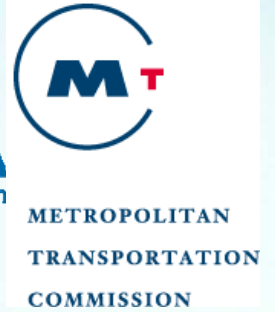


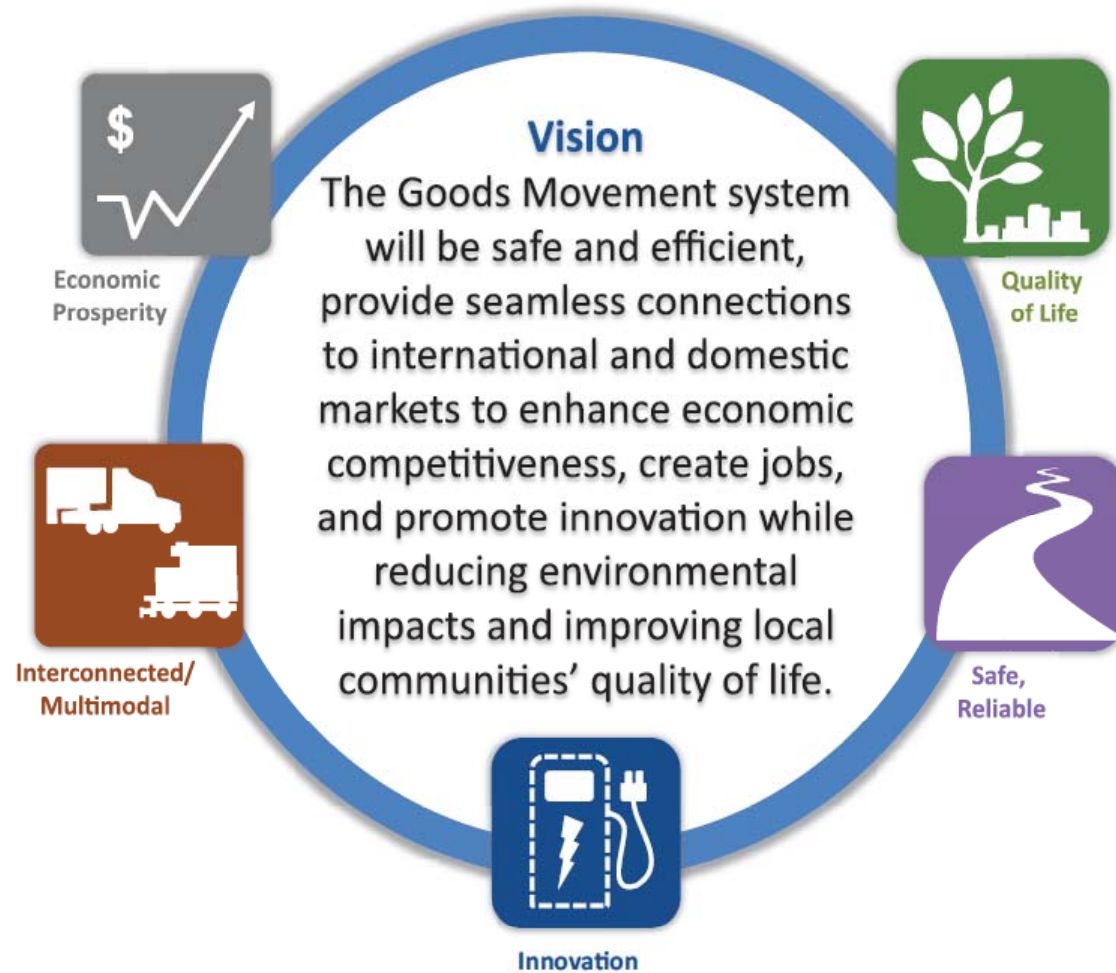
# Goods Movement Plans



## Summary of Needs Assessments

January 21, 2015

# Goods Movement Vision and Goals



# Purpose of Needs Assessment

**Evaluate** the existing and future conditions of freight assets against goals and performance measures (established in prior tasks)

**Identify** gaps, issues and opportunities for each functional element based on performance measure ratings

Help **develop** strategies to meet performance goals

- Strategies will be evaluated against all performance measures and all goals should be met through “balanced portfolio” of strategies

# Needs Assessment Overview



## Global Gateways Issues

- Global gateways handle international trade, and cover entry and exits points that are essential to moving imports/exports.
- *These Issues are associated with Ports, Airports and other intermodal assets.*



## Interregional and Intra-regional Corridors Issues

- Interregional corridors link Alameda County and the Bay Area with the rest of the U.S.
- *Issues along major highway and rail corridors.*



## Local Streets and Roads Issues

- Local streets and roads link global gateways and the interregional and intra-regional corridors.
- *These issues include issues on city truck routes and local streets, and last-mile connectors.*

- ### Cross-Cutting Issues
- Air quality and public health
  - Industrial land supply
  - Crude by rail
  - Sea level rise

*Higher level regional analysis coordinated with detailed Alameda County Analysis*



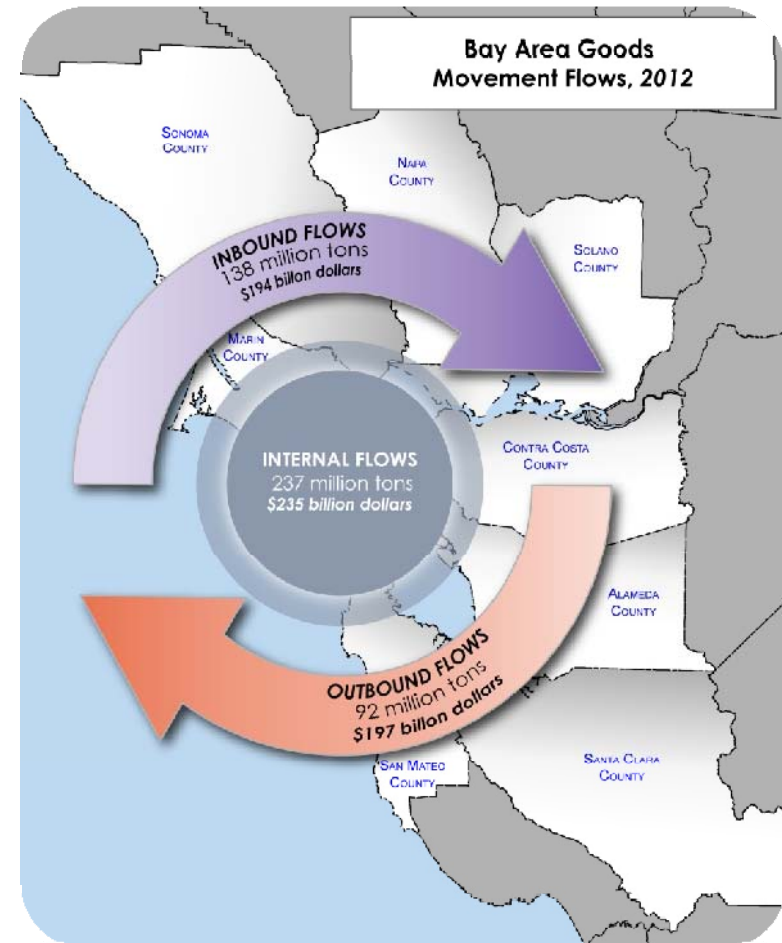


# Needs Assessment Summary

## *Local Streets and Roads Issues*

# Role of Local Streets and Roads in Goods Movement

- Economic driver
  - *Almost 50% of goods in the Bay Area are entirely local*
  - *Local delivery and pick up*
  - *Critical last-mile connectivity needed to/from freight hubs*



Source: FAF 3.5 Provisional Data and Forecasts.

# Summary of Local Street and Roads Needs

## Truck routes connectivity

- Access, land use and modal conflicts

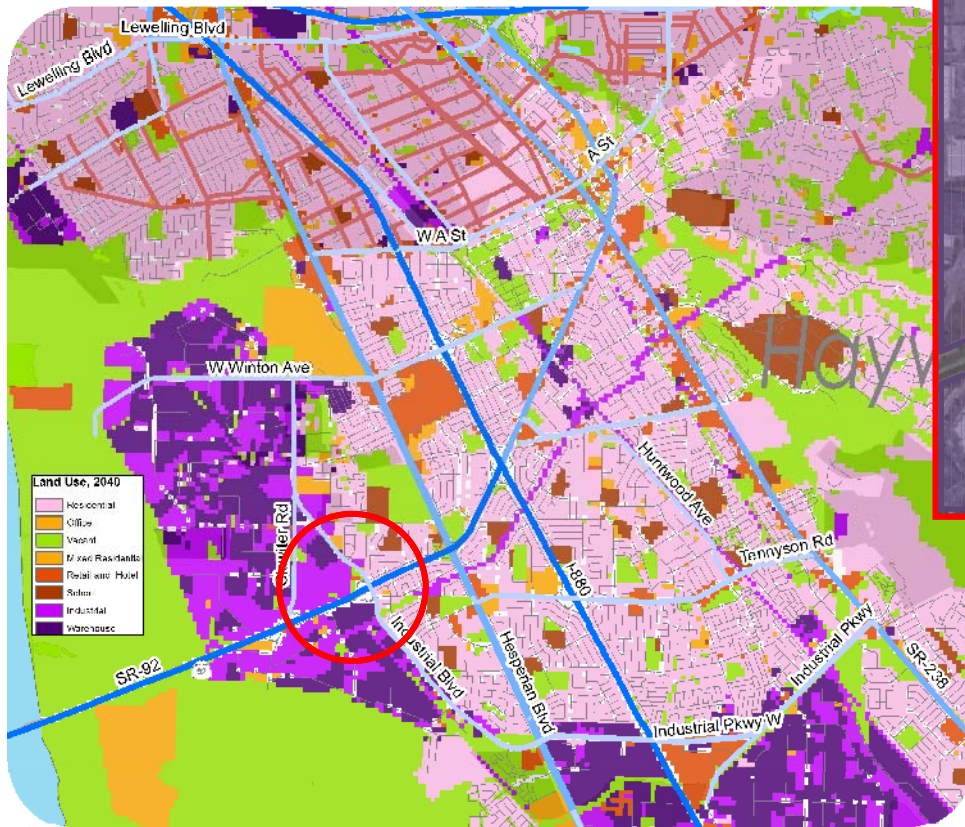
## Truck route performance

- Congestion, safety

## Truck Parking

## Pavement Conditions

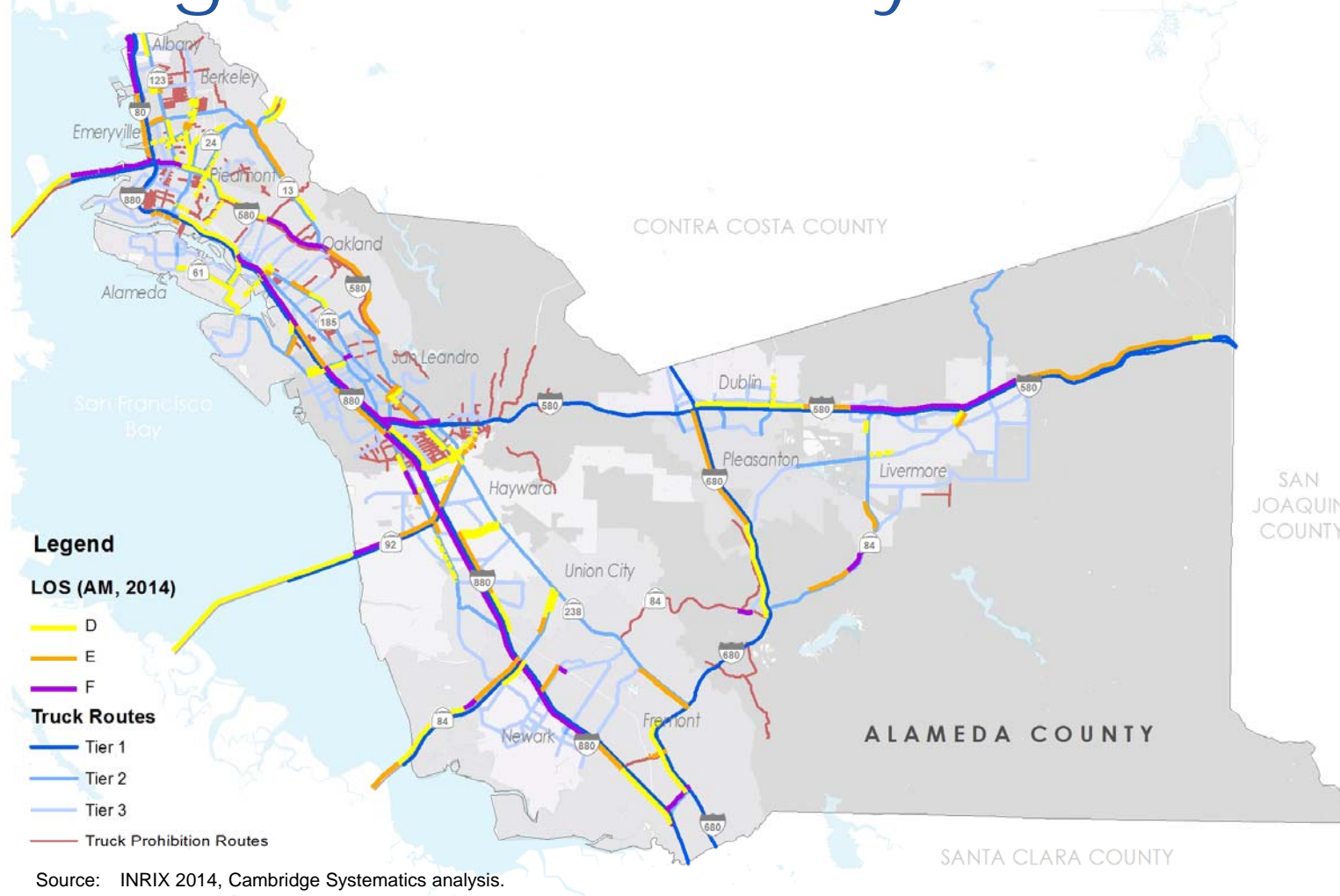
# Connectivity and Land Use Conflicts



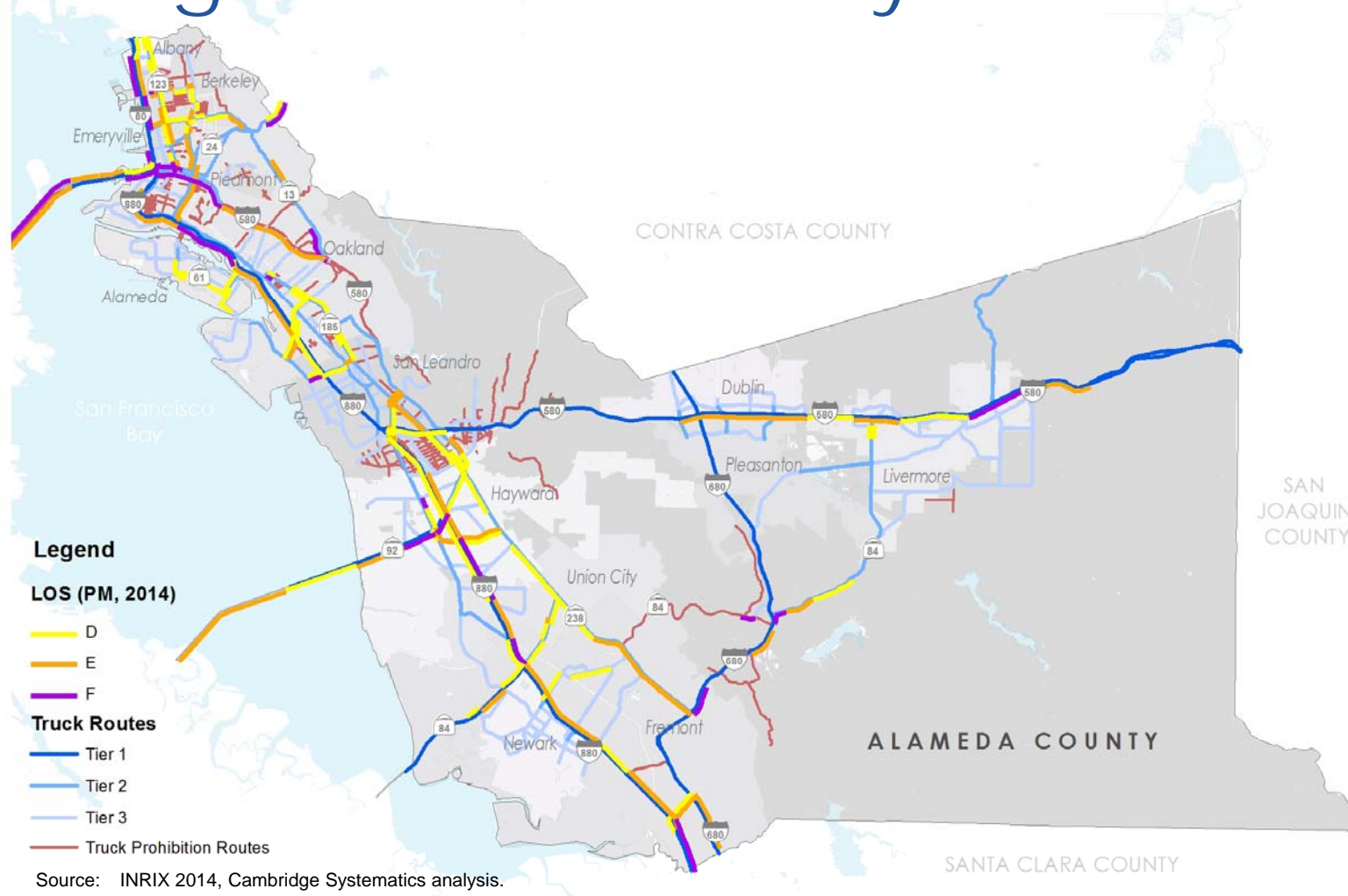
Source: MTC Land Use Data; Cambridge Systematics



# Focus on Alameda County Congestion and Delay – AM Peak



# Focus on Alameda County Congestion and Delay – PM Peak



# Truck Parking Issues



Port-related parking in West Oakland



Corridor parking for long haul



Urban delivery parking

Corridor parking photo: <http://www.gonewiththewynns.com/free-camp-walmart>; Urban Delivery photo: NACTO Webinar, Freight Considerations in World Class Street Design, Stacey Hodge, March 13, 2014

# Needs Assessment Summary

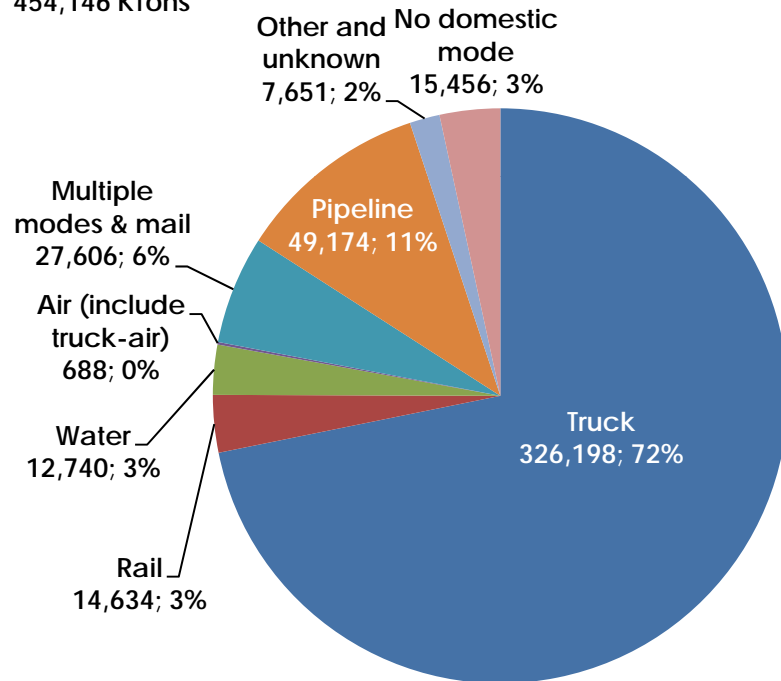
## *Interregional and Intraregional Corridor Issues - Highways*



# Importance of Highway Corridors – Regional View

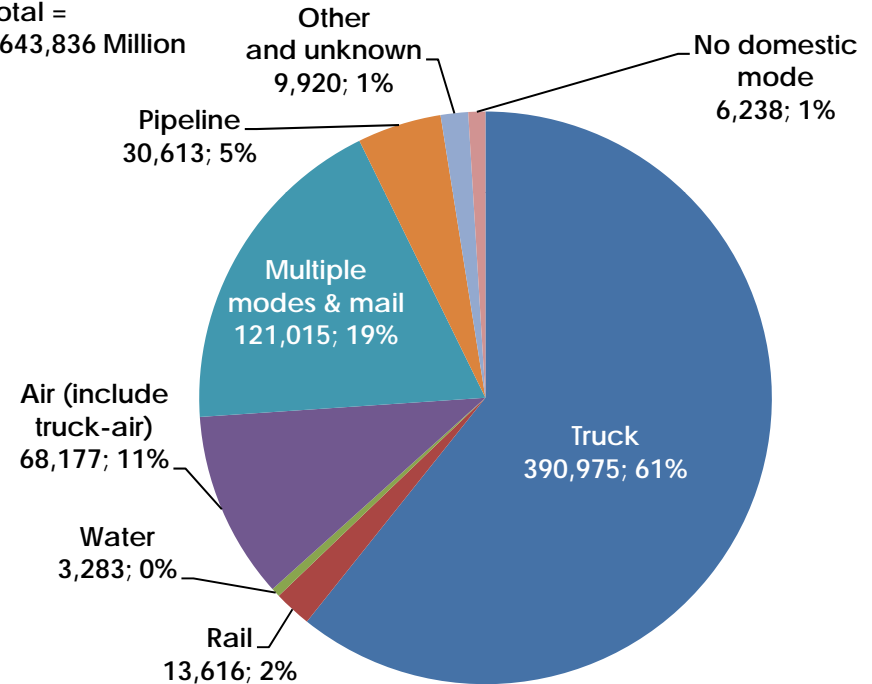
**Freight Flows by Tonnage**

Total =  
454,146 Ktons



**Freight Flows by Value**

Total =  
\$643,836 Million



Source: Cambridge Systematics FAF3 2012 Disaggregated Database.

# Summary of Inter-Regional and Intra-Regional Highway Needs

## Congestion and Mobility

- Highest levels of truck delay on I-880, I-80 (Oakland to Berkeley), U.S.101 in San Jose, SR 4 at Port Chicago

## Freeway Travel Time Reliability

- Worst truck reliability on I-80, I-580, and I-880

## East-West Connectivity

- SR12/SR37 needs, SR 4 connectivity to SJV, SR 152 future potential

## I-80/I-680/SR 12 Interchange and WB Truck Scales

## Truck-Involved Crashes

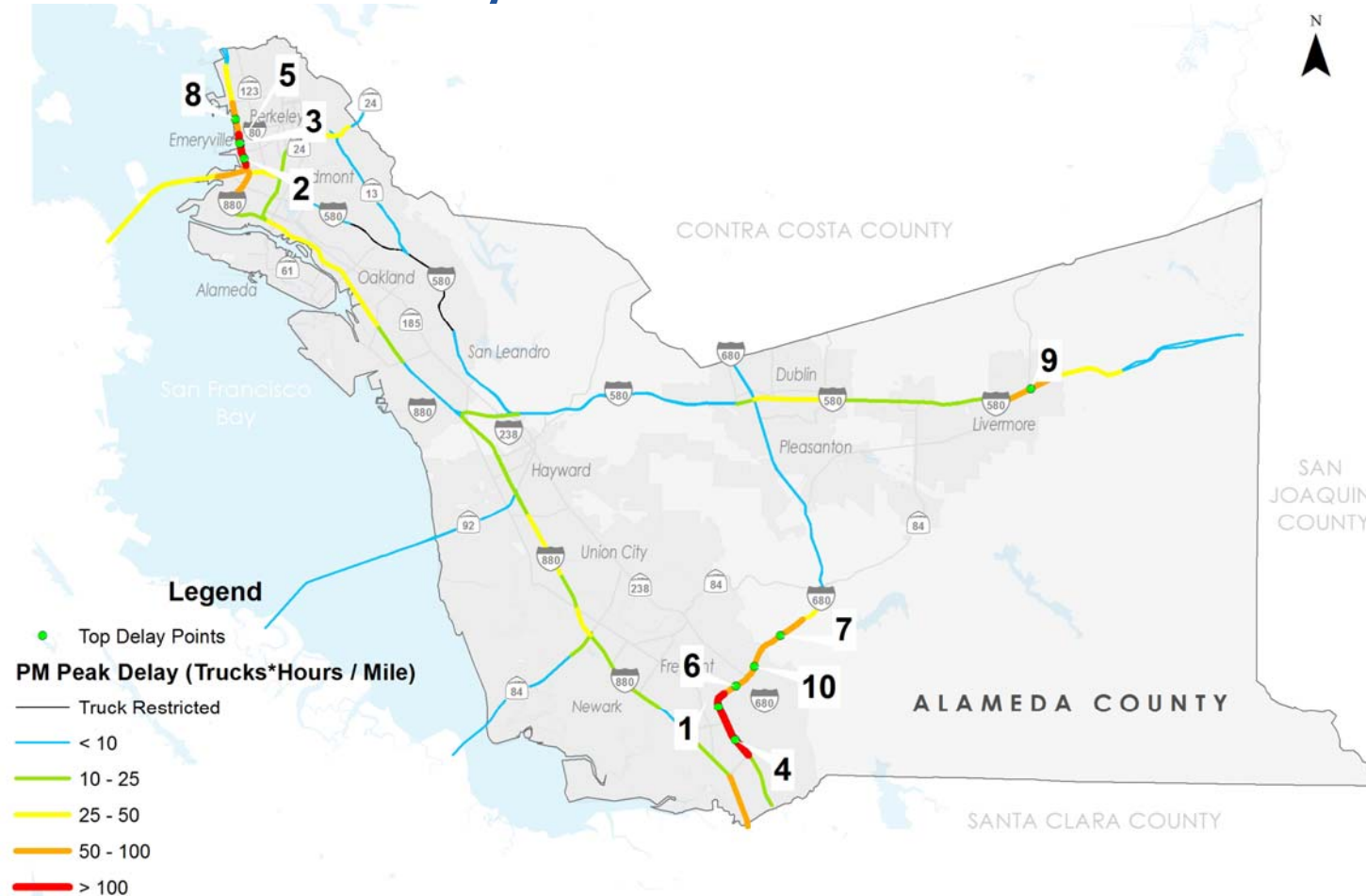
## Pavement and Bridge Conditions

# Focus on Alameda County - Top 10 Truck Delay Locations in 2010 - AM



Source: INRIX 2014 Speed Data; Alameda County Truck Travel Demand Model; PeMS time of day distribution, Cambridge Systematics analysis.

# Focus on Alameda County - Top 10 Truck Delay Locations in 2010 - PM



Source: INRIX 2014 Speed Data ; Alameda County Truck Travel Demand Model; PeMS time of day distribution, Cambridge Systematics analysis.



# Needs Assessment Summary

## *Interregional and Intraregional Corridor Issues - Rail*

# Summary of Inter-regional Rail Corridor Issues

Congestion and capacity

Changing nature and use of Northern CA Rail System

- Bulk unit trains and manifest traffic to ports
- Growth in domestic and international container traffic

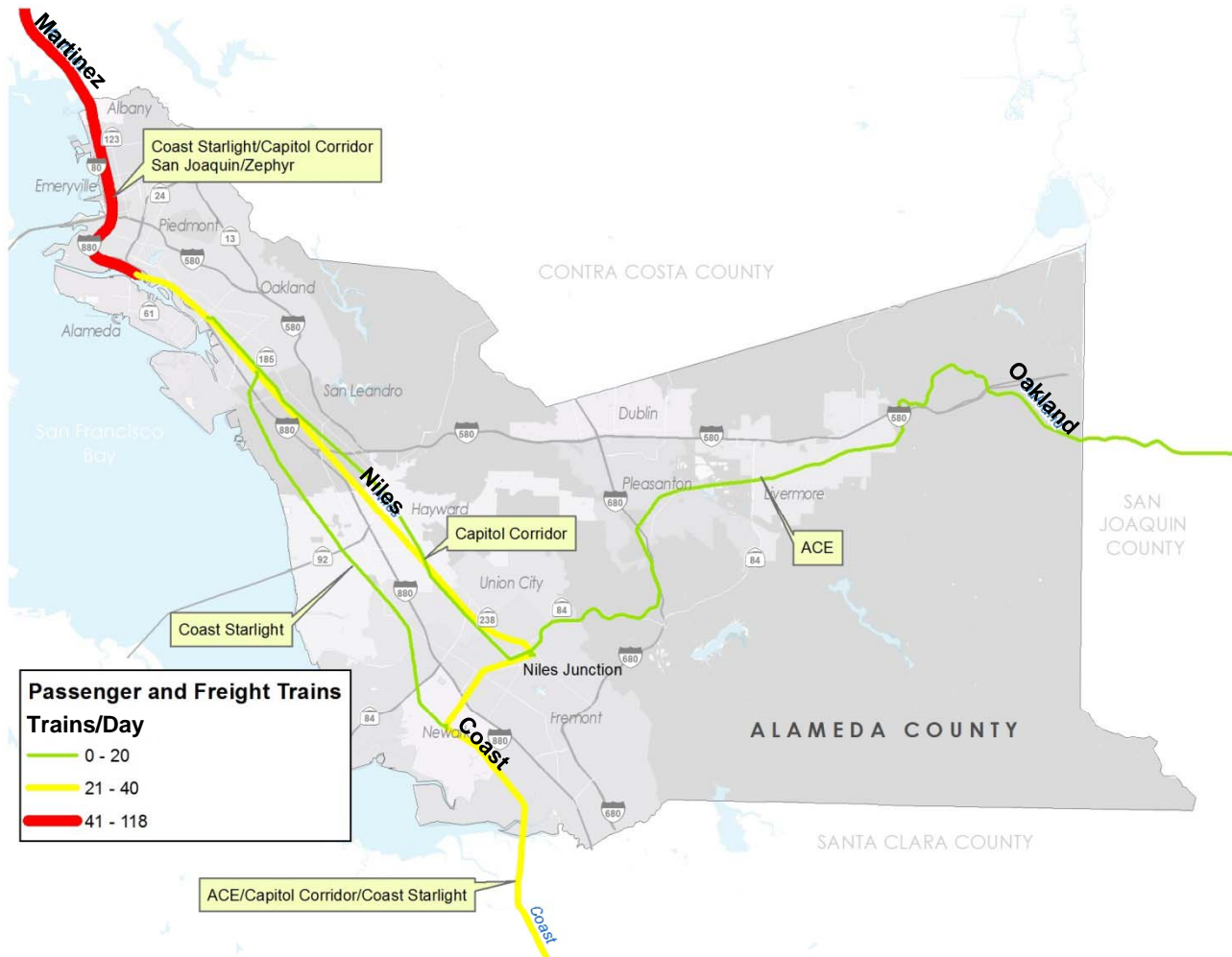
Passenger and Freight Conflicts

Industrial Rail Spur Funding Needs

Grade Crossing Improvements

- Grade separations, signal improvements
- Quiet zones to reduce community impacts

# Focus on Alameda County – Train Volumes



Source: AECOM and Cambridge Systematics

# Congestion/Capacity Needs – V/C Ratio on Bay Area Rail Lines

Parallel Highway Corridor	Subdivision	From:	To:	Existing			2020		
				Freight Daily Trains	Total Daily Trains	LOS	Freight Daily Trains	Total Daily Trains	LOS
I-880	UP Coast	San Jose	Newark	8	30	F	10	42	F
	UP Coast	Newark	Oakland	6	8	C	8	10	C
	UP Niles	Niles	Oakland	2	18	C	2	26	E
	UP Oakland	Niles	Melrose	1	1	A	N/A	N/A	N/A
I-80	UP Martinez	Sacramento	Martinez	18	52	C	22	56	D
		Martinez	Richmond	18	60	C	22	66	E
		Richmond	Emeryville	17	59	D	30	74	E
		Emeryville	Oakland	17	57	D	30	72	E
I-580	UP Oakland	Niles	Stockton	4	12	B	11	23	D
US 101	UP Coast	Gilroy	San Jose	2	10	A	4	12	C
	Caltrain Peninsula	San Jose	San Francisco	6	93	E	6	120	F
SR 4	BNSF Stockton	Stockton	Port Chicago	10	18	C	11	23	D
	UP Tracy	Martinez	Port Chicago	4	4	A	N/A	N/A	N/A
	UP Tracy	Port Chicago	Lathrop	0	0	A	N/A	N/A	N/A

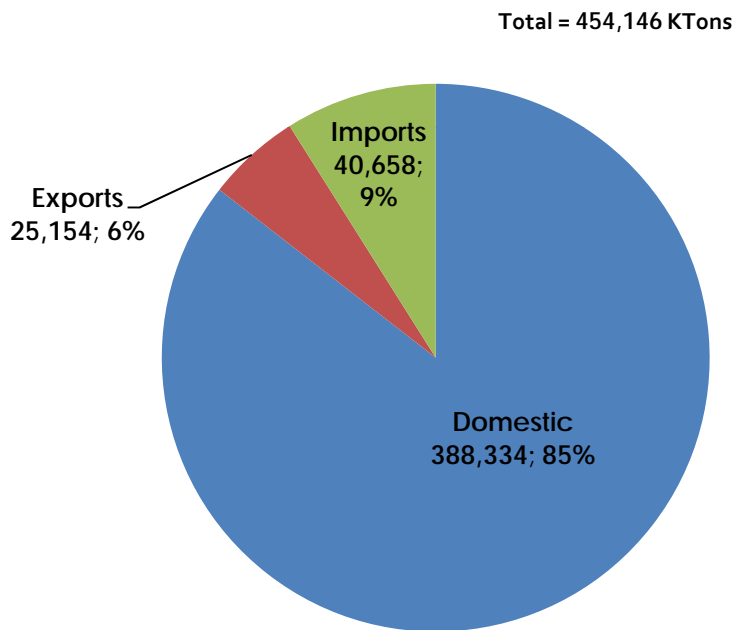


# Needs Assessment Summary

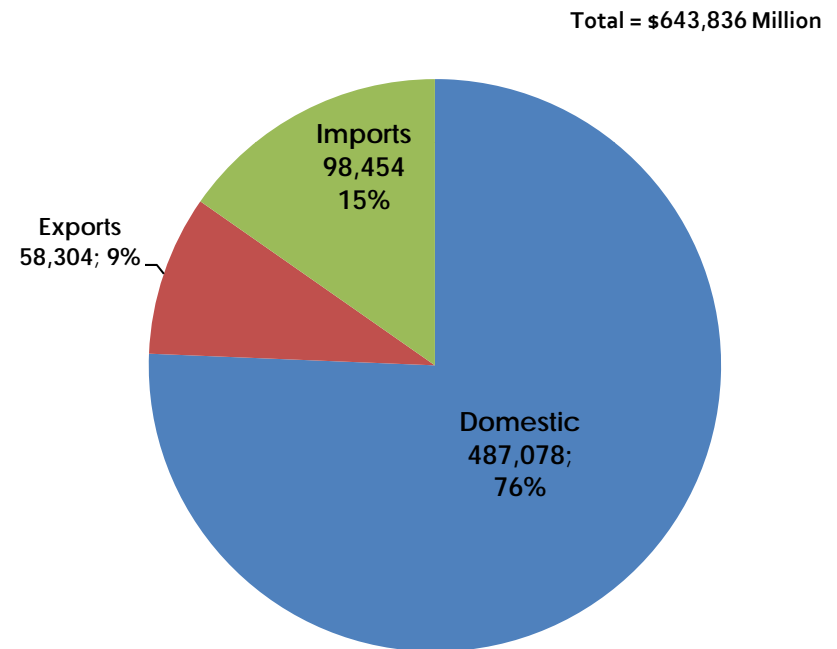
## *Global Gateway Issues*

# Importance of Global Gateways in the Bay Area

Freight Flows by Tonnage, 2012



Freight Flows by Value, 2012



Source: Cambridge Systematics FAF3 2012 Disaggregated Database.

# Summary of Global Gateway Needs

## Seaports

- Operations issues at Port of Oakland – Gate queueing issues, handling big ships
- Rail operations and access
- Bulk export opportunities
- Land use and access constraints

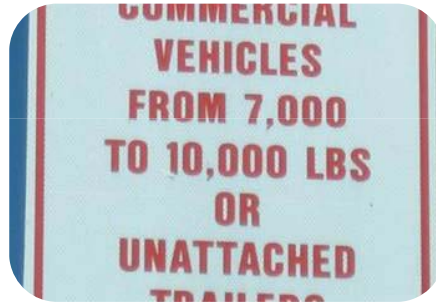
## Airports

- Sufficient capacity for growth
- SFO may experience constraints if international markets come back stronger in the future
- Highway congestion

# Focus on Alameda County – Port of Oakland Needs



Terminal Capacity



Neighborhood Impacts



Gate Queues



7<sup>th</sup> Street Grade Crossing



Bike and Pedestrian Access

# Needs Assessment Summary

## *Cross-Cutting Issues*



# Summary of Cross-Cutting Needs

Regional Air Quality Impacts and Localized Public Health Effects

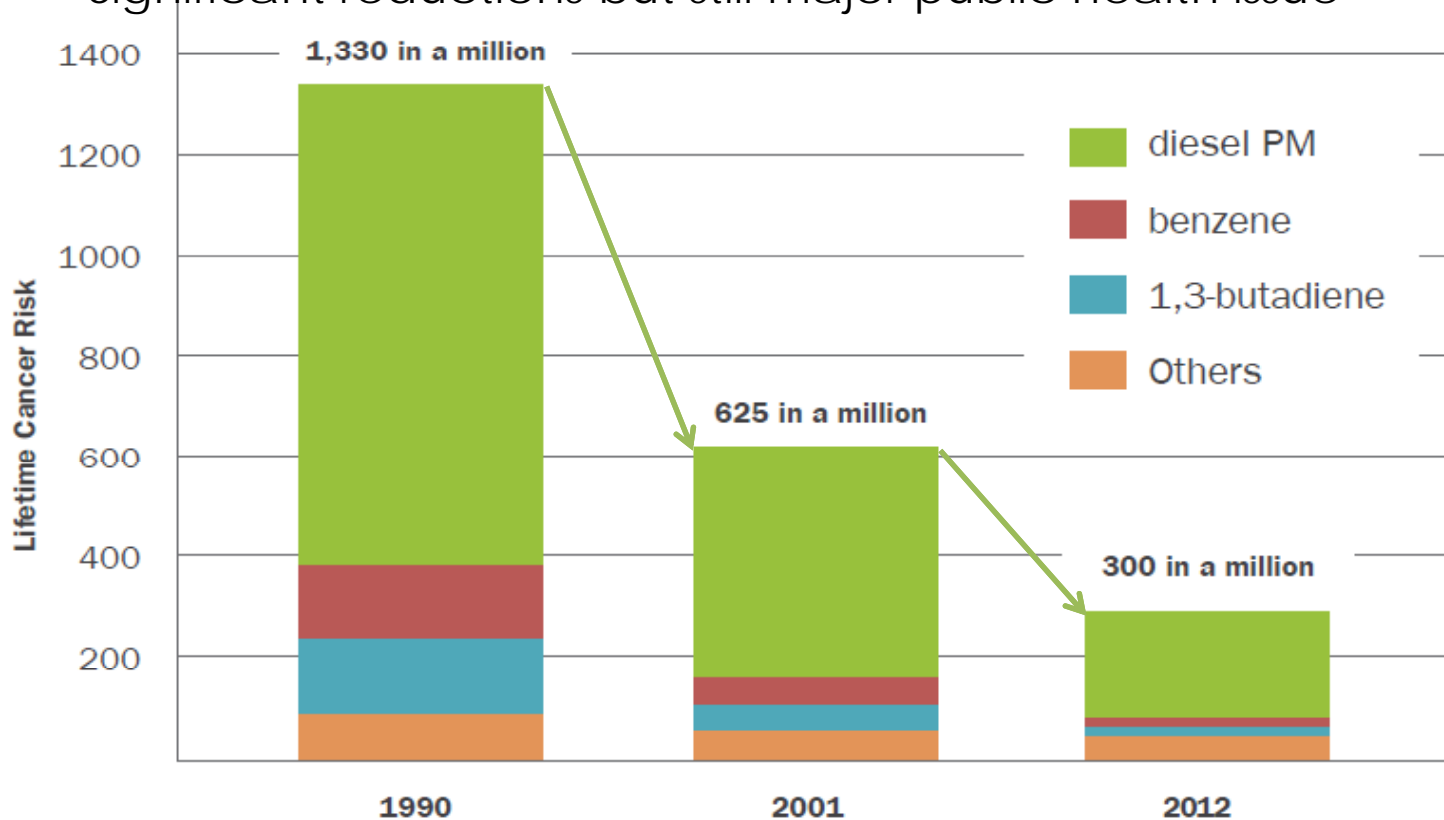
Sea-level Rise Vulnerability and Risk

Industrial Land Supply

Crude by Rail

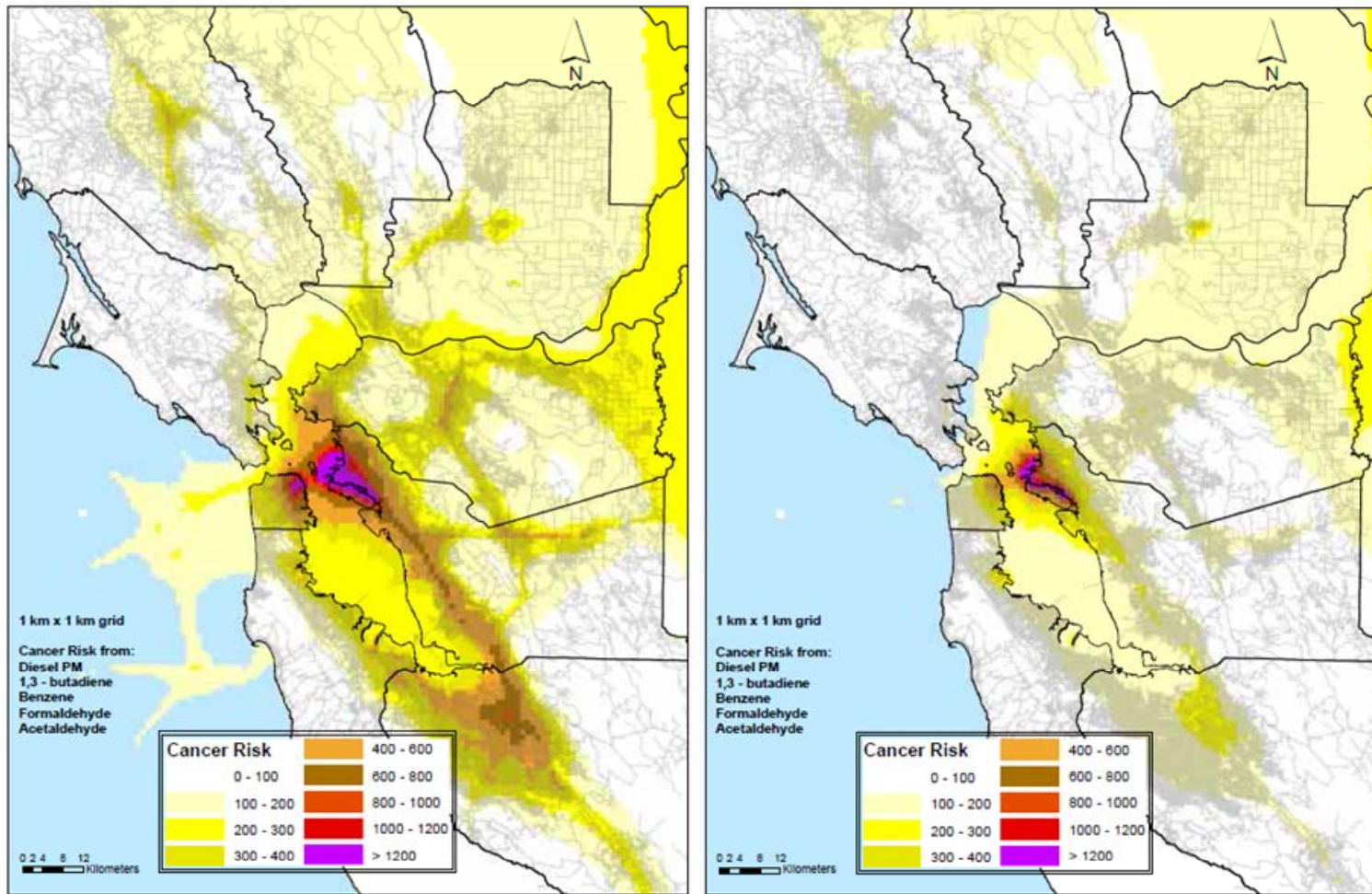
# Air Quality and Environmental Impacts - Emissions from Freight

Significant reductions but still major public health issue



Source: Improving Air Quality and Health in Bay Area Communities, Community Air Risk Evaluation Program Retrospective and Path Forward (2004 – 2013), BAAQMD, April 2014.

# Air Quality and Environmental Impacts – Localized Health Effects



Source: Bay Area Air Quality Management District.

# Opportunities and Strategies



# Context- Setting Opportunities

- **Goods Movement to Support Emerging Industries** (biotech, artisanal foods, clean energy & transportation, advanced manufacturing, recycled materials)
- **E-Commerce and Advanced Retail Distribution** – capture value-added economic activity; neighborhood & commercial center impacts
- **Goods Movement Workforce Development** – key source of job diversity; need to focus on access to jobs for impacted communities
- **Bulk Exports and Expanded Rail Services** – growth in bulk exports at seaports; increased demand on rail corridors
- **New Technologies** – ITS, equipment technology
- **Integrated Planning** – coordinated land use, transportation and economic development; integration of complete streets concepts



# Examples of Strategies

---

## Projects

- Whipple Road widening and truck route designation from Central to Mission Boulevard in Union City
- Construct I-580 eastbound truck climbing lane at the Altamont Summit
- Port of Oakland Rail Access Improvements

---

## Programs

- Cross-jurisdictional Truck Route management program
- Countywide Grade Separation program
- Hour-peak delivery policy guidance and demonstration program

---

## Policies/ Partnerships

- Policy guidance on insulating residential areas from health impacts of goods movement
- Incorporation of sea level rise considerations during infrastructure rehab