# U.S. Department of Transportation Better Utilizing Investments to Leverage Development "BUILD 2020" TRANSPORTATION DISCRETIONARY GRANTS APPLICATION PROJECT NARRATIVE

Project Name:	Tulare, CA – SR99/Commercial Ave Interchange Project
Project Type:	New Interchange and auxiliary lanes
Project Location:	Rural – Tulare, California
Project Website:	https://tularecog.org/tcag/programs-funding/commercial-avenue-
	interchange-build-grant/
Construction Funds Requested:	\$16,000,000 (30%)
Other State and Local Funds:	\$36,800,000 (70%)
Total Construction Costs:	\$52,800,000 (100%)
Contact:	Ted Smalley
	Executive Director
	Tulare County Association of Governments
	210 N. Church Street, Suite B
	Visalia, CA 93291
Telephone:	(559)623-0450
Email:	tsmalley@tularecog.org
DUNS #:	96-269-3474











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## 1) **Project Description**

### a) Project Background and Details

### Project Summary

The Tulare County Association of Governments (TCAG) in partnership with the California Department of Transportation (Caltrans), the City of Tulare and the International Agri-Center proposes the construction of a nationally significant interchange. The request is for \$16 million in construction funding to leverage public and private funds. The Public-Private Partnership is located on the nationally significant highway, State Route 99. The project when completed will perform at a level to support the BUILD program criteria. The project has both CEQA/NEPA approval along with most of the ROW dedicated or owned by the City of Tulare and will be ready for the construction phase (funding obligation) by May, 2021.

The purpose of this project is to improve transportation operational performance with a new interchange, consistent with the goals of Caltrans, TCAG, the City of Tulare and private industry. The project will relieve future traffic congestion on the mainline freeway and local roads, improve safety, enhance the movement of public traffic and goods, and spur economic development. These expected results are further reviewed in later sections of this narrative.

Each project partner is contributing to the development and success of this innovatively designed and funded interchange project. Caltrans is managing the development and construction of the project and has already completed the environmental review and documentation. Caltrans is currently in the design and right-of-way phase of the project. The City of Tulare endorsed the project alternative recommended from the environmental review and continues to work with Caltrans regarding utility placement and project staging.



Project Layout

TCAG has secured the necessary construction matching funding for the project from the Tulare County Regional Sales Tax (Measure R) and State Transportation Improvement Program (STIP). There is significant public interest supporting the completion of this project. The International Agri-Center and the Faria family (a local family farm land owner for 4 generations) contributed \$1.5 million for the completion of the environmental review and documentation for the project. In addition, the Faria family has dedicated 80% of the needed right-of-way for the project at an estimated \$8 million in value.

If TCAG were to receive a BUILD award, the funding would be transferred to Caltrans. Caltrans has completed the environmental phase and is currently completing the design and ROW phase. Caltrans is the best agency to conduct the construction phase in a cost effective manner. Caltrans will accept BUILD funding on behalf of TCAG.

### Project Details

The SR-99/Commercial Avenue Interchange Project consists of the following components:

- Construct a four-lane interchange (two through lanes per direction of traffic) at Commercial Avenue, 0.8 mile south of the Paige Avenue overcrossing, and use existing Commercial Avenue from K Street to connect to State Route 99. Existing ramps at Paige Avenue would remain open. The existing Paige Avenue overcrossing would not be replaced.
- Construct a left-turn lane from southbound K Street and a right-turn lane from northbound K Street for traffic to turn onto Commercial Avenue. Existing Commercial Avenue would be widened and realigned to accommodate the new freeway interchange. A new portion of Commercial Avenue would connect with Laspina Street to become a "T" intersection.
- Construct an extension of Blackstone Street to a "T" intersection at Commercial Avenue with bike lanes for both northbound and southbound.
- Construct auxiliary lanes (one lane per direction of traffic) on State Route 99 between the
  proposed Commercial Avenue interchange and the existing Paige Avenue interchange. The
  approximately 1,800-foot-long auxiliary lanes with 10 ft shoulders would connect the proposed
  ramp to the existing Paige Avenue ramp.
- Install shoulders at interchange on-ramps and off-ramps within the Caltrans right-of-way. The ramp outside shoulders would be 8 feet wide; the ramp inside shoulders would be 4 feet wide.
- Construct bike lanes. Bike lanes would be constructed in these areas: along both eastbound and westbound Commercial Avenue within the city right-of-way limits; Within the state right-of-way, along the eastbound and westbound overcrossing, there would be an 8-foot-wide shoulder that can be used for bike lanes for the new Commercial Avenue overcrossing. The bike lanes along Commercial Avenue would be connected to K Street and Laspina Street.
- Install a 10-foot-wide sidewalk on both sides of Commercial Avenue connecting from K Street to Laspina Street.
- Provide an additional lane on the new on-ramps to accommodate ramp metering
- Construct drainage basins within the proposed project limits.
- Install a new drainage system (pipes with drainage inlets, possible side ditches along the freeway and ramps) to direct runoff from the freeway and ramps into the proposed basins.
- Relocate utilities (water, sewer, storm drain, AT&T lines, high pressure gas line, and utility poles).

### b) Transportation Challenges the Project Will Address

Traffic projections for the project limits show an increase in traffic volume over time, which will result in longer motorist delays, excessive congestion and queuing (long line of vehicles) at the existing ramp-end intersections for Paige Avenue, and potential traffic backups onto the freeway mainline. Local circulation between east and west, crossing State Route 99, will also be congested.

Traffic mitigation is needed based on the analysis conducted by the Caltrans Traffic Operations Branch. Traffic volume analysis done by the Technical Planning Branch at the same time indicates that the Paige Avenue interchange and the intersection of Paige Avenue/Laspina Street are operating at levels of service D and F during the peak traffic periods. The intersections at the Paige Avenue interchange currently operate at levels of service C to F and will approach level of service F prior to 2047. Also, the traffic forecasting data projects increases in traffic volume at the Paige Avenue interchange, which will cause longer delays, excessive queuing at the existing off-ramps, and potential overflows of traffic onto the freeway mainline.

The existing Paige Avenue interchange is a Type L-6 interchange system with the freeway ramps connecting with Blackstone Street and Paige Avenue. The existing northbound hook ramps are accessed through Paige Avenue, and the existing southbound hook ramps connect to Blackstone Street. Paige Ave is a two-lane roadway without turn lanes on the east side of freeway. Westbound traffic on Paige Avenue must stop and wait until the eastbound traffic is clear before proceeding to turn left onto the State Route 99 northbound on-ramp access. The northbound offramp traffic must wait until both westbound and eastbound Paige Avenue through traffic is clear before turning onto westbound Paige Avenue. The queue length of the eastbound approach of Paige Avenue and Laspina Street is longer than the spacing between the intersection and the northbound off-ramp. The shorter spacing would lead to excessive queuing of traffic at the northbound off-ramp and could possibly extend to the freeway mainline.

Other interchanges in the area are substandard and do not provide adequate pedestrian and bicycle connectivity over the freeway. There are no bike lanes provided for multimodal use at Paige Avenue and the bridge structure. The nearest crossing of SR-99 with dedicated bike lanes is 3 miles to the north at the Santa Fe Trail. In addition, the Paige Ave overcrossing has a narrow pedestrian sidewalk on one side of the bridge that does not connect to the sidewalks on Laspina Street to the east or Blackstone Street to the east. Improved access for multi-modal transportation is critical.



Existing Paige Ave. Overcrossing

The SR-99/Commercial Avenue project includes the construction of a new interchange and auxiliary lanes on SR-99 between Commercial and Paige that would alleviate the congestion and safety concerns at the existing SR-99/Paige Avenue interchange. In addition, the project includes bike lanes and sidewalks that connect to the arterials east (Laspina Street) and west (K Street) of the new interchange providing multi-model access that Paige Avenue does not have currently.

### c) Project History and Previously Completed Components

The SR-99/Commercial Interchange project was one of the original projects included in the voterapproved Tulare County Regional Sales Tax (Measure R) in 2006 and was added to the 2006 TCAG Regional Transportation Plan. The Project Initiation Document (PID), required by Caltrans for these types of projects, was funded by Measure R and completed by Caltrans on March 8, 2017. The environmental analysis and documentation, funded with private and Measure R funding, began after the completion of the PID and was completed on June 20, 2019. The project is currently in the design and right-of-way phase. (Refer to Section 5a – Project Schedule)

### d) Connection to Other Infrastructure Investments

Significant investments are being made to the entire SR-99 corridor in the State of California. SR-99 is the goods movement backbone for the State and has more truck traffic than most interstates in the United States. In the City of Tulare, truck traffic ranges from 13,933 and 15,600 annual average daily traffic (AADT). [Source: 2018 Caltrans Traffic Census Program]

The SR-99/Commercial Ave Interchange project needs to be constructed before SR-99 can be widened from 4 to 6 lanes in the City of Tulare. This widening project (Prosperity Ave to Avenue 200) includes much needed improvements to the Paige Avenue interchange and replacement and widening of the bridge structure (refer to picture in Section 4e – Quality of Life).

Some of the City's largest employers and the City's largest sales tax generators are currently accessed by the SR-99/Paige Avenue Interchange. Without the SR-99/Commercial Ave Interchange being constructed, there are no other construction options that wouldn't inflict significant economic damage to the businesses accessed by the SR-99/Paige Ave Interchange.

The SR-99 widening project and Paige Avenue Interchange improvements have funding committed through the design phase. The project is currently in the environmental analysis phase. Construction is estimated to begin in FY 25/26.



SR-99 Corridor Improvement Projects

### e) Benefits of the Project to the Region

In addition to addressing the transportation challenges reviewed in Section 1b, this project represents a significant opportunity to improve economic development in an economically disadvantaged region (see Section 4c - Economic Competitiveness). The project site is located along SR-99, one of the busiest goods movement routes in the United States which provides an opportunity for significant economic growth once the necessary infrastructure and circulation is provided by the new interchange.

Tulare County is the nation's leading milk producing county with 11 billion pounds valued at \$1.7 billion in 2018. For comparison, if Tulare County were a state, it would rank #7 in the country just ahead of Pennsylvania. Due to the County's ag-based economy, there is a heavy reliance on agricultural processing and transportation/goods movement jobs. The new interchange would provide improved access to SR-99 and dairy processing facilities in the City of Tulare.

The project site is located adjacent to the International Agri-Center, a non-profit corporation that was formed to produce the World Ag Expo and promote California's agriculture industry and heritage. The World Ag Expo is the largest annual agricultural exposition in the world. In 2019, there were 102,878 attendees and 1,452 exhibitors representing 48 states and 65 countries. In addition, the International Agri-Center hosts the annual California Antique Farm Equipment Show and operates the AgVentures Learning Center and Ag Museum. Throughout the year their facility is leased for third-party events ranging from concerts to wedding receptions.

Large events do put significant short-term stress on the existing transportation infrastructure, especially at Paige Avenue, demonstrating the inability to accommodate economic development in its current configuration. By relieving traffic at the Paige Ave interchange, this project would provide the capacity and circulation needed for the International Agri-Center and other businesses to grow and thrive.



Aerial of the World Ag Expo



World Ag Expo – Sierra Nevada Mountains



Traffic entering World Ag Expo

## 2) Project Location

The project extends along State Route 99 between 0.9 mile north of the Avenue 200 overcrossing (Post Mile 26.3) to the Paige Avenue interchange (Post Mile 27.6) at southern end of the City of Tulare in Tulare County, California. Mefford Field, a general aviation airport is located to the south and the International Agri-Center is located to the east.





For the purposes of the BUILD Discretionary Grants program, the project location is considered "Rural". The project does extend into the Visalia Urbanized Area which includes the City of Tulare. However, the majority of the construction funding will be taking place outside of the urbanized area. Caltrans estimates that \$27 million of the \$45 million of construction capital funding (60%) will be taking place outside of the urbanized area.

The project is not located in an Opportunity Zone. However, it is adjacent and will provide direct access to two opportunity zones to the northwest of the project location (see Section 4c – Economic Competitiveness).



### 3) Grant Funds, Sources and Uses of all Project Funding

### **Construction Funding Using BUILD**

The Tulare County Association of Governments in partnership with Caltrans is requesting \$16 Million (30% of total construction cost) in BUILD federal funding for the construction of this new interchange project. As shown in Table 3-1 below, \$16 million in BUILD grant funds is being requested to complement \$36.8 million of state and local funds for the \$52.8 million construction of the SR-99/Commercial Ave Interchange project. The project would therefore be funded 30% by BUILD, 14% by State of California funds and 56% with local funds.

Table 3-1						
SR-99/Commercial Avenue Interchange Project Construction Budget						
Project Item	Cost Estimate	BUILD Request	STIP	Regional Sales Tax		
Construction (Total)	\$52,800,000	\$16,000,000	\$7,400,000	\$29,400,000		
% Total Construction Cost	100%	30%	14%	56%		

STIP: State Transportation Improvement Program

Regional Sales Tax: Tulare County Measure R Transportation Sales Tax

### **Non-Federal Fund Documentation of Commitment**

A significant portion of the construction funding (70%) for this project is from state and local (nonfederal) sources. Other than the 2020 BUILD grant funds being requested, no other federal funds will be used for this project. The State funding commitment comes from the State of California's State Transportation Improvement Program (STIP). The STIP is a biennial five-year plan adopted by the California Transportation Commission (CTC) for allocations of state transportation funds for state highway improvement, intercity rail, and regional highway and transit improvements. The commitment of \$7.4 million of STIP funds for the construction of this project was approved by CTC on March 25, 2020. The regional sales tax commitment of \$29.4 million for construction comes from the Tulare County Transportation Authority's (TCTA) regional sales tax measure known locally as Measure R. This project was part of the initial list of projects approved by the voters in Tulare County in 2006. Links to committed funding documents are included in Section 5b – Required Approvals.

#### **Total Project Costs**

Thus far, funding has been expended for the completion of the environmental analysis and funding is currently being expended for the design and right-of-way phases of the project. The total project budget is listed in Table 3-2. Funding sources are grouped into BUILD, State, Regional and Private fund types and the table details the costs by project component. There are no conditions on the timing or sequence of non-federal funding. If awarded, the BUILD grant funds will be used entirely for construction. Caltrans adheres to all federal wage rate requirements and has included a <u>federal wage rate certification letter</u> with this application.

Table 3-2							
SR-99/Commercial Avenue Interchange Total Project Budget							
Project Item	Cost	BUILD	STIP	Regional	Private		
	Estimate	Request	5111	Sales Tax	Funds		
PA&ED	\$3,000,000	\$0	\$0	\$1,500,000	\$1,500,000		
PS&E	\$6,000,000	\$0	\$6,000,000	\$0	\$0		
<b>Right-of-Way Support</b>	\$2,400,000	\$0	\$2,400,000	\$0	\$0		
Right of Way	\$11,100,000	\$0	\$3,100,000	\$0	\$8,000,000		
<b>Construction Support</b>	\$7,400,000	\$0	\$7,400,000	\$0	\$0		
Construction	\$45,400,000	\$16,000,000	\$0	\$29,400,000	\$0		
Project Total	\$75,300,000	\$16,000,000	\$18,900,000	\$30,900,000	\$9,500,000		
% Total Project Cost	100%	21%	25%	41%	13%		

STIP: State Transportation Improvement Program

Regional Sales Tax: Tulare County Measure R Transportation Sales Tax

**Private Funds:** From the International Agri-Center and Faria family for PA&ED and Faria Family for Right-of-Way **PA&ED:** Project Approval and Environmental Document

**PS&E:** Plans, Specifications, and Estimates

### 4) Selection Criteria

a) Safety

### Safe movement of goods and people

The SR99/Commercial Ave Interchange Project will provide a safe and convenient multimodal transportation system with complete streets elements for vehicles, pedestrians, cyclists, first responders, semi-truck goods transporters, and farm equipment in this area. Existing facilities for bicyclists and pedestrians in the project area are limited, making multimodal travel difficult throughout the corridors. Commercial Avenue will create vehicle, bicyclist, and pedestrian accessibility for east-west travel through the roadway extensions, advanced congestion mitigating technologies, and installation of complete street elements such as sidewalks, bicycle lanes, safe and accessible transit stops, and safe crossings for pedestrians, including median islands, and curb extensions.

To enhance bicyclist and pedestrian access and safety, Commercial Interchange is proposed to be designed as follows: 1) Ramp intersections with local roads are 90-degree intersections rather than free flow ramps with high speed connections. 2) The curb radii of the ramp intersection should be such that the right turns are made at a slower speed. 3) The off-ramp traffic is controlled with stop sign. 4) Maximum grade on overcrossing is 5%. 5) Sidewalk on both side of Commercial Avenue. 6) Width for bike lanes on Commercial Avenue through the entire interchange. 7) bike lane to the left of the right-turn only lane to reduce conflicts between turning motorists and bicycle through traffic. 8) Raised center median/pedestrian refuge island. Upon project completion, the Commercial Ave Interchange will alleviate heavy traffic concentration on Paige Ave. Vehicle to non-vehicle interactions are expected to improve at Paige Ave Interchange as more trucks, vehicles, cyclists, and pedestrians use the new roadway and interchange at Commercial Ave.

#### Occurrence of Crashes, injuries, and fatalities

The SR99/Commercial Ave Interchange will have advanced safety features for emergency response including ITS Technology and traffic signals outfitted with emergency vehicle preemption equipment. Traffic signal preemption features installed on new signals will allow emergency vehicles to have a priority. The project will also construct ramp auxiliary lanes on SR-99 to increase traffic capacity. Congestion reduction resulting from the new interchange and roadway extensions will reduce delays in emergency vehicles response times including police and fire.

The project includes highway safety lighting at particular points in interchange areas. This lighting serves to illuminate areas of potential vehicle conflict and to delineate exit ramps, entrance ramps, and island noses. The use of high mast lighting systems may be considered where conventional lighting standards are difficult to maintain. The purpose of highway safety lighting is to promote the safe and orderly movement of traffic by illuminating certain permanent features or conditions which are unusual, which require additional care and alertness to negotiate, and which, if illuminated, may be more readily comprehended and so compensated for by the motorist. According to FHWA Toolbox of Countermeasures and Their Potential Effectiveness for Pedestrian Crashes Highway safety lightings expected to reduce all crashes by 27% at night.

Vehicles may leave the roadway for various reasons, ranging from distracted driver errors to low visibility, or to the presence of an animal on the road. Exposed vertical pavement edges can cause

vehicles to be unstable and prevent their safe return to the roadway. The project includes tapered edge treatment to eliminate the vertical drop-off at the pavement edge, allowing drifting vehicles to return to the pavement safely while maintaining control of their vehicles. According to the safety countermeasures from the FHWA this treatment reduces fatal and injury crashes by 11%.

Run-off-road crashes account for approximately one-third of the deaths and serious injuries each year on the Nation's highways. Drift-off crashes, caused by drowsy, distracted, or otherwise inattentive driving, are a subset of run-off-road crashes. One of the Federal Highway Administration's primary safety goals is to reduce the number and severity of roadway departure crashes. The project will install shoulder rumble strip along 99 within project limits. Shoulder rumble strip is a longitudinal safety feature installed on a paved roadway shoulder near the outside edge of the travel lane. It is made of a series of milled or raised elements intended to alert inattentive drivers (through vibration and sound) that their vehicles have left the travel lane. NCHRP Report 641 documents milled shoulder and edge rumble strips to provide statistically significant reductions in single-vehicle run-off-road injury crashes by 10 to 24 percent on rural freeways.

In addition to the safety features above, a safe work environment is the Caltrans' number one priority for his employees. According to the U.S. Bureau of Labor Statistics, highway construction and maintenance work is one of the most hazardous occupations in the United States. In 2018, more than 7,000 work-zone collisions occurred on California roadways. About 2,300 resulted in injuries, and 46 involved a fatality. Nationally drivers and passengers account for 85 percent of the people who are killed in work zones. A safe work environment is the number one priority for Caltrans and the City of Tulare. Allowing enough space for workers who are doing Maintenance work helps prevent crashes that can cause serious injury or death to Caltrans employees; therefore, the project is proposing the following to improve Maintenance Personnel Safety:

- Provide access for workers including maintenance vehicle pullouts, maintenance access roads and gates.
- Pave narrow areas and areas beyond freeway gore entrances and exits to reduce the need for maintenance
- 2-post exit sign at exit ramp gores to reduce highway workers to high speed traffic
- Use concrete barrier where feasible in lieu of metal beam guard railing.
- Provide a clear recovery zone with traversable and recoverable slopes where feasible
- Place irrigation water valves away from mainline to prevent them from constantly being run over and damaged reducing maintenance costs and increasing worker safety.
- Place new roadside features outside of the clear recovery zone and away from gore areas and driver decision points.
- Controller cabinets doors will be installed to allow maintenance personnel to see on-coming traffic to reduce the chances of injury from errand vehicles. These improvements will help reduce the Maintenance personnel exposure to live traffic and will help prevent crashes that can cause serious injury or death to Caltrans maintenance personnel.

Based on a 20-year Benefit Cost Analysis (BCA), the accident cost savings for passenger vehicles and freight traffic is projected to be \$63,500,000 after the project is constructed.

### b) State of Good Repair

A no-build scenario will cause the Paige Avenue and Avenue 200 interchanges to deteriorate beyond their service lives due to increased traffic loads. It will also reduce the efficiency of traffic flow through the area. As one of the largest economic engines in the Central Valley, access to employment opportunities in Tulare are vital to economic prosperity. A no-build scenario threatens future transportation network efficiency, the transport of goods via SR-99, and mobility options for residents. Infrastructure investment in the area now will support thriving commerce and foster private investment in the future.

The project helps maintain the highway system in a state of good repair by shifting travel patterns from Avenue 200 and Paige Ave over to Commercial Ave Interchange. This will reduce strain on existing infrastructure, prolonging the useful life of the assets. If left unimproved, the Avenue 200 and Paige Ave interchanges will continue to experience overload and reduced pavement performance. Freeway exiting traffic using the new auxiliary lanes will help reduce the traffic loads on SR-99 within project limits increasing the life of the existing pavement. The City of Tulare and Caltrans will be responsible for the project's life-cycle costs. The benefit cost analysis tool estimates the average annual operations and maintenance (O&M) for Commercial Ave Interchange at \$50,000 over its useful life. The design life of the new project elements is as follows:

- 75 years for the bridge structure.
- 40 years for new pavement constructed by the Commercial Ave interchange within State R/W.
- 20 years for all other reconstructed connecting ramps from existing freeway (from gore to ramp exits/entrances) and any new local roads constructed by this project.

A Freeway Maintenance Agreement along with a Cooperative Agreement are in the process of being negotiated with Tulare to allow the State and Tulare to assume their maintenance responsibilities as rapidly as possible after acceptance of the contract. Caltrans will retain full jurisdiction over maintenance and control of all portions of the freeway proper. Caltrans will also maintain approach ramps, grade separations, and similar installations, within rights of way secured for the exclusive use of traffic entering, leaving or traveling on the freeway. This includes under crossings or overcrossings whose primary purpose is to serve as crossings for freeway traffic, and whose use by local traffic is incidental.

Tulare proposes to maintain all other portions of streets or roads, including outer highways, approaches to ramps, overcrossings, and under crossings that serve adjoining property and local traffic. In general, Caltrans will retain title to and be responsible for the maintenance of all property on which access rights have been secured. Collateral facilities built as part of this project such frontage roads, relocated or reconstructed roads, service roads, and cul-de-sacs that are not needed for continuity or the proper functioning of the State Highway System will be relinquished to Tulare in state of good repair. Tulare will sign a relinquishment agreement and assume full operation and maintenance cost of these facilities.

Future budget cycles will include funding as the project completes construction and becomes operational. Secure state funding sources for maintenance include the Road Maintenance and Rehabilitation Account (RMRA) funds, of which Tulare receives approximately \$1.2 million per year.

### c) Economic Competitiveness

#### **Existing Conditions**

This project is in a Disadvantaged Community as designated by the California Environmental Protection Agency. Disadvantaged communities in California are specifically targeted for investment of proceeds from the State's cap-and-trade program. These investments are aimed at improving public health, quality of life and economic opportunity in California's most burdened communities at the same time reducing pollution that causes illness and climate change. The County has an agriculturally-based economy and lags behind the State in numerous economic and demographic measures of wellness as shown in the table below.

#### **Table 4-1 Tulare County Demographics**

	Median Household Income	Poverty Rate	Median House Value	Unempl- oyment Rate	High School Degree (Age 25+)	Bachelor Degree+ (Age 25+)
Tulare County	\$47,518	22.2%	\$191,200	9.6%	69.8%	14.3%
California	\$71,228	14.3%	\$475,900	4.1%	82.9%	33.3%

Sources: 2018 American Community Survey – US Census, 2019 Bureau of Labor Statistics

In 2018, Tulare County's agricultural production was valued at \$7.2 billion making it the 3<sup>rd</sup> most productive county in the USA just behind neighboring Fresno and Kern Counties. Also, Tulare County produced more milk (11 billion pounds valued at \$1.7 billion) than any other county in the United States. Due to the County's ag-based economy, there is a heavy reliance on agricultural processing and

transportation/goods movement jobs. In the City of Tulare, six of the seven largest employers are part of the ag industry which includes: Land O' Lakes, Saputo Cheese, J.D. Heiskell, Haagen Dazs, Kraft and U.S. Cold Storage.

#### **Opportunity Zones**

The project provides direct access to two Opportunity Zones to the north and northwest. The Opportunity Zones were designated by the State of California and certified by the Secretary of the U.S. Treasury. The objective of this designation is to encourage investment of all types to these important zones. These communities have high levels of poverty, failing schools, job scarcity, and a lack of investment. The Opportunity Zones tax incentive was created to spur economic development and job creation by encouraging long-term investment in low-income communities nationwide. The opportunity zones that will be accessed by the project are even further economically disadvantaged than Tulare County as a whole as shown in Table 4-2.



	Median Household Income	Poverty Rate	Median House Value	Home Rental Rate	High School Degree (Age 25+)	Bachelor Degree+ (Age 25+)
Tract 29.01	\$35,128	31.9%	\$133,100	62%	59.6%	8.6%
Tract 22.02	\$27,113	46.4%	\$123,300	73%	53.2%	4.6%
Tulare County	\$47,518	22.2%	\$191,200	43%	69.8%	14.3%

#### **Table 4-2 Opportunity Zone Demographics**

Sources: 2018 American Community Survey

#### **Project Economic Benefits**

Rural transportation networks are critically important for domestic production and export of agriculture, especially in the Central San Joaquin Valley. Two-thirds of rail freight originates in rural areas, and nearly half of all truck vehicle-miles-traveled occur on rural roads. These industries require heavy trucks that create significantly more wear-and-tear on roadways. A disproportionate number of roadway fatalities also occur in rural areas. While only one-fifth of the nation's population lives in rural areas, 46% of the nation's highway fatalities occur on rural roads. This project is in line with the Rural Opportunities to Use Transportation for Economic Success (ROUTES) initiative to address disparities in rural transportation infrastructure. Specifically, rural transportation infrastructure's unique challenges need to be considered in order to meet our Nation's priority transportation goals of safety and economic competitiveness.

The project will reduce congestion, reduce greenhouse gas emissions, and improve safety in a ruralsuburban area. In addition, the project improvements would enhance the east-west movement of traffic and goods, supporting economic development for the City as a whole. This project is an excellent candidate for the BUILD grant because the beneficial impacts are multifold on the local community as well as regionally.



SR-99 (Looking south towards project site from Paige Ave)

### d) Environmental Sustainability

#### Reduce energy use and air or water pollution through congestion mitigation strategies

The project is designed to reduce congestion, which will reduce greenhouse gas emissions from traffic delays and idling under the future growth scenario. The following measures would also be implemented to reduce greenhouse gas emissions and potential climate change impacts from the project:

- The project will add pedestrian and bicycle facilities to the project area to encourage use of nonmotorized modes of transportation.
- Caltrans will prepare a traffic management plan to most efficiently manage traffic during construction.
- According to Caltrans' Standard Specifications, the contractor must comply with all local Air Pollution Control District rules, ordinances, and regulations for air quality restrictions to reduce greenhouse gas emissions.
- Provide a detour if needed to handle traffic during construction to minimize idling emissions.
- Shut off equipment when not in use or minimize idling time to reduce emissions.
- Maintain all construction equipment in proper working condition according to manufacturer's specifications.
- Use onsite soils if available to reduce the vehicle miles traveled for haul trucks.
- The project would plant disturbed areas with a variety of native and drought-tolerant trees and shrubs in ratios enough to replace the air quality and cooling benefits of trees removed by construction of the project.
- The project would incorporate the use of LED energy-efficient lighting and traffic signals.

#### Avoid adverse environmental impacts to air or water quality, wetlands, and endangered species

Several alternatives were proposed and presented to the public before a preferred alternative was selected. The preferred alternative is the environmentally superior alternative because it meets the purpose and need of the project, was determined to have the least environmental impacts, and was broadly supported by the community and local stakeholders.

An air quality conformity analysis for this project was conducted and submitted to the San Joaquin Valley Council of Governments' Directors' Association Interagency Consultation Group on May 3, 2018. The Interagency Consultation Partners concurred that the project is "Not a Project of Air Quality Concern."

No endangered species were identified for the project. However, standard special provisions may be added to ensure that project activities comply with the Migratory Bird Treaty Act and do not result in harmful impacts to nesting birds.

There are no waterways that would be affected by the project. However, since the project would disturb more than one acre of soil, short term impacts to water quality would be minimized with the following measures:

• A Notification of Intent would be submitted to the appropriate Regional Water Quality Control Board at least 30 days prior to the start of construction.

- A Storm Water Pollution Prevention Plan would be prepared and implemented during construction to the satisfaction of the Resident Engineer.
- A Notice of Termination would be submitted to the Regional Board upon completion of construction and site stabilization. A project will be considered complete when the criteria for final stabilization in the Construction General Permit are met.

By incorporating proper and accepted engineering practices and Best Management Practices, the proposed project would minimize short-term impacts and not produce long-term impacts to water quality during construction or its operation.

No jurisdictional waters, including wetlands, were identified within the project limits. Coordination with the California Department of Fish and Wildlife, U.S. Army Corps of Engineers and Regional Water Quality Control Board is not required under the preferred alternative.

### **Provide environmental benefits**

Traffic projections for the project limits show an increase in traffic volume over time, which will result in increased emissions from excessive congestion and queuing (long line of vehicles) at the existing rampend intersections at Paige Avenue, and potential traffic backups onto the freeway mainline. Local circulation between east and west, crossing State Route 99, will also become congested. Currently, there are no sidewalk or bike lane facilities at the existing Paige Avenue and bridge structure, which discourages active modes of transportation.

The purpose of the project is to improve the operational performance of State Route 99 within the project limits, relieve traffic congestion on local roads, and improve accessibility to the freeway system in that area. The new bridge structure that would span State Route 99 (Commercial Avenue) consists of two 12-foot travel lanes, one 8-foot shoulder, and 10-foot sidewalk will provide multi-modal eastbound and westbound access. The project incorporates Complete Streets elements that includes installing Class II bike lanes.

Context sensitive solutions such as landscaping would be included in the project. A landscape/replanting plan would include planting eucalyptus trees to replace those being removed from the roadsides and median. The project is consistent with the TCAG's 2018 RTP and Sustainable Communities Strategy, which includes construction of a new interchange on SR- 99 at Commercial Avenue.

There would be no effects to groundwater recharge and wetlands or habitat connectivity. Stormwater runoff would be directed from the freeway and ramps via drainage inlets and side ditches into the proposed drainage basins within project limits.

### e) Quality of Life

The 2018 Regional Transportation Plan, Sustainable Communities Strategy (RTPSCS), prepared by the Tulare County Association of Governments (TCAG), and adopted on August 23, 2018 included interchange improvements anticipated for the 20-year horizon within the corridor of State Route 99 at Paige Avenue and Commercial Avenue. Under objectives for air quality and greenhouse gases in the RTP-SCS, construction of bike lanes and sidewalks, as part of the SR-99/Commercial Avenue Interchange Project, would provide residents other transportation options.

The Tulare County Regional Bicycle Plan identifies proposed bike lanes on K Street west of SR-99 and a Class I bike path along Laspina Street east of SR-99. A Class II bike lane facility would be provided on both sides of Commercial Avenue connecting from K Street to Laspina Street, including the new bridge structure. The Class II bike lanes would connect to the future bicycle network. Currently, the nearest

overcrossing of SR-99 with bike lane facilities is three miles to the north at the Santa Fe Bicycle Trail.

In addition, this project will provide for ADA compliant sidewalks on both sides of Commercial Ave linking to K Street to the west and Laspina Street to the east. The nearest existing overcrossing of SR-99 at Paige Avenue does not have bike lanes and has a narrow sidewalk on one side of the bridge structure that does not connect to adjacent streets. The new bicycle lanes and sidewalks that are a part of the proposed project will provide much needed access and connectivity across SR-99.



Paige Ave/SR-99 Overcrossing

The new interchange is on the edge of the urban/rural interface (reference Section 2 – Project Location) and will provide better access into and across the City for services and jobs. There are many important existing businesses that will be positively impacted with added connectivity to jobs that this project will provide. The International Agri-Center, Energy Education Center, Mefford Field Airport and Tulare County Ag Commissioner's office would be accessed by the interchange to the east and southeast of the project. Knight Transportation and many other businesses are located along K Street to the west and southwest of the project. The City's leading sales tax generators, Love's Travel Stop and Flying J Travel Center along with several other transportation related businesses and Saputo Cheese, the City's 2<sup>nd</sup> largest employer, would be accessed to the north of the project.

California <u>Assembly Bill 1549</u> (Wood, Chapter 505, Statutes of 2016) requires that Caltrans, during the planning phase of specified Caltrans-led highway construction projects, notify broadband deployment companies and organizations of transportation projects that involve construction methods suitable for the installation of broadband. Upon notification from Caltrans, companies or organizations working on broadband deployment may collaborate with Caltrans to install a broadband conduit across State highway right-of-way within project limits.

### f) Innovation

#### **Innovative Technologies**

The use of Intelligent Transportation Systems (ITS), in the project would provide expedited information on Incidents occurring in the vicinity of the interchange. The information would address quicker responses provided to first responders to these incidents involving property damage, injuries or fatalities. The quick turn around and clearances of the incidents would save costs associated with congestion delay, fuel consumption and potential life savings. Delays cause an impact on trucking and Industry and those it serves. Motorists who also experience delays have greater wear and tear on their vehicles in addition to loss of personal time. The ITS elements at this interchange would be linked to others in the area that would benefit the efficient movement of traffic in the corridor.

This project will install a state-of-the-art ITS fiber optic communication infrastructure within the interchange, along with freeway ramp metering systems, IP camera systems, traffic census detectors and ground work for future traffic signal systems. Ramp metering is a traffic management strategy which uses traffic signals and accompanying equipment and techniques to manage onramp flow onto the freeway system. Ramp metering strategies contribute to the reduction of overall travel time by decreasing delay on freeways by controlling the introduction of vehicles onto the freeway. It is an integral part of the Caltrans Transportation Management System Master Plan, which outlines strategies to reduce congestion and increase safety on California's State Highway System and is used to maintain an efficient freeway system and protect the investment made in freeways by keeping them operating at or near capacity.

IP camera systems will provide live video streams to the Central Valley Transportation Management Center to aid in traffic management and to the general public via the department's Live Traffic Cameras website. They will enable remote monitoring of the entire interchange (freeway, ramps, future traffic signals and City streets). All of these systems will be interconnected through a state-of-the-art fiber optic system and will be backhauled to the Transportation Management Center network via the high speed cellular 5G network.

#### **Innovative Project Delivery**

Caltrans reviewed the possibility of using the Alternative Bridge Construction (ABC) method for the highway overpass included in this project. However, the ABC method would've resulted in significantly higher construction costs so Caltrans will be using standard delivery methods to deliver the project.

#### **Innovative Financing**

This project has been financed by a significant amount of private funding. The International Agri-Center and Faria family committed \$1.5 million of funding for the completion of the environmental analysis and documentation for the project. In addition, the Faria family has dedicated approximately 37 acres of land for the project which represents about 80% of the total needed right-of-way acquisition for the project at an estimated value of \$8 million (map of dedicated right-of-way including additional dedication by the City of Tulare is shown in the following Section 4g – Partnership). The total private investment in the project represents 13% of the total project cost as shown in Table 3-2 in Section 3 – Grant Funds, Sources and Uses of all Project Funding. The construction phase of the project does not include private funding.

### g) Partnership

This project has been developed in partnership with multiple public agencies and private interests at every stage of the project development process. The City of Tulare recognized Caltrans experience in managing these types of large projects and elected to have Caltrans develop and manage this project. City and TCAG staff participated with Caltrans staff in the development of the project initiation document (PID) which is required by the State for this type of project.

The International Agri-Center and the Faria family contributed \$1.5 million in private funding to partner with \$1.5 million in local funding from TCAG's Measure R Transportation Sales Tax for the environmental analysis that was prepared and completed by Caltrans. Right-of-way at an estimated \$8 million in value is being dedicated by the Faria family with some additional right-of-way being dedicated by the City of Tulare. In terms of acreage, this represents 86% of the needed right-of-way area for the project.



Caltrans is currently in the design phase of the project and is working with the City of Tulare regarding the placement of sewer and water utilities. In addition, Caltrans is working private companies with the placement of other utilities such as street lighting and electric (Southern California Edison), natural gas (SoCal Gas) and communications (AT&T).

The following is a list of project parties partnering with TCAG and their agency information.

**California Department of Transportation (Caltrans):** Caltrans is the agency of the State of California responsible for construction and maintenance of the state's transportation infrastructure. Caltrans partners with all jurisdictions that use federal money to fund projects, as the State's NEPA delegation authority. Caltrans has a long history of partnering with TCAG and other agencies in Tulare County. Completed and in-process projects along State Route 99 involving Caltrans partnership with the City of Tulare and TCAG include the Cartmill Interchange Project, Tulare City Widening Project, and the Tagus 6-Lane Widening Project.

**City of Tulare:** Tulare is the second largest city in Tulare County with a population of roughly 65,000 and an area of approximately 21 square miles. The backbone of Tulare's economy continues to be its agricultural and dairy industry with a significant amount of the County's overall milk production occurring in the vicinity of Tulare. The nation's largest single-site dairy complex, operated by Land O'Lakes, is located in Tulare. State Route 99 is a main north-south route through Tulare and carries a significant amount of regional and interregional traffic.

**International Agri-Center:** The International Agri-Center is a non-profit corporation formed in 1976 to produce World Ag Expo and to promote California's agriculture industry. The International Agri-Center is led by an all-volunteer board of directors; has a full-time staff and more than 1,200 volunteers who dedicate their time to World Ag Expo, the California Antique Farm Equipment Show and other International Agri-Center programs.

### 5) Environmental Risk Review/Project Readiness

### a) Project Schedule

As mentioned earlier, the environmental and permit phase of the project has been completed. The design and right-of-way phases are currently in process. Below is the remainder of the project schedule:

Milestone	Date
End Right of Way Phase (Right of Way Certification Milestone)	02/01/22
End Design Phase (Ready to List for Advertisement Milestone)	03/01/22
Execute Funding Cooperative Agreements for Construction with TCAG	04/15/22
Federal Obligation of BUILD Grant	05/02/22
<b>RTIP</b> Allocation from California Transportation Commission	05/12/22
Advertise Project	06/01/22
Bid Opening	07/20/22
Begin Construction Phase (Contract Award Milestone)	09/01/22
End Construction Phase (Construction Contract Acceptance Milestone)	07/01/25
Begin Closeout Phase	01/05/26
End Closeout Phase (Closeout Report)	07/02/29

### b) Required Approvals

#### **Environmental Permits**

The Mitigated Negative Declaration (CEQA) and Environmental Assessment (NEPA) was completed by Caltrans in June, 2019. No other environmental permits or approvals are needed for this project. A copy of the complete environmental document is available <u>here</u>.

#### Federal, State and Local Approvals

The project is included in all the required approved plans and funding programs. The addition of BUILD funding to this project would require an administrative amendment to the Federal Transportation Improvement Program which would cause no delay to project obligation and construction. Weblinks are included with the list of required plans and programs below:

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Program or Plan	Project Page	Full Document
Federal Transportation Improvement Program (2019)	<u>weblink</u>	<u>weblink</u>
State Transportation Improvement Program (2020)	<u>weblink</u>	<u>weblink</u>
TCAG Regional Transportation Plan (2018)	weblink	weblink
TCAG Measure R Expenditure Plan (2006)	<u>weblink</u>	weblink
State Route 99 Business Plan (2020)	<u>weblink</u>	weblink

### c) Assessment of Risk and Mitigation Strategies

#### **Environmental Risk**

The environmental review has been completed and approved and no additional permits are needed. There is no environmental related risk that would negatively impact project obligation.

#### **Technical Capacity**

This project is being managed by Caltrans. Caltrans has decades of experience successfully delivering projects in compliance with applicable Federal requirements and working with Federal agencies. Caltrans also has the necessary experience in successfully working with prior BUILD or INFRA awards. There is no risk due to technical capacity that would negatively impact the successful delivery of this project.

#### **Financial Capacity**

Construction funding has been fully committed with matching funds from State (State Transportation Improvement Program – STIP) and Local (Measure R Transportation Sales Tax) sources. For Measure R, even if there is a decrease in sales tax revenue, there is more than sufficient bonding capacity to fill any potential shortfall. For State funding, while this is not expected, if the already committed STIP funding becomes at risk due to State budgetary issues, California State law allows for the temporary substitution of State funds with Local funds that would be reimbursed when State funding becomes available. TCAG, through its Measure R Transportation Sales Tax, has the financial capacity to address any issues that could arise for the matching funding to the BUILD grant.

### d) Public Outreach and Support

Prior to the beginning of the development of the environmental documentation and project alternative selection process, public outreach was conducted in collaboration with the Caltrans, the City of Tulare and TCAG. A City Council study session which included a Caltrans presentation of project alternatives and estimated costs was conducted on November 1, 2016 with additional review on November 15, 2016 where numerous public comments were received. Project alternatives and information were also presented at the TCAG Board meeting on December 12, 2016 where action was taken to begin the environmental review and project alternative selection process.

As part of the environmental review and project alternative selection process an open forum public hearing was held at the International Agri-Center in Tulare, California on January 8, 2019. The hearing was in an open house format; attendees could wander freely, view various displays, and ask questions of the project team. A court reporter was present to record the spoken comments of the attendees. All meeting attendees were given a project information sheet and a comment card. The comment card provided a means by which participants could submit their written comments about the project. Approximately 50 people attended the open forum public hearing. Approximately 133 comment cards, letters and emails were received during the draft environmental document public circulation period.

A Tulare City Council meeting presentation was conducted by Caltrans and the Tulare County Association of Governments regarding the findings of the South Tulare Interchange Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment and subsequent selection of a

preferred alternative on February 5, 2019. The Tulare City Council adopted Resolution 19-76 supporting Caltrans' recommendation of preferred Alternative 1A for the project.

Letters demonstrating support for the project from federal, state and local leaders are available on the application's <u>website</u> and have been submitted as attachments to the grants.gov application package.

## 6) Benefit Cost Analysis

Based on a 20-year Benefit Cost Analysis (BCA), the benefit/cost ratio for the SR-99/Commercial Interchange project is 3.0. The Rate of Return on Investment is 16.4% with a Payback Period of 6 years. The BCA was completed using the Cal-B/C Sketch Version 7.1. The Freeway Connector option was used as the project type. Detailed information about the assumed inputs can be found under the "project information" tab and the "parameters" tab of the Cal/B-C Excel spreadsheet submitted separately as part of this BUILD application and can also be found <u>here</u>.



The California Life-Cycle Benefit/Cost (Cal-B/C) Analysis Model is a suite of Microsoft Excel workbooks developed by the Caltrans Transportation Economics division to provide decision-makers with the ability to assess the benefits and costs of transportation projects associated with the highway system. Cal-B/C is continuously updated to ensure that it aligns with current transportation benefit-cost findings and practices. The Cal-B/C Sketch model is periodically modified to comply with the U.S. Department of Transportation's "Benefit-Cost Analysis Guidance for Discretionary Grant Programs". The Cal B/C Sketch model worksheet and technical guidance can be found at the following link:

https://dot.ca.gov/programs/transportation-planning/economics-data-management/transportationeconomics

**BCA Inputs:** 

• Current, Base Year, and Forecast Year Traffic ADT was determined using historical data and the

Tulare COG Travel Demand Model (TDM).

- Truck percent is higher on the SR 99 corridor than other State highways and default inputs were adjusted according to 2016 Traffic Census data. Twenty five percent (25%) was used conservatively in the worksheet however it is believed that land use changes and development in the adjacent areas to the project will cause that percentage to increase.
- Actual Accident Data was collected from Caltrans Selective Accident Rate Calculation tables.
- Accident Rates were determined using the Basic Average Accident Rate Table For Highways for a 5-6 lane Freeway in an urban area due to the inclusion of auxiliary lanes between an adjacent interchange.

**BCA Results:** 

- Travel time cost savings for passenger vehicles and freight traffic was significant.
- Accident cost savings for passenger vehicles and freight traffic was significant.
- Person-Hours of Time Saved is calculated to be over 14 million with an annual savings of over 700,000 Person-Hours over a twenty-year period.

## 7) Appendices Under Separate Cover:

Application for Federal Assistance SF-424 BUILD 2020 Project Information Benefit Cost Analysis Environmental Documentation Federal Wage Certification Other Support Letters and Supporting Documentation