Appendix E: Discussion Concepts for Potential Future Action

In addition to the suite of actions identified in Appendix C, the State agencies have also identified transformational concepts for further exploration and potential future action. They include complex, big-picture ideas that are promising, but will require further discussion with experts and stakeholders to determine feasibility and effectiveness.

The State agencies will continue to gather more detail on the concepts described here, and will develop any subsequent actions through separate public processes. As the State agencies move forward, the concepts may change, be adjusted or new concepts may be added. Implementation of these concepts and any subsequently identified actions will also be conditional based on applicable public processes, necessary financing approvals, and environmental reviews.

A. Inland Marine Corridors

In 2013, the U.S. Department of Transportation partnered with State and local agencies to partially fund the operation of Marine Highway 580 green trade corridor.

A barge service moving among the ports of Oakland, Stockton, and West Sacramento holds promise for increased freight volumes and capacity. Public and private benefits could include reduced emissions and congestion on nearby Interstate 580 corridor. The barge service also offers an opportunity for the State to establish a zero or near-zero emission freight corridor, with the use of low emission marine vessels. The State sees this as an opportunity to expand markets and promote workforce development at inland ports, with a focus on zero emission corridors.

B. Non-traditional Transport Methodologies

As congestion near major freight hubs increases, it is important to explore innovative methods to moving freight. Some private companies have already begun considering transformational ideas, including hyperloop and un-manned aircraft for freight. Another option is to divert trucks hauling freight via dedicated, clean energy underground facilities serving inland locations where transloading and distribution can occur. These types of projects could transform freight movement by increasing efficiency, improving safety, reducing traffic congestion, and using alternative cleaner fuel technologies.

C. Packaging Optimization

As e-commerce continues to increase, it is important to explore opportunities to reduce the full life-cycle impacts of packaging production. Reducing the size and weight of packaging materials could provide private and public sector benefits,

including cost, time, waste, and emission savings. The shipping industry is already implementing strategies to promote package optimization. For example, several shippers apply dimensional weight pricing. This aims to avoid the use of oversized boxes by setting the dimensional weight according to the size of the box and charging for the dimensional weight or the actual weight, whichever is greater. In addition to smaller and lighter packaging, companies are also beginning to use sustainable, natural, bio-degradable, and non-petroleum-based materials to reduce waste. Additionally, packaging is important to protecting the commodity being shipped, therefore optimized packaging must continue to minimize damage to products. This will help to avoid reverse logistics.

D. Supply Chain Consolidation in the Agriculture Industry

A fragmented food supply chain leads to inefficient transportation of goods and can limit the ability for some growers to reach competitive markets. Coordination among regional producers, carriers, and logistics facilities can help harness economies of scale by reducing the number of less-than-load trips and providing a centralized location for the storage and consolidation of perishable goods. Regional collaboration and consolidation may lead to lower transportation costs.

E. System Efficiency

System efficiency improvements can produce economic and air quality benefits. By implementing one or more efficiency strategies, businesses may be able to cut travel time, decrease fuel costs, and increase the capacity of the system to transport more freight within the existing footprint. Supply chain efficiencies generally decrease cost, and if proven, become widely adopted due to their ability to increase business competitiveness.

To gain insight into industry vision and best practices, the State convened a group of academic and industry professionals that were tasked with providing recommendations on how the public and private sectors can work together to bring about new technology or practices that can enhance efficiency. The resulting concepts could lead to significant public benefit and further the State's sustainable freight goals. Some efficiency measures the State agencies are pursuing include increased and more advanced truck parking, freight traveler information systems, load consolidation, reservation systems at ports, and coordinating data gathering and modeling at the State level. Other concepts, which are of interest but are not included, are receiver-led consolidation, full integration of chassis pool systems, virtual container yards, and load tracking systems. Detailed descriptions of the efficiency measures are in Appendix F, Freight Efficiency Working Group Papers.

F. Infrastructure Projects

In addition to the discussion concepts listed above, there are large transformational infrastructure projects proposed that could be critical in developing a sustainable

freight transport system. They have the potential to provide lessons learned for future actions and a platform for innovative strategies. The State agencies will continue to track development of the following two projects and seek opportunities for partnership where appropriate.

1. Interstate 710

Interstate 710 is a vital transportation corridor, linking the ports of Long Beach and Los Angeles to major Southern California distribution centers and intermodal rail yard facilities. Interstate 710 experiences serious congestion and safety issues as a result of population growth, increased cargo container volume at the ports of Los Angeles and Long Beach, increasing traffic volumes, and an aging infrastructure. The Interstate 710 Corridor Project aims to improve air quality, noise pollution, public health, and traffic safety, modernize the freeway design, address projected traffic volumes, and address the projected growth in population, employment, and activities related to freight. The corridor is 18 miles long and runs from the southern terminus of Interstate 710 to its connection to State Route 60.[1]

2. Otay Mesa East Port of Entry

Insufficient capacity at existing border crossings in the San Diego-Baja California region costs the United States and Mexico billions of dollars in foregone economic output each year. Hours-long delays are undermining productivity and industry competitiveness. Additionally, the current border infrastructure between the U.S. and Mexico will be inadequate for projected binational commerce growth in the coming decades. The State Route 11/Otay Mesa East Port of Entry Project will provide fast, predictable, and secure crossings via tolled approach roads that connect directly to a new state-of-the-art port of entry serving both passenger and commercial vehicles.[2] The total cost of the project for facilities on both sides of the border is approximately $900 million. The project consists of three segments, with construction of the first occurring now, and construction of the final two segments contingent on securing funds. The intelligent transportation system portion of the project, which will provide the underlying architecture, hardware, and software to support the entire toll collection system, will begin construction in 2018-2019 and will cost approximately $36 million.

[1] Caltrans, "I-710 Corridor Project Draft EIR/EIS", June 2012, http://www.dot.ca.gov/dist07/resources/envdocs/docs/710corridor/docs/1.0%20Proposed%20Project.pdf.

[2] San Diego Association of Governments, "SR11/Otay mesa East Port of Entry", January 2016, http://www.sandag.org/uploads/projectid/projectid_56_20230.pdf.

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