



**THE PORT
OF LOS ANGELES**

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November 30, 2015

Lezlie Kimura Szeto
California Air Resources Board
1001 "I" Street
Sacramento, CA 95814

Subject: California Sustainable Freight Action Plan: Pilot Project Ideas

Dear Ms. Szeto:

Please find attached the Port of Los Angeles' California Sustainable Freight Action Plan - Pilot Project Idea, entitled "ZERO EMISSION (ZE)/TRUCK TRIP REDUCTION/FREIGHT EFFICIENCY PROGRAM (ZE ON-DOCK RAILYARDS)".

If you have any questions, please do not hesitate to call me (310-732-7702).

Sincerely,

Kerry Cartwright, P.E.
Director of Goods Movement

KC:ss
Attachment

CALIFORNIA SUSTAINABLE FREIGHT ACTION PLAN PORT OF LOS ANGELES PILOT PROJECT IDEA

**ZERO EMISSION/TRUCK TRIP REDUCTION/FREIGHT EFFICIENCY PROGRAM
(ZERO EMISSION ON-DOCK RAILYARDS)**



**STATE OF CALIFORNIA SUSTAINABLE FREIGHT ACTION PLAN
PORT OF LOS ANGELES PILOT PROJECT IDEA
ZERO EMISSION (ZE)/TRUCK TRIP REDUCTION/FREIGHT EFFICIENCY PROGRAM (ZE ON-DOCK RAILYARDS)**

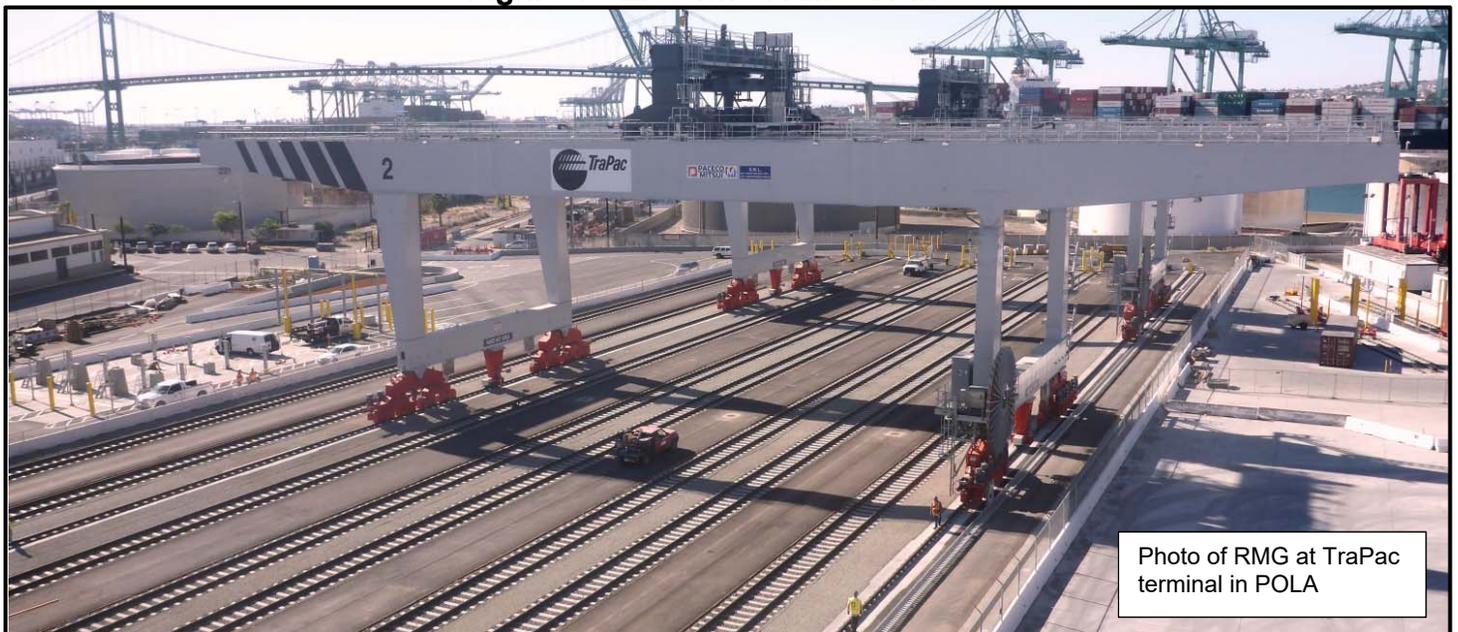
PILOT PROJECT DESCRIPTION

The ZERO EMISSION (ZE)/TRUCK TRIP REDUCTION/FREIGHT EFFICIENCY PROGRAM (ZE ON-DOCK RAILYARDS) is located on Terminal Island and in the West Basin areas of the Port of Los Angeles (POLA). The Program entails the following:

- Electrified on-dock railyards located in APM Terminal (APMT) and West Basin Container Terminal (WBCT)
 - Conversion of existing APMT on-dock railyard and conversion/expansion of existing WBCT on-dock railyard (with additional tracks to increase capacity)
 - Electrified rail-mounted gantry (RMG) crane operations, replacing diesel-powered top-pick operations
 - Procurement/Installation of four RMG cranes for each railyard (8 total)

Figures 1-3 illustrate the project and its location. Figure 1 is a photo of an RMG at the POLA’s TraPac terminal, and would be similar to an RMG deployed at APMT and WBCT.

Figure 1 - Electrified RMG Cranes



Project Status

The projects are contained in the California Freight Mobility Plan (CFMP, project #100710) and the Southern California Association of Governments’ (SCAG) Draft “2016 Regional Transportation Plan/Sustainable Communities Strategy,” to be released in December 2015. For the WBCT element, an environmental impact report is being prepared, and should be approved in mid-2017. A mitigated negative declaration is currently being prepared for the APMT component, and is expected to be approved in the third quarter of calendar year (CY) 2016. This type of project has been previously awarded State Proposition 1B Trade Corridors Improvement Fund (TCIF) funds.

These electrified on-dock railyards reduce emissions, truck trips/miles-travelled, and roadway congestion. Given these significant regional benefits, these projects are also contained in the Los Angeles County Metropolitan Transportation Authority’s (METRO) *Project Idea*, the “Los Angeles/Gateway Freight Technology Program.” METRO’s *Project Idea* is being submitted on behalf of the *Countywide Zero Emission Trucks Collaborative*, which was formed in 2011, and is comprised of the following other agencies: POLA, Port of Long Beach (POLB), South Coast Air Quality Management District, Caltrans District 7, and SCAG.

Figure 2 - Project Regional Context

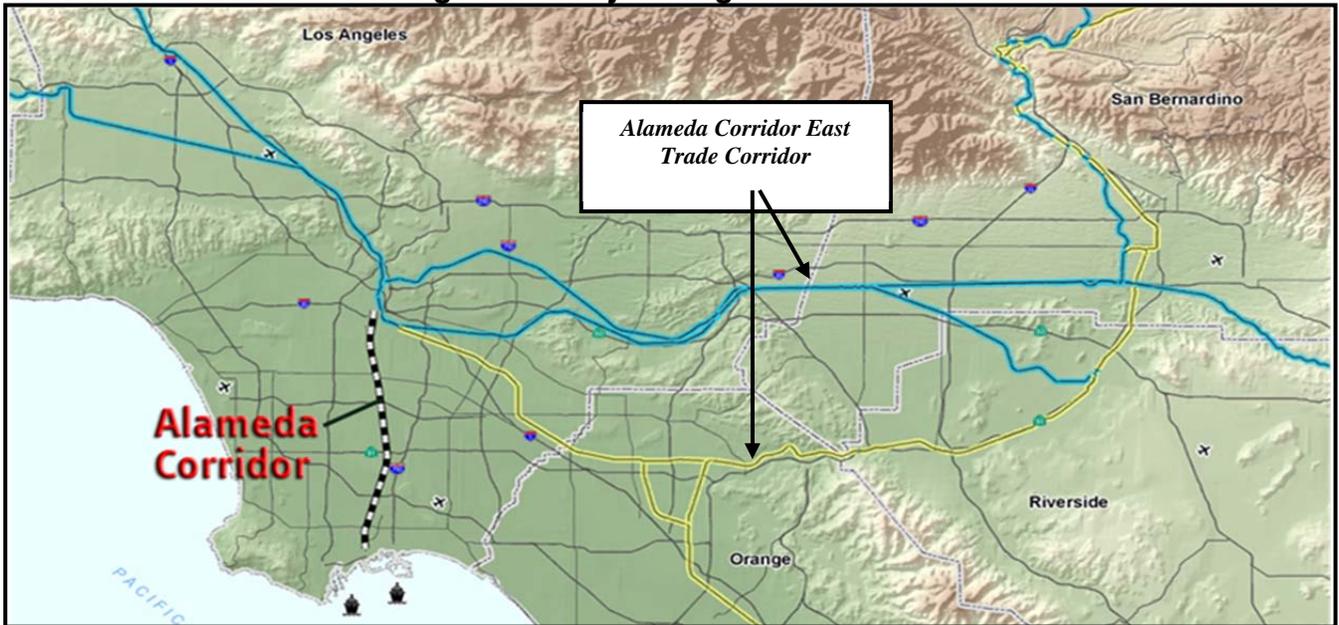
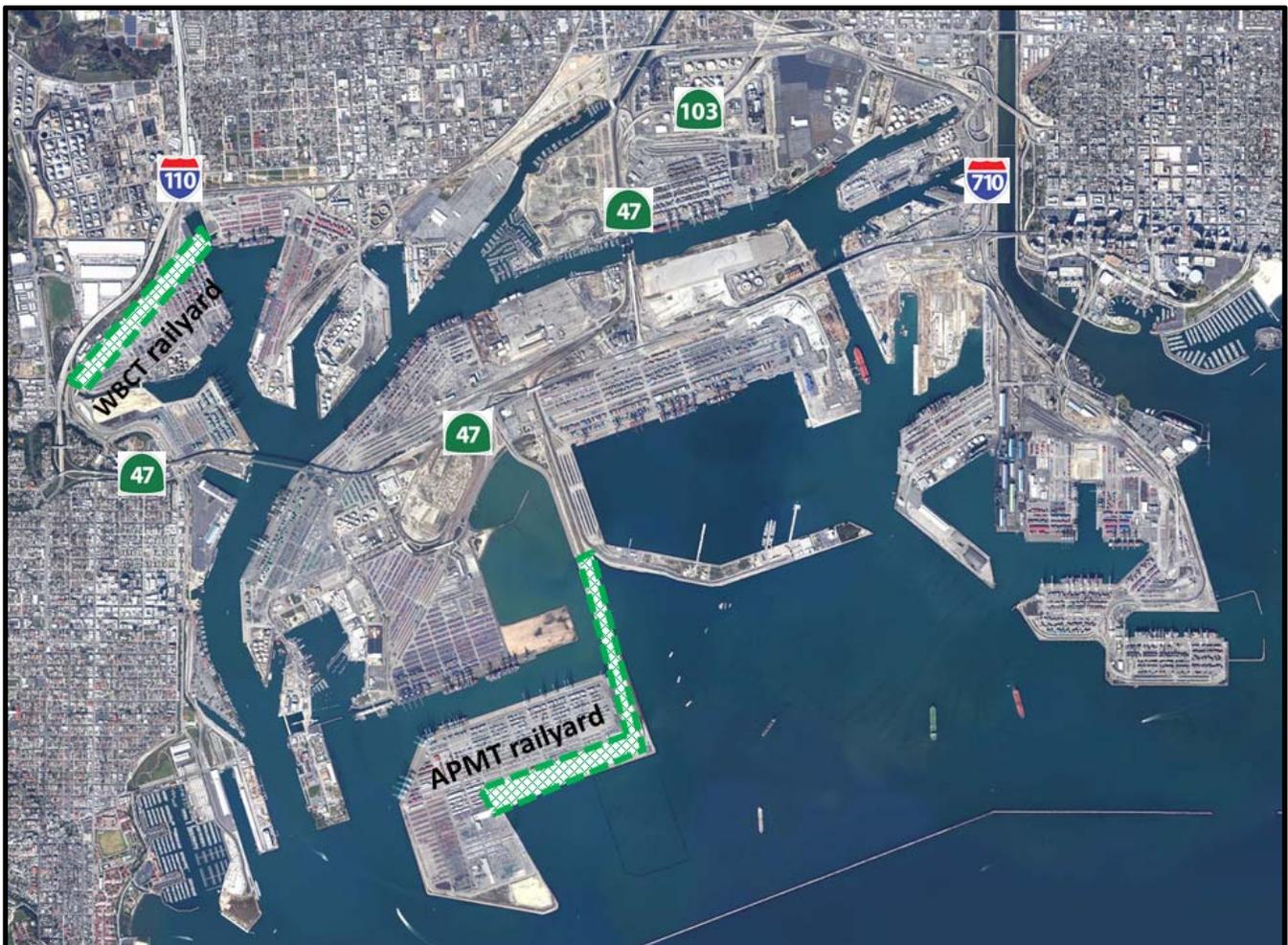


Figure 3 - Project Local Context



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PROJECT BENEFITS

The RMG projects meet all of the goals (and project performance measures) of the CFMP, California Sustainable Freight Strategy, and “Integrated Action Plan” as required by Executive Order (EO) B-32-15. The goals and performance measures include:

- Environmental Stewardship (including alternative fuels and transitioning to zero-emission technologies): reduces emissions; improves public health; reduces diesel consumption; reduces truck trips
- Infrastructure Preservation (CFMP): reduces truck-miles travelled
- Congestion Relief (CFMP) and Freight Efficiency: reduces truck-miles travelled, which improves traffic operating conditions on roadways/freeways
- Safety (CFMP): reduces truck-miles travelled, which reduces propensity for accidents
- Economic Competitiveness and Freight Efficiency: Increases velocity of container movement via shifting from off-dock to on-dock rail use, and via use of RMG vs. conventional container handling equipment; reduces transportation costs
- Innovative/Advanced Technology: electrifies all on-dock rail operations; improves cargo handling

Specific Benefits: Freight Efficiency/Congestion Relief/Safety/Infrastructure Preservation

- On a daily basis, each RMG railyard reduces about 700 truck trips and 7,600 truck-miles travelled
- Combined with other POLA/POLB Rail System projects, these projects help to reduce train delays by around 50 train-hours/day, which also reduces locomotive emissions
- The reduction in truck trips on adjacent roadways/freeways, including the I-710, will result in improved safety

Specific Benefits: Emissions Reductions

The two projects will significantly reduce terminal and truck emissions, which will improve air quality for workers and the adjacent communities. It should be noted that the emission benefits are understated as the findings do not account for decreased rail locomotive operating hours as a result of the improved rail system infrastructure. Each RMG project will eliminate the following cargo handling equipment emissions as follows:

Cargo Handling Equipment Annual Emission Reductions (in tons; Year 2014 Conditions)					
Project	CO	CO ₂	NO _x	PM	Hydrocarbons
WBCT	406	34,389	180.9	5.3	43.1
APMT	97.8	35,921	147.2	6.3	11.2

Additionally, each on-dock railyard expansion will reduce truck emissions as follows:

Truck Trip Reduction - Annual Emission Reductions (in tons; Year 2030 Conditions)				
CO	CO ₂	NO _x	PM	Hydrocarbons
13	5,522	21	0.9	1.0

Benefit Performance Monitoring. The POLA can monitor progress in attainment of the estimated emission reductions via our annual emissions inventory, which has been conducted since 2005.

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Economic Competitiveness/Benefits

These projects are a vital element of the POLA's capital improvement program to accommodate containerized cargo as efficiently as possible. Given that the POLA comprises the largest container seaport in North America (and approximately 19% of all U.S. waterborne containers move through the POLA), these projects are an important component of the nation's intermodal transportation system and trade network. The container terminals where these projects are located serve about 10% of the entire nation's containers (with an estimated value of \$83 billion). These projects are important to the efficient movement of intermodal containers to/from the POLA/POLB and inland destinations east of the Rockies, which also entails maximizing use of the Alameda Corridor. The containerized imports moving through these two POLA terminals include not only final consumer goods, but also intermediate goods that go into products manufactured in the United States (e.g., computers and automobiles). These projects expand and improve the POLA/POLB port infrastructure which is critical to accommodating intermodal containers that could otherwise divert to other ports outside of California. Investing in our nation's seaports is a fundamental component to jumpstarting the economy and creating jobs in California and throughout the nation.

These on-dock railyards eliminate the drayage of containers to/from off-dock railyards via the highly congested I-710, and thus improve the velocity and reliability of cargo transportation for shippers, which in turn reduce the costs of goods by reducing transportation and inventory carrying costs. These truck trip reductions lessen congestion on freeways/roads in the region, which also improves velocity and reliability of domestic and regionally consumed international goods. For exporters in particular, lower transport costs will improve the competitiveness of U.S. products in world markets. Moreover, reductions in logistics costs have been found in numerous studies to generate significant increases in industrial output, improvements in industry productivity, and reductions in production costs. Such increases in industrial output and productivity lead to both increased hiring of workers as well as higher worker wages. These trip reductions will also improve mobility for commuters (ergo workers), and combined with proposed improvements on the I-710, will help to retain and attract new businesses to the area.

Finally, the construction of these projects will create a combined 2,300 direct and indirect new construction jobs (one year/full-time equivalent) in an "Economically Distressed Area" with 13% unemployment.

PROJECT NEED: ENVIRONMENTAL, TRANSPORTATION, AND ECONOMIC CHALLENGES

Environmental

The POLA is located in the South Coast Air Basin (SCAB), an extreme nonattainment area. This basin has some of the worst air quality in the nation, which represents a serious health concern for its residents. Currently, the SCAB is designated by the U.S. Environmental Protection Agency as being in nonattainment of the National Ambient Air Quality Standards for ozone and for particulate matter less than 2.5 microns (PM_{2.5}). Additionally, the RMG projects are located in one of the worst "disadvantaged communities" in the entire State, and nation. Studies show that tens of thousands of people living in communities around the ports face an increased risk of cancer, asthma, birth defects, and decreased lung function. These communities are also heavily populated by immigrants, minorities, and economically disadvantaged people. In its recent Cap-and-Trade Auction Proceeds document, the California Air Resources Board designated the POLA's surrounding communities of San Pedro and Wilmington as "disadvantaged communities."

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Transportation

The POLA/POLB (Ports) handled 15.2 million twenty-foot equivalent units (TEUs) in 2014. By 2035, the Ports are projected to handle about 36 million TEUs. The rail system serving the POLA is instrumental in enabling the efficient transportation of cargo, as rail service is both economically and environmentally beneficial. At the POLA/POLB, about 35% of all containers are loaded onto trains via on-dock and off-dock railyards. Of this 35%, about 25% is loaded via on-dock railyards. It is the policy of the Ports to maximize the movement of containers via on-dock rail, and thus provide sufficient infrastructure. To accommodate the growth in rail traffic, which is estimated to increase from about 95 to 315 trains/per day between now and 2035, the POLA/POLB has developed a comprehensive Rail System Program estimated to cost about **\$2 billion** over the next 10-15 years.

Many intersections, roadways, freeways within the Ports' area, and I-710 Corridor currently operate at unacceptable levels of service. The poor operating conditions are expected to deteriorate within the next 20 years as determined in numerous recent studies. Given the expected cost of the proposed I-710 Corridor improvements, the scarcity of public funds, and the lengthy timeframe required for development/implementation, other types of transportation improvements, such as on-dock/near-dock intermodal railyards, are crucial to ensure the overall economic vitality of Southern California, the State, and the nation. On-dock/near-dock intermodal facilities reduce truck trips for a marine container terminal by about 35-50%.

These projects increase the loading/unloading of containers directly onto trains, and thereby maximize the number of containers moved directly via rail (which is a goal in the draft *United States Department of Transportation Strategic Plan*). These projects thus reduce truck trips on streets and freeways within the SCAG region, including I-710, I-110, SR 47/103, and Alameda Street.

SCHEDULE/COST ESTIMATE/FUNDING

The estimated cost of each project element is as follows:

- WBCT RMG On-Dock Railyard: \$80 million (including \$28 million for cranes)
- APMT RMG On-Dock Railyard: \$110 million (including \$28 million for cranes)

Both projects are in the environmental document preparation phase. In addition to seeking potential State funds (Green House Gas Reduction and/or State Highway Account funds), the POLA would be providing funds. Other potential fund sources include METRO and the United States Department of Transportation (USDOT). For METRO, eligible funds include: USDOT Congestion Mitigation and Air Quality (CMAQ) and Regional Surface Transportation Program (RSTP) funds; formula State Regional Transportation Improvement Program funds; and local sales tax funds. For USDOT funds, the impending transportation authorizing bill includes several new funded freight programs for which funds for these two RMG projects could be sought.

The following summarizes the schedules:

WBCT RMG On-Dock Railyard		
Task	Start	Finish
1. Environmental Approval	12/2014	06/2017
2. Final Design (PS&E)	06/2017	12/2018
3. Construction	12/2018	12/2020

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APMT RMG On-Dock Railyard

Task	Start	Finish
1. Environmental Approval	11/2015	09/2016
2. Final Design (PS&E)	09/2016	05/2018
3. Construction	05/2018	05/2020

REGIONAL SUPPORT/BROAD ACCEPTANCE

These types of projects have been previously awarded TCIF funds, and thus are supported by the Southern California Consensus Group (SCCG). The SCCG is a coalition of all the transportation agencies in Southern California and comprised of the POLA and the following agencies:

- SCAG
- Five regional transportation planning/programming agencies (RTPA) in the SCAG region:
 - METRO
 - Orange County Transportation Authority
 - Riverside County Transportation Commission
 - San Bernardino Associated Governments
 - Ventura County Transportation Commission
- Alameda Corridor-East Construction Authority
- Alameda Corridor Transportation Authority
- Southern California Regional Rail Authority (Metrolink)
- Ports of Long Beach and Hueneme

For the past several years, the SCCG agencies have collaborated to identify more than \$50 billion in multi-modal transportation projects to address mobility, safety, environmental, and quality of life impacts of goods movements.