

California Freight Mobility Plan

Addendum for FAST Act Compliance

June 2018



[This page intentionally left blank]

California Freight Mobility Plan

Addendum (2018)

Contents

- Introduction..... 5**
- Federal Requirements..... 5**
- California State Requirements..... 6**
- FAST Act Compliance Requirements 7**
 - Element 1: Freight System Trends, Needs, and Issues..... 8**
 - Element 2: Freight Policies, Strategies, and Performance Measures..... 8**
 - Element 3a: Multimodal Critical Rural Freight Facilities and Corridors 9**
 - Element 3b: Critical Rural and Urban Freight Corridors 10**
 - Element 4: National Multimodal Freight Policy Goals and National Highway Freight Program Goals... 10**
 - Element 5: Innovative Technologies and Operational Strategies 12**
 - Element 6: Improvements to Reduce Deterioration of Roadways 12**
 - Element 7: Freight Facilities with Mobility Issues and Strategies to Address Them 12**
 - Element 8: Congestion or Delay Caused by Freight Movements and Mitigation Strategies..... 13**
 - Element 9: Freight Investment Plan 16**
 - Element 10: State Freight Advisory Committee..... 18**

[This page intentionally left blank]

Introduction

This Addendum to the 2014 California Freight Mobility Plan (CFMP 2014) has been developed to address the new requirements under The Fixing America’s Surface Transportation (FAST) Act so as to receive National Highway Freight Program (NHFP) funding. Specifically, this Addendum recaps all of the Moving Ahead for Progress in the 21st Century Act (MAP-21) elements addressed in the CFMP 2014 and addresses in detail the three new FAST Act elements. It also addresses some initiatives that California is undertaking beyond the federal requirements.

The full update of the CFMP is scheduled to be completed by December 2019. It will incorporate all regionally led and State led freight planning and research efforts, many of which have been completed since the completion of CFMP 2014 while others are currently underway.

Federal Requirements

The CFMP was published in December 2014 to fulfill the MAP-21 recommendations and the associated California State requirements. A year later, the FAST Act established the NHFP to provide long term freight funding to states and required that each state develop a Freight Plan that provides a comprehensive plan for immediate and long-range freight planning activities and investments. In October 2016, the Federal Highway Administration (FHWA) provided guidance for states to develop FAST Act compliant Freight Plans. Since December 2017, to be eligible to obligate NHFP funds, the Freight Plans are required to address the following ten elements:¹

Element 1. An identification of significant freight system trends, needs, and issues with respect to the State;

Element 2. A description of the freight policies, strategies, and performance measures that will guide the freight-related transportation investment decisions of the State;

Element 3. When applicable, a listing of—

- a. multimodal critical rural freight facilities and corridors designated within the State under National Multimodal Freight Network (NMFN);²
- b. critical rural and urban freight corridors designated within the State under National Highway Freight Program (NHFP);³

¹ <https://www.federalregister.gov/documents/2016/10/14/2016-24862/guidance-on-state-freight-plans-and-state-freight-advisory-committees>

² [http://uscode.house.gov/view.xhtml?req=\(title:49%20section:70103%20edition:prelim\)](http://uscode.house.gov/view.xhtml?req=(title:49%20section:70103%20edition:prelim))

³ [http://uscode.house.gov/view.xhtml?req=\(title:23%20section:167%20edition:prelim\)](http://uscode.house.gov/view.xhtml?req=(title:23%20section:167%20edition:prelim))

Element 4. A description of how the plan will improve the ability of the State to meet the national multimodal freight policy goals⁴ and the national highway freight program goals;⁵

Element 5. A description of how innovative technologies and operational strategies, including freight intelligent transportation systems, that improve the safety and efficiency of the freight movement, were considered;

Element 6. In the case of roadways on which travel by heavy vehicles (including mining, agricultural, energy cargo or equipment, and timber vehicles) is projected to substantially deteriorate the condition of the roadways, a description of improvements that may be required to reduce or impede the deterioration;

Element 7. An inventory of facilities with freight mobility issues, such as bottlenecks, within the State, and for those facilities that are State owned or operated, a description of the strategies the State is employing to address those freight mobility issues;

Element 8. Consideration of any significant congestion or delay caused by freight movements and any strategies to mitigate that congestion or delay;

Element 9. A freight investment plan (FIP)⁶ that includes a list of priority projects and describes how funds made available to carry out the NHFP would be invested and matched; and

Element 10. Consultation with the State Freight Advisory Committee, if applicable.

California State Requirements

The CFMP is required by California law to be updated every five years. This CFMP Addendum addresses the State requirements and takes into consideration Governor Brown’s Executive Order B-32-15, which resulted in the California Sustainable Freight Action Plan (CSFAP). The CSFAP was developed jointly by multiple State departments and completed in July 2016. It “establishes clear targets to improve freight efficiency, transition to zero-emission technologies, and increase competitiveness of California’s freight system.”

The California Transportation Commission (CTC) is the agency responsible for programming projects in California. In response to the Road Repair and Accountability Act of 2017 (Senate Bill 1), the CTC adopted the Trade Corridor Enhancement Program (TCEP) Guidelines in October 2017

⁴ [http://uscode.house.gov/view.xhtml?req=\(title:49%20section:70101\(b\)%20edition:prelim\)](http://uscode.house.gov/view.xhtml?req=(title:49%20section:70101(b)%20edition:prelim))

⁵ [http://uscode.house.gov/view.xhtml?req=\(title:23%20section:167%20edition:prelim\)](http://uscode.house.gov/view.xhtml?req=(title:23%20section:167%20edition:prelim))

⁶ [http://uscode.house.gov/view.xhtml?req=\(title:49%20section:70202\(c\)%20edition:prelim\)](http://uscode.house.gov/view.xhtml?req=(title:49%20section:70202(c)%20edition:prelim))

combining federal and State freight funds, and solicited project nominations from local and regional agencies and the State in January 2018. The TCEP Guidelines describe the policy, standards, criteria, and procedures for the development and management of the TCEP funds. The CFMP is referenced as an essential document in the Guidelines.⁷

The FIP section of this Addendum includes the priority list of financially constrained freight projects for both federal and State freight funds.

FAST Act Compliance Requirements

In July 2015, the FHWA determined the CFMP to be consistent with MAP-21 guidance. FAST Act requires the CFMP to address three additional requirements (Elements 3, 8 and 9). These are addressed in this Addendum.

The Table 1 provides the location (chapter and page number) of the FAST Act requirements that have been included in the CFMP 2014, available on Caltrans website.⁸

Table 1 – CFMP and the FAST Act Requirements

Required FAST Act Element	Recommended per MAP-21	CFMP 2014 Chapter and Page where this element is addressed
Element #1	Yes	Ch. 1.2 Pg. 27-36; Ch. 2.3 Pg. 139-159
Element #2	Yes	Ch. 1.1 Pg. 3-25; Ch. 2.2 Pg. 113-138
Element #3	No	Addendum
Element #4	Yes	Ch. 3.4 Pg. 199-213; Ch. 3.5 Pg. 215-234
Element #5	Yes	Ch. 3.6 Pg. 235-246
Element #6	Yes	Ch. 3.5 Pg. 215-234
Element #7	Yes	Ch. 2.1 Pg. 73-112
Element #8	No	Addendum
Element #9	No	Addendum
Element #10	Yes	Ch. 1.4 Pg. 55-72

NOTE: There are several references to MAP-21 and the Primary Freight (PFN) in the CFMP 2014 which are no longer valid since FAST Act rescinded that network and replaced it with the National

⁷ <http://www.catc.ca.gov/programs/sb1/tcep/>

⁸ <http://www.dot.ca.gov/hq/tpp/offices/ogm/cfmp.html>

Highway Freight Network (NHFN)⁹ and its subsystem called the Primary Highway Freight System (PHFS). California’s network (maps and table) is available on the federal website.¹⁰

The remainder of this Addendum describes how Caltrans has addressed these elements and continues to do so as an ongoing planning process.

Element 1: Freight System Trends, Needs, and Issues

This FAST Act requirement remains the same as MAP-21.

The CFMP 2014 addressed Element 1 requirements in the Chapter 1.2 and 2.3. With continued collaboration with the regional agencies, Caltrans has provided leadership and statewide consistency in identification of significant trends, needs, and other issues of interest to California. With the passage of Senate Bill 1 (SB 1), California will have additional funding and Caltrans will continue to assess significant freight system trends, needs and issues, in coordination with local and regional agencies and the neighboring states.

Element 2: Freight Policies, Strategies, and Performance Measures

This FAST Act requirement remains the same as MAP-21.

The CFMP 2014 addressed Element 2 requirements in the Chapters 1.1 and 2.2. California’s vision, policies, strategies, and performance measures are consistent with the National Highway Freight Program.¹¹ The vision for the CFMP, developed in consultation with various stakeholders, is as follows:

California Freight Mobility Plan 2014 - Vision

“As the national gateway for international trade and domestic commerce, California enhances economic competitiveness by collaboratively developing and operating an integrated, multimodal freight transportation system that provides safe, sustainable freight mobility. This system facilitates the reliable and efficient movement of freight and people while ensuring a prosperous economy, social equity, and human and environmental health.”

In addition, the CSFAP establishes targets to improve freight efficiency, transition to zero emission

⁹ <https://ops.fhwa.dot.gov/freight/infrastructure/nfn/index.htm>

¹⁰ https://ops.fhwa.dot.gov/freight/infrastructure/ismt/state_maps/states/california.htm

¹¹ [http://uscode.house.gov/view.xhtml?req=\(title:23%20section:167%20edition:prelim\)](http://uscode.house.gov/view.xhtml?req=(title:23%20section:167%20edition:prelim))

technologies, and increase the competitiveness of California’s freight transport system.¹² The vision for a sustainable freight transport system listed in the CSFAP is as follows:

California Sustainable Freight Action Plan Vision for a Sustainable Freight Transport System
“Utilize a partnership of federal, State, regional, local, community, and industry stakeholders to move freight in California on a modern, safe, integrated, and resilient system that continues to support California’s economy, jobs, and healthy, livable communities. Transporting freight reliably and efficiently by zero emission equipment everywhere feasible, and near-zero emission equipment powered by clean, low-carbon renewable fuels everywhere else.”

The Table 2 shows the alignment of CFMP goal with the MAP-21 performance measure. Caltrans is coordinating statewide, conducting a baseline performance assessment, and finalizing the performance target for the National Performance Management Measure to assess freight movement on the Interstate System.

Table 2 – Alignment of CFMP Goal with the Federal Performance Measures

23 CFR 490 Subpart	NHFP Goal	CFMP Goal	Performance Measure	Target
Freight Movement (Subpart F)	Invest in infrastructure improvements and implement operational improvements on U.S. highways that improve the year-round reliability of freight transportation	Congestion Relief - Reduce costs to users by minimizing congestion on the freight transportation system	Truck Travel Time Reliability Index (TTTR)	Under development

Element 3a: Multimodal Critical Rural Freight Facilities and Corridors

Element 3a is a new requirement in the FAST Act.

This section addresses Element 3a by listing the multimodal critical rural freight facilities and corridors designated within the State. This listing was prepared in response to the US DOT announcement for the states to comment on the Interim National Multimodal Freight Network (NMFN). Caltrans led a statewide outreach effort (1) to provide comments to US DOT, (2) propose additional designations to the NMFN, and (3) meet the NMFN certification requirement.

Attachment A is Caltrans’ letter to US DOT listing the current and proposed changes to the NMFN.

¹² <http://www.dot.ca.gov/csfap/>

Element 3b: Critical Rural and Urban Freight Corridors

Element 3b is a new requirement in the FAST Act.

This section addresses Element 3b by listing the Critical Urban Freight Corridor (CUFC) and Critical Rural Freight Corridor (CRFC) within California. These corridors, along with the PHFS form California’s NHFN. California received an allocation of approximately 311 CUFC miles and 623 CRFC miles. Caltrans formed a Technical Working Group with diverse freight stakeholders and developed a process for the ongoing designation and de-designation for these miles. The Technical Working Group will reconvene on an as needed basis to review the status of the freight network and related procedures. Caltrans keeps track of all rolling designations statewide on its website with a tracker scoreboard including GIS mapping.¹³

Attachment B lists California’s Critical Urban and Rural Freight Corridors as of April 2018.

Element 4: National Multimodal Freight Policy Goals and National Highway Freight Program Goals

This FAST Act requirement remains the same as MAP-21, however the multimodal policy aspect is a new requirement.

The CFMP 2014 addressed Element 4 requirements in the Chapter 3.4 and 3.5. The CFMP 2014 goals are Economic Competitiveness; Safety and Security; Freight System Infrastructure Preservation; Environmental Stewardship, Congestion Relief; and Innovative Technology and Practices. A description of the goals, objectives, and implementation strategies, and its alignment with the NHFP goals can be found on pages 5 through 18 of the CFMP 2014.

The FAST Act expanded this requirement in relation to the National Multimodal Freight Policy (NMFP) goals. Many of the goals and strategies described in the CFMP 2014 overlap with the NMFP goals. Since the approval of CFMP 2014, California has led the development of the CSFAP, which contains a vision, guiding principles, and freight targets to improve freight efficiency, transition to zero emission technologies, and increase competitiveness of the freight transportation system. The CSFAP has over 70 implementation actions that are actively being addressed by multiple California state agencies, many of which directly address the NMFP goals. Following is a discussion of how the CFMP 2014 addresses the NMFP goals.

As listed in Table 3, California supports the NMFP goals of the United States to maintain and improve the condition and performance of the NMFN to ensure that the network provides a foundation for the United States to compete in the global economy.

¹³ <http://www.dot.ca.gov/hq/tpp/offices/ogm/cufc-crfc.html>

Table 3 – Alignment of California Actions with the NMFP Goals

NMFP Goals	California Actions
(1) to identify infrastructure improvements, policies, and operational innovations that— (A) strengthen the contribution of the NMFN to the economic competitiveness of the United States; (B) reduce congestion and eliminate bottlenecks on the NMFN; and (C) increase productivity, particularly for domestic industries and businesses that create high-value jobs;	Several of the goals, policies, strategies, actions, and projects listed in CFMP 2014 directly address this goal. As a national gateway California continues to invest to increase the economic competitiveness of the United States. The discussion in Element 7 of this document focuses on several improvements to reduce congestion and eliminate bottlenecks on the NMFN. The Economic Competitiveness Goal and Strategies specifically mention increasing productivity that benefits California and national industries.
(2) to improve the safety, security, efficiency, and resiliency of multimodal freight transportation;	The Safety and Security Goal and Strategies in CFMP 2014 relate to this goal.
(3) to achieve and maintain a state of good repair on the NMFN;	The Freight System Infrastructure Preservation Goal and Strategies in CFMP 2014 relate to this goal.
(4) to use innovation and advanced technology to improve the safety, efficiency, and reliability of the NMFN;	The Innovative Technology and Practices Goal and Strategies in CFMP 2014 relate to this goal.
(5) to improve the economic efficiency and productivity of the NMFN;	The Economic Competitiveness Goal of CFMP 2014 and strategies relate to this goal.
(6) to improve the reliability of freight transportation;	The Economic Competitiveness Goal of CFMP 2014 and strategies relate to this goal.
(7) to improve the short- and long-distance movement of goods that—(A) travel across rural areas between population centers; (B) travel between rural areas and population centers; and (C) travel from the Nation’s ports, airports, and gateways to the NMFN;	The diverse nature of California’s multimodal freight network requires a robust analysis and tailoring freight improvements to the appropriate context. A detailed discussion of this included in Chapter 1.1 of CFMP 2014.
(8) to improve the flexibility of States to support multi-State corridor planning and the creation of multi-State organizations to increase the ability of States to address multimodal freight connectivity;	Recent multistate efforts include I-10 and Concept of Operations, the Eastern Sierra Corridor Sustainable Freight Strategies Study, and Truck Parking studies.
(9) to reduce the adverse environmental impacts of freight movement on the NMFN; and	The Environmental Stewardship Goal states to avoid and reduce adverse environmental and community impacts of the freight transportation system.
(10) to pursue the goals described in this subsection in a manner that is not burdensome to State and local governments.	Caltrans is working with partners to develop a goal on Economic Competitiveness.

Element 5: Innovative Technologies and Operational Strategies

This FAST Act requirement remains the same as MAP-21.

The CFMP 2014 addresses Element 5 requirements in Chapter 3.6. With the passage of SB 1, California has seen an increase of funding and continues to consider innovative technologies and operational improvements during project selection process that improves safety and efficiency of the freight system.

Element 6: Improvements to Reduce Deterioration of Roadways

This FAST Act requirement remains the same as MAP-21.

The CFMP 2014 addresses Element 6 requirements in Chapter 3.5. Since CFMP 2014 adoption, several actions and programs have been implemented to help address roadway deterioration. With the passage of SB 1, California has seen an increase of over \$3.7 billion annually for maintenance of state and local roads.¹⁴ Most of the damage on state highways and major arterial streets are due to heavy duty vehicles, and funds are targeted to repair the roadways most in need of improvement.

Caltrans is implementing an accelerated bridge improvement program targeted at heavy volume freight corridors. The program focuses on raising the heights of overpasses and increasing load capacities of bridges for long stretches of corridors to help reduce the length of detours for oversize or overweight vehicles requiring a special permit to transverse the roadways.

Several actions from the CSFAP aim to improve maintenance of freight corridors.¹⁵ Caltrans is the lead for and has made progress on several implementation actions, including Freight Highway System Preservation through Asset Management, Bridge Performance through Asset Management, and Pavement Technology. California recently adopted the 10-year Transportation Asset Management Plan.¹⁶

Element 7: Freight Facilities with Mobility Issues and Strategies to Address Them

This FAST Act requirement remains the same as MAP-21.

¹⁴ <http://rebuildingca.ca.gov/overview.html>

¹⁵ http://www.dot.ca.gov/csfap/documents/CSFAP_AppendixC_FINAL_07272016.pdf

¹⁶ http://www.dot.ca.gov/assetmgmt/tam_plan.html

The CFMP 2014 addresses Element 7 requirements in Chapter 2.1. The State employs a combination of strategies to address freight mobility issues. Chapter 3.6 also briefly mentions some ideas. This component is actively present in the implementation of various plans, programs, and projects.

Coordination with partner agencies, regional planning organizations, and local governments in the State, are a key factor to relieving bottlenecks. Since the completion of the CFMP 2014 multiple actions are continually being taken to address bottlenecks, which include, but are not limited to:

- Major highway projects to improve travel time reliability,
- On dock rail support facilities,
- Port area rail infrastructure improvements,
- Expansion of near-dock rail to accommodate demand and to reduce truck trips,
- Rail grade separations projects reducing delay and emissions, improving safety and noise,
- Positive Train Control to enhance safety, reliability, operating efficiency and capacity,
- Improvement at international port of entries to reduce border crossing wait times,
- Truck climbing lanes potentially including I-5, I-10, I-15, I-80, SR-57 and SR-60,
- ITS, operation technologies including Freight Advanced Traveler Information System,
- Automated Truck Research,
- Advanced Transportation Management Information System (ATMIS), and
- Autonomous Commercial Vehicles Testing.

Element 8: Congestion or Delay Caused by Freight Movements and Mitigation Strategies

Element 8 is a new requirement in the FAST Act.

This section addresses Element 8 by describing the consideration of any significant congestion or delay caused by freight movements and any strategies to mitigate congestion or delay. Freight hubs include international gateways such as ports, airports, border crossings, and major domestic terminals and transfer points. Bottlenecks between freight hubs are caused by converging traffic at highway intersections and railroad junctions, steep grades on highways and rail lines, lane reductions on highways and single-track portions of railroads, and locked and constrained channels on waterways. Additionally, freight congestion is caused by other factors such as traffic backups at toll booths; inefficient operating practices at terminals and border crossings; and equipment shortages, short-term labor disruptions, and long-term shortages in key occupations such as truck drivers.

Ongoing program activities will continue to be enhanced and/or cross-referenced to further track and manage potential freight mobility issues and mitigation strategies. Where applicable, continued multi-state/multi-jurisdictional collaboration will also support a more comprehensive assessment of key freight corridors and potential mobility/congestion issues.

As noted, congestions and delays are caused by a multitude of factors and can be measured in multiple ways, including congestion, reliability, variability, and safety. Over the last few years Caltrans and other regional agencies have invested in gaining access to a variety of freight data, analytical tools, and methodologies for identifying congestion and delay for the purpose of analyzing corridors and infrastructure and supporting project nominations for available funding. Key analytical tools and studies are described below.

Analytical Tools

INRIX Tool:¹⁷ Every state DOT and MPO has several new responsibilities with the May 2017 federal rule regarding congestion and freight system performance reporting requirements (PM3). The FHWA made the National Performance Management Research Data Set (NPMRDS) travel time dataset available to DOTs and MPOs. The dataset is an output of a system, created and delivered by the consulting firm INRIX in collaboration with University of Maryland Center for Advanced Transportation Technology Laboratory team. This system is an on-demand, cloud-based analytics suite that pulls INRIX global traffic data to help monitor, measure, and manage the performance of road networks. Using INRIX data helps agencies have a better understanding of traffic flow and the measures that can be taken to alleviate the impact of congestion. California is committed to using this data, to the extent possible, to analyze the freight transportation system and identify congestion and delay.

ITERIS Tool:¹⁸ To address the MAP-21 Performance requirements, target setting, tracking and reporting, Caltrans contracted with the consulting firm ITERIS to combine its Performance Measurement System (PeMS) database (which provides truck counts) with the NPMRDS data (which addresses reliability). The tool is being used statewide for information and analysis, as appropriate. California is committed to using this data, to the extent possible, to analyze the freight transportation system and identify congestions and delay against the truck counts to prioritize high volume corridors having low reliability.

Caltrans Multi-objective GIS Tool:¹⁹ Caltrans contracted with the consulting firm Fehr and Peers to map the information related to Congestion, Reliability and Safety in an online tool to help identify bottlenecks. The methodology applied uses data for the travel time of vehicles from the NPMRDS. For this analysis, data were collected for all of California during 2016. Data for each month was aggregated for the AM, PM and OP (overnight off-peak) weekday periods. The speed statistics calculated include the average, standard deviation, minimum observed, maximum observed, and percentiles for 15th, 50th, and 85th. The data from this process is joined to point

¹⁷ <http://www.cattlab.umd.edu/MAP-21>

¹⁸ <https://npmrds.iteris-pems.com/accounts/login/>

¹⁹ <http://fehrandpeers.maps.arcgis.com/apps/webappviewer/index.html?id=ef18929e92494a8eabd0699d7a1f8f48>

locations in ArcMap, allowing metrics to be calculated. Detailed technical documentation and a simplified flow chart of the process of identifying congested locations in corridors and at ramps and intersections is available on request. Caltrans is committed to using this data, to the extent possible, to analyze the freight transportation system to identify high volume corridors with congestion, delay, reliability and safety issues.

Attachments C1, C2, and C3 show the static maps for congestion, speed variability and safety for the State of California. This Multi-objective GIS tool provides the option to analyze bottlenecks.

Bottlenecks and Mitigation Strategies

American Transportation Research Institute (ATRI) publishes an annual list of the Top 100 Freight Bottlenecks in the nation. This information helps California better understand the severity of congestion, and provides some criteria for comparison with other analytical methods. California’s highest congested bottlenecks are listed in the Table 4.

Table 4 – Bottlenecks in California - National Ranking by Congestion Level

Congestion Ranking	Location Description	State	Average Speed	Peak Average Speed	Non-Peak Average Speed	Peak Average Speed Percent Change 2017-2018
5	Los Angeles, CA: SR 60 at SR 57	CA	41.4	34.2	44.3	-3.61%
13	Los Angeles, CA: I-710 at I-105	CA	40.4	30.6	44.8	-4.20%
27	San Bernardino, CA: I-10 at I-15	CA	45.7	38.1	48.9	-3.82%
38	Oakland, CA: I-880 at I-238	CA	42.1	32.4	46.7	-8.04%
45	Corona, CA: I-15 at SR 91	CA	38.8	29.9	42.5	2.44%
64	Los Angeles, CA: I-110 at I-105	CA	40.1	30	44.6	-5.36%
65	Oakland, CA: I-80 at I-580/I-880	CA	31.3	21.9	36.7	-2.80%

Source: American Transportation Research Institute²⁰

Seven of California’s locations are within the top 100 most congested areas in the nation. These locations are consistent with observations generated using other tools.

Caltrans contracted with METRANS²¹ to identify congested locations using a different methodology that was developed and applied to the two largest metro areas in California – Los Angeles and San Francisco. The study identified the top 15 freight impact areas, focusing on the most congested period of time during a day. The significance of freight impact areas, which depends on both the severity of congestion and the volume of trucks, is measured by four indices: average peak hour freight congestion value; total peak hour freight congestion delay; average

²⁰ <http://atri-online.org/2018/01/25/2018-top-truck-bottleneck-list/>

²¹ http://www.dot.ca.gov/hq/tpp/offices/ogm/index_files/CaltransFreightImpactsProject_finalreport.pdf

peak hour all-vehicle congestion value; and total peak hour all-vehicle congestion delay. These indices were used to identify the impact areas and to calculate total delay.²²

For the rest of California, the top 15 freight impact areas on the National Highway System were identified using PeMS data, Vehicle Detector Stations (VDSs), Traffic Census Stations, and Weigh-In-Motion Sensors, which provide real-time and historical data and analysis on congestion. Major arterial freight impact areas and impacts of rail crossings were also considered in the analysis.

The study identified 15 strategies based on the CFMP 2014 goals and literature review of best practices, as shown in Table 5. These strategies were selected and evaluated based on the following four criteria: cost, effectiveness in reducing truck-related congestion, co-benefits, technical difficulty, and implementation feasibility.²³ The findings were shared widely via webinars.

Table 5 – Mitigation Strategies Recommendations

Infrastructure Improvements	Efficiency Improvements	Policy Improvements
<ul style="list-style-type: none"> • Truck-only lanes • Railroad grade separations • Expand highway capacity • Truck parking facilities 	<ul style="list-style-type: none"> • Freight advanced information management systems • Integrated freight load information system • Freight priority traffic management • Cargo matching services • Smart truck parking • Off-hours deliveries • Terminal appointment systems • Auto truck platoon 	<ul style="list-style-type: none"> • Truck and passenger VMT tax • Truck lane tolls • On-site parking and loading

Element 9: Freight Investment Plan

Element 9 is a new requirement in the FAST Act.

The CFMP is required to include a list of priority projects. Element 9 states that the Freight Investment Plan (FIP) component of the CFMP “shall include a project, or an identified phase of a project, only if funding for completion of the project can reasonably be anticipated to be available for the project within the time period identified in the freight investment plan.”²⁴

²² http://www.dot.ca.gov/hq/tpp/offices/ogm/index_files/CaltransFreightImpactsProject_AppendixA.pdf

²³ http://www.dot.ca.gov/hq/tpp/offices/ogm/index_files/CaltransFreightImpactsProject_AppendixB.pdf

²⁴ [http://uscode.house.gov/view.xhtml?req=\(title:49%20section:70202\(c\)%20edition:prelim\)](http://uscode.house.gov/view.xhtml?req=(title:49%20section:70202(c)%20edition:prelim))

In May 2018, the CTC adopted the multi-year TCEP program requesting a total of \$1.39 billion for 28 projects valued at more than \$4 billion. The projects were determined to be ones that best address the objectives of the program and the established screening and evaluation criteria. The projects include a variety of improvements to goods movement on corridors with high volumes of freight including, but not limited to, projects that increase the use of on-dock rail; improve safety by eliminating at-grade crossings; reduce impacts to surrounding communities; reduce border wait times; and increase rail capacity with double tracking.

This list of projects is called California’s FIP and is included in Attachment D Adoption of the 2018 Trade Corridor Enhancement Program Resolution (CTC Book Item Tab 19, TCEP-P-1718-01).²⁵

The projects that will be requesting allocations from the NHFP in the coming months, marked by an “F” under the “Federal State Funding” column in Attachment D, are as follows:

- San Bernardino County: Interstate 10 Corridor, Contract 1 (Express Lanes)—Add two express lanes and auxiliary lanes
- Shasta County: Interstate 5, Redding to Anderson Widening, Phase 2—Widen road and structures from four to six lanes, replace two bridges, and install closed circuit TV and fiber optic cable
- Kern County: State Route 58 / 99 Bakersfield Freeway Connector—Grade separate exit and entry ramps, construct southbound auxiliary lane, two lane collector-distributor road, retaining walls, and widen bridge
- Merced County: State Route 99 Livingston Widening, North Bound—Widen 7.65 miles to 3 lanes, northbound direction only
- Los Angeles County: Southern Terminus Gap Closure—Add 5000 feet of main line track
- Los Angeles County: Terminal Island Railyard Enhancements—Add 31,000 feet of on-dock staging/storage tracks
- Los Angeles County: Pier G & J Double Track—Add 9,000 feet of double track
- Los Angeles County: Interstate 605 / 91 Interchange Improvement: Gateway Cities Freight Crossroads Project—Add new general purpose and/or auxiliary lanes and modify on and off ramps
- Los Angeles County: Interstate 5 Golden State Chokepoint Relief—Add truck lanes, HOV lanes, auxiliary lanes, sound walls, and an ITS hub station; and widen seven bridges and improve access to weigh station
- Orange County: State Route 57 / Lambert Road Interchange Improvement—Install auxiliary lanes, modify ramps and widen Lambert Road to accommodate future truck climbing lane
- San Diego County: National City Marine Terminal Rail Track Extension—Construct connector track and realign Marina Way
- San Diego County: Tenth Avenue Marine Terminal Beyond Compliance Environmental Enhancements—Expand shore power and purchase "Bonnet" system

²⁵ [http://catc.ca.gov/meetings/2018/2018-05/Complete_Meeting_Book\(1310_Pages\).pdf](http://catc.ca.gov/meetings/2018/2018-05/Complete_Meeting_Book(1310_Pages).pdf)

The approval of this CFMP Addendum by the FHWA will make the projects eligible for federal fund allocations.

Element 10: State Freight Advisory Committee

This FAST Act requirement remains the same as MAP-21.

The CFMP 2014 addressed Element 10 requirements in the Chapters 1.4. California has a robust public engagement program with local and regional agencies, and with private sector stakeholders.

The California Freight Advisory Committee (CFAC) was established in 2013 in response to federal and State law. The CFAC is a permanent statewide advisory committee for freight and was established by Caltrans under the delegated authority and collaboration with the California State Transportation Agency (CalSTA). The CFAC is chaired by Caltrans and currently has 65 official member organizations.²⁶

Consistent with federal guidance, the CFAC member organizations were selected with the intent of providing a fair balance of representation broadly across all regions of California, freight modes, and perspectives. Members represent a diverse cross-section of public agencies and private sector freight stakeholders, including representatives of ports, shippers, carriers, workforce, trade associations, tribal governments, and environmental, safety, and community organizations.

In addition, for the designation of Critical Urban and Rural Freight Corridors, Caltrans formed a Technical Working Group of 25 partners and stakeholders which met several times between October 2016 and April 2017 to develop a transparent and collaborative process for these designation in California. This is covered under Element 3b of this Addendum.

²⁶ <http://www.dot.ca.gov/cfac/>

Attachment A
Caltrans Comment Letter to US DOT on National Multimodal Freight Network

Attachment B
California’s Designated Critical Urban and Rural Freight Corridors as of April 2018

CRITICAL RURAL FREIGHT CORRIDORS (CRFC) - 49 USC 70103 (b)(2)(A)						
State	Facility ID	Start Point	End Point	Length (Miles)	CRFC ID (A-G)	MPO / RTPA
CA	S11	1/4 mi 400 feet E of Sanyo Ave	Enrico Fermi Dr	0.51	(E); (F); (G)	SANDAG
CA	S44	44	47	4.07	(G)	SRTA
CA	S89	29	30	0.99	(G)	SRTA
CA	S89	42.7	42.9	0.2	(G)	SRTA
CA	S89	28.5	29.5	1	(G)	SRTA
CA	S97	29.4	29.9	0.48	(G)	SRTA
CA	S299	17.2	18.293	1.04	(G)	SRTA
CA	S299	66.6	67.425	0.95	(G)	SRTA
CA	U395	14	R16	2.03	(G)	SRTA
CA	Skyline Ext	Skyline Rd to Johnstonville Rd	S36 R29.931	0.49	(G)	SRTA
CA	S89	27.3	27.4	0.11	(G)	SRTA
CA	U395	29.94	42.08	12.14	(B); (D); (G)	Inyo LTC
CRFC Total				24.01		

CRITICAL URBAN FREIGHT CORRIDORS (CUFC) - 49 USC 70103 (b)(2)(A)						
State	Facility ID	Start Point	End Point	Length (Miles)	CUFC ID (H-K)	MPO
CA	Brittania Blvd	I905	La Media Rd	2.14	(H); (I); (J); (K)	SANDAG
CA	La Media Rd	I905	International Mexico Border	2.27	(H); (I); (J); (K)	SANDAG
CA	S11	Junction S905/S125	1/4 mi 400 feet E of Sanyo Ave	0.64	(H); (I); (J); (K)	SANDAG
CA	S11	Enrico Fermi Dr	Future Otay Mesa East POE	1.58	(H); (I); (J); (K)	SANDAG
CA	Pier B	9th St	Pier A Way	1.6	(H); (J)	SCAG
CA	Churn Creek Rd/Rancho Rd	0.15 mi E of I5 on Churn Creek Rd	0.10 mi E of Shasta View Dr on Rancho Rd	1.8	(K)	SRTA
CUFC Total				10.03		

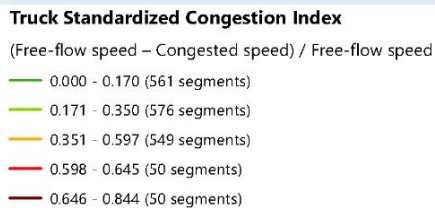
Map:

<http://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=f3458a90339b4becb471262eee8d8412>

Attachment C1: Static Map of Congestion in California



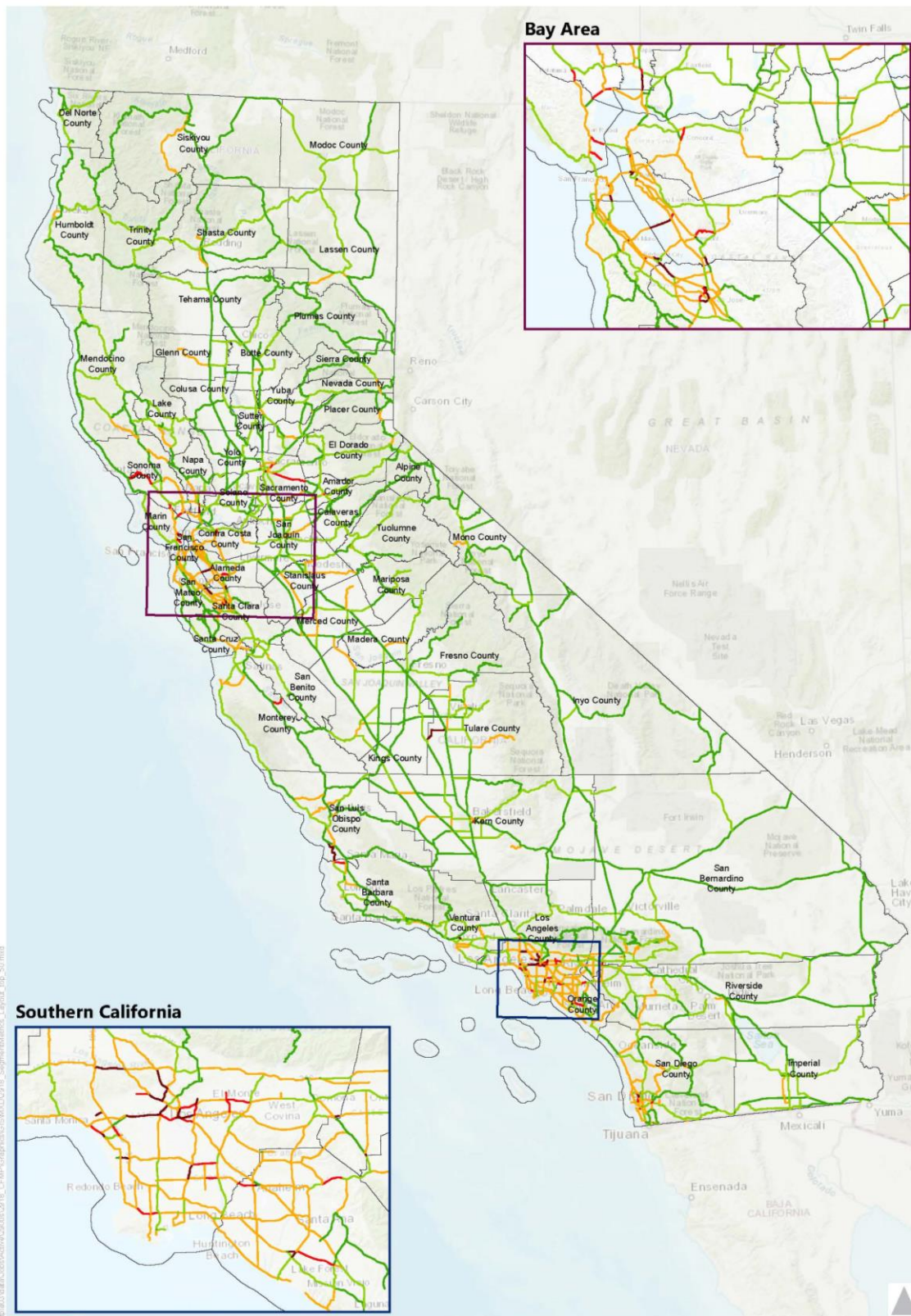
M:\a1023484\copy\active\20180316_C1Map\Graphics\SWA\C0318_SegmentMetric_Layout_100.mxd



Truck Congestion Metric

The data represents the worst case scenario of each direction for the annual average weekday using NPMRDS for Year 2016
 Date: 11/17/2017

Attachment C2: Static Map of Speed Variability in California



18342012/01/18/18_C2/MP/Graphic/CA/FAST/2018_Segments/Map/Map_Legend_10p_50.mxd

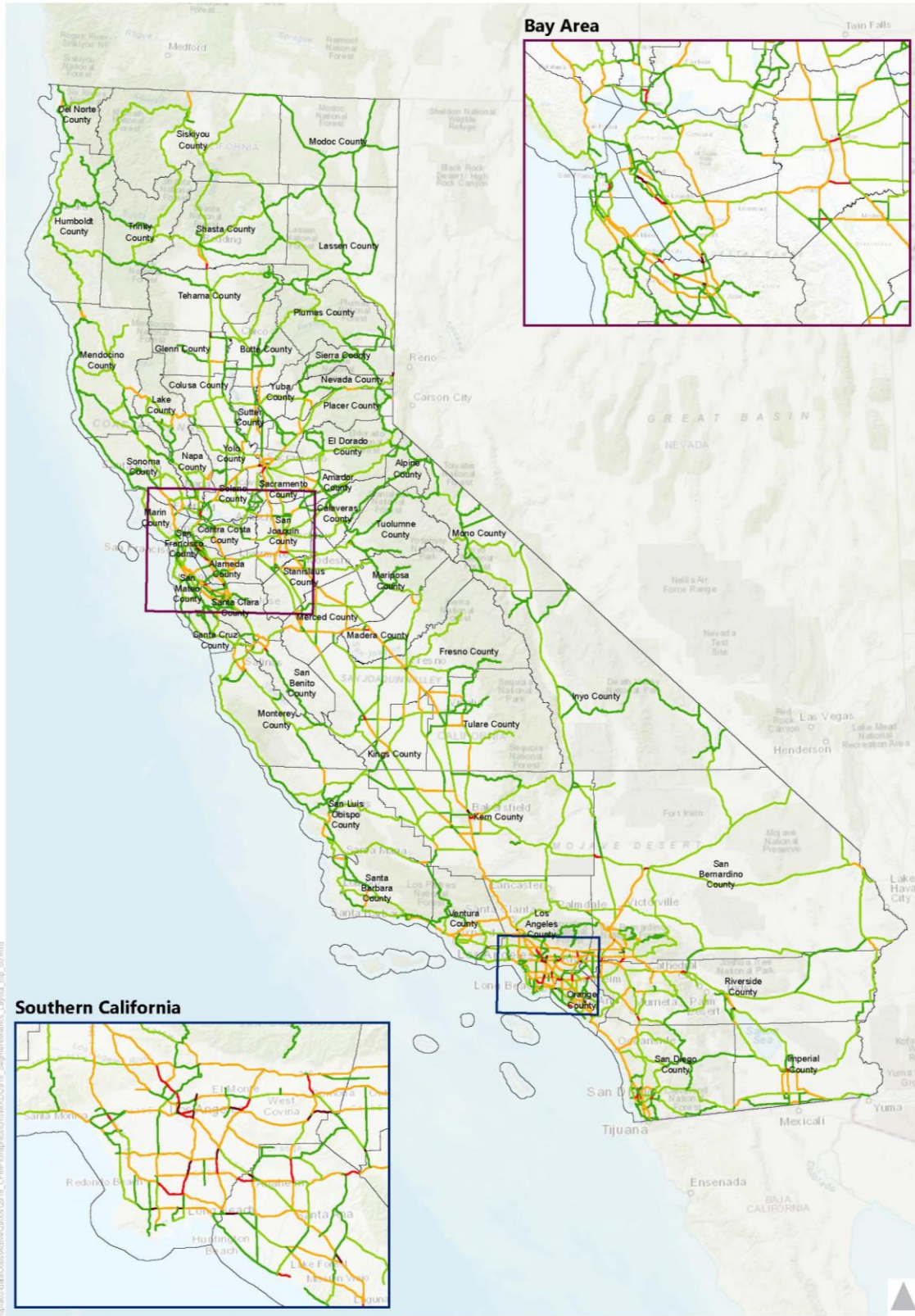
- Truck Speed Variability**
 (85% Congested Speed - Mean Congested Speed) / Mean Congested Speed
- 0.000 - 0.150 (Low variation day to day) (777 segments)
 - 0.151 - 0.350 (501 segments)
 - 0.351 - 0.559 (408 segments)
 - 0.560 - 0.625 (50 segments)
 - 0.626 - 0.980 (High variation day to day) (50 segments)



Truck Reliability Metric

The data represents the worst case scenario of each direction for the annual average weekday using NPRMDS for Year 2016
 Date: 11/17/2017

Attachment C3: Static Map of Safety (Injury Cost) in California



Truck Severe Injury Cost per Segment (2012-2016) (Normalized by Length)

- \$0 (988 segments)
 - \$1 - \$100,000 (355 segments)
 - \$100,001 - \$1,365,000 (343 segments)
 - \$1,365,001 - \$3,200,000 (50 segments)
 - \$3,200,001 - \$381,720,676 (50 segments)
- $$\frac{[(\text{Sum collisions with Crash Severity 1} * \$1,000,000) + (\text{Sum collisions with Crash Severity 2} * \$21,800) + (\text{Sum people injured in collisions with Crash Severity 1 and 2} * \$466,400) + (\text{Sum people killed in collisions} * \$9,800,000)]}{\text{Length of segment (miles)}}$$



Truck Safety Metric

The data represents the sum of truck involved collisions for both directions, using SWITRS data for Year 2012 to 2016
Date: 11/17/2017

Attachment D
Adoption of the 2018 Trade Corridor Enhancement Program Resolution
(California’s Freight Investment Plan)

2018 California Freight Investment Plan
Trade Corridor Enhancement Program (Trade Corridor Enhancement Account and National Highway Freight Program)

(1,000's)

CO	Routes	Project Title	Project Description	Total Project Cost	* Matching Funds	TCEP Funds		NHFP Funding Only		
						TCEA Funds	NHFP Funds	2017-18	2018-19	2019-20
ALA	7th Street	7th Street Grade Separation (East)	Reconstruct existing 4-ln underpass at the UPRR mainline tracks to meet current geometric standards.	\$ 252,000	\$ 77,000	\$ 175,000	\$ -			
ALA	Various	Freight Intelligent Transportation System	Install and implement ITS elements and other technologies, which include changeable message signs, closed circuit TV, fiber optic and Wi-Fi communications, traffic signal enhancements, vehicle and queue detection, train queue detection, weight-in-motion, information application, and smart parking system.	\$ 30,600	\$ 18,144	\$ 12,456	\$ -			
ALA	Various	Quiet Zone Safety Engineering Measures	Install 4 quadrant gates, raised median, and sidewalks at three at-grade railroad crossings.	\$ 6,480	\$ 2,280	\$ 4,200	\$ -			
KER	SR 58 / 99	Rt 58 / 99 Bakersfield Freeway Connector	Grade separate exit and entry ramps, construct southbound auxiliary lane, 2-lane collector-distributor road, retaining walls, and widen bridge.	\$ 50,000	\$ 25,000	\$ 500	\$ 24,500	\$ 24,500		
MER	SR 99	Rt 99 Livingston Widening, north bound	Widen 7.65 miles to 3 lanes, northbound direction only	\$ 37,420	\$ 8,370	\$ -	\$ 29,050		\$ 29,050	
SJ	Fyffe Ave	Fyffe Ave Grade Separation	Replace an at-grade crossing with a new grade separated overcrossing.	\$ 13,000	\$ 4,000	\$ 9,000	\$ -			
SJ	I 205	205 / International Parkway Interchange Improvements	Widen ramps, construct turn pockets, install bike/pedestrian improvements, and signal modification.	\$ 15,690	\$ 8,090	\$ 7,600	\$ -			
SJ	I 580	580 / International Parkway Interchange Improvements	Widen ramps, construct turn pockets, install bike/pedestrian improvements, and signal modification.	\$ 8,970	\$ 3,790	\$ 5,180	\$ -			
SCL	US 101 / SR 25	Rt 101 / 25 Interchange Improvements Ph 1	Construct/relocate interchange (IC) N of the existing location by replacing a 2-ln bridge with 4-ln bridge / IC construct aux ln, modify /construct frontage roadway, install bike lns, sidewalks, and traffic signals	\$ 65,000	\$ 60,800	\$ 4,200	\$ -			
SOL	Rt 80/680/12	Rt 80/680/12 Interchange, Package 2A	Construct a new 2-ln hwy alignment and bridge, off-ramp, install ramp metering and changeable message signs, and braided ramp connection.	\$ 76,000	\$ 22,800	\$ 53,200	\$ -			
STA	SR 132	Rt 132 West Freeway / Expressway Ph 1	Construct new 2-ln expressway with full access control and grade separation divided highway.	\$ 149,400	\$ 128,400	\$ 21,000	\$ -			
LA	LA Metro	Southern Terminus Gap Closure	Add 5000 feet of main line track.	\$ 9,529	\$ 3,537	\$ -	\$ 5,992		\$ 5,992	
LA	LA Metro	Terminal Island Railyard Enhancements	Add 31,000 feet of on-dock staging/storage tracks.	\$ 34,015	\$ 12,370	\$ -	\$ 21,645		\$ 21,645	
LA	LA Metro	Pier G & J Double Track	Add 9,000 feet of double track.	\$ 25,000	\$ 11,000	\$ -	\$ 14,000		\$ 14,000	
LA	Montebello Blvd	Montebello Boulevard Grade Separation	Replace an at-grade crossing with a new grade separated undercrossing.	\$ 128,611	\$ 79,611	\$ 49,000	\$ -			
LA	Turnbull Canyon Rd	Turnbull Canyon Road Grade Separation	Replace an at-grade crossing with a new grade separated overcrossing. Add sidewalks/bike lanes.	\$ 86,246	\$ 57,246	\$ 29,000	\$ -			
LA	Rosecrans/ Marquardt	Rosecrans/Marquardt Grade Crossing	Replace an at-grade crossing with a new grade separated crossing.	\$ 155,300	\$ 146,300	\$ 9,000	\$ -			
LA	I 605 / SR 91	Rt 605 / 91 Interchange Improvement: Gateway Cities Freight	Add new general purpose and/or auxiliary lanes and modify on and off ramps.	\$ 187,800	\$ 155,800	\$ -	\$ 32,000		\$ 32,000	
LA	I 5	Rt 5 Golden State Chokepoint Relief	Add truck lanes, HOV lns, aux lns, soundwalls, and an ITS hub station. Widen 7 bridges and improve access to weigh	\$ 539,200	\$ 292,200	\$ 98,000	\$ 149,000			\$ 149,000
LA	SR 71	Rt 71 Freeway Conversion	Add 1 HOV and 1 mixed flow ln in each direction, close 3 at-grade crossings, install sound walls and pedestrian bridge.	\$ 175,519	\$ 131,519	\$ 44,000	\$ -			
LA	SR 57 / 60	Rt 57 / 60 Confluence: Chokepoint Relief Program	East bound improvements include interchange modifications, aux. lanes and 3 new bridges.	\$ 288,600	\$ 266,600	\$ 22,000	\$ -			
ORA	SR 57	Rt 57 / Lambert Road Interchange Improvement	Install aux lanes, modify ramps and widen Lambert Rd to accommodate future truck climbing lane.	\$ 100,000	\$ 34,295	\$ -	\$ 65,705		\$ 65,705	
RIV	SR 60	Rt 60 Truck Safety and Efficiency, Phase 1A	Replace 50 yr old with new 6-ln bridge, reconfigure the N side of the 60/Moreno Beach Dr IC and construct aux lns.	\$ 24,000	\$ 7,200	\$ 16,800	\$ -			
SBD	US 395	Rt 395 Widening from SR 18 to Chamberlaine Way	Widen 395 from 2 to 4-lns, construct turn lanes, and install signals.	\$ 52,321	\$ 28,029	\$ 24,292	\$ -			
SBD	I 10	Rt 10 Corridor, Contract 1 (Express Lanes)	Add two express lanes and auxiliary lanes.	\$ 625,400	\$ 507,569	\$ 13,515	\$ 104,316	\$ 104,316		
SBD	Etiwanda Ave	Etiwanda Avenue Grade Separation	Replace an at-grade crossing with a new grade separated overcrossing. Add 1,700 feet of sidewalks/bike lanes.	\$ 60,000	\$ -	\$ 60,000	\$ -			
VEN	SR 34	Rt 34 (Fifth St) / Rice Avenue Grade Separation	Grade separate existing overcrossing and widen from 4 to 6-lns, install connector roads, signals, and sidewalks.	\$ 79,192	\$ 12,109	\$ 67,083	\$ -			
SD	Rt 125/905	Rt 125/905 Connector	Construct freeway to freeway South-West Connector.	\$ 36,255	\$ 14,275	\$ 21,980	\$ -			
SD	SR 11	Rt 11/Siempre Viva Interchange and Commercial Vehicle Enforcement Facility, Seg 2B	Construct new interchange and begin site prep for the CVEF, which includes drainage and utilities.	\$ 45,400	\$ 8,282	\$ 37,118	\$ -			
SD	Otay Mesa East POE	Otay Mesa East Port of Entry Segment 3A	Begin site preparations which include drainage and utilities.	\$ 40,350	\$ 35,300	\$ 5,050	\$ -			
SD	POEs	Advanced Technology Corridors at Border POEs	Implement a fiber optic cable network to facilitate an advanced traveler information and border wait time system.	\$ 39,175	\$ 27,206	\$ 11,969	\$ -			
IMP	SR 98	Rt 98 Improvements	Widen 98 from four to 6-lns, install associated sidewalks, Class II bike lanes, and curb ramps.	\$ 11,650	\$ 8,280	\$ 3,370	\$ -			
IMP	Calexico East POE	Calexico East POE Truck Crossing Improvement	Widen bridge to add truck lanes and passenger lanes along with eight foot shoulders.	\$ 29,844	\$ 26,844	\$ 3,000	\$ -			
SD	SANDAG	Sorrento to Miramar, Ph2 Intermodal Improvements	Add 1.9 miles of double track in slowest area, install signal improvements and retaining walls.	\$ 129,037	\$ 118,537	\$ 10,500	\$ -			
SD	City of San Diego	Otay Mesa Truck Route, Phase 4A	Widen and pave existing service road, redirect laden/unladen trucks on dedicated route.	\$ 19,530	\$ 13,530	\$ 6,000	\$ -			
SD	SD Unified Port District	National City Marine Terminal Rail Track Extension	Construct connector track and realign Marina Way.	\$ 13,120	\$ 12,535	\$ -	\$ 585		\$ 585	
SD	SD Unified Port District	10th Ave Marine Terminal Beyond Compliance Environmental	Expand shore power and purchase "Bonnet" system.	\$ 8,100	\$ 2,500	\$ -	\$ 5,600			\$ 5,600
SB	US 101 / SR 25	Rt 101 Multimodal Corridor	Construct HOV lanes between Carpinteria and Santa Barbara, reconstruct or replace bridges and overcrossing, install	\$ 276,575	\$ 225,575	\$ 51,000	\$ -			
SHA	I 5	Rt 5, Redding to Anderson Widening, Ph 2	Widen road and structures from 4 to 6-lns, replace 2 bridges, and install closed circuit TV and fiber optic cable.	\$ 126,258	\$ 60,558	\$ -	\$ 65,700	\$ 65,700		
Total				\$ 4,050,587	\$ 2,657,481	\$ 875,013	\$ 518,093	\$ 194,516	\$ 168,977	\$ 154,600

* Matching funds include state and local funds.

**All NHFP funded projects (highlighted in blue) were adopted by the California Transportation Commission into the Trade Corridor Enhancement Program and are fully funded with state and/or federal funds.

California's FAST Act Obligation Authority Estimates by
Federal Fiscal Year

FFY	NHFP OA *	California Freight Mobility Plan
2015/16	\$98,645,569	*
2016/17	\$91,532,209	*
2017/18	\$98,803,317	\$194,516,000
2018/19	\$109,484,395	\$168,977,000
2019/20	\$120,432,834	\$154,600,000
Total	\$518,898,324	\$518,093,000

* CA did not allocated NHFP funds during these years. Carried over to 2017/18

** All NHFP funded projects were adopted by the California Transportation Commission into the Trade Corridor Enhancement Program and are fully funded with state and/or federal funds.