

# *Regional Goods Movement Study for the San Francisco Bay Area*

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*presented by*

*Cambridge Systematics, Inc.*

*with*

*Hausrath Economics Group  
The Tioga Group  
Dowling Associates*

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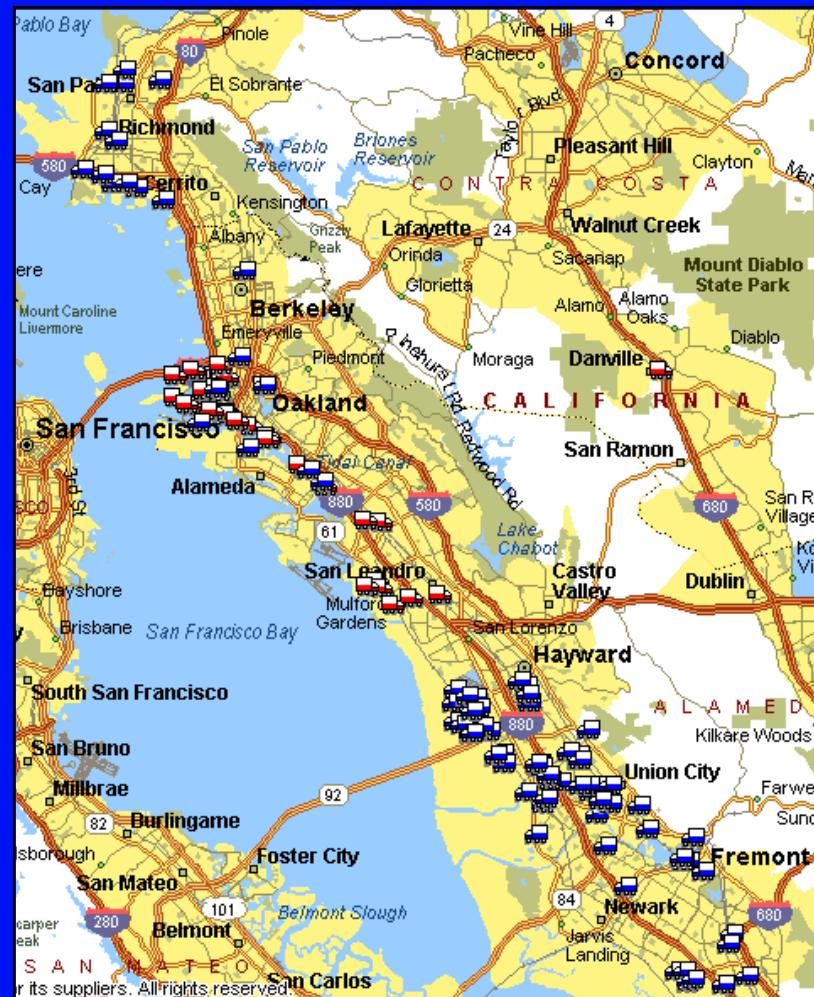


# All Businesses/Consumers Rely on Goods Movement, But What are Economic Hot Buttons?

- Goods movement businesses (carriers, warehouse/DC, logistics services)

- Jobs/communities impacted (880 corridor, South SF)
- Trends affecting location (Safeway example)
- Opportunities for value and job growth (value-added distribution)

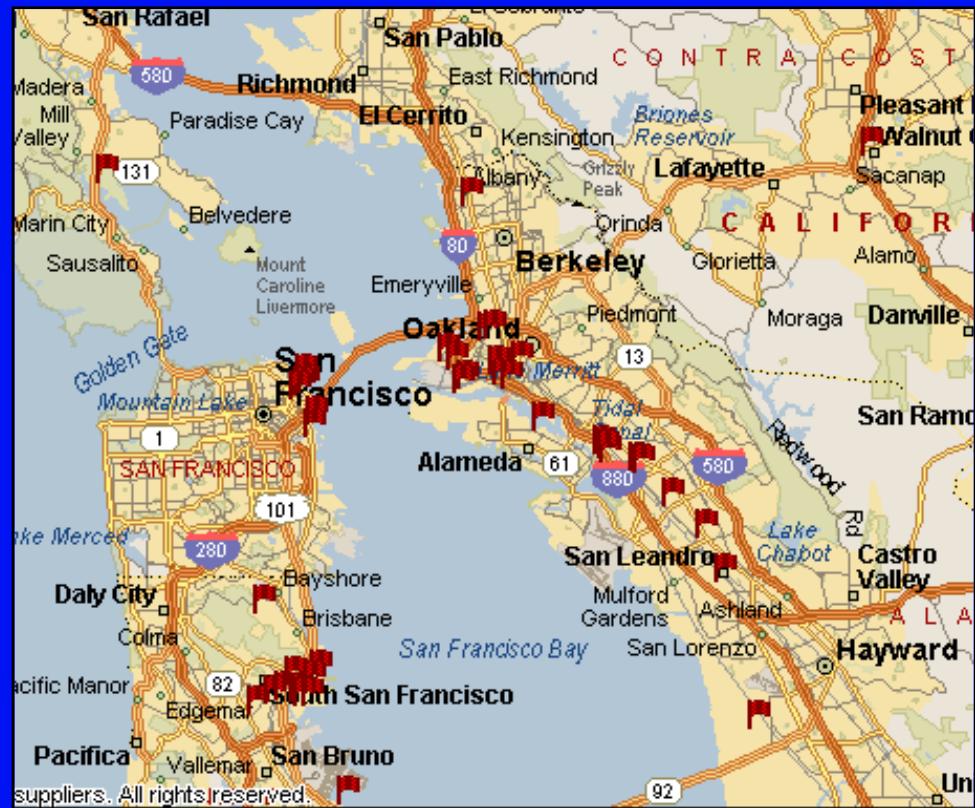
- Significant industries where transportation affects location



# *All Businesses/Consumers Rely on Goods Movement, But What are Economic Hot Buttons?*

## □ Trade

- Unique features of Bay Area Ports
- Competitive issues
- Growth in air cargo



# **How Should MTC Allocate Funds to Goods Movement?**

- Most RTP funds are already planned or programmed
  - How do freight needs overlap with passenger needs?
  - New revenue opportunities
- RTP emphasizes maintenance and operations
  - Traffic operations for freight (I-880 Corridor example)
  - Private sector solutions (FedEx staging in South SF)
  - Public/private ITS solutions (Synchro Met example)
  - Innovative modal services (CIRIS, Napa/Solano rail)
- Look at goods movement system through eyes of the users
  - Market segments (long haul, parcel, construction, drayage, etc.)
  - Customer requirements (timing, equipment choices)

# ***Reauthorization and Statewide Policy Issues***

- **Freight funding**
  - User fees
  - **Gateway funding**
- **Funding for rail investments (e.g., rail shuttle projects, public-private)**
  - **AASHTO Rail Freight Bottom Line, Mid-Atlantic Rail**
- **Project earmarking – Where is the competition?**
- **Global Gateways and ITIP Funding**

# *Overview of the Team*

## Cambridge Systematics, Inc.

- Project Management
- Freight Data
- Freight and Economic Development
- Freight Policy

**Key Staff:** Michael Fischer, Project Manager  
Christopher Wornum, Principal-in-Charge

## The Tioga Group

- Industry Knowledge
- Trucking, Ports and Rail
- Logistics Trends

**Key Staff:** Dan Smith,  
Steve Nieman

## Hausrath Economics Group

- Land Use
- Economic and Community Development

**Key Staff:** Linda Hausrath

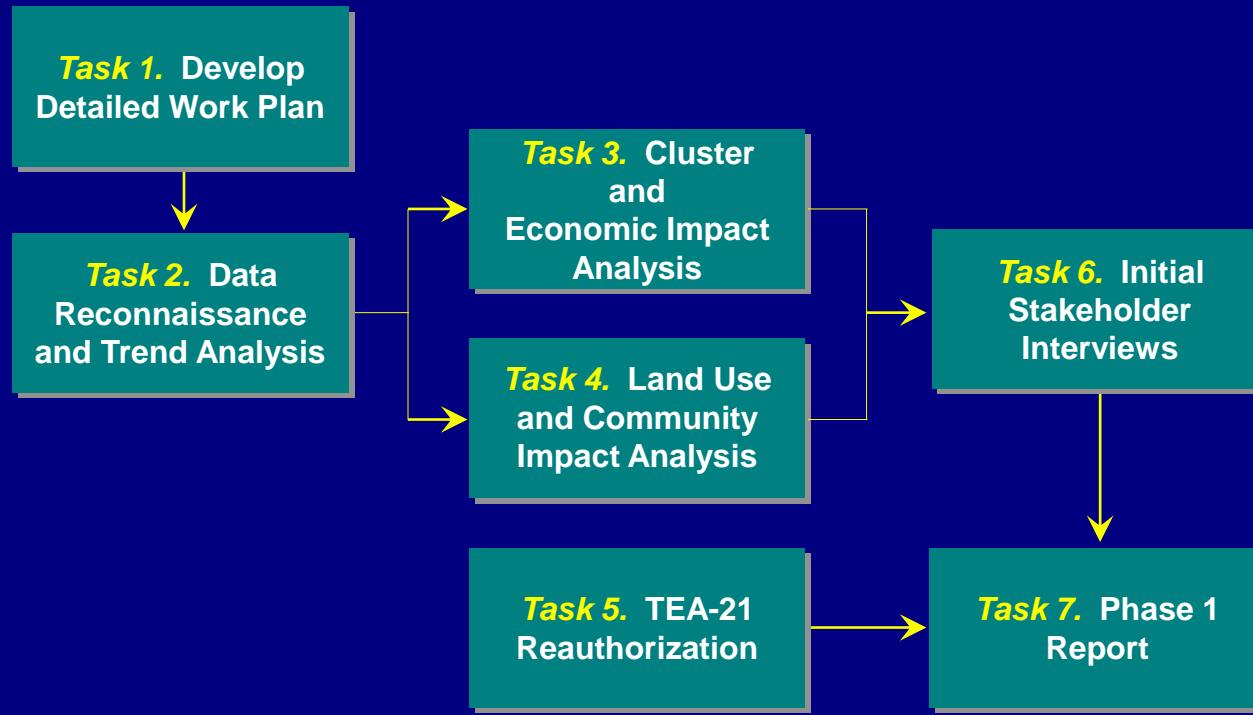
## Dowling Associates

- Traffic Operations
- Transportation Engineering

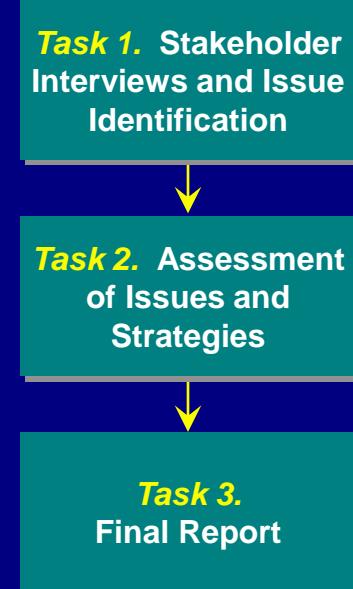
**Key Staff:** Mark Bowman

# *Overview of Approach*

## Phase I



## Phase II



# ***Freight Transportation System Data and Trends***

## **Traffic Flows**

*Trucks, Planes, Rail Cars . . .*

## **Freight Infrastructure**

*Highways, Rail Lines, Ports, Access Roads . . .*

## **Industry Logistics Patterns**

*Supply Chains, Distribution Networks*

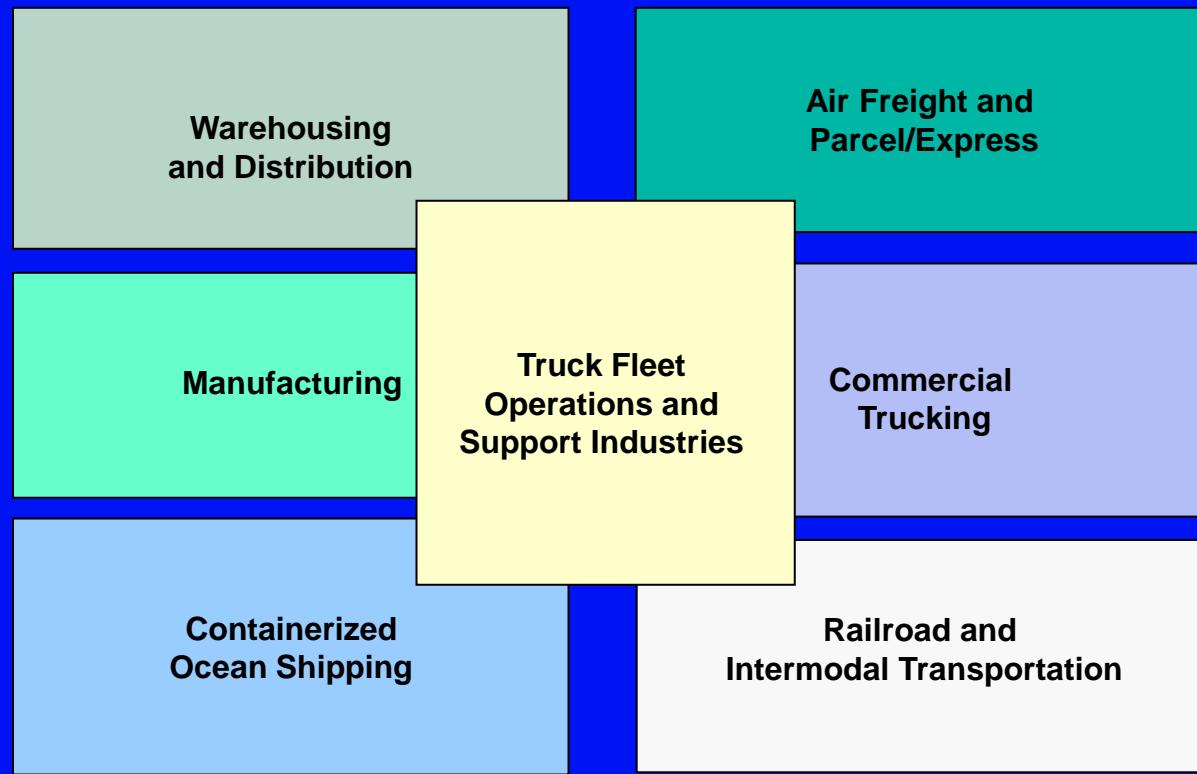
## **Economic Structure**

*Type of Businesses, Number of Households*

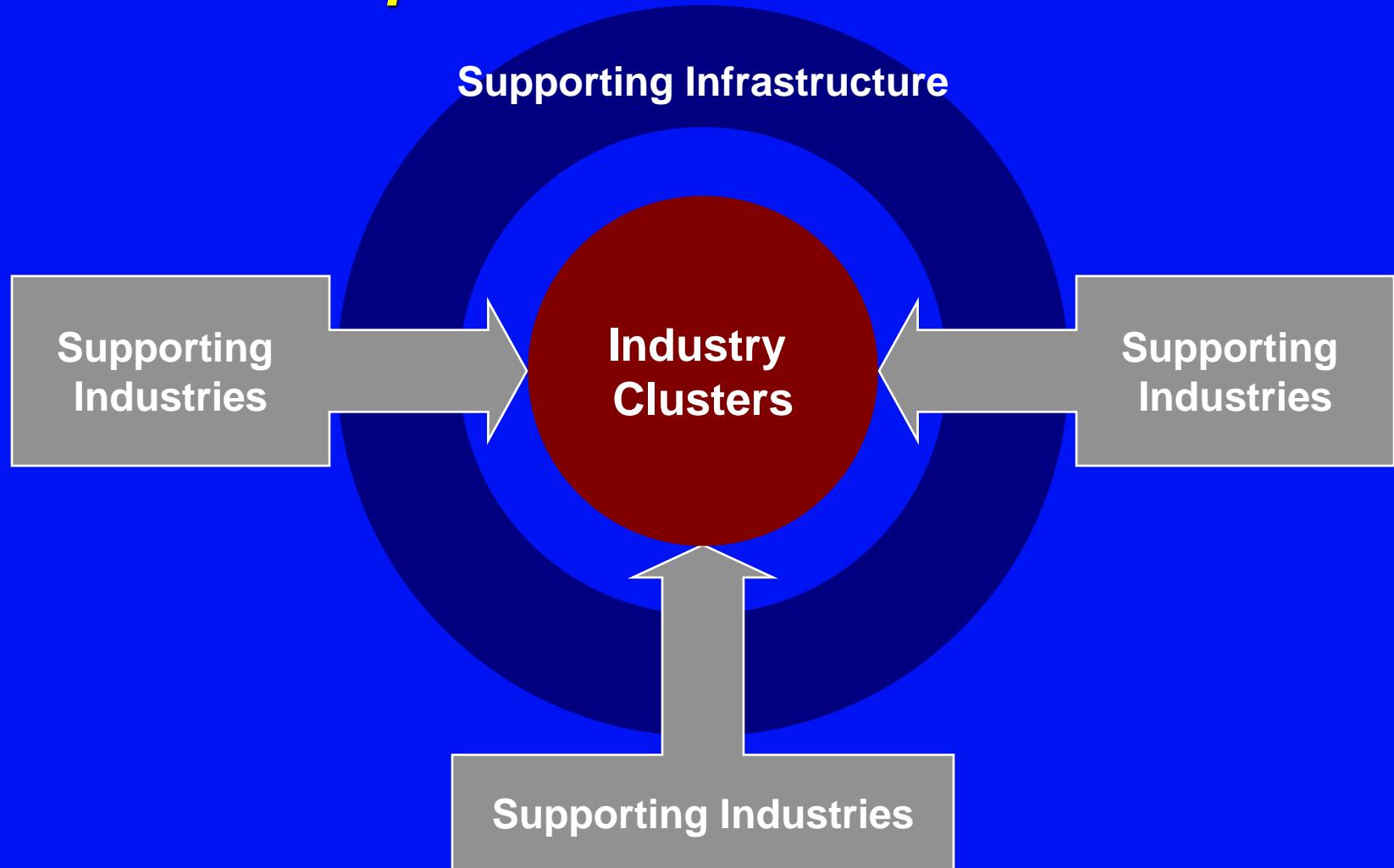
**Organization and Public Policy  
Ownership, Regulation, Pricing . . .**

# *The Goods Movement Industry*

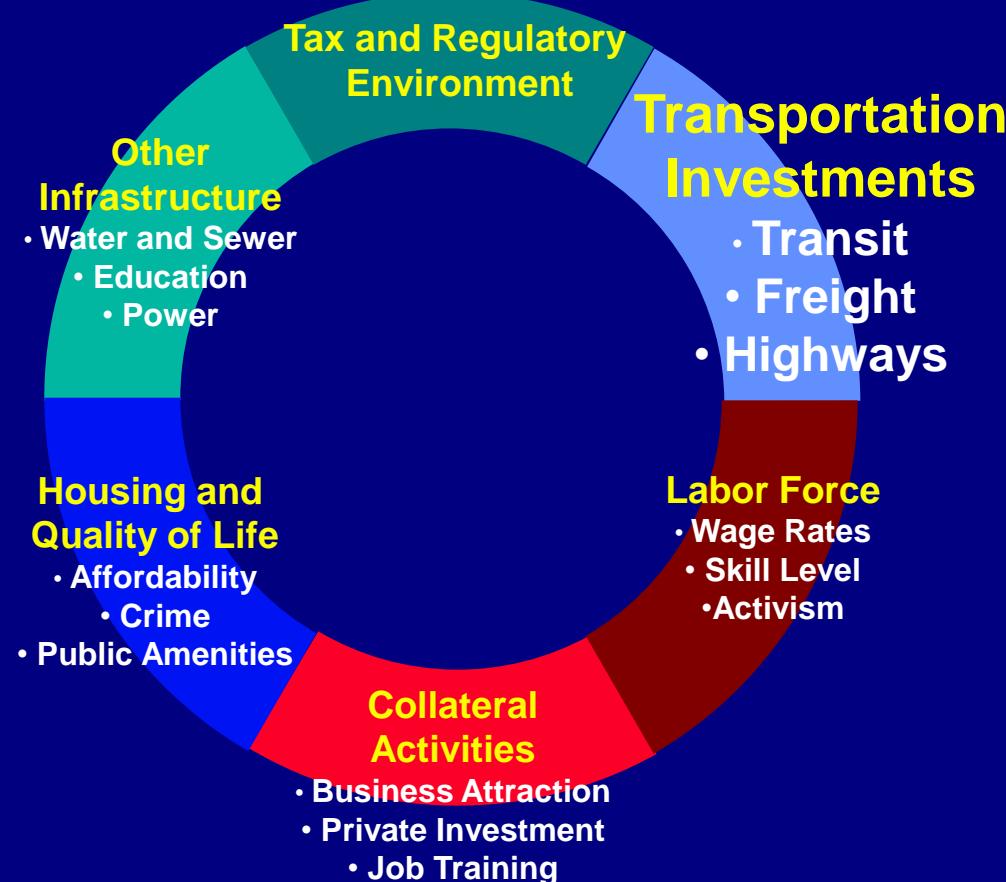
## *Highway Infrastructure and Truck Operations*



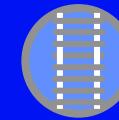
# *Economic Impacts and Clusters – Goods Movement Dependent Industries*



# *Infrastructure and Business Environment*



# *Interregional, Interstate, and International Transportation Needs for Key Industries*



**Agriculture/Forestry**



**Manufacturing**



**Distribution**



**High-Tech**



**Construction**



**Health Care**



**Tourism**



**Military**



**Less Important**



**More Important**

# *Land Use and Community Impacts*

- Impacts of economy and real estate market on location of goods movement industry
- Community attitudes and local land use policy
- Tax base advantages from switching land out of transportation uses
- Future development patterns and goods movement industry

# ***Stakeholder Interviews and Issues***

## □ Stakeholder groups

- CTA, commercial truckers, private fleet owners
- Port/airport, ocean carriers, terminal operators, air cargo operators
- Class I and shortline railroads
- Local electeds and planners
- Shippers
- Warehousing and distribution industry

## □ Issue areas

- Infrastructure needs
- Operational problems
- Land use and regulatory issues
- Institutional/Governance
- Funding and Finance

# *Assessing Issues and Strategies/Solutions*

- Develop solutions and compile evaluative information
- Relate solutions to implementation issues and likelihood of success
- Construct performance measures where possible
- Conduct workshop/charette

Category	Strategy	Description	Improve mobility - Reduce truck delays	Improve mobility - Improve accessibility	Improve mobility - Improve truck reliability	Improve mobility - Reduce regulatory burden	Improve mobility - Reduce truck impact on general traffic	Improve Safety
<b>Infrastructure</b>								
Freeway	1 New general purpose and/or HOV lanes	Additional capacity on corridors used by trucks	x		x		x	
	2 New truck climbing lanes	Auxiliary lanes to increase capacity for trucks and general-purpose traffic	x				x	x
	3 Truck-only freeway lanes	Designated truck lanes. Could be barrier-separated from general purpose lanes.	x		x		x	x
	4 New freeway interchanges and/or ramps	New and improved access to high-volume truck nodes.	x	x	x		x	
	5 Retrofit interchange & ramps	Capacity and safety improvements.	x	x			x	x
Arterial	6 New arterials	New roads to access truck nodes and/or underdeveloped industrial lands.	x	x	x		x	
	7 Retrofit arterials for freight	Geometric improvements (e.g., radii, turn lanes, vertical and horizontal clearance).	x	x	x		x	x
	8 Adequate vertical and horizontal clearances for oversize trucks	Eliminate obstructions (e.g., low bridges, signal mast arms, utility poles, trees).	x					x
	9 Oversize load corridors	Continuous routing of oversize loads across jurisdictions		x				
	10 New signals	Improve capacity for side streets serving truck nodes.	x	x	x		x	
	11 Access control improvements to serve truck needs	Geometric improvements (e.g., U-turn facilities for trucks, median design, etc.)	x	x			x	
ITS	12 Intelligent Transportation Systems (Public projects)	Information, communications, advanced signal systems, etc.	x	x	x		x	
Other	13 Safety improvements for trucks	Geometric improvements (e.g., radii, superelevation, shoulders, accel/decel lanes).						x
	14 New signage	Enhanced driver information and routing.		x				
	15 Truck staging and parking	Facilities to reduce truck impact.		x			x	



## *Related Goods Movement Studies*

# *National Efforts with Regional Significance*

- National Cooperative Highway Research Projects
  - 8-39 – Financing and Improving Land Access to U.S. Cargo Hubs
  - 8-42 – Freight Movement by Rail, Impacts and Opportunities
  - 8-43 – Methods for Forecasting Statewide Freight Movements and Related Performance Measures
  - 8-36(A), Task 33 – Best Practices for Statewide Freight Planning
- AASHTO Freight Rail Bottom Line Report
- U.S. Chamber of Commerce, Port and Intermodal Access Needs

## ***National Efforts with Regional Significance (cont.)***

- FHWA
  - Freight Analysis Framework
  - Freight Professional Capacity Building
  - NHS Connector Study
- Transportation Security Agency, Operation Safe Commerce
- TEA-21 Reauthorization

# ***Statewide Studies/Programs***

- **Global Gateways Development Program**
- **State Rail Plan**
  - **Freight Rail Plan**
- **Freight Movement Cost Benefit Study**
- **ITMS Statewide Freight Forecast**

## *Northern California – Representative Completed Studies*

- MTC/BCDC Cargo Forecast Update
- MTC I-880 Corridor Truck Access Study
- Port of Oakland CIRIS White Paper
- San Joaquin Valley Goods Movement Study, Phase I
- Central Stanislaus Freight Study
- BCDC Bulk Cargo Forecast
- Oakland Port Services Location Study

## *Northern California – Representative Ongoing Studies*

- **San Joaquin Valley Goods Movement Study, Phase II**
- **Port of Oakland/Caltrans/SJ Valley COGs CIRIS Market Feasibility Study**
- **Port of Stockton Rail Shuttle Study**
- **SJ COG Inland Port Study**
- **Napa/Solano County Passenger and Freight Rail Study**
- **Alameda CMA North I-880 Operations and Safety Study**

# *Southern California Goods Movement Studies*

- Alameda Corridor
- SCAG Goods Movement White Paper
- MTA/SCAG/Caltrans/FHWA Southern California Goods Movement Case Study
- SCAG Heavy Duty Truck Model
- Sub-Regional Goods Movement Studies
- Rail Capacity/Truck-Rail Diversion Studies

# *Southern California Goods Movement Studies (cont.)*

## □ **Truck Lanes/Corridor Studies**

- SR-60 Truck Lane Feasibility Study
- I-710 Major Corridor Study
- I-15 Corridor Study

# *TEA-21 Reauthorization*

# *The \$64 Million Question – What Will the New Surface Transportation Bill Hold in Store for Ports and Freight Transportation?*

- Some themes are emerging
  - Freight transportation will see increased emphasis
  - The effort to create options for public-private partnerships will require creative approaches to financing
  - Multimodal freight interests will still be viewed with suspicion by traditional highway lobbies – but there is hope!

# ***What Stakeholders Said in FHWA Outreach***

- **Solutions will involve new capacity coupled with improved operation**
- **Improve intermodal connections to enhance connectivity, interoperability**
- **Improve state and MPO planning and financing mechanisms for freight**
- **Support multi-state coalitions to deal with corridor and regional trade/transportation issues**
- **Better enable public/private financing and other innovative finance approaches for freight**
- **More federal leadership needed given multiple modes, jurisdictions, private stakeholders, international considerations, and national security implications**

## ***Some Perspectives on Funding***

- **Basic funding categories/revenue sources and funding structure unlikely to change**
  - **Highway Trust Fund**
  - **Apportionment categories**
  - **Discretionary earmarks**

## ***Some Perspectives on Funding (cont.)***

- Some new funding sources may be proposed by stakeholders
  - Indexing gas tax
  - Recovery of ethanol tax exemptions
  - National Transportation Finance Corporation
- How will freight projects get more money?
  - Discretionary projects
  - New funding categories (e.g., set asides) – Affects existing apportionments
  - Changing eligibility rules (e.g., broaden STP eligibility, modify TIFIA, add gateways to Sec. 1118/1119)
  - Changes in planning process – More effectively compete for existing funds

# ***Freight Reauthorization Ideas***

- **Improve Freight Financing**
  - **Flexibility for intermodal freight in existing Fed-aid programs (e.g., CMAQ, STP)**
  - **Innovative Finance (e.g., TIFIA for freight)**
  - **More emphasis on NHS intermodal connectors**
  - **Expand Borders/Corridors to include Gateways/Hubs**
- **Improve State/MPO freight planning, including public/private collaboration**
- **Improve data and analytical tools**
- **Need freight professional capacity building**
- **Focus on Operations/Technology/Security**