Southern California Delivers the Goods
SCAG Connect SoCal Goods Movement Element

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Goods Movement
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www.scag.ca.gov
Our Region

- Nation's largest Metropolitan Planning Organization (MPO)
- Governed by a Regional Council of 86 elected officials
- 38,000 Square Miles
- 15 Subregions
- Nation’s Global Gateway for Trade
- Address federal & state regional planning mandates & local membership needs

SCAG Facts

- 6 COUNTIES
- 48.1% STATE POPULATION
- 191 CITIES
- 5.8% U.S. POPULATION
- 19.1 MILLION RESIDENTS
- 15th LARGEST ECONOMY IN THE WORLD
- 38,618 SQUARE MILES
SCAG's Primary Roles And Responsibilities

- Develop a short-range Transportation Improvement Program
- Develop a long-term regional growth forecast
- Develop a Regional Housing Needs Assessment (RHNA)
- Provide a forum to address issues of regional significance
- Serve as a regional data & information center
- Develop a long-range Regional Transportation Plan (RTP) including a Sustainable Communities Strategy (SCS) to meet GHG reduction targets
What Is the RTP/SCS?

- Long-term vision and investment framework
- State Requirements (SB 375)
  - Integrated regional development pattern & transportation network
  - Reduce GHG emissions to meet targets for passenger vehicles
- Federal Requirements
  - Updated every 4 years
  - 20+ years into the future
  - Revenues = Costs
  - Passes regional emission standards
  - Public involvement

CONNECT SoCal

- Vision, Goals, Policies, & Performance Measures
- Growth/Demographic Forecasts
- Financial Plan
- Strategies
- List of Projects
- Performance Analysis
What’s different this time?

- More aggressive GHG target (19% vs. 13% in 2016)
- MAP-21/FAST Act performance measures & target setting
- Two New Federal Planning Factors:
  - Improving resiliency and reliability of transportation system & reducing or mitigating stormwater impacts of transportation
  - Enhancing travel and tourism
- More outreach
- Activity-based model implementation
- Coordination with Regional Housing Needs Assessment (RHNA)
- Ever changing and fast paced technology & innovation landscape
RTP/SCS Key Questions: What kind of future?

- What type of transportation network should we have?
- How should be prioritizing our limited transportation revenue?
- How bold should we be in identifying new revenue sources or rethinking our current funding structure?
- Where should new growth be located?
- How can we best balance mobility, public health, natural systems, and economic development?
- What can we achieve together that we cannot achieve as individual cities or counties?
- What do community members view as important for a bright and sustainable future?
The Regional Goods Movement System

- Seaports
- Commercial Airports
- Extensive Highway Network
- Class I Rail
- International Border Crossings
- Warehousing and Distribution Facilities
- America’s Manufacturing Center
- Large Consumer Market
The Regional Goods Movement System

Extensive network of freeways and arterials
- 41 percent of freeways and highways in California and nearly 3 percent of U.S. freeways and highways

2 Class I railroads (BNSF & UP)
- Critical links to the over 70% of goods that travel through the SCAG region to areas east of the Rocky Mountains

3 international border crossings
- Over $14 billion of trade passed through SCAG crossings in 2014; Nearly $60 billion when combined with San Diego crossings

Abundant warehousing facilities
- Almost 1.2 billion square feet with another 338 million square feet in developable

Large internal market
- 18+ million consumers also create a huge local consumer market that is projected to grow by another 4 million by 2040
Our vision: A world-class, coordinated Southern California goods movement system that accommodates growth in the throughput of freight to the region and nation in ways that support the region’s economic vitality, attainment of clean air standards, and quality of life for our communities

- Maintaining the long-term economic competitiveness of the region
- Promoting local and regional job creation and retention
- Increasing freight and passenger mobility
- Improving the safety of goods movement activities
- Mitigating environmental impacts of goods movement operations
Critical International Goods Movement Challenges

- National trade policy uncertainty
- Trans-Pacific Trade Lane
- NAFTA/USMCA
- Import supply chains are diversifying
- Shifting trade volumes among various ports of entry
Critical Regional Goods Movement Challenges

Congestion

Port Capacity

Rail Capacity

Warehousing Shortage

Growing Demand

Advancing Technology

Environmental Impact

Safety
Critical Regional Goods Movement Challenges

- Growing port volumes
- Increasing roadway volumes
- Rail capacity and grade crossings
- Warehousing shortfalls
- Air Quality

San Pedro Bay Ports Container Forecast 1995 - 2045

San Pedro Bay Ports Capacity – 33.9 Million

2018 Record High – 17.5 Million


TEUs
 TEUs Port Capacity

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2018 Record High – 17.5 Million

Growing port volumes
Increasing roadway volumes
Rail capacity and grade crossings
Warehousing shortfalls
Air Quality
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Goods Movement Sources as a Percent of NOx Emissions, South Coast Air Basin, 2016

- Mobile Goods Movement
- Mobile Not Goods Movement
- Non Mobile

Source: CARB CEPAM 2016 Standard Emission Tool
Goods Movement Sources as a Percent of NOx Emissions, South Coast Air Basin, 2016

- Mobile Goods Movement: 53%
- Mobile Not Goods Movement: 31%
- Non Mobile: 16%

Distribution of NOx emissions from Goods Movement Sources, South Coast Air Basin, 2016

- Commercial Harbor Craft: 58%
- Train: 6%
- OGV: 7%
- Truck: 27%

Goods Movement Sources as a Percent of PM2.5 Emissions, South Coast Air Basin, 2016

- Mobile Goods Movement: 72%
- Mobile Not Goods Movement: 17%
- Non Mobile: 11%

Distribution of PM2.5 emissions from Goods Movement Sources, South Coast Air Basin, 2016

- Commercial Harbor Craft: 51%
- OGV: 39%
- Train: 5%
- Off-road: 5%

Source: CARB CEPAM 2016 Standard Emission Tool
Goods Movement Is Critical To The Regional Economy

Goods movement dependent industries include manufacturing, retail trade, wholesale trade, construction, transportation and warehousing sectors.

2014 Economic Contributions (in Billions) – $291 Billion Regional GRP

- Manufacturing: $106.87, 37%
- Wholesale Trade: $57.97, 20%
- Transportation and Warehousing: $28.67, 10%
- Retail Trade: $7.41, 3%
- Construction: $12.66, 4%
- Mining: $53.66, 18%
- Forestry, Fishing, and Related Activities: $22.60, 8%
- Utilities: $0.64, 0%
- Retail Trade: $2.9 Million Jobs

2014 Employment Contributions (in Thousands) – 2.9 Million Jobs

- Manufacturing: 702, 23%
- Wholesale Trade: 461, 15%
- Construction: 437, 15%
- Transportation and Warehousing: 332, 11%
- Retail Trade: 26, 1%
- Utilities: 30, 1%
- Mining: 986, 33%
- Forestry, Fishing, and Related Activities: 12.68, 4%

Source: 2016 RTP/SCS, REMI TransSight SCAG, CA, USk3.6.5.
Seaport Strategies

- Pier B Street Freight Corridor Reconstruction Project
- The Gerald Desmond Bridge replacement Project
- SR-47 (Seaside Avenue)/Navy Way Interchange Project
- SR-47/ Vincent Thomas Bridge/Front St Interchange Project
- Alameda Corridor South Terminus/Henry Ford Ave. Rail Crossing Advanced Warning System
- Harbor Boulevard Improvements Project

- Realign and Expand Harbor Boulevard Project
- Zero Emission (ZE)/Truck Trip Reduction/Freight Efficiency Program
- Fourth Track at Ocean Boulevard Project
- Pier D Street Realignment Project
- Pico Avenue Realignment project (roadway widening and realignment)
Rail Strategies

• Mainline rail improvements (double or triple tracking, new signal systems, universal crossovers, new sidings, etc.)
• Rail yard improvements (upgrades to existing yards as well as construction of new yards)
• Rail operation safety improvements
• Road-rail grade separations
• Emissions reduction strategies
• On-dock/near-dock/off-dock rail improvements
• Port Area Rail Infrastructure Improvements
• Expansion of Near-Dock Rail
Highway Strategies

- Clean Freight Corridor System
- Bottleneck Relief Strategy
- Truck Climbing Lanes
Regional Commitments And Timeline

- Developed to address community health concerns, federal attainment requirements and climate change issues, while contributing to our economic and energy security goals

- Focus on the long-term goal of a zero-emission goods movement system where technically feasible and economically viable

- Four phases of the SCAG Action Plan for Advancement of Zero-Emission Technology
  - Phase 1: Project Scoping and Evaluation of Existing Work
  - Phase 2: Evaluation, Development and Prototype Demonstrations
  - Phase 3: Initial Deployment and Operational Demonstration
  - Phase 4: Full-Scale Demonstrations and Commercial Deployment
Connect SoCal invests almost $77 Billion in Goods Movement

- Port Access
- Freight Rail Capacity
- Grade Separations
- Truck Bottleneck Projects
- Intermodal Facilities
- Emissions Reduction Strategies

### Connect SoCal Goods Movement Investments

<table>
<thead>
<tr>
<th>Improvements</th>
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<tbody>
<tr>
<td>Roadway Access To Major Goods Movement Facilities $22,270,946</td>
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<tr>
<td>Freight Corridor System $22,090,831</td>
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<td>Off Dock And Near Dock Inter Modal Yard Projects $1,799,616</td>
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<td>Mainline Rail $4,386,748</td>
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<td>On- dock Rail $998,855</td>
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<td>Rail Access Improvements To Port Of Long Beach &amp; Port Of Los Angeles $1,338,329</td>
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<td>Rail- highway Grade Separations $5,900,574</td>
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<td>Bottleneck Relief Projects $5,000,947</td>
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<td>Rail- highway Grade Separations $13,045,604</td>
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<td>Total $76,832,450</td>
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Note: Numbers may not sum to total due to rounding
Connect SoCal Goods Movement Highlight Areas: Last Mile Delivery

- Improve the regional understanding of last-mile delivery conditions, challenges, and solutions
- Understand user challenges and needs
- Quantify delivery issues and conditions
- Balance conflicting demands for street space
- Develop diverse site-specific strategies
- Identify pilot projects for delivery improvements
- Have a stakeholder-driven process
Connect SoCal Goods Movement Highlight Areas: E-commerce

E-Commerce v. In-Store Retail Sales

Retail & food service, adjusted  E-commerce, adjusted  E-commerce percentage

Retail Sales  E-commerce
Connect SoCal Goods Movement Highlight Areas: Workforce Development

- Automation and disruption
- Competitive wages and increased pressure on the goods movement industry
- Impact and mitigation of the freight workforce skills gap
- Significant lack of awareness among younger generations about the job opportunities offered by the freight industry
- Regional programs to increase participation
Connect SoCal Goods Movement Highlight Areas: Commodity Flow Analysis

- Development of replicable method that can be applied to any commodity
- Creation of tools to use big data right to leverage datasets to maximize planning efficacy
- Opportunity for proof of concept and expansion to encompass domestic production and consumption and illustrate regional freight relationships to economic measures including:
  - Competitiveness
  - Employment
  - GDP
  - Current and projected transportation demand
- Consistency with SCAG emphasis on data-driven
- Relevance to SCAG
  - Funding competitiveness: Know inside and out the benefits for federal, state, local funding opportunities.
  - Fed/State: operational and management strategies to address current and future transportation demand and inputs into state and federal plans (CFMP/State Rail Plan, etc.)
Connect SoCal Goods Movement Highlight Areas: Truck Routes And Truck Parking

- Identify gaps in the regional truck route network
- Identify potential spots where truck supportive infrastructure can be added
- Build cohesive network of truck routes and truck stops for maximum efficiency and less congestion
- Create maps and navigation, while integrating both the datasets, for use by cities and truck drivers
- Use the collected information to overlay local truck routes with emissions maps associated with pollutants from goods movement activities for environmental justice research at SCAG

• Provide resources for research and policy development related to regional land use
Connect SoCal Goods Movement: Additional Focus Areas

- Truck Platooning and Connected Vehicles
- Curb space and Delivery
- Freight and the Sharing Economy
- Truck Automation
- Big Data and Data-Driven Decision Making
- Low- and Zero-Emission Vehicles

THE FUTURE OF FREIGHT
Thank You!

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