**Date/Time:** May 8, 2014, 1:30 pm

**Purpose:** To identify how high-speed rail will affect the landscape of mobility and opportunity in the region and short-term and long-term decisions on business locations, growth, expansion, etc. and anticipated growth.

**Questions:**

**1. Which industries/types of businesses do you think will be affected most by high-speed rail?**

Engineering, construction, and trucking companies will be affected immediately. One of things the EDC is trying to do with them is look at intellectual growth to make sure they'll be ready for what is going to be happen. There are 350 businesses that are located on the alignment through Fresno, and about 200 will have to move to another location. The Fresno EDC has a contract with the City of Fresno, County of Fresno, and the Authority to make sure those businesses are relocated. So far, there has not been a single business that has been lost. There have been quite a few success stories for finding locations, and many of these businesses are in better locations than they were previously since the alignment currently goes through some areas of blight.

There are some other businesses that don't want to continue with their business, and the EDC helping them with getting appropriate price for their land. Angelo's Drive-in, for example, had been waiting for years for someone to buy them out so they could move to San Francisco. Cosmo's Restaurant has been in the same spot for 110 years but the area they're moving to is in the parking lot of the convention center. Their business will increase significantly since people working for nearby businesses can walk to Cosmo's for lunch.

Although it seems as though businesses located along the alignment will be negatively impacted, the EDC is working to make sure every single business is getting the assistance they need to maximize opportunities.

**2. Briefly describe the business climate and how it has performed in the last few years.**

Business has started to improve in Fresno. When the recession hit, the Fresno County community was hit very hard. The state of California generally has been bouncing back over the last 3 years and in the last year—and Fresno has been doing much better. The EDC has worked a lot with businesses to help them keep afloat and retain them over the last 4-5 years. This year, the focus has been on working with businesses for expansion and also attracting other businesses. Things are getting better.

**3. How has high-speed rail impacted business decisions (e.g., location, growth, expansion, etc.)?**

There are certainly engineering companies that have been gearing up to work on the project, but a few of the construction companies in Fresno County are still waiting to see how things will play out. The EDC is looking at starting to train additional truck drivers, which is one of the groups that are short in Fresno County. Once construction starts, the truck driving community will be in demand. The EDC is also starting to work with community colleges to prepare for the demand for truck drivers. The County's businesses

are also starting to prepare, such as getting certified (i.e., small, minority) with the state of California, so they can capitalize on opportunities when business opportunities do come.

**4. How will high-speed rail impact your business in the near- and long-term? Are there any challenges the high-speed rail project will present?**

In the long-term, high-speed rail could impact the Valley in the same ways it has changed communities in Europe. We recently traveled to Spain, France, and China, and met with high-speed rail entities in all three of those countries, including touring maintenance and operations facilities and looked at growth around stations in different parts of the country. Seville in Spain was a tiny town without a lot of business, but when the station came in, businesses began to grow, which now enables people to live and work close by. The countryside in Seville is very similar to Fresno County. There are vineyards, dairy producers, etc.

High-speed rail is an exciting opportunity that can change the economic climate. We met with the head of International Union of Railways (UIC) in Paris and he asked her where we were from and when we started to describe Fresno, he said, "You're not from Fresno, are you?" In the high-speed world, Fresno is the "center of the universe." It was exciting to hear that from the head of UIC, who also said, "You don't even know the opportunities that are coming in 15-20 years. You'll see construction and impacts from that, but in the next 15-20 years, there will be big changes." When the Fresno EDC reaches out to businesses, they are excited about high-speed rail. The opportunities in the next 5 years will be huge.

**5. What growth opportunities do you see emerging for your business and others in the region from the high-speed rail program?**

The Fresno EDC meets once a month to discuss common topics. Even though some elected officials may not support the project, there are individuals within those communities who really understand the opportunities for high-speed rail. The region will change with the connectivity; people will be able to live anywhere in the Valley and still commute to the Bay Area. Businesses will be able to go back and forth between the Valley and the Bay Area.

The Fresno EDC has spoken to a large pharmaceutical company, which ran out of space in Silicon Valley. This is not just true for manufacturing, but R&D is also running out of space. High-speed rail could make it possible to connect back and forth between plants in Silicon Valley and the Central Valley.

**6. Do you see any opportunities for your business to participate in the construction of the high-speed rail project?**

There are already 40 local companies that are working on the project. Many are engineering firms, but once construction starts, the EDC anticipates that a lot of local companies will be subcontractors. With the next section, the EDC is gearing up construction workers to be able to work on that section.

The EDC utilized a Train the Trainer program to help small businesses become certified. UC Merced donated rooms with computers and notices were sent to businesses to suggesting that they get certified saying there were opportunities beyond construction and engineering. In the first day 95 people signed up. The EDC went through the certification process and by the time they left, they were certified. The

certification process takes about 2 hours. The EDC has trained people to do it around town, so it's easier and more accessible for businesses to get certified.

**7. How are you hearing about high-speed rail project updates and opportunities? Are there any improvements that can be made to the information dissemination process? What are they?**

The Fresno EDC is very proactive in tracking the program. The EDC is on the listserv for the CHSR Authority. When new things are happening, the EDC gets notifications and they also receive a notification every time the program pops up in the news. There is also a staff person at the Fresno EDC that is assigned to follow high-speed rail news. The Fresno EDC has 2,500 businesses on its listserv. Most businesses in Fresno know where to go because there is a strong network.

Fresno EDC is a model for the information dissemination process. The way to get around political pressure is to advocate for businesses and to prepare them for opportunities—it's not really a matter of supporting or not supporting the project, but it's about supporting local businesses.

**8. What kind of additional assistance would be helpful in maximizing the opportunities and impacts of high-speed rail?**

Communications and outreach—while it is being done well—it can always be improved. There could be more community meetings for people who are not affected by the alignment but want to know more about the project—so far there have been a few in Chinatown, north Fresno, and in areas affected by the alignment.

**9. Are there any other sources of data that you think may be valuable for us to incorporate into our analysis?**

A few years ago, Fresno EDC had an annual event and the theme was high-speed rail. There were publications that were used for the event.

**10. Is there anything else you would like us to know about that has not yet been discussed in this interview?**

There are going to be a lot of visitors coming into the area and the high-speed rail system will be a tourist attraction. There are people in outlying areas that will spend their money and stay in Fresno just to look at our train.

When looking at tourism, what are other things that should be added now in anticipation of the project? Agri-tourism is something that Fresno had not previously looked at. At the Underground Gardens, there was a group of tourists there that were traveling from San Francisco to LA. They were from the Midwest and they wanted to tour vineyards and farms in the Valley. Fresno doesn't have that right now, but if they did, people would come and visit. There could be tastings in the middle of almond orchards!

At a DC biotech convention, there was a breakfast to talk about what the Central Valley has to offer. Fresno EDC reps were hoping for 20 people to show up, but 82 people came to listen. A gentleman from

Chile asked about Fresno's growing season. Fresno has many growing seasons that go on for 365 days a year and there is a great variety of crops.

**References:**

CA HSR Authority (2013). Small Business Certification Guide.

[www.hsr.ca.gov/docs/programs/small\\_business/SB%20Certification%20Guide.pdf](http://www.hsr.ca.gov/docs/programs/small_business/SB%20Certification%20Guide.pdf)

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**Interviewee:** Evelyn Young, Executive Assistant to the President, California State University at Bakersfield (CSUB)

**Date/Time:** April 24, 2014, 3:00 pm

**Purpose:** This interview followed up on some of the initiatives that CSUB has taken to prepare its young engineers for high-speed rail opportunities, including the collaboration with a university in China to provide high-speed rail courses. This interview also explored how CSUB plans on capturing knowledge of its students (engineering, social sciences, and business) for the project.

**Questions:**

**1. How did the decision to provide high-speed rail courses come about?**

The University has maintained a neutral position on the project but has maintained interest in the public policy and engineering aspects of the project from an academic perspective. There has been early interest on the possibility of having a high-speed rail simulator on campus for the study of high-speed travel worldwide. The University also held a community class (through extended university) in order to provide a forum for residents of the region to openly discuss the project in a community and public policy type setting, but in an academic setting. This was a vibrant course and it generated interest to gain more opportunities for CSUB students. There was specific interest by a qualified professor within the university as well and the decision was to formulate a high-speed rail class.

**2. What was the process to develop these courses? How did CSUB seek out the partnership with the university in China to develop and offer these courses? Can this model be used elsewhere?**

It was necessary to assess whether there was interest on the part of our student population, to seek administrative approval and that a qualified professor with the appropriate credentials and experience was available on staff. The professor that will oversee the class is well qualified both by credentials and from real experience in China and has established a working relationship with a counterpart in China to assist in the organizing and structuring of the class.

**3. What course design changes or adaptations might be used to prepare students for a new and more mobile work platform that could come from the HSR project?**

The high-speed rail industry in China and other parts of the world continually use the newest technology available and any class at CSUB will have to be designed to insure that students have the skill sets to be well prepared. So we have to be able to help prepare them for a class that is on the cutting edge of new modes of moving people at high rates of speed and the intermodal public and private network that is needed to support such a system. The utilization of social media and other technologies will also have to constantly be reviewed as it relates to the study of this new form of travel including interconnectivity, public policy, and integrated public/private partnership capabilities.

**4. What other initiatives is the college taking to become involved (and get its students involved) in the high-speed rail project?**

Since the high-speed rail class will be interdisciplinary with the electrical engineering, mechanical engineering, computer science department, and possibly the social science department, it will be necessary to have the process researched by a professional to analyze the entire need of the curriculum. The university will need to seek a grant for such a research study.

**5. How could CSUB join with UC Merced and Fresno State University to be world leaders in high-speed rail design and research? Is a three party consortium possible?**

It would be possible for a collaborative of Valley educational intuitions to join to facilitate further understanding of what the high-speed project could bring to the region. We have relationships we can build on, to assess our respective strengths and advance the study on a range of fronts, from the mechanical design of the project to researching the social connectivity and mobility opportunities the project could bring to the Central Valley.

**6. What other stakeholders would the university benefit from having a partnership/coordination with?**

The Bakersfield Downtown Association, which is currently working on a revitalization program, may be stakeholder in the planning of how the system might influence downtown Bakersfield. Equally of interest as a stakeholder would be the Bakersfield Department of Community Development and the Homeless Center.

**7. Are there any other sources of data that you think may be valuable for us to incorporate into our analysis?**

The CSU Bakersfield School of Social Sciences and Education has a quality of life center which addresses sustainability and will include data on transportation and mobility as a major quality of life issue. Data is not available yet but is in the process.

**8. Is there anything else you would like us to know about that has not yet been discussed in this interview?**

We all must recognize that our college students are major stakeholders in the study of transportation, intermodal public/private services, connectivity, and the need for mobility of the current and future societies.

**Interviewees:** Dan Hirelman, Dean of Engineering, UC Merced; Dan Feitelberg, Vice Chancellor, Planning and Budget, UC Merced; Philip Woods, Director, Physical and Environmental Planning, UC Merced

**Date/Time:** May 15, 2014, 2:30 pm

**Purpose:** As the San Joaquin Valley's only UC research center, the University of California, Merced (UC Merced) is in a position to potentially become a world leader in new applied technologies in high-speed rail design and especially in areas of environmentally efficient systems. The interview was designed to gain an understanding of how UC Merced might become an international player in the development and understanding of high-speed rail technology and intermodal connectivity. The effort will incorporate data from the white paper that UC Merced has already completed about the benefits of high-speed rail.

### **Questions:**

#### **1. What role do you envision UC Merced has with the project in the short- and long-terms?**

In the short term, the UC Merced campus envisions being a supportive advocate for California high-speed rail through connections to local community stakeholders, letters of support, and advocacy within the California Partnership for the San Joaquin Valley. In the long term, the campus envisions a role as repository for knowledge generated during the planning, designing, and building of the system. At completion, the University will be both a strong driver and attractor of ridership.

UC Merced brings education, innovation, and economic development to the Valley and high-speed rail will bring the same things. It's within the context of these similarities that there are a lot of micro-opportunities, including wetlands mitigation on the construction side and economic development for downtown; downtown Merced has a lot of potential for economic vitality and the station is key for revitalization later down the road.

Since UC Merced is a research university, it is interested in defining fundamental issues to "doing high-speed rail right." From the lifecycle point of view, for example, this includes the need for looking at sustainability. There is also a need to look at higher urban form. Some of the University's other facilities are located around town, including downtown. Beyond the University's 2020 Project, there is the question of how to better connect the community.

#### **2. What initiatives and efforts has UC Merced put forward to solidify this role?**

In 2013, UC Merced launched an ambitious initiative to expand enrollment from 6,200 students today to 10,000 students by 2020. The "2020 Project" will add new academic, research, recreation and housing facilities to the campus site. In addition, the campus is in the early stages of strengthening its presence in downtown Merced—which is proximate to the planned Merced station. The campus is intending to locate additional administrative functions in the downtown area. The presence of significant numbers of UC Merced staff in close location to the station provides a potential source of ridership for the system and will help revitalize the downtown urban core. UC Merced has spent significant resources developing relationships with community and civic leaders. To the extent that the interests of the University and high speed rail overlap, there are opportunities for collaboration.

The University is also evaluating where public private partnerships (P3s) can add value, especially on the capital maintenance side which is a high priority. As Merced continues to grow and is built out, the University is looking at P3s and risk transfer, similar to what high-speed rail is also doing. There are parallels with the project in terms of execution strategy and philosophies surrounding developing infrastructure in the 21<sup>st</sup> Century.

The University is also looking at alternative methods for transportation to reduce costs and the need to build roads, specifically, identifying the alternatives and economics around it. UC Merced is looking to make mobility within the campus more transit-focused than car-focused, such as a park-and-ride. The University also has an intermodal transportation project in the pipeline.

**3. How does UC Merced see its role with high-speed rail changing over time?**

With the dual growth of campus and the high-speed rail system, Merced has the potential to quickly expand into a 21<sup>st</sup> Century model for urban growth. As the high-speed rail program matures, UC Merced faculty, staff and students will potentially provide an opportunity for:

- Engineering related knowledge transfer
- Serving as national digital repository for high-speed rail related transportation development
- A potential testing ground for leading edge transportation research or sustainable transportation institute, and
- A primary beneficiary of stronger ties to the more populated regions of California.

High-speed rail will complement the University's plan for build-out to increase capacity.

**4. Funding requirements?**

UC Merced's academic programs are designed to focus on research and innovation. High-speed rail provides a critical linkage to expanding the reach of its students and research. Rapid, daily access to the San Francisco Bay Area and Southern California will reinforce UC Merced's teaching, research and public service mission and enable the University of California to better accommodate access to the system. To reach the full potential envisioned by these goals, resources should be allocated to:

- To facilitate technology transfer between academic innovations at UC Merced to the project
- Developing relationships with UC Merced Career Services to identify promising student talent who could help the rail authority meet the demands of designing, planning, administering the system
- Enable the creation of student/private sector internships with students
- To develop and maintain a digital repository dedicated to modern transportation planning in partnership with UC Berkeley's Institute for Transportation Studies

- To host on-site conferences and exchange information related to sustainable transportation planning
- Academic research that can benefit the evolution of high-speed rail in the United State and California.

**5. What current/planned programs at UC Merced would be advantageous to students that might seek employment in the high speed transportation sector?**

UC Merced currently offers approximately 20 undergraduate majors and 13 graduate programs. From Mechanical Engineering to Materials Sciences to Management, UC Merced can be a ready pipeline for the significant number of public and private-sector jobs that will be responsible for operating and maintaining the system. UC Merced has tailored its academic program to fields with the potential for long term global impact. Information regarding UC Merced's academic focus can be found at: [www.ucmerced.edu/academics](http://www.ucmerced.edu/academics)

Several programs that will have relevance to the high-speed transportation sector include engineering, environmental, computer science, biology, and even political science. UC Merced could be a beacon for the Central Valley, and though located in a rural region, high-speed rail would give the university connectivity to SF and LA.

**6. How is the University engaging students in high-speed rail planning efforts?**

UC Merced boasts numerous student groups that provide ideal venues for future student engagement in the program. The Engineers for a Sustainable World (ESW) chapter at UC Merced is a student organization promoting sustainability through engineering. The group's goal is to expose students to aspects of engineering projects and to work done by professors and private sector professionals. A long-term partnership with UC Merced engineering or student sustainability organizations is a readymade student engagement opportunity.

**7. What would a cooperative process between the University and the Authority (and other organizations such as WIBs and unions) look like?**

The University educates the faculty of the future; as such it could develop high-speed rail scholars and build a scholarship program for undergrad and fellowship program for grad students and presidential fellows. These fellows could then give back to the academic community if UC Merced hires them to teach at the University.

**8. How can the University leverage its strides in alternative energy for high-speed rail opportunities?**

There is potential for a University-sponsored solar project that could feed into high-speed rail.

**9. What course structure changes/course offerings might take place to enhance contribution to new high-speed travel technology?**

At the graduate level, it's about establishing the fundamentals first, because it's easier to change the applications. Research agenda of faculty aligns with where the funding is and the classes therefore, naturally have that aspect. Since students and faculty will be engaged in a subject matter that impacts their community, they'll be able to feel the tangible results of their work.

**10. What technology and environmental projects that are currently being worked on at UC Merced might be useful for high-speed rail design now and in the future?**

Lifecycle analysis of a system is particularly relevant. This involves trying to track down the entire manufacturing process and identify the long-term model for managing the asset.

**11. What sorts of high-speed rail opportunities will give UC Merced a competitive advantage against other UCs? How will improved connectivity benefit the university?**

The work the University has done on lifecycle analysis will be beneficial, in addition to the university's pilot intermodal study.

**12. How might the university go about seeking out internship opportunities for its students?**

Only 23 percent of current students have an internship, and that includes on-campus research. There will be demand for internships, especially in the area of high-speed rail.

**13. Are there any other sources of data that you think may be valuable for us to incorporate into our analysis?**

UC Merced's planned growth trajectory anticipates 10,000 students by 2020 and an ultimate build out of 25,000 students. Current enrollment planning data and information can be found at:

<http://2020project.ucmerced.edu/resources/long-range-enrollment-plan> Although located in the San

Joaquin Valley, UC Merced attracts more than 50% of its students from outside the region and will continue to attract students from throughout the entire state. Data regarding geographic places of origin for UC Merced students can be found at:

<http://ipa.ucmerced.edu/docs/Undergraduates/Geographic%20Origin.pdf>

**14. General information about UC Merced demographics can be found at:  
<http://ipa.ucmerced.edu/student.htm>**

The university recently opened its Blum Center for Developing Economies at UC Merced, which will focus on the Valley as a developing economy and its future prosperity.

**15. Is there anything else you would like us to know about that has not yet been discussed in this interview?**

Like California High Speed Rail, UC Merced has the potential to have a transformational impact on the social, economic and environmental wellbeing of the San Joaquin Valley. The successful tandem growth of

the University and the high-speed rail network will provide mutual benefits for both projects. The University will be able to strengthen its connections with its sister institutions and the communities they serve while the rail network.

Purdue has a program called GEARE, Global Engineering Alliance for Research and Education, which Phillip Woods, the Director of Physical and Environmental Planning at UC Merced helped to establish. The program has an emphasis on a global perspective and making decisions that may go against one's cultural instincts. The need was identified to work on global teams in order to gain this perspective. The program has six different global partners in countries such as China, India, and Germany that allows students to study abroad for one semester and have both an international and domestic internships/research company from a sponsor company. By the time these students graduate, they will have taken 12 credits in a foreign language and spent time abroad to really gain a global design team experience.

This could be a model for a high-speed rail program at UC Merced. UC Merced could partner with another university with similar characteristics in another country for students to experience global collaboration. Having a UC-wide application for a graduate scholar program that would allow students to take courses from different campuses could attract students that would otherwise go to school in another state. There could also be a UC-wide integrated research program. Collaboration could occur at three levels: global, within the UC system, and within smaller state and community colleges.

**Interviewee:** Bonique Emerson, AICP, Supervising Planner, City of Fresno

**Date/Time:** May 19, 2014, 9:00 am

**Purpose:** To better understand the station area planning study that is currently underway, opportunities Fresno sees for the station, and how high-speed rail has helped spur/shape/support the wider planning efforts that are going on.

**Questions:**

**1. What does Fresno envision for the area surrounding its station? How is this similar or different to the current context of the area?**

The City is planning to enter into a contract with a consultant to begin the Station Area Master Plan process. The Master Plan is intended to provide a vision for the Station Area that builds upon the City's plans and policies, while maximizing the long term benefits and to identify strategies for future development while supporting the station's urban setting, operations, and passenger access, parking and intermodal connectivity.

The City envisions a more vibrant environment than what currently exists in the station area, but wants the assets of the neighborhoods, including areas such as the Chinatown region, to be embraced. The station will have a main entrance on both sides, which will open up to G Street and towards the Fulton Mall. The City Council has approved opening the Fulton Mall to traffic and there is hope this will help with revitalization. The other side of the station will open up to G Street where Chinatown is located, which is a struggling area but the area has potential and there's a strong sense of community. There are those in the neighborhood who have felt like they have been left behind, but a focus of the station area plan is how Fresno can revitalize Chinatown while keeping the character of the neighborhood. There are plans to increase residential development and it is hoped that there will be a range of housing types in the downtown area in the future. There are also hopes that the station will become a hub for different types of industries.

**2. How has the station planning effort changed the overall downtown planning efforts for Fresno?**

There has been an effort underway for the past five years to develop new plans and a form-based downtown development code, both of which have not changed much because the City is already anticipating the allowance for more intense growth in the area. This new plans and development code is close to adoption. The station presence has factored into the development of this plan for several years now. As the station became more of a reality, the downtown plan tried to anticipate the station and incorporate its impacts, but some minor changes will come from the station area plan.

**3. What station planning efforts are underway (including the Station Area Plan)? What stakeholders are involved in this effort?**

See answer above. There is a committee who has been involved in the development of the downtown plans and there will be a considerable outreach to ensure public involvement as part of developing the station area master plan.

There has not been a committee formed for the station area plan, but the scope of work calls for a committee, which will include residents in the area, advocates, business owners, etc. The usual downtown stakeholders will be involved, but there is a desire to reach out to Chinatown to ensure no part of the community feels left out. Input from all the stakeholders is vital to the process.

**4. Are there any challenges the City has faced for station area planning?**

The station area planning process has not yet begun. The biggest challenge is timing and anticipating things that are not set in stone yet. When working with business owners that are impacted, it has been difficult because the high-speed rail project is a moving target and there is still a lot of uncertainty. It's hard to plan around something when the details are still being worked out. Consensus between property owners, business owners, residents, and advocates may also be a challenge. These stakeholders will have different perspectives and different wants and needs. There is a vocal community in Chinatown who feels that their needs have been overlooked in the past.

**5. Are there any innovative mechanisms the City is employing for station area development (e.g., zoning, developer incentives, etc.)?**

These will be developed as part of the station area master plan. We are open to any suggestions.

In refining the downtown development code, the city is trying to identify any final tweaks. In Chinatown, there is a three-story maximum placed on new buildings. Since Chinatown will be adjacent to the station, this would restrict more intense development. Although the City does not envision the area to have high-rise buildings, the draft code was changed to allow for five stories. There will be more input from experts that have been involved with HSR when the station area master plan process begins to determine whether this change to five stories is appropriate.

**6. How do these efforts help shape the wider planning efforts going on for the project?**

Incentives could be key for getting the type of development we want in the area. These efforts will ensure planning for development downtown synchronizes with the station area plan.

**7. Has there been a qualitative or quantitative analysis/estimate on how the station will impact downtown businesses?**

Not yet. This will be part of the station area master plan.

**8. What trends might this bring forward to mitigate urban sprawl and minimize the loss of agricultural properties?**

One of the goals is to make the area an attractive area for people to live and want to live by prioritizing infill development to achieve this. Downtown Fresno consists of mainly office buildings, with a little bit of retail and residential—it lacks the downtown feel. After 5 pm on the weekdays and on the weekend, there is a lot less people in the downtown area but there is hope that the station will provide vitality.

The station will be an incentive to a lot of people who may want to commute to LA or the Bay Area and if downtown is attractive and livable, many of these people will want to live close to the station. This will

help to minimize urban sprawl and help build on the City's overall goals of focusing on infill development. However, there is another view that the station may intensify urban sprawl if Fresno becomes a bedroom community for Bay Area commuters.

**9. Are there any other sources of data that you think may be valuable for us to incorporate into our analysis?**

No.

**10. Is there anything else you would like us to know about that has not yet been discussed in this interview?**

None.

**Interviewee:** Layla Forstedt, Acting CEO/President, Fresno/Clovis Convention & Visitors Bureau

**Date/Time:** April 30, 2014, 11:00 am

**Purpose:** To explore what high-speed rail could mean to tourism (including Yosemite) for domestic and international visitors through a Fresno gateway, utilizing the Fresno station and an intermodal connection through State Route 41.

Fresno is located in the center of one of the most agriculturally rich areas of the world and it is the easiest access point to the Yosemite Valley. These two advantages combined can enable Fresno to be a center for new entrepreneurship business designed for tourism.

**Questions:**

**1. How will high-speed rail help promote a strong local economy and provide opportunities to help businesses prosper and grow?**

The Fresno/Clovis Convention & Visitors Bureau (FCCVB) serves as a county marketing organization for the greater Fresno County area. The high-speed rail system can assist in attracting both domestic and international visitors to the many venues the region has to offer. The Fresno/Clovis Convention & Visitors Bureau, if provided the opportunity to have a very proactive visitor center at the station, would offer a range of services to the many visitors that will be coming through. The system could be a catalyst to bring this new group of mobile domestic and international visitors to the many venue opportunities in the region.

**2. What is the general sentiment that businesses in Fresno County (and the larger San Joaquin Valley) have about high-speed rail?**

Visitor-oriented businesses recognize the potential of increased revenues as high-speed rail provides connectivity and enhanced mobility to both domestic and international visitors and a substantial increase of visits to the area for either business or pleasure reasons. The Fresno/Clovis Convention & Visitors Bureau is a member of the Western Association of Convention and Visitors Bureaus, which helps recognize the many opportunities of tourism locally and in the western region.

**3. What are the most current visitation statistics for visits to Yosemite via Fresno?**

The exact statistics are available in the visitation studies by the National Park Service but it is estimated that the parks contribute \$1.5 billion annually to the Central Valley and 41 percent of visitors are staying outside the parks.

**4. What are other tourism opportunities available in the region other than the national parks? Are there tourism opportunities Fresno is trying to grow and capitalize on?**

Agri-tourism is a huge opportunity for the region. As visitors become more aware of how enormous the California agricultural industry is and how imperative it is to the food supply domestically and internationally, it will spur even more visitation to the Valley. Fresno County is the number one agricultural county in the United States and grows more than 350 types of crops (Fresno Farm Bureau,

2014). Sports and sport-related visitation may be the number one tourist attraction currently in Fresno County. As the high-speed rail project becomes more active, it very likely that it will lead to the enhancement of more activities in the medical sector due to specialty services and medical education opportunities available in the Fresno area.

**5. How will the high-speed rail project impact tourism? Are there some areas that are anticipated to be impacted more than others? Which are they?**

It is very possible that sport events could be greatly enhanced due to activities in the parks where bicycle riding and other sports take place. Golf may be enhanced due to weather and venues and general sport activities may be enhanced due to infrastructure that is already in place, such as the SaveMart Center and Convention Center.

**6. What are the opportunities to bolster tourism and capitalize on the increased connectivity from the project?**

The proposed visitor's center (refer to #1) at the new planned Fresno station is one of the best potential venues for maximizing visitation and services for the expansion of tourism to the Fresno region. The facility would act as a "one-stop shop" and embrace the latest technological and public services tools available to make sure every visitor feels welcome and is introduced to all the venues and services that are available. HSR will provide more cost effective travel for convention attendees making Fresno County an even more desirable as a centrally located convention destination.

**7. Do you see growth opportunities in agri-tourism with HSR?**

It takes a lot of cooperation for agri-tourism to be successful and to flourish. There is a substantial amount of agri-tourism now and it could be expanded by educating venues (i.e., growers and processors) on how to capitalize on the process of raising fresh food and how to advertise this to visitors. Agriculture will need to have assistance on how to handle visitors and how to properly plan and manage the risks in the areas of service, liability, insurance, etc.

**8. What are some anticipated impacts of the project on the hospitality industry?**

The challenge will be how to manage overall growth in the tourism sector resulting from both domestic and international visitors.

**9. Are there any other sources of data that you think may be valuable for us to incorporate into our analysis?**

See the References section below.

**10. Is there anything else you would like us to know about that has not yet been discussed in this interview?**

None.

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**Interviewee:** Mike Dozier, Executive Director of Community & Economic Development, Fresno State University (FSU)

**Date/Time:** April 22, 2014, 2:00 pm

**Purpose:** To understand regional coordination effort to maximize the benefits of high-speed rail for the entire region—and the gaps that may exist in that effort.

**Questions:**

**1. What is the extent of current regional coordination and communication?**

There is an extensive effort and multiple consortiums in the Central Valley region that communicate and share information very efficiently and proactively. These consortiums have cross-participation by the many partnering agencies in the area. The Fresno State Office of Community and Economic Development (OCED) acts as a hub for many of the consortiums and is the place of central operations for some including the San Joaquin Valley Partnership (Partnership), Broadband Consortium (SJVBC), SJV Housing Collaborative (SJVHC), Community and Regional Planning Center (CPRC) Regional Industry Cluster Initiative (RICI), and SJV Development Center (RDC).

**2. Which consortiums do you currently participate in? Briefly describe each.**

The OCED is involved in most of the consortiums in the region. The following is a brief description of each:

- *Partnership:* The Partnership is an unprecedented public-private sector partnership between the Valley and the State of California. It was created in 2005 to address the Valley's persistent economic, environmental and social challenges and disparities as compared to other regions in the state and nationally. While acknowledging the statewide and national significant contributions of the Valley, it was essential to recognize the necessity to improve the pathway for improving the quality of life and other socioeconomic opportunities in the region. The primary goal is to connect, collaborate and advocate for the San Joaquin Valley. The effort brings together leaders and experts committed to the same purposes of sustainable economic development, responsible environmental stewardship and human advocacy. The vision focuses on providing a world-class region with a diversified economy, a healthy environment and a higher quality of life for all residents. Work groups each focus on the top priority areas of advanced communications, air quality, economic development, energy, health and human services, higher education and workforce development, housing, PreK-12 education, sustainable communities and water quality and supply reliability.
- *SJVBC:* Is to facilitate the deployment and utilization of advanced communication services and information technology throughout the region.
- *SJVHC:* To identify regional solutions to promote affordable housing through dialogue among state, federal and local stakeholders.

- *CPRC*: To facilitate the dissemination of technical assistance, consulting, and support to the regional stakeholders to shape the economic future for the region. These services can be for the collaborative stakeholders or by contractual services to others requiring assistance.
- *RICI*: The goal of the project is to support regional economic performance, sustainability, and shared opportunities for Valley residents, businesses and communities in the areas of manufacturing, energy, water, agriculture, logistics, construction and health care. The collaborative brings together private sector businesses and service providers in an effort to identify possible gaps in the common goals.
- *RDC*: The collaborative acts as a hub to provide technical assistance for public agencies in small and underserved communities by connecting them to experts who can provide specialized consulting to which they may not otherwise have access. The services provided include business services, clean energy, economic development, finance, grant writing, health and human services, housing, nonprofit capacity, planning, project design and construction, trade development, transportation, and water infrastructure.

**3. What makes a consortium effective? Of the consortiums you are a part of, what works well? What does not work well?**

The most important factor is to keep people involved and insure they feel ownership in the effort. Understanding of purpose and being able to measure outcomes are essential to have continued support by all members. A foundation of trust, follow through, and credibility are critical for sustainable successes.

**4. How can participation in current consortiums and coordination between community colleges, organizations, etc. be improved? With which organizations will coordination be key?**

They have been very involved and it comes down to keeping the channels of communication and understanding open and active. The community colleges have been fairly successful in the region in consortium efforts especially in the areas of worker education and readiness.

**5. Are there opportunities to share resources between the different entities?**

Yes there is and that has been one of the positive outcomes of the types of cooperation that has taken place here in the valley. Information is one of the most important resources to be shared.

**6. Are there opportunities for partnerships and collaboration between different entities for workforce programs and research programs/studies?**

There are numerous examples of shared research efforts including the agriculture value added white paper project that was completed and a number of others including RICI and the C-6 grant that the community colleges received to address workforce issues in the emerging industries.

**7. What are current obstacles to regional cooperation to enhance the opportunities on the high-speed rail project?**

The biggest obstacles currently tend to be political and a feeling of uncertainty by some over whether the project will actually happen. There have been some entities and organizations that have stayed very active while others have not. The further one gets from the core of activity the more the possibility of skepticism or lack of reality can settle in.

**8. How can other cities/counties be made to feel more inclusive in the high-speed rail project planning effort?**

This is a constant challenge by all involved but it does require willingness by the particular agency to desire to stay engaged and understand the process that is currently taking place. Hopefully the current interviews and meetings that have been held for this research will help enhance the ability of those that have felt left out to re-engage their agencies and themselves.

**9. Are there any other sources of data that you think may be valuable for us to incorporate into our analysis?**

The San Joaquin Valley Goods Movement Study and the Workforce Needs For Public Infrastructure Projects.

**10. Is there anything else you would like us to know about that has not yet been discussed in this interview?**

None

**References:**

The San Joaquin Valley Interregional Goods Movement Study: <http://sjvcogs.org/goods.html>

The San Joaquin Valley Regional Cluster Analysis and Action Plan: [http://sjvpartnership.org/wp-content/uploads/2013/03/SJV\\_RegionalIndustryClustersInitiative\\_Plan\\_Sep2012.pdf](http://sjvpartnership.org/wp-content/uploads/2013/03/SJV_RegionalIndustryClustersInitiative_Plan_Sep2012.pdf)

**Interviewee:** Glen Morris, President & CEO, Visalia Chamber of Commerce

**Date:** April 14, 2014, 10:00 am

**Purpose:** To understand what high-speed rail could mean for tourism (with the Sequoias and Three Rivers as prime destinations) for domestic and international visitors through the Hanford Station and an intermodal connection through State Route 198.

**Questions:**

**1. How will high-speed rail help promote a strong local economy and provide opportunities to help businesses prosper and grow?**

The Visalia Chamber of Commerce is always looking for opportunities to create jobs and attract businesses that are ready and able to spend money in the tourism sector. Convenient and efficient connectivity have been the primary drivers of increasing tourism and mobility in the region, as well as the ability for the workforce to obtain the skills needed for higher wages. The Visalia Chamber and the Visitors Bureau work very closely together but have separate funding sources and staff. The joint effort by both parties has been met by a fairly engaged community, which has resulted in a very vibrant downtown area (focused mostly on office space and entertainment venues rather than retail) and has helped to develop a dual modal system and the successful Mooney Boulevard retail corridor.

**2. What is the general sentiment that businesses in Visalia and Tulare County (and the larger San Joaquin Valley) have about high-speed rail?**

Visalia has been engaged in the high-speed rail project for several years and when the process first began, community leaders were focused on the rail alignment and a potential station in the area. There has been a general sentiment that if the state was going to take on such a large-scale project that Visalia should stay engaged. There has been a commitment to ensure that Visalia is not on the sidelines, but as time has passed, there has been a growing attitude of skepticism that the project will not happen by some people of the general community.

**3. What are the most current visitation statistics for visits to the Sequoias via Tulare County?**

The NPS provides the general statistics of the three park region in the Central Valley. The Visalia tourism area seems to be more conducive to camping, hunting, and off-road activities due to its proximity to the three park region. The area has been a strong international draw, especially from European and Asian visitors. One of the challenges Visalia is facing is the expectation from foreign visitors that there will be public transportation to connect them to different park destination points. It will be very important to have an inter-modal system in place to facilitate efficient movement to the tourism sites in order to maximize tourism opportunities once high-speed rail brings domestic and international visitors to the area.

**4. What are other tourism opportunities available in the region other than the national parks? Are there tourism opportunities Visalia and Tulare Counties are trying to grow and capitalize on?**

There is a children's museum currently under construction in Visalia and Tulare County recently built a farm labor history museum focusing on the culture of various eras and the ethnic communities. Given the diversity of the region both demographically and geographically, there is a commitment to feature and promote the area's culture, natural scenery, music, and art. The Visalia region is very dedicated to promoting what they have to offer to visitors, including new sources of destination opportunities.

**5. How will the high-speed rail project impact tourism? Are there some areas that are anticipated to be impacted more than others? Which are they?**

The impacts of expanded growth opportunities by tourism will be used to help reduce the high unemployment rate in the area. Some individuals are concerned about the increasing demand for labor also increasing the cost of labor. Home builders are interested in promoting the opportunities of connectivity, while others have concerns about the possible bedroom community effect. However, since both the opportunities and impacts will happen over time, there is room for proper planning and adjustment to accommodate these changes.

**6. What are the opportunities to bolster tourism and capitalize on the increased connectivity from the project?**

Connectivity is a major part of the discussion for the Visalia region since bringing in more visitors, either from tourism or business transactions, is good for local businesses. However, what remains a challenge is how the intermodal system can bring visitors to their destinations. If Hanford has a station, it will pose both opportunities and challenges to get people to their ultimate destination and ensure their experience in the Visalia region is entertaining, convenient and efficient. There will be challenges, but the reality of the opportunity will be the driver of finding the right solutions. Connectivity also has the ability to increase the quality of life for local residences, such as improving access to healthcare facilities that are located further away.

**7. Do you see growth opportunities in agri-tourism with HSR?**

Agricultural tourism (or the lack thereof) in the Visalia region is not driven so much by public policy, but more by the size and dynamics of the agricultural industry in the area. There is resistance by many in the industry to open their doors to this type of on-premise visitation. The Visalia area tends to have larger value added crops and operations such as fruit, nut, and dairy operations. These sectors by necessity have concerns for security and privacy due to a number of reasons, including agricultural compliances, dust control, and a number of environmental issues. The Visalia area differs from many other parts of the central region because it tends not to have smaller farms, such as pick-your-own operations. Liability is always a major concern when visitors are allowed on the premise because of safety concerns related to agricultural operations for employees and visitors. The Tulare Farm Show, for example, is not considered by most to be a tourism event because visitors are there for business and they tend not to go out and visit operations in the area unless it is organized by one of the vendors. It is possible to further develop tourism in more controlled environments, such as cheese plants and other processing facilities.

The Visalia area is also very interested in expanding tourism in other areas, such as sport tournament events due to its central location and many scenic enhancements.

**8. What are some anticipated impacts of the project on the hospitality industry?**

Many of the visitors currently come to the area in order to take advantage of the seasonal opportunities, including the beauty of winter and the many outdoor activities (e.g., lakes and parks) of spring and summer. Even though this is a very positive, since it causes seasonal swings in the number of visitors which can fill the hospitality venues, it also creates voids during the off seasons. If there is a major increase in the number of visitors that come to the region, it will cause pressures on existing facilities, especially hotels. Over the long-term this is very positive, but local businesses will need to adjust to these new opportunities. Hotels tend not to expand capital structures until they see a long-term sustainability of the new business.

**9. Do smaller businesses have the capacity to accommodate increased visitation?**

The businesses in the area will adjust accordingly with retail and are able to adjust much faster than those venues that require long-term capital investment, such as hotels.

**10. Are there any other sources of data that you think may be valuable for us to incorporate into our analysis?**

The resources provided by the Visitors Bureau are fairly comprehensive and the Chamber and other promoting agencies in the area utilize the materials to quantify opportunities and promote new business strategies.

**11. Is there anything else you would like us to know about that has not yet been discussed in this interview?**

None

**Interviewee:** Sunne Wright McPeak, President and CEO, California Emerging Technology Fund (CETF)

**Date/Time:** April 23, 2014, 3:00 pm

**Purpose:** To understand the CETF's work on closing the digital gap in the Valley, how it might be possible to utilize high-speed rail rights of way to help with that, and other potential technologies emerging from the high-speed rail program.

**Questions:**

**1. What efforts has the organization taken to close the digital gap in the San Joaquin Valley particularly in the rural areas that lack broadband infrastructure? What sorts of programs/investments are in place?**

CETF is performance-driven and focused on outcomes, giving special attention to those regions with the lowest broadband deployment and adoption rates. That includes the San Joaquin Valley along with Los Angeles and the Inland Empire. CETF accepted the Strategic Action Proposal (Plan) from the California Partnership for the San Joaquin Valley (SJVP) as the base "strategic plan" and made an immediate investment in 2007 (first year of CETF operation) of \$200,000 in the SJV to UC Merced to further telehealth-telemedicine in the region.

CETF also made a grant of \$633,000 to a consortium in the City of Firebaugh (involving the school district and West Side Technology Center in partnership with Greenlining Institute and the California Community Builders for the San Joaquin Villas affordable housing project) to further distance learning and broadband adoption. CETF then worked closely with the SJVP to shape the State-CPUC policy and rules for implementation of the California Advanced Services Fund (CASF)—a unique State-sponsored fund to subsidize broadband deployment and adoption. A major broadband deployment project in the SJV (CVIN) is a beneficiary of CASF and ARRA funds.

Most recently, CETF provided a grant of \$600,000 to SJVP (SJV Broadband Consortium through Fresno State) to promote broadband adoption. CETF has also worked with various school districts to encourage the use of technology. CETF has developed an effective program to close both the Achievement Gap and Digital Divide called School2Home (see attached Overview), the functional equivalent of the 10 Core Components of which should be embraced by all districts in implementing Common Core Standards.

CETF has looked at the SJ Valley Partnership as an example of what is needed and encourages the rest of the state to form regional efforts for broadband expansion. Since local officials have embraced the broadband efforts it would be positive for the high speed rail program to facilitate the expansion through possible right-of-way cooperation.

**2. What are the impacts of improving broadband access to residents in the San Joaquin Valley?**

The Digital Divide is just another manifestation of the economic divide and the opportunity divide. Low-income residents are being left farther behind in a digital world if they don't have affordable broadband and computing devices (digital literacy). Data shows that the availability of high-speed broadband accelerates economic development. Availability of trained workforce with Digital Literacy ICT (Information and Communications Technology) skills spurs employment.

CETF encourages all regions and jurisdictions to be strategic and to leverage all economic development opportunities (such as HSR) to advance broadband deployment and adoption. It is important that all counties and cities adopt appropriate policies to facilitate broadband deployment and adoption (see Resources Guide for Local and Regional Governments). Broadband also is “green strategy” to reduce impacts on the environment by adding to the “mobility” tools (see attached Policy Brief).

**3. Are there funding vehicles in place that might be used to assist cities and or communities with gaining broadband access?**

Yes, please see Resource Guide and CASF.

**4. Does CETF see any strategic opportunities to leverage the high-speed rail project to increase broadband access? What are they?**

CETF believes it should be an explicit policy of the State to incorporate broadband deployment into all major infrastructure projects (see attached CETF policy recommendations). High-speed broadband—actually fiber—should be deployed in the high-speed rail corridor and all stations should be model “smart villages” or “digital hubs.” It is believed that high-speed rail should accommodate the internet services within the right of way as this would add to the backbone for broadband to a wider constituency and the Authority should call upon the rest of the stakeholders in the region to actively participate in the peer review of such a commitment.

**5. Are there any other sources of data that you think may be valuable for us to incorporate into our analysis (e.g., percentage of San Joaquin Valley population that does not have broadband access, progress that has been made, etc.)?**

The CETF Annual Report and the attached briefing to the U.S. Senate regarding data on broadband adoption SJV (Central Valley area used by PPIC) are excellent resources. See CPUC maps for broadband adoption. While all data sets have challenges, the overall conclusion from this information is that more work is needed to meet the broadband deployment and adoption goals for the SJV: HSR offers a pivotal opportunity to advance those goals which will spur economic development in the region. The most important action is for SJV and high-speed rail leaders to make Digital Inclusion an explicit policy and to set quantitative objectives for broadband deployment and adoption.

**6. Is there anything else you would like us to know about that has not yet been discussed in this interview?**

CETF is available to discuss the particulars about how to accomplish the above. Including broadband into high-speed rail is a priority for several State policymakers. It would also be constructive to encourage engagement at the congressional level to garner support for a more strategic approach to surface transportation legislation, one that includes high-speed internet capabilities in all infrastructure planning. CETF is advocating that legislative leaders consider making it a requirement for infrastructure projects to give serious and deliberate consideration to the integration of broadband capabilities in all infrastructure planning and projects.

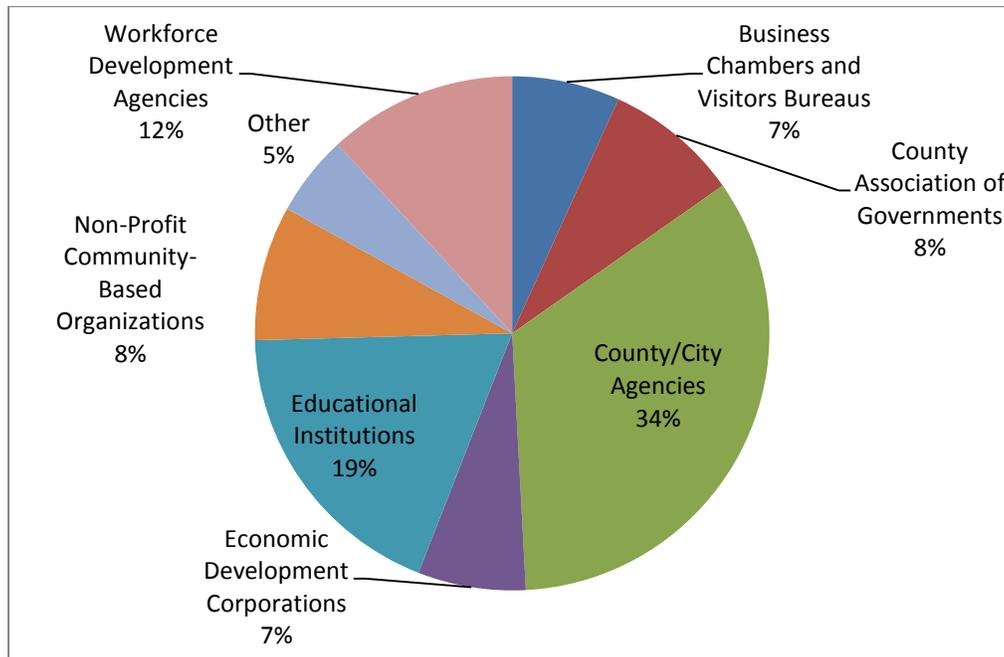
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## APPENDIX F—LIST OF ROUNDTABLES ATTENDEES AND INTERVIEWEES

### Organization Representation

The following graphic breaks down the different organizations that all roundtable attendees and interviewees represent.



### Roundtable Attendees

Region	Name	Organization
Madera 12/3/13	Jim Chin	Madera Community College Center
	Tracie Contreras	Madera Workforce Investment Board
	Jan Dekker	Reedley College
	Mike Dozier	Fresno State
	Julie Herd	Madera County Economic Development Corporation
	Mattie Mendez	Community Action Partnership of Madera County
	Jim Taubert	Madera Redevelopment Agency
	Dylan Stone	Madera County Transportation Commission
Fresno 12/4/13	Tony Boren	Fresno COG
	Lee Ann Eager	Fresno Economic Development Corporation
	Bonique Emerson	City of Fresno
	Randy Ghan	FMTK—Central Labor Council
	Ismael Herrera	OCED at Fresno State
	Deborah Ikeda	Willow International Community College Center
	Bernard Jimenez	Fresno County

Region	Name	Organization
	Blake Konczal	Fresno Regional Workforce Investment Board
	Wilma Quan-Schechter	City of Fresno
Merced 1/22/14	Richard Cummings	University of California, Merced
	Jim Andersen	Merced College
	Nara Narahari	University of California, Merced (School of Engineering)
	Karyn Dower	Merced College
	Oksana Newmen	Merced County Planning
	Mark Hendrickson	Merced County Planning
	Robert Lung	Merced County Planning
	Marjie Kirn	Merced County Association of Governments
	John Bramble	City of Merced
	Robert Morris	Merced County Workforce Investment Board
	Ben Duran	Great Valley Center
	Holly Owen	City of Livingston
	Scott McBride	City of Atwater
	Tulare 1/23/14	Jake Raper
Sandi Miller		Tulare County Workforce Investment Board
Michael Washam		Tulare County Resource Management Agency
Carla Calhoun		Community Services Employment Training/Employment Connection
Craig Plath		Community Services Employment Training/Employment Connection
Carlton Jones		City of Tulare
Louann Waldner		College of the Sequoias
Christine Chavez		Tulare County Association of Governments
Christine Statton		College of the Sequoias
Kern 1/24/14	Suzanne Forrest	City of Shafter
	Sam Aunai	Taft College
	Brad Bernhart	Community Action Partnership of Kern
	Steven Teglia	City of Bakersfield
	Norma Rojas-Mora	Housing Authority
	Jeremy Tobias	Community Action Partnership of Kern
	Doug McIsaac	City of Bakersfield
	Dan Hoyt	CHSR Project Management Team
	Jim Eggert	City of Bakersfield, Planning
	Rob Ball	Kern Council of Governments
	Evelyn Young	California State University, Bakersfield
Richard Chapman	Kern Economic Development Corporation	
Kings 2/5/14	Joe Machado	Citizens for California High-Speed Rail Accountability
	Ross Browning	Citizens for California High-Speed Rail Accountability
	Karen Stout	Citizens for California High-Speed Rail Accountability
	Jeff Garner	Kings Community Action Organization
	Cliff Ronk	Quad Knopf

Region	Name	Organization
	John Lehn	Kings Economic Development Corporation/Kings County Job Training Office
	Jeff Laws	City of Lemoore
	Steve Brandt	Quad Knopf (Hanford/Lemoore)
	Rick Joyner	Quad Knopf (Corcoran)
	Bob Hoskins	Housing Authority Kings County
	Terri King	Kings County Association of Governments
	Judy Holwell	City of Lemoore
	Jay Salyer	Kings EDC
	Chuck Riojas	FMTK Building Trades
	Kevin Tromborg	City of Corcoran
	Mike Dozier	Fresno State
	Frank Oliveira	Citizens for California High-Speed Rail Accountability
	Regional 2/6/14	John Lehn
Robert Morris		Merced County Workforce Investment Board
Matt Leedy		Fresno Regional Workforce Investment Board
Michael Washam		Tulare County Resource Management Agency
John Fitzer		Madera Center
Bobby Kahn		Madera County Economic Development Corporation
William McConas		Fresno County Economic Development Corporation
Tracie Contreras		Madera Workforce
Sandi Miller		Tulare County Workforce
Mark Hendrickson		Merced County
Robert Lung		Merced County
Chuck Riojas		FMTK Building Trades
Ron Taylor		Merced College
Sandra Caldwell		Reedley College
Tim Woods	Fresno City College	
Small Cities 2/7/14	Alex Henderson	City of Kingsburg
	Jayne Anderson	City of Dinuba
	Nicole Zieba	City of Reedley

## Interview Participants

Name	Title	Organization	Date Interviewed
<b>Al Smith</b>	President and CEO	Fresno Chamber of Commerce	4/30/2014
<b>Antonio Avalos</b>	Professor of Economics	Fresno State University	4/23/2014
<b>Bradley Banks</b>	Communications Engineer	California High-Speed Rail Project Management Team	4/4/2014
<b>Mike Dozier</b>	Executive Director, Community and Economic Development	Fresno State University	4/22/2014
<b>Lee Ann Eager</b>	President and CEO	Fresno Economic Development Corporation	5/8/2014
<b>Bonique Emerson</b>	Supervising Planner	City of Fresno	5/19/2014
<b>Dan Feitelberg</b>	Vice Chancellor, Planning and Budget	University of California, Merced	5/15/2014
<b>Layla Forstedt</b>	Acting CEO and President	Fresno Convention and Visitors Bureau	4/30/2014
<b>Barbara Gilliland</b>	Planning Director	California High-Speed Rail Project Management Team	4/3/2014
<b>Frank Gornick</b>	Chancellor	West Hills Community College	6/13/2014
<b>Dan Hirelman</b>	Dean of Engineering	University of California, Merced	5/15/2014
<b>Dan Hoyt</b>	PMT—Station Planning	California High-Speed Rail Project Management Team	4/3/2014
<b>Blake Konczal</b>	Director	Fresno Workforce Investment Board	4/29/14
<b>Glenn Morris</b>	President and CEO	Visalia Chamber of Commerce	4/14/2014
<b>Thierry Prate</b>	PMT—Ridership/Revenue	California High-Speed Rail Project Management Team	3/24/2014
<b>Phillip Woods</b>	Director, Physical and Environmental Planning	University of California, Merced	5/15/2014
<b>Sunne Wright McPeak</b>	President and CEO	California Emerging Technology Fund	4/23/2014
<b>Evelyn Young</b>	Executive Assistant to the President	California State University, Bakersfield	4/24/2014
<b>Gail Zurek</b>	Tourism and Marketing Manager	Visalia Convention and Visitors Bureau	4/9/2014

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