



# Terminals, Infrastructure, and Air Quality Impacts

**Faster Freight - Cleaner Air Conference  
Oakland, CA**

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# Realities

- ◆ Major increased freight volume
- ◆ Little increased ship calls
- ◆ Little increased terminal area
- ◆ Increased density
- ◆ Needed increased efficiency



# Trucks, Trucks ... Coming & Going



# Overview

- ◆ Air quality drivers
- ◆ Infrastructure solutions
- ◆ Operational solutions



# Air Quality Drivers

- ◆ Regulatory
- ◆ Indirect
- ◆ Non-regulatory



# Regulatory Drivers

- ◆ Emission standards
  - ↗ Trucks
  - ↗ Support equipment
  - ↗ Ships
- ◆ Air quality attainment plans
  - ↗ Ozone
  - ↗ Toxic/Risk
  - ↗ Particulate
  - ↗ SO<sub>2</sub>



# Indirect Drivers

- ◆ NEPA/CEQA
- ◆ Conformity
- ◆ Land use
- ◆ Etc



# Non-regulatory Drivers

- ◆ Traffic
- ◆ Visual
- ◆ Noise





# Infrastructure Solutions

- ◆ Off terminal solutions
- ◆ Marine side solutions



# Off Terminal Solutions

- ◆ Roadway access/circulation
- ◆ Dedicated on & off ramps
- ◆ Fast corridors



# FAST Corridor



Freight Action Strategy for the Everett-Seattle-Tacoma Corridor

# Marine Side Solutions

- ◆ Cold ironing (AMP)
- ◆ Alternate fuel logistics



# Miscellaneous

- ◆ Plug-ins
  - ↗ Reefers
  - ↗ Cabs, for overnighiter
- ◆ Alternate fuel logistics



# Operational Solutions

- ◆ Scheduling
  - Gate appointment incentives
  - Off peak movements
- ◆ Off site staging



**Air quality related issues  
will drive infrastructure  
changes getting  
to and from terminals**



# Infrastructure for Speedy Communications





# Contact Information

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