

**Alameda County
Goods Movement Plan**
Needs Assessment and Strategy Development






Alameda County Technical Advisory Committee
March 5, 2015

Agenda for Today's Discussion

- Summary of Needs Assessment
- Summary of Strategies to be Evaluated for the Countywide Goods Movement Plan
 - *Strategies are projects, programs, and policies*
- *Action – Recommendation to Commission to Approve the List of Strategies to be Evaluated*
 - *The results of evaluation will be used to inform selection of strategies that will be included in the Plan after consultation with Stakeholders, Technical Team, and Executive Team*

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

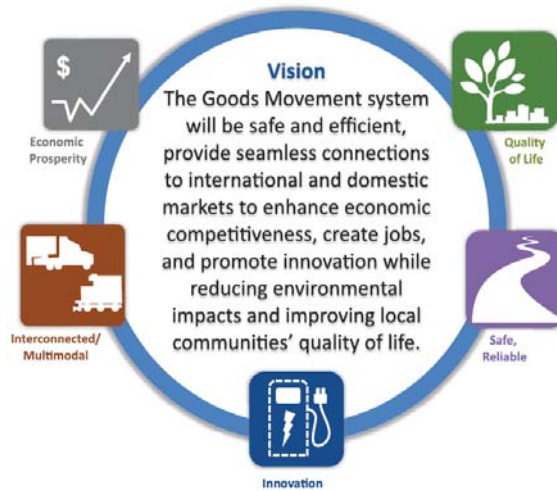
Help **develop** strategies to meet performance goals

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

Linking Needs and Strategies

- Develop strategies to meet goals for any functional elements that need improvement based on performance measure evaluation in needs assessment
- Develop combinations of strategies to pursue opportunities
- Strategies will be evaluated against **ALL** performance measures
 - *If a strategy makes performance better in one area but worse in another additional strategies will be incorporated in plan to “balance portfolio”*

Goods Movement Vision and Goals



Getting the Most Out of Goods Movement - 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; best practices for addressing 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; state and national priority; increased demand on rail corridors
- **National Model of Sustainable Goods Movement System**

Aligning Strategies with Federal, State, Local Priorities



Global Gateways Issues

- Global gateways are seaports and airports handling international trade.
- *Alameda County Gateways are critical and unique national asset – 5th largest container port, West Coast e-commerce hub, high value export gateways*



Interregional and Intraregional Highway and Rail Corridors Issues

- Interregional corridors link Alameda County and the Bay Area with domestic markets
- *Alameda Highway corridors are significant in National Priority Freight Network and rail lines are part of State's Tier 1 system.*



Local Streets and Roads Issues

- Local streets and roads are first and last-mile link to goods movement system.
- *National Freight Advisory Committee recommended more attention on last-mile connectors and CA FMP identified freight and Complete Streets as an emerging need.*

Cross-Cutting Issues

- Air quality and public health
- Industrial land supply
- Sea level rise

Alameda County can play a national leadership role while addressing critical local needs and building a strong economy



Needs Assessment and Strategies Summary *Local Streets and Roads*



Truck Route Connectivity, Land Use Conflicts and Modal Conflicts



Source: MTC Land Use Data; Cambridge Systematics; Bus routes and frequency information from Parsons Brinkerhoff; Cambridge Systematics Analysis.

Truck Route Congestion and Safety



Source: INRIX 2014, Cambridge Systematics analysis.

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

GOODS MOVEMENT COLLABORATIVE AND GOODS MOVEMENT PLAN



METROPOLITAN
TRANSPORTATION
COMMISSION



11

Summary of Local Street and Roads Strategies

Truck route connectivity and conflicts

- Complete Streets and truck route planning guidance
- Night delivery pilots and time of day management of truck routes
- Bike and pedestrian separations on truck routes
- Revisit overweight network needs Oakland/San Leandro
- Land use buffers and industrial land use planning guidance

Truck route performance (congestion and safety)

- Signal timing improvements and signal prioritization for trucks
- Ramp metering
- Turns pockets, intersection geometric improvements, freeway ramp improvements
- Selective arterial widening
- Smart arterial corridors coordinated with freeway ITS

Truck Parking

- Re-examine locations and strategies for I-880 corridor public truck parking from 2008 analysis
- Monitor implementation of OAB truck parking provisions

GOODS MOVEMENT COLLABORATIVE AND GOODS MOVEMENT PLAN



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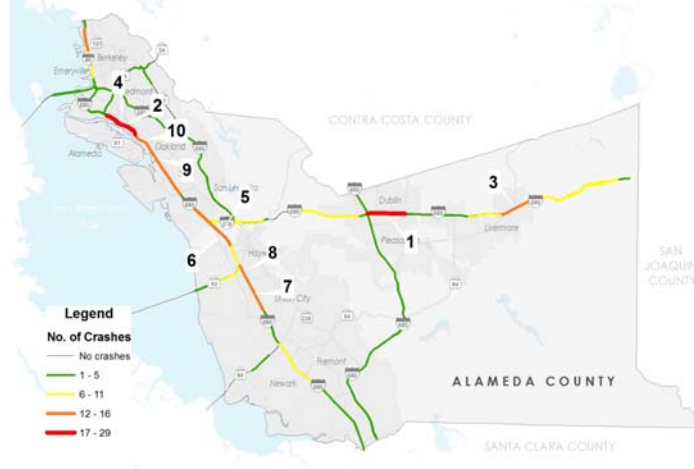


12

Needs Assessment and Strategies Summary

Interregional and Intraregional Highway Corridors

Truck Mobility Needs – Delay, Safety, and Reliability



Source: INRIX 2014 Speed Data; Alameda County Truck Travel Demand Model; PeMS time of day distribution; Safety data from SWITRS 2008-2012 Cambridge Systematics analysis.

Summary of Inter-Regional and Intra-Regional Highway Strategies

Truck Delay Reduction Strategies

- Selective lane widening/additions
- Expand truck uses on highways - managed lanes/shared use of HOT/HOV lanes, outside commute hours
- Expanded aux lanes to help eliminate bottlenecks
- Truck-only lanes (potential on I-580 and I-880)
- Reduce or eliminate freeway truck restrictions
- Expanded domestic intermodal capacity in Alameda County and long-term development of alternate modes (e.g., short haul rail)

Reliability and Safety Strategies

- Interchange operations (geometrics, aux lanes, lengthen merge sections)
- Truck interchange bypasses
- Selective use of center lanes for trucks (potential off-peak use of HOV/HOT lanes for trucks)
- Improved signage for truck movements

Innovative Technology Strategies

- Link corridor ATIS/TL1 or ITS to manage long haul access to marine terminals
- Link arterial ITS/DIMS on truck routes to freeway ITS

Pavement and Bridge Strategies

- Targeted bridge and pavement reconstruction linked to increasing vertical clearances

Needs Assessment and Strategies Summary *Interregional Rail Corridors*

TL1

Spell out ATIS

Tess Lengyel, 2/22/2015

Summary of Inter-regional Rail Corridor Issues

Congestion and capacity

- Several critical routes approaching capacity limits

Changing nature and use of Northern CA Rail System

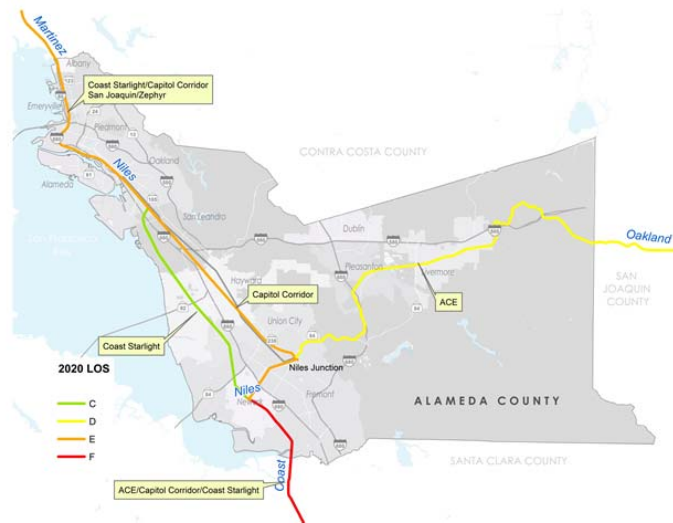
- Bulk unit trains and manifest traffic to ports
- Growth in domestic and international container traffic
- Greater use of both Northern and Southern routes to Oakland

Passenger and Freight Conflicts

Grade Crossing Improvements



Rail Level of Service



Source: AECOM and Cambridge Systematics



Summary of Inter-regional Rail Corridor Strategies

Congestion and capacity

- Expanded capacity (double/triple tracking, sidings) and coordinated strategy for Niles and Oakland Subdivisions
- Capacity improvements on Martinez Subdivision

Changing nature and use of Northern CA Rail System

- Domestic intermodal terminal capacity improvements in Oakland
- Improved connectivity and capacity expansion Oakland Subdivision (Niles Canyon) to Niles Subdivision

Passenger and Freight Conflicts

- Expanded track and sidings to allow for freight and passenger separation (Niles Subdivision)
- ROW acquisition to allow for expanded capacity (Martinez Subdivision)
- Alternative use plans for Niles/Oakland/Coast (Mulford) Subdivisions

Grade Crossing Improvements

- Grade separations, signal improvements and prioritization policy/program
- Quiet zones to reduce community impacts



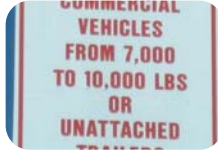
Needs Assessment and Strategies Summary *Global Gateways*



Port of Oakland Needs



Terminal Capacity



Neighborhood Impacts



Gate Queues



7th Street Grade Crossing



Bike and Pedestrian Access

Summary of Global Gateway Strategies

Innovative Technology Solutions

- Freight ITS (FRATIS) to improve port gate operations – link to appointment systems
- Airport access ITS
- Link corridor ATIS to port ITS

Capacity and Congestion Strategies – Port of Oakland

- Expansion of bulk and cold storage terminals (underway)
- Longer-term expanded transload warehouse capacity
- Night gate operations

Connectivity and Access Strategies – Port of Oakland

- Grade crossing improvements (7th St. West)
- North lead rail access to intermodal terminals
- Local street circulation improvements (widening, signals, striping, signage, turn lanes, access ramp improvements)

Coordination with Passenger System Strategies – Port of Oakland

- Alternative bike/ped routes
- Physical separations of bike/ped routes

Needs Assessment and Strategies Summary *Cross-Cutting Issues*



Summary of Cross-Cutting Needs

Regional Air Quality Impacts and
Localized Public Health Effects

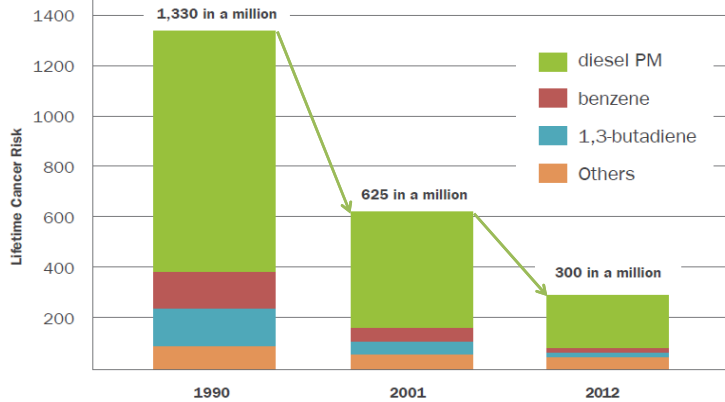
Sea-level Rise Vulnerability and Risk

Industrial Land Supply



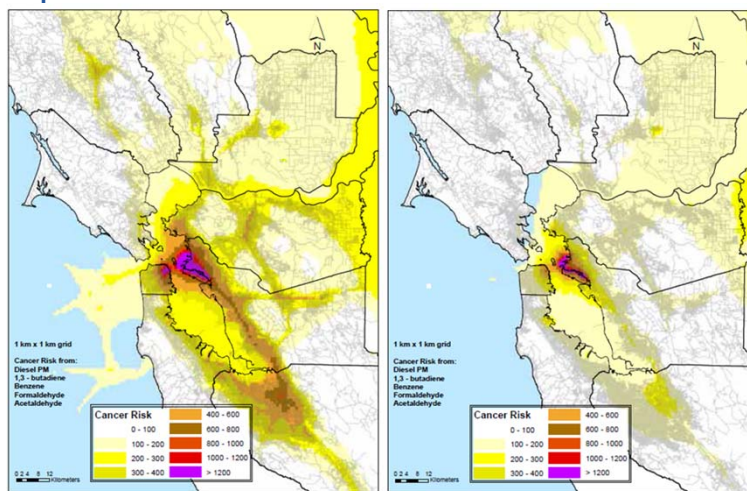
Air Quality and Environmental Impacts - Emissions from Freight

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.

Summary of Cross-Cutting Needs

Regional Air Quality Impacts and Localized Public Health Strategies

- Incentives for engine retrofits to low emission and ZEV technology
- ZEV technology demonstrations for trucks
- Low emission requirements for new rail terminals
- Voluntary agreements for adoption of Tier 4 locomotives as part of public-private investment agreements
- Incentives for use of low emission switching locomotives

Community Livability Strategies

- Coordination of truck route planning in industrial areas with restrictions and enforcement in adjacent residential areas
- Land use controls to ensure truck services out of neighborhoods adjacent to truck routes

Sea-level Rise Adaptation Strategies

- Drainage and flood control improvements along I-880 and I-80 (Bridge approach)
- Improve airport perimeter dike

Industrial Land Supply and Freight Corridor Preservation Strategies

- Land use guidance for cities on industrial land preservation strategies
- Incentives to preserve buffers around freight corridors

Workforce Development Strategies

- Training and workforce development programs for truck drivers and logistics professionals coordinated through the community colleges

Strategies to Pursue Opportunities

Strategies for Opportunities

- **Goods Movement to Support Emerging Industries** – strengthen airport links to biotech clusters, industrial preservation in I-880 corridor with truck route improvements (freeway and local roads) and expanded rail capacity and domestic rail terminals
- **E-Commerce and Advanced Retail Distribution** – Strengthen freeway links between OAB and airport, truck route improvements in I-880 corridor and FRATIS links between I-880 corridor/I-580 corridor
- **Goods Movement Workforce Development** – Expanded support for community college programs training logistics professionals and truck drivers
- **Bulk Exports and Expanded Rail Services** – continued expansion of bulk terminals at port, increased domestic intermodal in Oakland, dual development of northern and southern rail routes to Oakland
- **National Model of Sustainable Goods Movement System** - guidance for truck route planning; integration of complete streets concepts; demonstration of low emission freight technology and freight ITS



Technical Team Comments

- Insert–
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