Interstate 5 Redding to Anderson Six-Lane Project (I-5 RASL) and Multi-Modal Food Hub

Shasta County, Northern California, Congressional District 1
Highway, Bridge and Rail Capital Project: Rural Area
FASTLANE Request: $52,870,000
April 2016

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Cover Page Information Chart

Project Name	Interstate 5 Redding to Anderson Six-Lane Project (I-5 RASL) and Multi-Modal Food Hub
Previously Incurred Project Cost	$3,249,183
Future Eligible Project Cost	$88,540,000
Total Project Cost	$88,540,000
NSFHP Request	$52,870,000
Total Federal Funding (Incl. NSFHP)	$68,920,000
Are matching funds restricted to a specific component? If so, which one?	Yes, see "Cost Estimate" Attachment
Is the project or a portion of the project currently located on a National Highway Freight Network?	Yes
Is the project or a portion of the project located on the National Highway System? • Does the project add capacity to the Interstate system? • Is the project in a national scenic area?	Yes Yes No
Do the project components include a railway-highway grade crossing or grade separation project	Yes
Do the project components include an intermodal or freight rail project, or freight project within the boundaries of a public or private freight rail, water (including ports) or intermodal facility?	Yes
If answered yes to either of the two component questions above, how much of requested NSFHP funds will be spent on each of these project components?	$150K for Renewable Fuel Infrastructure Planning; $42.370M for RR HWY Grade Separation
State in which project is located?	California
Small or Large project?	Large
Also submitting an application to TIGER for this project	Yes
Urbanized area in which project is located, if applicable?	Redding
Population of Urbanized Area?	<200,000
Is the project currently programmed in the: • TIP • STIP • MPO Long Range Transportation Plan • State Long Range Transportation Plan • State Freight Plan	• TIP – Partial Project • STIP – Partial Project • MPO • SLRTP • SFP

FASTLANE 2016
Interstate 5 Redding to Anderson Six-Lane Project (I-5 RASL) and Multi-Modal Food Hub
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a. Project Description: The City of Anderson, as lead applicant in coordination with the County of Shasta, City of Redding and City of Shasta Lake along with the Shasta Regional Transportation Agency (SRTA) and the California Department of Transportation (Caltrans), is pleased to present this FASTLANE grant proposal for the Interstate 5 Redding to Anderson Six-Lane Project (I-5 RASL) and Multi-Modal Food Hub. The Project will replace the fifty-year-old, and dangerously substandard, Interstate 5 (I-5) overcrossing of the Union Pacific Railroad (UP) in Anderson, California while widening I-5 from four to six lanes in the median for 7.9 miles from Redding to Anderson —not only addressing safety concerns, but also sparking community revitalization. The project will incorporate the Far Northern California Consolidated Goods & Freight Hub Study as an independent component into the application, which will incorporate planning for Alternative and Renewable Fuels Infrastructures and an Agricultural Goods Movement Demonstration Project into the proposed project. These improvements will open up other transportation investments in the area, serving an adjacent, recently annexed brownfield area that is slated for redevelopment. (See Map 2: Site Map in "Maps" Attachments)

The total rural project cost is $88,540,000 of which $35,670,000 has been leveraged through the project partnership between the city, the county, SRTA and Caltrans. The FASTLANE request is for $52,870,000, or 60% of the project cost. This project is currently funded through the final design phase. The design, right of way and future construction costs are being funded from contributions from the City, the County, the State Transportation Improvement Program (STIP) and State Highway Operation and Protection Program (SHOPP) funding. The Far Northern California Consolidated Goods & Freight Hub Study will be funded through leveraged local funds while the NSFHP will fund the Planning for the Alternative and Renewable Fuels Infrastructure. See the attached Cost Estimate for additional details.

Spanning the entire west coast of the continental United States, I-5 is the main north-south route in the western United States, and a principal arterial at this location. It runs from Mexico to Canada connecting west coast maritime ports. In addition I-5 is a high emphasis route and part of the National Highway System (NHS) and the Interregional Road System (IRRS). The UP corridor, running parallel to I-5, is the most significant goods and people movement rail corridor in the west coast states. Just south of Anderson, the UP veers off its parallel course and runs under I-5 at the project site. The trains travel at high speeds between a narrow gap of twelve unfortified interstate bridge supports that do not meet minimum safety clearances (See Map 5: Accident Data in "Map" Attachment).

Each day, over 7,800 heavy trucks, 20,000 light vehicles, 1500 rail freight cars, and 2 Amtrak trains pass through this I-5/UP intersect[1]. Traffic at the I-5/UP overcrossing consisting of commuters, interregional travelers, local and long-haul trucks, rail freight, and passenger rail is projected to increase across all travel modes by approximately 50% in 20 years[2].

This portion of I-5 was planned, designed, and built in the 1960s and the facility has aged beyond its design life. Efficient traffic operations on this portion of Interstate 5 are diminished by five existing interchanges that are in close proximity to each other. Interstate 5 was constructed in the mid-1960s with one full interchange and four partial interchanges all within three miles of

[1] SRTA, from the Shasta Regional Travel Demand Model, 2014
[2] SRTA, from the Shasta Regional Travel Demand Model, 2014

each other. These factors combine to reduce the operational effectiveness of the existing four lane freeway in the Anderson/Redding corridor.

In addition, the project will address the precarious transect where I-5 and a major rail line meet at the gateway to California's most northerly metropolitan area. The structure is vulnerable to failure as it does not meet even the minimum vertical and horizontal clearance requirements from the rail. A train derail or protruding item from rail car would cause structural failure. The supports are not reinforced for a train strike in any way. Train derailments and truck-related collisions are all-too-common in the region. The backbone rail and interstate network connecting all west coasts states could be lost in an instant. If that was not bad enough, due to this dangerous overpass and insufficient funding to replace it with an upgrade, adjacent local road improvements cannot move forward, stymying economic development and community revitalization in southern Shasta County—most notably the adjacent City of Anderson. This project is truly a transformative surface transportation investment, catalyzing investment and growth, as well as providing Ladders of Opportunity for the local community and region as a whole.

Locally, the existing infrastructure creates community challenges that go beyond the obvious safety concerns. **There are three challenges or "disconnects" in all.** Each of the three challenges, along with how the FASTLANE program can play the pivotal role in resolving them, warrants the detailed discussion that follows:

Disconnect #1: Separating Residents from Jobs - I-5 and the UP rail line physically divide the community of Anderson, an economically distressed city of over 10,000[3] residents. Anderson lies at the southern gateway to the Redding metropolitan area. **The I-5/UP overcrossing remains the biggest impediment to a larger set of planned transportation improvements intended to connect people to jobs, education, and services.** The I-5/UP overcrossing adjoins the Deschutes Road Interchange to the south. This area, in particular, was especially hard by hit by the collapse of the north state's natural resource-based economy. The **closure of mills and loss of living-wage jobs tied to the declining timber industry have left several-hundred acres of brownfields in its wake**, which Anderson is attempting to redevelop, moving one step closer by a recent annexation (See Map 4: Economically Distressed Area of "Map" Attachment).

SRTA has devoted federal planning funds to study this area because of its rail and interstate access potential. SRTA recently received funding to perform a feasibility analysis for the Far Northern California Consolidated Goods & Freight Hub Study within the proposed project vicinity, which will include the Agricultural Goods Movement Demonstration Project consisting of all aspects of communications, transportation logistics, data collection, and other transactions between project participants. With Anderson's recent annexation leading the way, city services can be extended further east, up to the area of the I-5/UP overcrossing and the Deschutes Road Interchange. Anderson, with backing from the entire region and economic development community, has the resources and will to redevelop those vacated industrial lands and create sustainable, living-wage jobs. The area is beginning to reinvent its economic base but can only complete major redevelopment efforts such as this with improvements to I-5 and the Deschutes

[3] Attachment "Maps", Map 4, Economically Distressed Area

Road Interchange. Caltrans requires the bridge over the UP rail line be widened to accommodate the on-ramps and off-ramps of the Deschutes Road Interchange. UP requires that the bridge be replaced to meet minimum safety clearances. **Because of Union Pacific's "you touch it, you fix it policy," plans to complete the partial interchange at Deschutes Road or widen I-5 cannot proceed**.

FASTLANE Reconnect: The Deschutes Road Interchange will better connect residents to employment and services in Anderson. It cannot be completed until the I-5 RASL Project has been completed. Local governments have created a partnership to leverage most of the needed funds. A FASTLANE grant will provide the missing piece to the finance puzzle. It will be wide enough to accommodate the needed Deschutes Road Interchange on- and off-ramps. The **FASTLANE project will also fix the last broken link** to complete the planned connection of a multi-jurisdictional I-5 widening project through the entire metropolitan area. This will provide reliable access to other job and housing centers to the north, as well as educational institutions.

Disconnect #2: Pinch-Point at Epicenter of Larger Set of Improvements - The substandard I-5/UP overcrossing **obstructs several planned transportation investments** – located to the north, south, east, and west – **from connecting in middle**. (See Map 3: Freeway Expansion Projects of "Map" Attachments) SRTA, as the federally designated Metropolitan Planning Organization (MPO), has been working for 20 years on a series of mainline and interchange projects to improve connections on either side of I-5 and the UP line to promote Ladders of Opportunity. While SRTA and the local agencies have been successful on most fronts, the substandard interstate overcrossing remains the major disconnect. Not only is it an unsafe bottleneck for both the interstate and the rail line, **it creates a formidable physical and financial barrier to planned and needed expansion projects at the Deschutes Road (partial) Interchange and I-5's mainline as discussed above**.

FASTLANE Reconnect: The FASTLANE grant will bring closure to a high-value improvement that cannot otherwise be funded entirely with local funds, nor should it be. This removes the largest financial impediment to connecting a series of I-5 expansion projects through the entire metropolitan area. Over $100 million has already been invested over the past twenty years. The wider overcrossing also allows completion of the Deschutes Road Interchange, to accommodate a two-lane SB off-ramp. Both the interstate and the rail line divide the community of Anderson separating residents from redevelopment efforts and the new jobs it would create. A wider overcrossing will also allow planned double-tracking of the UP line. **The FASTLANE project would be the capstone that will ensure improvements to address system reliability and expansion** for residents, travelers, freight trade, and passenger rail. Economic, industrial redevelopment, and job recovery efforts have been successful to date but the momentum will be lost without the aforementioned mobility improvements.

Disconnect #3: Safety and System Reliability - The I-5/UP

Union Pacific derailment at Interstate 5 in Shasta County, 2014.

overcrossing was designed with light supports that have no railroad crash walls to protect the bridge columns from a hit by a derailed train. In the event of a collapse, a temporary crossing with limited capacity could be put in place in approximately four months, which would cause severe traffic congestion. The current overcrossing fails to meet even the minimum safety standards for vertical or horizontal clearance from the fast-moving UP and Amtrak trains. Derailments are far-too-common in Shasta County. For example, a UP train struck an I-5 bridge support in 2014 just north of Anderson in Shasta County (See Safety Section). This bridge was more modern and damage was minor; however, this served as a wakeup call at the older Anderson overcrossing where safety clearances are worse, other safeguards are non-existent, and people and businesses surround the area. Caltrans estimates that a new structure would take at least four months to complete. With the ensuing traffic jams, noise, access and air quality impacts on Anderson city streets, even the best economic recovery efforts over decades could be undone in an instant. **The best solution is prevention, with a "Fix it First" approach. While sizeable, the investment today will prove wise compared to the cost of a bridge replacement under a disaster declaration scenario.**

FASTLANE Reconnect: The FASTLANE project will meet or exceed the highest standards for horizontal and vertical safety clearances and **virtually eliminate the risk of a catastrophic event**. The bridge will be raised and lengthened, raising the highway profile 10 feet higher than exists today, which would railroad clearance by eight inches, which would restore minimum clearance. Retaining walls will be installed on either side of the rail right-of-way. The proposed new bridge will be 3-span with supports meeting the railroads min horizontal clearances while allowing for a future track. **The investment is an insurance policy that could save the state and UP untold millions in injury and settlement cost, while also replacing a 50+ year-old bridge with one that has a longer design life.**

b. Project Location: The I-5 RASL spans the length of I-5 from PM R11.7 in Redding to PM R3.8 in Anderson. The I-5/UP overcrossing is at 40.441507 Latitude and -122.287842 Longitude (See the Map 1: Project Location of "Map" Attachments). The Project is located at the geographic center and transportation crossroads of California's sixteen-county North State. It is also at the mid-point of I-5, a contiguous highway corridor spanning the western United States from Canada to Mexico with connections to all major west coast maritime ports in-between. **This project qualifies as a rural project** as it is located outside of an Urbanized Area that contains 200,000 or more people. Based on the US Census Bureau, the County of Shasta has a population of 179,533; therefore, it is a designated rural area.

c. Project Parties:

Project Applicant: The City of Anderson is the applicant, with strong support from the County of Shasta, City of Redding and Shasta Lake, among many others. City Manager Jeff Kiser has been part of the Anderson management team for seven years since 2009, serving as Director of Public Works, Director of Community Services, and Assistant City Manager. Prior to coming to Anderson, Mr. Kiser worked for Omni-Means Engineering as project manager specializing in construction management. He also has 15 years of service with the California Department of Transportation; his last several years were served as Caltrans Maintenance Manager. Mr. Kiser has a Bachelor's Degree in Organizational Communications from California State University, Sacramento, and is an International City/County Management Association Credentialed Manager.

SRTA and Caltrans are project partners. SRTA is the planning and political energy behind the project, while Caltrans is the implementing partner. CalTrans has managed successfully California's roads, highways, railways, heliports and other transportation infrastructure for over 100 years. Dave Moore, the Caltrans District 2 Director, will provide the overall management of Project. Dave Moore has been the Acting District 2 Director since April 2015. As District Director, he is responsible for planning and delivering transportation improvement projects in the seven counties (Tehama, Shasta, Trinity, Siskiyou, Modoc, Lassen and Plumas) that make up District 2. He also oversees the maintenance and operations of more than 4,000 lane miles of highways in the second largest geographic district in California. Prior to his appointment, Moore was the District 2 Deputy District Director for Planning and Local Assistance. In that role, he oversaw federal and state transportation funds administered by the 40 local and regional transportation agencies and 10 federally recognized Tribes within the district. Moore is a registered engineer and holds a Bachelor of Science degree in civil engineering from the University of California, Davis and a master's certificate in project management from The George Washington University.

Project Supporters: The project enjoys wide-spread support from diverse interests. Thirteen letters of support to Secretary Foxx are attached[4], a combination of ones provided for FASTLANE VI, as well as several updates. A summary listing of supporters is included on Page 23. The support letters are included in the FASTLANE Attachment "Letters of Support".

The I-5 RASL enjoys broad support with no known opposition (See letters of support included in Attachment "Letters of Support"). The project benefits discussed throughout this proposal are confirmed by numerous letters of support, not only from governmental entities, but also from private industry, trade organizations, and economic development supporters. What's more, the local support is more than talk – it is backed by partnership financial commitments for more than half the project need.

Delivering Agency: As the project is on the federal interstate system, a FASTLANE funding award to the I-5 RASL will be delivered through the Caltrans. Caltrans is responsible for California's Interstate system. In District 2 and in partnership with local agencies, Caltrans has successfully delivered several similar projects on time and under budget including the interstate widening projects in the last decade immediately North and South.

d. Grant Funds and Sources/Uses of Project Funds:

The City of Anderson requests **FASTLANE funds in the amount of $52.870 million, or 60% of the total project cost.** Caltrans – the delivering agency – has included a 15% capital construction cost contingency. The funding plan is shown in the table, below. See the "Cost Estimate" Attachment for additional details.

I-5 RASL Funding Plan (thousands)				
Phase	SubTotal	Funded	Grant Request	% of Total Project
Planning	$310	$160	$150	.30

[4] See FASTLANE Attachment "Letters of Support"

PA&ED	$440	$340	$100	.50
PS&E	$6,640	$3,140	$3,500	7.5
R/W Support	$110	$60	$50	.12
Con Support	$7,410	$2,410	$5,000	8.4
R/W Cap	$160	$90	$70	.18
Con Cap	$73,470	$29,470	$44,000	83
Total	$88,540	$35,670	$52,870	100%

The $35,670,000 of committed matching funds (spent and promised) for this project has demonstrated importance of this project while showing the cooperation and partnerships between the local and State agencies. SRTA has committed $16,050,000 of RIP funds. Caltrans committed $15,920,000 SHOPP (and other funds) while the local Caltrans District has committed $3,000,000 of SHOPP minor funds. The City of Anderson committed $500,000 and Shasta County has committed $200,000.

e. Cost Effectiveness:

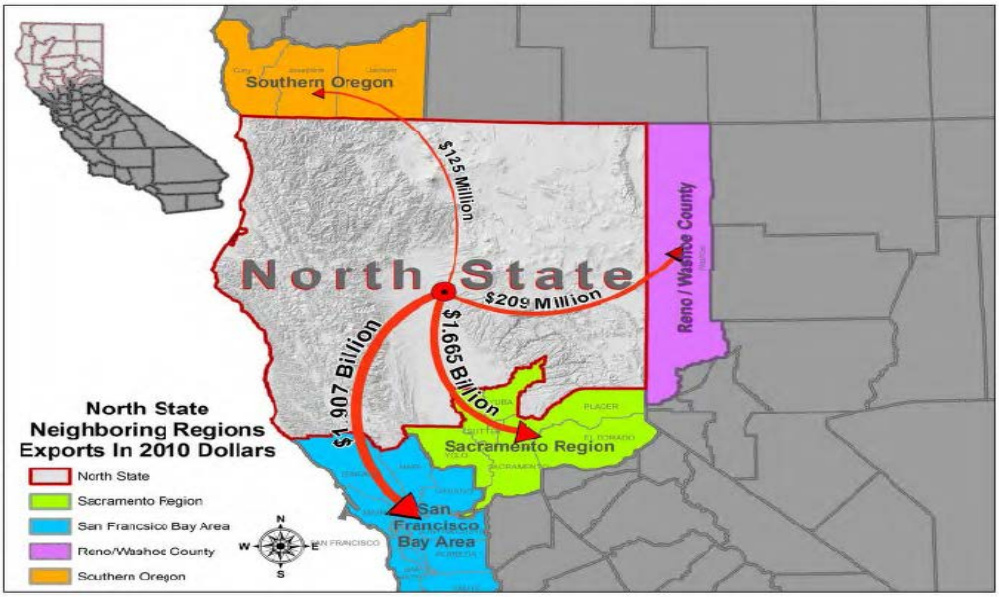
A Benefit Cost Analysis has been completed on the I-5 transportation component of the project, with both 3% and 7% discount rates, and resulted in Benefit-to-Cost ratios of 3.2 and 2.1, respectively, providing an 11.5% return on investment over 7 years in both cases. Any number over one is considered a positive result, the higher the better. However, these ratios include only the transportation component and do not include the other project components, which likely will have significantly higher Benefit-to-Cost ratios and would once quantified raise the overall ratio of the entire project. These potential additional benefits are extremely difficult to quantify today because more planning work needs to be done. As an example of benefit that is difficult to quantify today, currently located adjacent to the food hub site is California's second largest biomass electricity generation plant. This is California's second largest "clean" energy plant, and currently its contract with PG&E for energy off-take expires in 2016, and it is unclear today whether this plant will remain operational after that. The Food Hub and Renewable Energy Infrastructure being planned as part of this project could provide a substantial power demand for this plant which could keep it operating. Not only would this save jobs, continue clean energy production and provide a localized power source for this economic development activity, but it also prevents catastrophic wildfires by consuming fuel which otherwise would remain at risk on the forest floor.

The proposed project is central to a larger joint effort to develop adjacent properties into a multimodal hub serving the greater sixteen-county North State. The food hub study component has been funded with state dollars and will be completed in 2016. This NSFHP request seeks to also fund an additional alternative fuel infrastructure planning process to examine broadening the scope of transportation technologies that this hub, and the multi-county region as a whole, can and should employ in order to achieve long term national efficiencies.

A key competitive disadvantage documented in the North State Transportation for Economic Development Study (2013) is the absence of an intermodal terminal in North State California for the efficient aggregation, wholesale, and distribution of rural commodities, including products of agriculture, ranching, mining, and forestry (See Figures 1 and 2). In food production alone, Shasta County is at the center of an eight-county area that transports products valued at $1 billion per year from 6,400 farms to state, national, and international markets. This study estimates the

regional economic impact of the state highway expansion in the North State would provide between $1.5B and $5.7B in additional output, between $800M and 2.8B in value added and between $400M and 1.5B in wages.[5]

Value of Commodity Shipments from the North State to Neighboring Regional Markets, 2010, NSTEDS, 2013



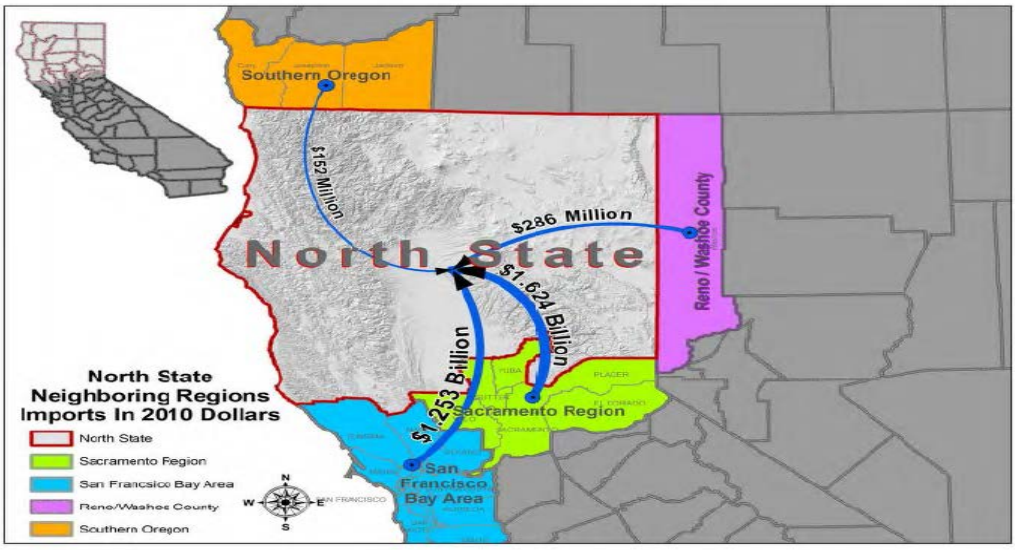
Source: Combination of FAF and IMPLAN data in LEAP tool

Figure 1 Value of Commodity Shipments Outbound

These industries and associated transactions constitute a core component of the region's economy, yet represent only a fraction of previous production levels and potential future economic contributions. For many years, the economy benefited from these industries – the transport and processing of which flowed through mills and other facilities located adjacent to the proposed project site. Such industries served as an economic anchor, helping to create a more diversified industrial job center. Today, there is an effective capping of North State productivity due to transportation infrastructure deficiencies. Producers located in some of the North State's most productive agricultural areas are harvesting large quantities of high-quality food products, but cannot effectively market them because there is no economical way to transport products to market. For the same reason, large tracts of prime agriculture land are lying fallow.

Value of Commodity Shipments from Neighboring Regional Markets to the North State, 2010, NSTEDS, 2013

[5] North State Transportation for Economic Development Study, Exhibit 80, p132: available online at: http://srta.ca.gov/DocumentCenter/Home/View/1043, accessed 4/12/16.



Source: Combination of FAF and IMPLAN data in LEAP tool

Figure 2 Value of Commodity Shipments Inbound

A FASTLANE investment in the I-5 RASL will enable private and public sector partners to move forward with planning and investment in the North State intermodal hub. Through targeted transportation investments and the ongoing efforts to support clustering of related industries, the community and greater region may thrive once again.

The Shasta Rebound: In spite of numerous limitations and deficiencies, Shasta County has many competitive advantages. Compared with the rest of California, the region has lower costs of doing business, including lower taxes, labor costs, and housing costs[6]. The I-5 RASL is located at the geographic center and transportation crossroads of California's sixteen-county North State. It is also at the mid-point of I-5, a contiguous highway corridor spanning the western United States from Canada to Mexico with connections to all major west coast maritime ports in-between. Two major trucking companies recently relocated to the Deschutes Interchange area due to its strategic location. For these and other reasons, the economic value of this facility to the state and national economy must not be underestimated. Figures 1 and 2 above illustrate the magnitude of trade going in and out of the region, mostly by the two corridors this project addresses.

As much of the North State's commodities are exported in raw form, without processing or other value-added economic multipliers, the low cost of doing business in Shasta County presents an opportunity to **fill the raw goods processing gap locally**, and **create spin-off industrial development**. It is critical that the region maintain these opportunities while seeking to address its many economic constraints.

[6] North State Transportation for Economic Development Study (NSTEDS), SRTA, 2013, http://www.srta.ca.gov/140/Transportation-Economic-Development-Stud

The Hub of Prosperity: The City of Anderson has recently taken steps to position the city as the logical center for that development by annexing 385 acres of land pre-zoned mostly as "Heavy Industrial." The area has been designated a "strategic growth area" in SRTA's draft sustainable communities strategy[7]. The property is situated at the junction of I-5 and the UP rail line. In order to facilitate an efficient and wide-reaching logistical solution for this prime industrial property, SRTA has just received funding to conduct a feasibility analysis for the development of a multi-industry intermodal transport hub. The growing number of project partners span public and private interests; the agencies and their roles within the analysis include:

- SRTA – Project Administration and Management
- Superior CA Economic Development District, Inc. – Economic Assessment and Communications/Outreach/Facilitation
- Growing Local (Eight-County Coalition of Agriculture Industry Leaders) – Economic Impact Analysis and Communications
- ProPacific Fresh (North State Food Distributor) – Private Sector Demonstration Partner
- Center for Economic Development at California State University, Chico – Economic Analysis Model
- Caltrans, Transportation/Freight Modeling & Data Branch – Integrate with Statewide Travel Demand Model and Truck County Survey

Using reference models and data in external food hub economic analyses, at this very early stage in our project we estimate that the Northern California Food Hub could reach revenue of $1M by year 3, generating economic impact in the local economy and participating farms of over $1.5M (assuming an economic multiplier of 1.5) and creating approximately 9 net new jobs (assuming an employment multiplier of 1.66). Please note that these are rough estimates based on a model that was developed by Cornell around a case study of a single food hub operating in New York[8], and we will continue refining these economic impact estimates as we gather more region specific data throughout our project.

The vision and goals of the North State Food Fiber Forest and Bio-Fuel Hub are reflected in the following diagram:

[7] Draft SRTA 2015 Regional Transportation Plan, March, 2015, http://www.srta.ca.gov/142/Regional-Transportation-Plan

[88] See http://publications.dyson.cornell.edu/research/researchpdf/wp/2015/Cornell-Dyson-wp1503.pdf

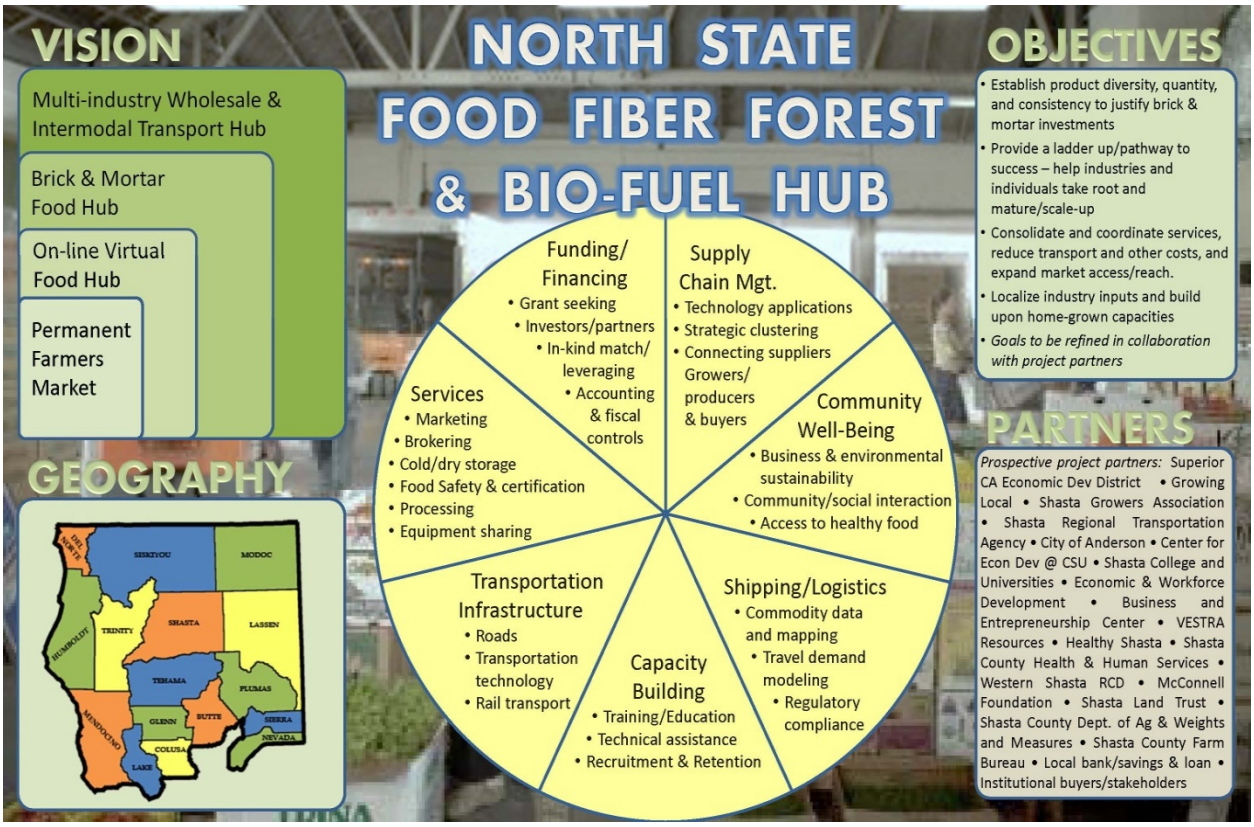


Figure 3 Food Hub Vision and Objectives

Timely Investment: Along with delivery market access to the San Francisco Bay Area and the Sacramento Region, the region has great economic potential. Capturing these economic and job-creation opportunities, directly linked to the I-5/Deschutes Road area, depends on the continued safe, reliable operation of the I-5 and the UP system – and the ability to improve those systems to support a competitive, growing, and sustainable economy.

South Redding Six-Lane Construction, 2011.

If further steps are not taken, transportation models predict future operating conditions will worsen, particularly along I-5. If the I-5 bridge over the railroad is not replaced by 2030, for example, daily vehicle hours of delay will increase by nearly 55 percent [9].

I-5 is unique in the North State in that no economically viable alternate route exists. If the I-5 overcrossing at the project location were destroyed or damaged in a catastrophic event, in addition to the potential loss of life, the general population and businesses relying on the timely transport of goods would incur crippling delays[10]. The resultant daily vehicle hours of delay from a bridge catastrophe are equivalent to the lost productivity of a 500+ full-time workforce.

[9] SRTA, from the Shasta Regional Travel Demand Model, 2014
[10] SRTA, from the Shasta Regional Travel Demand Model, 2014

Fueling Development: This project will immediately create jobs in the construction industry while the bridges are built and the travel lanes added. According to Caltrans' Economic Analysis Branch (April, 2014), the project will create or support 201 jobs per year and add approximately $16.8 million per year to the economy (Gross State Product) during construction years. A completed project will encourage redevelopment of industrial property by private sector investment in land, part of which is "shovel ready." As mentioned, the North State Transportation for Economic Development Study estimates wages added by jobs resulting from economic growth to the region resulting from the state highway expansion component alone to be between $400M and $1.6B between 2010 and 2040.[11]

UP has rail spurs that served the large lumber mill (now closed) just southeast of the project. The rail spur can easily be reactivated and used by an industrial development on the former lumber mill parcel. UP is currently active in the region and runs through Redding, connecting Shasta County with 23 western states.

The project will provide traffic-carrying capacity to support the development of an industrial job center. **Backed by real planning and annexation efforts**, the industrial area served by the project has excellent potential to incubate industrial uses of the new economy, such as the opportunity to provide additional green electric power generation from biomass waste – principally from agricultural production waste from the northern Sacramento Valley.

Such **long-term job-creation** prospects will not go unnoticed in a region where over one in ten civilians over age 18 are **veterans**[12], where the **median household income** is $44,396[13] or 70% of the national median, and where 13.7% of the labor force remains **unemployed**[14].

Quality of Life: The I-5 RASL is at the center of local and regional efforts to boost economic opportunity; improve access to jobs, education, and essential services; and enhance overall livability. The region employs a variety of community-based strategies and initiatives to achieve these goals. Some challenges, such as the substandard I-5/UP crossing, are too monumental for locals to tackle alone without federal assistance. FASTLANE grant funds, when combined with local funds and efforts, will increase livability in the following ways:

- Once a booming area and center of a forest-based industry, the area now has many underutilized industrial parcels with rail and interstate access. To enhance the region's **economic competitiveness**, several parcels have been annexed by the city of Anderson, and grassroots efforts are underway to create sustainable jobs in high-growth industries[15].
- The I-5 RASL Project **invests in existing communities** by creating high-value jobs in proximity to residential development in the city of Anderson and surrounding areas, which offer some of the region's most **affordable housing**.
- The I-5 RASL Project is a designated 'Strategic Growth Area' (SGA) by SRTA's Regional Transportation Plan Sustainable Communities Strategy. SGAs are geographically small

[11] Ibid
[12] Table S2101 of the American Community Survey (2008-2012), available at: http://factfinder2.census.gov
[13] Table DP03 of the American Community Survey (2008-2012), available at: http://factfinder2.census.gov
[14] Table DP03 of the American Community Survey (2008-2012), available at: http://factfinder2.census.gov
[15] See Map 3, Anderson Annexation, Project Description and Location

areas targeted for coordinated transportation and land use planning and investment. Within SGAs, a broad range of smart growth strategies are employed to deliver **affordable and convenient transportation choices** and enhance **community health and well-being**. For example, a sustainable development incentive program will be used to encourage infill and redevelopment on vacant and underutilized properties[16].

- **Timely access to popular destinations** – including community services; vocational training and higher education facilities; and surrounding state and federal recreation areas – will continue to be dependent on I-5. The I-5 RASL Project supports quality of life by tackling the last major bottleneck and obstacle to expanding I-5, resulting in safer and more reliable travel times.
- The I-5 RASL Project is **located at the confluence of local, regional, state, and federal interests**. Federal investment will leverage local transportation funds, representing most of the project's total cost, intended to serve as the impetus for the development of clean energy production. More specifically, the region's efforts to **develop agriculture and forest-based bio-fuel industry** have been thwarted by the lack of a transportation-accessible production facility. The double-tracking of UP rails at the project location, combined with adjacent improvements at the Deschutes Road-Interstate 5 interchange, will provide the transportation infrastructure capacity necessary to transport bio-fuel inputs and outputs in a commercially viable manner.

Environmental Sustainability: The I-5 RASL Project will enhance environmental sustainability in many ways:

- Following a review by the Central Valley Regional Water Quality Control Board, contaminants were documented on the vacated industrial properties currently served by I-5 and UP. The I-5 RASL Project would serve this area planned for brownfield clean up, so that this well-situated property may be reused rather than lie economically fallow for decades to come.
- The project is located in a 'Strategic Growth Area' (SGA) identified in the region's Sustainable Communities Strategy. Within SGAs, a broad range of smart growth strategies are employed to deliver affordable and convenient mobility options; support community health and well-being, **reduce greenhouse emissions**, and preserve the region's environmental integrity. Aside from reducing the air pollution associated with future highway traffic congestion, as projected in the Shasta Regional Travel Demand Model, this project mitigates a hazardous materials disaster. Many of the trains passing through the Shasta region carry hazardous materials, and the loads represent a high risk to trains passing under the I-5 overpass that impedes on the trains' clearances[17].
- Funding this project opens opportunities to move forward with other projects that benefit the environment. For example, one project in the construction queue is a roundabout offering a safer junction for cyclists and pedestrians accessing the outlet mall adjacent to the interstate, or trying to cross I-5 which separates the city.
- Although hazard and disaster mitigation is not always recognized as environmentally sustainable, the project would result in the virtual elimination of a catastrophic event caused by unsafe interstate bridge support clearances from rail operations. The new bridge will be a

[16] SRTA 2015 Draft Regional Transportation Plan, March 2015, http://www.srta.ca.gov/142/Regional-Transportation-Plan

[17] Shasta County Hazard Mitigation Plan, 2011

three-span structure providing **resilience and longevity for the new transportation asset** and for the transportation system as a whole.

- This project will enable the UP to construct a double track and increase service, thus reducing the freight network's dependency on trucks, and fossil fuels.
- Caltrans signed a NEPA Categorical Exclusion that included median widening of the existing structure along withbridge replacement, providing horizontal and vertical clearances, will require amending require amending the documentation; however, none of the adjustments are anticipated to significantly impact the natural, social, and/or economic environment.
- A California Environmental Quality Act Negative Declaration has found that the project will have no substantial negative environmental impacts.

Safety: A train collision with the I-5 bridge over the UP rail line not only halts traveler and freight movement in the area, it also means lost commerce, and the potential for serious injuries and loss of life. The I-5 RASL Project will remove a major vulnerability to a nationally-sensitive freight corridor and the local community. The new bridge meets all rail safety clearances and offers the **safe and reliable multimodal movement of goods and people**.

The Risk: The following current factors, when viewed together, add up to a high risk to the city, region and nation:

1. Non-compliant railroad clearances (see Table 2 below)
2. Trains travel at high speeds in rural areas
3. The transport of hazardous materials along both the I-5 and UP corridors (see Hazardous Materials Section)
4. History of train accidents and I-5 truck accidents near the project site

Table 1 UPRR Clearances (SRTA, Caltrans, UP, April 2014)

UPRR Clearances	Existing	Absolute Minimum	Standard	New Clearances
Vertical	**22'8"**	**23'4"**	**23'4"**	**23'4"**
Horizontal	**17'8"**	**18'**	**25'**	**25'**

Figure 4 Union Pacific train derailment highway bridge collapse, Missouri, 2013.

Figure 5 Union Pacific Train Derailment at I-5 in Shasta County, 2014.

Train derailments occur with less frequency than vehicle/truck collisions on the Interstate. However, given that the **I-5 overpass is non-compliant** with UP minimum clearances, and the cost and danger associated with a catastrophe, the Shasta region wants to **eliminate the**

possibility of a train/bridge collision at this location. The logic that "it has not happened yet here, so it never will" does not hold up. There have been **56 derailments** in Shasta County since records were kept in 1975[18]. An alarming 11 percent of those derailments have occurred **within three miles of the project site**.

Table 2 Data on Derailments near Project Site (Derived from Federal Railroad Administration website, April, 2014. Statistics based off of Shasta County train accidents reported since 1975.)

Number of Derailments within Three Miles of Project Site	Percent Derailments within Three Miles of Project Site
6	11%

Hazardous Materials: Areas of concern in Shasta County are the UP rail line and I-5, which are major interstate transportation routes that pass through the region. Trains and trucks commonly carry a variety of hazardous materials, including gasoline and various crude oil derivatives, and other chemicals known to cause human health problems. The County is exposed to the effects of a major catastrophic hazardous material emergency due to the proximity of these transportation routes to densely populated areas of the city[19]. The infamous Cantara Spill took place just north of Shasta County in 1991. A UP train derailed, killing all life in the Sacramento River for 45 miles. The table below lists the derailments and exposes the hazardous materials risk to the region.

Table 3 Derailment and Hazardous Materials Data (Derived from Federal Railroad Administration website, April, 2014. Statistics based off of Shasta County train accidents reported since 1975.)

Derailments as a Percentage of Train Accidents in Shasta County	Percent Derailments Involving Hazardous Materials
86%	20%

Of critical concern to the Shasta region, is the increased reliance on rail transportation for shipping Bakken shale crude oil. California, as estimated by the California Energy Commission, can expect over a 100-fold increase in shipments, between 2012 and 2016. Next year, in 2016, an estimated **150 million barrels of crude oil** is projected to enter the state by rail[20]. All western rail lines can expect to be impacted, including the UP line through this project. As the project rail overcrossing does not even meet minimum safety clearances, this I-5 RASL proposal addresses safety deficiencies of the railroad overcrossing, particularly in the context of derailments of trains carrying highly volatile materials, like crude oil.

Construction of a new interstate bridge that meets UP clearance standards **greatly reduces the unintended release of hazardous materials**.

[18] Federal Railroad Administration, Office of Safety Analysis, Accident Reports found in April, 2014 at http://safetydata.fra.dot.gov/officeofsafety/default.aspx

[19] Shasta County Hazard Mitigation Plan, 2011

[20] Record Searchlight, "Crude-Carrying Rail Cars Need to be Reined In", May 17, 2015. See Attachment "Rail Crude Oil Shipments" for this, as well as additional, articles on the hazards of increased rail crude oil shipments.

On I-5, there have been 139 crashes within the I-5 RASL Project area from 2002 to 2012. Twenty-percent of these involved heavy trucks, many of which transport hazardous materials.

Worker Safety: Construction of the I-5 RASL Project will provide more room for maintenance workers and first responders to stay out of harm's way by adding wider median shoulders and adding a concrete barrier for the portion of the project limits with a narrower median.

Benefit-Cost Analysis:
The project costs have been prepared using the Caltrans standards for preparing engineering cost estimates for transportation projects. The project traffic operations benefits have been evaluated using modern traffic modeling and operations tools that have been reviewed and approved by Caltrans. Caltrans has upgraded their Benefit-Cost Analysis Model to ensure its consistency with FASTLANE parameters.

Though the benefit-cost analysis demonstrates multiple benefits that the project would bring, it is important to remember that benefits are understated because the state's benefit-cost model currently has no methodology to factor in "what-if" scenarios related to the interstate bridge supports not meeting safety standards. The analysis created shows only the widening benefits from four- to six-lanes of the Interstate, not the benefit of virtually eliminating the chance of a catastrophic accident involving the I-5 and UP mainline corridors. In such a scenario, the I-5 mainline corridor would be shut down, leading to huge traffic delays, lost revenue due to reduced/curtailed goods movement, and public safety and local business issues associated with diverted interstate traffic on city streets not designed for such use. Additionally, the value associated with loss of life, liability, and personal or property injury, cannot be modeled.

Finally, the benefit-cost analysis does not take into account this project opening the door to further economic development—catalyzing investment and growth—within the city of Anderson vicinity, in southern Shasta County. While not factored into the B-C calculations, as mentioned earlier, the North State Transportation for Economic Development Study projects an economic impact of just the state highway expansion, including increased output, value added and wages, to be between $2.7B and $10.2B between 2010 and 2040.[21] The Food Hub is estimated to generate $1M annually within 3 years.

f. Project Readiness:

i) Technical Feasibility:

Caltrans will be responsible for all aspects of project delivery. They have a proven track record with the largest team for delivery of mobility projects in the nation. The project is immediately ready to proceed upon receipt of a FASTLANE Grant, following the project schedule. There is no expectation of project implementation delay. Considering the significance of a FASTLANE award to the ability of the project to be moved forward, any potential implementation delay will be afforded top priority for resolution.

[21] North State Transportation for Economic Development Study (2013), Exhibit 80, p132.

A Project Study Report (PSR) was completed in December of 2011 that studied joining the Cottonwood Hills and the South Redding Six-Lane projects to provide a continuous 15.3 mile six lane facility from the town of Cottonwood to north of the I-5/44 Separation. Three different build alternatives were identified, each adding an additional lane and shoulder in both directions varying by widening to the outside, widening to the inside, and a combination of inside, and outside widening. A Value Analysis (VA) study was commenced in August of 2011. The VA team studied the various alternatives and concluded that widening to the median provided the best assured value for the project.

The existing four-lane facility will be widened from the Deschutes OC to the north of the Smith Road Overcrossing to provide an additional 12-foot lane and 10-foot shoulder in each direction in the median. The Anderson Overhead will be replaced with a new structure meeting the railroad's minimum horizontal and vertical clearances. The existing roadway profile will be raised approximately 8-feet to meet railroad clearance standards for the new overhead. Existing lanes between Deschutes Road and Anderson Creek will be reconstructed at the new profile grade and a cable median barrier will be installed. From Anderson Creek to north of Smith Road, the median will be widened for the new lanes and shoulder. Bridges at Deschutes Road, Anderson Creek, Ball Ferry Road, North Street, and Tormey Drain will be widened in the median. The remaining five bridges will have typical single stage construction. (See Preliminary Design in "Map" Attachments)

The project is being developed according to Caltrans Highway Design Manual standards. The existing nonstandard stopping sight distance along I-5 will be upgraded to current standards. Roadway cross slopes will be improved to current standards.

The project is currently in the design phase, whereas 75% of the design has been completed. The existing ground surface data has been collected and is being used in the development of the proposed design. The project has been modeled using Civil 3D design software to determine grading limits and earthwork quantities. A hydrology study has been completed to determine drainage patterns, and existing and projected design flows. Work has begun on the design for drainage modifications needed to accommodate the increase in impervious area. Appropriate water quality features have been identified and incorporated into the drainage design.

Replacement of the existing South Anderson Overhead is included in the project. An Advanced Planning Study (APS) for the new structure has been completed. The APS identified the type, width and length of the proposed structure, including the structure depth. A preliminary cost, including contingencies, was determined for the new structure.

The structure will be constructed in three stages to accommodate existing traffic. Temporary access roads will be needed for all four quadrants of the railroad crossing. The proposed staging has been developed and the cost for the temporary access, traffic control devices and lane closures are included in the project cost estimate. Existing utilities within the project limits have been identified and the cost for utility relocations are included in the project cost estimate.

The current project costs are based on a preliminary estimate of bid item quantities and current prices. Quantities for the major items of work are based on the preliminary design take-offs.

The cost estimate includes appropriate contingencies for the level of detail in the current design. The estimate includes a 15% contingency, which will be reduced to 5% when the design documents are more complete.

Caltrans has worked closely with UP and has already completed an agreement on design. Caltrans will also coordinate with the City of Anderson to ensure that the new interstate bridge facilitates plans to complete the Deschutes Road Interchange. Engineering and design estimates will be made available to the FASTLANE Team from Caltrans, District 2, upon request[22]. Early and close coordination will be Caltrans' mainstay for this project.

Funding for the project is shown in the following table:

I-5 RASL Funding Plan (thousands)				
Phase	SubTotal	Funded	Grant Request	% of Total Project
Planning	$310	$160	$150	.30
PA&ED	$440	$340	$100	.50
PS&E	$6,640	$3,140	$3,500	7.5
R/W Support	$110	$60	$50	.12
Con Support	$7,410	$2,410	$5,000	8.4
R/W Cap	$160	$90	$70	.18
Con Cap	$73,470	$29,470	$44,000	83
Total	$88,540	$35,670	$52,870	100%

SRTA funds are essentially local funds. They are intended to benefit local agencies like the city of Anderson and Shasta County who are members of the Metropolitan Planning Organization. SRTA will contribute $12,000,000 while Anderson and Shasta County have committed another $700,000 collectively in local traffic impact fees should the FASTLANE grant be approved.

SRTA will provide funding through regional gas tax shares apportioned by the state. These are typically state funds but the project is proceeding with all needed federal clearances. If federal funds are used, federal-approved toll credits would apply to meet match requirements. $2.094 million has already been obligated for NEPA and design work is 75% complete

$12.122 million is currently reserved for 2017/18 construction of a segment of the I-5 RASL project to the north of the UP Overcrossing section. This represents all SRTA funds and **twelve years of accumulated shares**. See the "Cost Estimate" Attachment for additional details.

Statement of Work: The Statement of Work (SOW) will consist of the main tasks listed, below. For additional subtasks and a more detail on these tasks, see the "Statement of Work" Attachment.

Task 1: Project Approval and Environmental Document (PA&ED)
Task 2: Plans, Specifications and Estimate (PS&E)

[22] Caltrans District 2 contact: Engineer John Martin at 530-225-3476, or john.martin@dot.ca.gov, or Robert Nixon at 530-225-2787 (robert.nixon@dot.ca.gov).

Task 3: Far Northern California Consolidated Goods & Freight Hub Study
Task 4: Alternative / Renewable Fuel Infrastructure Planning
Task 5: Right of Way
Task 6: Construction

ii) Project Schedule: With planning, preliminary engineering and most environmental approval activities already complete, Caltrans is confident they can deliver the project according to the following schedule:

Project Schedule											
	Sept. 2016	Jan. 2017	Feb. 2017	Oct. 2017	Mar. 2018	July 2018	Sept. 2018	Oct. 2018	Dec. 2018	Apr. 2019	Nov 2022
Project Study Report Approved	Complete										
Pre NHSP Preliminary Engineering											
Allocate/obligate NHSP, SHOPP, & STIP funds for Preliminary Engineering and Environmental studies, if needed											
Revised NEPA/CEQA and Project Report											
Allocate NSHP, SHOPP, STIP funds for Design Engineering											
Obligate NSHP, SHOPP STIPP funds for R/W support and R/W capital											
Completion of Feasibility Study											
Right of Way Acquisition (R/W cert)											
Relocate utilities											
Rail Road Approvals											
Environmental Permits obtained											
Local funds obtained through Coop											

	Sept. 2016	Jan. 2017	Feb. 2017	Oct. 2017	Mar. 2018	July 2018	Sept. 2018	Oct. 2018	Dec. 2018	Apr. 2019	Nov 2022
Completion of Demonstration Project											
Approvals of Plans Specs and Est (incl FHWA approvals)											
Allocation of STIP/SHOPP monies											
Obligate NSFHP Construction Monies											
Advertise											
Start Construction											
End Construction											

Construction will begin in April 2019 and is expected to require two full construction seasons due to the scope of the project. The project will have construction completed by November 2022.

iii) Required Approvals:

a) Environmental Permits and Reviews:
NEPA and CEQA are complete. Design is 75% complete. On March 8, 2013, Caltrans signed a NEPA Categorical Exclusion for the I-5 RASL. See "Environmental Documents" Attachments.

Public Involvement:
A public open house for the Draft Environmental Document (DED) was held on the 13th of February, 2013 at the Shasta Outlets in Anderson. Project displays were presented and project staff were on hand to answer questions for the citizens that attended. The general public that attended the open house were in support of the project.

Fix Five Partnership
- Eleven City Council Meetings
- Four Board of Supervisors Meetings
- Six SRTA Board Meetings
- Five Public Hearings
- Joint Televised Forum
- Seven Business Group Meetings

Transportation Improvement Programs
- Five FSTIP Hearings
- Six FTIP Hearings

Transportation Plans

- Metropolitan Improvement Plan
- Regional Transportation Plan

NEPA

- Two Public Open Houses

b. State and Local Approvals:

No legislative approvals are required for the proposed project. The project has received legislative support through the U.S. House of Representatives and the California State Assembly, per attached letters of support[23]. There will be no required local approvals.

This project will require the following permits for in water work at the Anderson Creek Bridge:

- Section 401 Water Quality Certification is required from the Regional Water Quality Control Board.
- A Nationwide Section 404 permit is required from the US Army Corps of Engineers.
- Streambed Alteration Agreement (1602 permit) is required from the Department of Fish and Wildlife.
- Central Valley Flood Protection Board permit is required.

For Public Support, please refer to the support letters and summary thereof in the Parties Section.

c. State and Local Planning:

The project is included in the 2015 Shasta County Regional Transportation Plan[24], prepared by the project applicant: the Shasta Regional Transportation Agency (SRTA). The cumulative project was outlined in a Caltrans Project Study Report approved December 15, 2011. Caltrans, the city of Anderson, and the county of Shasta will join SRTA as partners on the project. Caltrans will be responsible for approval of the construction documents. Plans for the continued economic development of the city of Anderson, and its sphere of influence, are included in the City of Anderson General Plan[25]. This project is consistent with the findings and recommendations from the North State Transportation for Economic Development Study (2013), from which relevant data and analysis is provided above.

iv) Assessment of Project Risks and Mitigation Strategies:

The greatest risk the project faces is not receiving the remainder of FASTLANE funding required to make the project tenable. Other than this funding issue, there is unlikely any other potential risk as UP has already agreed to the design. NEPA and CEQA are complete and no Right of Way is needed. $12.122 million is currently reserved for 2017/18 construction of a segment of the I-5 RASL project to the north of the UP Overcrossing section. This represents all SRTA funds and **twelve years of accumulated shares**. See the "Cost Estimate" Attachment for additional details.

[23] Attachment "Letters of Support"

[24] Shasta Regional Transportation Agency RTP available at http://www.srta.ca.gov/142/Regional-Transportation-Plan

[25] City of Anderson General Plan available at http://www.ci.anderson.ca.us/departments/kristen_development_services_and_building_departments/index.php