

LA County Goods Movement Strategic Plan

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In Memory

LA Metro honors the memory and legacy of Connie Rivera, the Public Affairs Director for the Alameda Corridor Transportation Authority, who for many years provided tremendous insight, wisdom, leadership and her trademark great sense of humor in many LA County goods movement forums and discussions.

A product of Southern California, Connie resided in Long Beach, attended local schools and earned her bachelor's degree from Cal State University, Long Beach. She was passionate about her family and serving her community through the YMCA and Rotary Club. She will be remembered fondly by her many colleagues, especially the Ladies of Logistics, an informal group of women in non-traditional jobs serving the Logistics Industry in Southern California.

Connie led with humility and graced Metro as a member of the Freight Working Group – her vision and voice are embedded within the vision, principles and priorities of the LA County Goods Movement Strategic Plan. Metro dedicates this Plan to Connie's memory and her unwavering belief that through hard work, collaboration and kindness people can come together to lift up and improve the quality of life for all LA County residents, families and communities.

In Tribute

LA County owes a deep debt of gratitude to the truck drivers, warehouse workers and all essential members of the logistics sector for keeping our homes, businesses and hospitals supplied with food, medicine and other necessities during the COVID-19 crisis. Your dedication and bravery ensured our families would be fed and have access to necessary goods at a critical time in our history. Thank you.

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Goods movement is the lifeblood of our regional economy.

LA County's extensive goods movement transportation network, which includes deep water ports, airports, railways and freeways, has positioned the region as one of the most dynamic and competitive markets in the entire world. We are the gateway of choice for international trade and our system supports the everyday need of local residents and the economies of California and the United States.

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Where goods flow, the economy grows.

Successful societies across the history of civilization share similar hallmarks – in particular, their economic competitiveness and quality of life depend greatly on a strong transportation system that allows for the efficient movement and delivery of goods.

Unsurprisingly, the rise of Los Angeles County as a regional, national and international economic, industrial and manufacturing powerhouse traces its genesis directly to the development of its regional, multimodal freight system. The arrival of the Santa Fe Railroad in 1885, the founding of the Port of Los Angeles in 1907 and the Port of Long Beach in 1911, and the post-war development of the region's extensive freeway system connected local and regional industries to national and global markets, fostered expansion of economic opportunity, attracted westward migration and improved the quality of life for all Southern Californians. This symbiotic relationship remains true today, even as the LA County freight network has expanded into a sophisticated system of marine terminals, railroads, highway corridors and air cargo facilities, while the industries supported by this system have evolved beyond dairy, citrus and oil production to include aerospace and defense, bio-science, technology and logistics.

Today, LA County's goods movement system is the backbone of the regional and national economy. This system is the lifeblood for industries that contribute billions to the regional economy and provide thousands of jobs nationwide. This system has helped the County become the gateway of choice for international trade and is key to the attraction, retention and growth of County businesses and their attendant employment opportunities. At the local level, this system facilitates a robust and convenient urban quality of life by allowing residents and businesses to access goods from across town or around the world, all delivered to their doorsteps, sometimes in a matter of hours.

The prosperity brought by robust economic activities, however, has also resulted in a series of challenges that increasingly threaten the County's ability to ensure quality of life, equity, public health and economic sustainability for its 10 million-plus residents. At the same time, the widening of the Panama Canal, trade wars with China, labor disputes at the San Pedro Bay Ports and extensive investment in East Coast, Gulf Coast and Canadian ports have together endangered LA County's preeminence in attracting discretionary international cargo into the United States, resulting in a loss of national market share symbolized most viscerally by the Port of Long Beach dropping to third place in national container port rankings in 2019.

With an increasing emphasis on correcting past wrongdoings, improving regional mobility and air quality and fending off North American competitors siphoning away cargo and economic prosperity, we are at an important juncture in LA County's history to steer a course towards prosperity that is built on equity, inclusion and sustainability. This LA County Goods Movement Strategic Plan will help guide that course. Through the development and implementation of this Plan, Metro has an opportunity to lead the region in identifying and addressing goods movement challenges and to partner with the myriad regional goods movement stakeholders to allow the nation's most populous County to make progress toward its economic, mobility, environmental and equity goals.

LA County's goods
movement system is the
lifeblood for industries
that contribute billions
to the regional economy
and provide millions
of jobs nationwide.

LA County Goods Movement at a Glance

The San Pedro Bay Ports together rank as the largest container port complex in the United States and the **9th largest in the world.**

LAX is the **5th busiest cargo airport** in the United States and **10th in the world.**

More than **25% of intermodal containers** flowing through the Ports are moved by Burlington Northern Santa Fe (BNSF) and Union Pacific (UP).

LA County houses nearly **1.1 billion square feet** of warehouses, distribution centers and transload facilities.

The multimodal freight system serves the goods movement and mobility needs of the nation's most populous county – with **over 10 million residents** – and an estimated **50 million visitors** annually.

The LA region is the nation's top-ranked customs district, with over **\$430 billion in two-way trade** annually.



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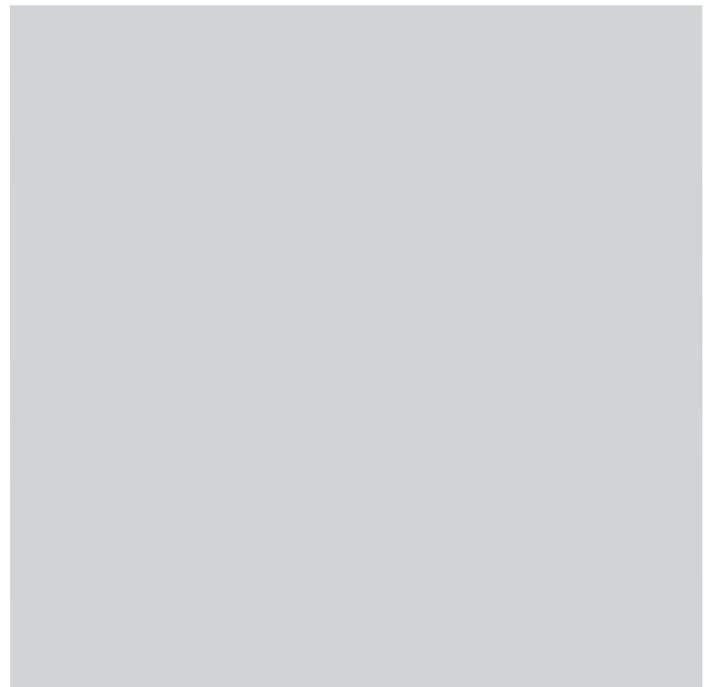


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This plan is a new strategic direction.

The Goods Movement Strategic Plan is Metro's response to the many freight-related challenges we face. It defines the vision of the Goods Movement Planning team and alignment with Metro's overall mission and goals. The Plan describes how Metro should work with local, regional and national partners to improve LA County's competitiveness in an equitable and sustainable manner, delineating where Metro should lead, where Metro should partner and where Metro should support. In total, this Plan provides a strategic framework to guide LA Metro's goods movement-related planning activities, investments, partnerships and decision-making over the next five years.

Mission and Vision

Metro's mission is to provide a world-class transportation system that enhances quality of life for all who live, work and play within LA.

How Metro will achieve this broad mission over the next ten years is guided by two key planning initiatives:

- > **Vision 2028**, which is the agency's big picture plan for improving mobility across the County adopted by the Board in June 2018. Its five goals underpin all of Metro's activities, including this Goods Movement Strategic Plan.
- > **Long Range Transportation Plan (LRTP)**, which serves as the blueprint for how Metro will spend anticipated revenues in the coming decades to operate and maintain both our existing and planned system¹. This blueprint will be informed by a variety of other Metro plans, including the Goods Movement Strategic Plan.

The Vision of the Goods Movement Planning Team at Metro fits squarely within these existing frameworks. Implementation of this Plan will allow Metro to become:

- > A **national leader** and **regional partner** in implementing a modern, responsive, coordinated and effective freight transportation system through policies, programs and projects that support a competitive global economy; and
- > A steward of **equitable and sustainable investments** and **technological innovation** that will increase regional economic competitiveness, advance environmental goals and provide access to opportunity for County residents.

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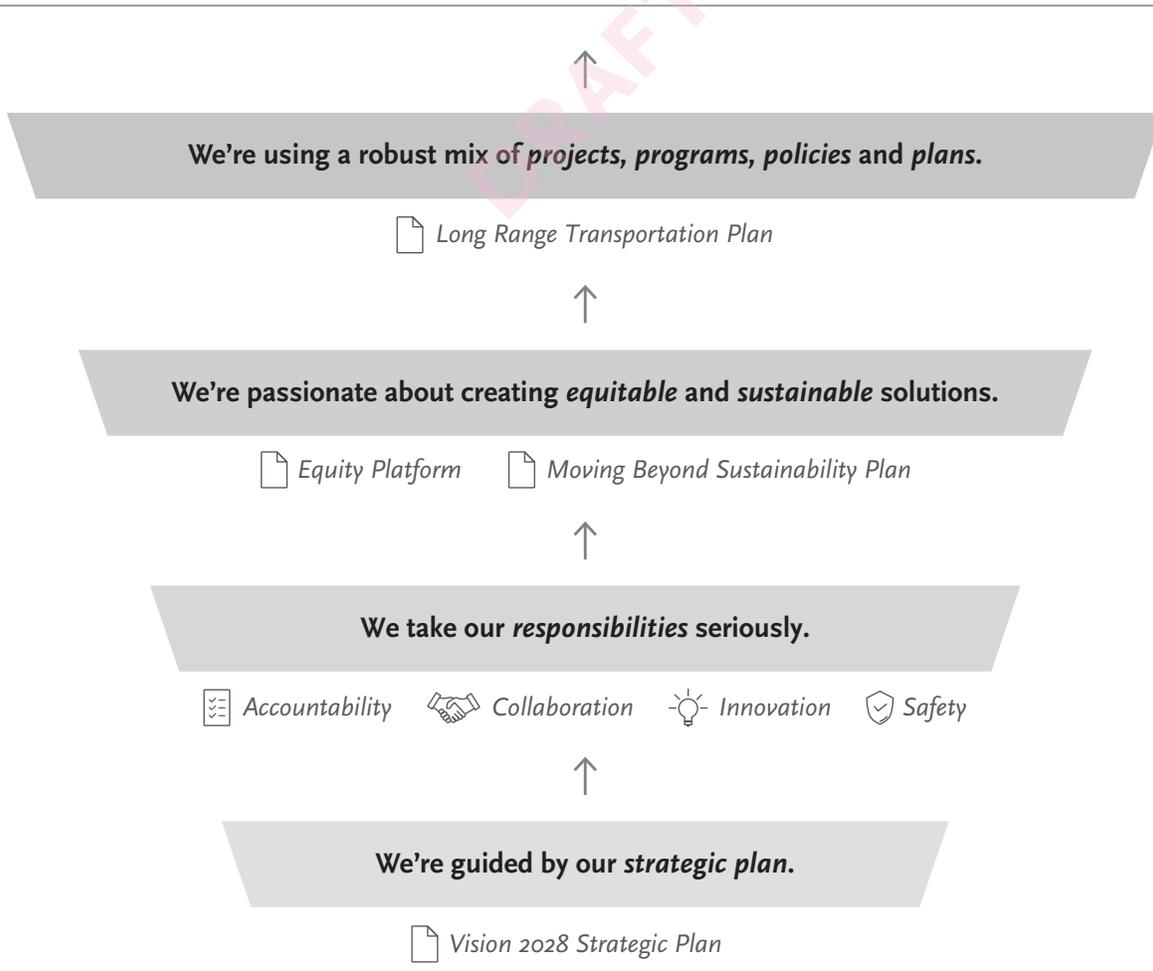
Figure 1

The LA County Goods Movement Strategic Plan aligns with Metro’s strategic framework by working toward achieving less congestion, complete streets and access to opportunity.

We have a plan for a better LA.

Everything Metro does ladders up to our mission – improving mobility to enhance the quality of life for you and all who live, work and play in LA County.

We’re creating:



Metro can't do it alone.

The movement of goods within and through LA County depends upon, impacts and supports many communities, businesses, organizations, public agencies and private companies. Numerous agencies plan, fund and regulate the “economy in motion” at the local, regional, state and federal level. Metro must rely on a robust and diverse network of these stakeholders to develop a relevant, impactful and forward-looking Goods Movement Strategic Plan established on the principle of equity, focused on implementing priorities advancing the Sustainable Freight Competitiveness Framework and aligned with regional, state and federal planning efforts.

Policy and Institutional Framework

Metro’s LA County Goods Movement Strategic Plan must be responsive to planning efforts developed by many agencies at the county, regional, state and federal levels. As more funding opportunities and regulatory requirements are established for the goods movement sector, these planning efforts will need to intersect and support each other in a vertical and horizontal manner. Convening stakeholders, engaging in dialogue and developing areas of overlapping priorities will be vital to ensuring that Metro’s Plan is coordinated with and funded by the many stakeholder agencies involved with advancing goods movement policy and projects.

Figure 2

LA County Stakeholders

Stakeholders
LA County
FPO list to come

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Figure 3

Regional, State and Federal Relationships

	Agency	Plans	Funding Programs
Regional	South Coast Air Quality Management District (SCAQMD)	Air Quality Management Plan (AQMP)	Carl Moyer Memorial Air Quality Standards Attainment Program
	Southern California Association of Governments (SCAG)	Regional Transportation Plan/Sustainable Communities Strategies (RTP/SCS)	
	Adjacent Counties		
	Metrolink	Metrolink Southern California Optimized Rail Expansion (SCORE) Program	
	Freight Rail Roads	Southern California Freight Strategy	
	METRANS		
State	California State Transportation Agency (CALSTA)		Senate Bill 1 Trade Corridor Enhancement Program (TCEP)
	California Transportation Commission (CTC)	California Freight Mobility Plan (CFMP)	Senate Bill 1 Local Partnership Program (LPP)
	California Department of Transportation (Caltrans)	California State Rail Plan	Transit & Intercity Rail Capital Program (TIRCP)
	California Air Resources Board (CARB)	California Sustainable Freight Action Plan	Truck Loan Program
	California Public Utilities Commission (CPUC)	California Freight Investment Program	Hybrid & Zero-Emission Truck & Bus Voucher Incentive Project (HVIP)
			AB617 - Community Air Protection Funds
		Volkswagen Environmental Mitigation Trust	
Federal	United States Department of Transportation	National Freight Strategic Plan	National Highway Freight Program
	Federal Highway Administration		Infrastructure for Rebuilding America (INFRA) Grant Program
	Federal Railroad Administration		Better Utilizing Investments to Leverage Development (BUILD) Grant Program
	United States Department of Energy		
	United States Environmental Protection Agency (EPA)		

Our multimodal network drives a global powerhouse.

LA County's robust, multimodal goods movement network drives and sustains the region's status as a global economic powerhouse. This extensive transportation network – comprising deepwater ports, airports, railways and myriad freeways – fuels the region's standing as one of the most dynamic and competitive markets in the entire world. Los Angeles County serves as a national and international goods movement hub, connecting producers and consumers around the globe. Absent trade war tariffs and COVID-19 impacts, nearly 375 million tons of imports and exports worth over \$430 billion move through the San Pedro Bay Ports². This represents nearly three-quarters of the total west coast import/export market and nearly one-third of the nation's total throughput. Similarly, the Los Angeles International Airport (LAX) handles 2.3 million tons of air cargo annually, with the value of these exports and imports worth nearly \$121 billion³.

It is easy to underestimate the impacts of trucks serving non-industrial locations along the County's arterial and local street networks, where they often compete for space with buses, passenger cars, transportation network companies such as Lyft and Uber and active transportation users. Trucks from these types of activities, including those serving the nearly 30,000 restaurants in Los Angeles County, local retail establishments, small businesses and residential neighborhoods, further exacerbate operational conflicts between trucks and vehicle, transit and pedestrian activity on these local streets⁴.

The lesson for LA County is simple: countywide mobility issues and freight issues are often one and the same, occurring on a shared multimodal network whose condition and performance is integral to personal and freight mobility.

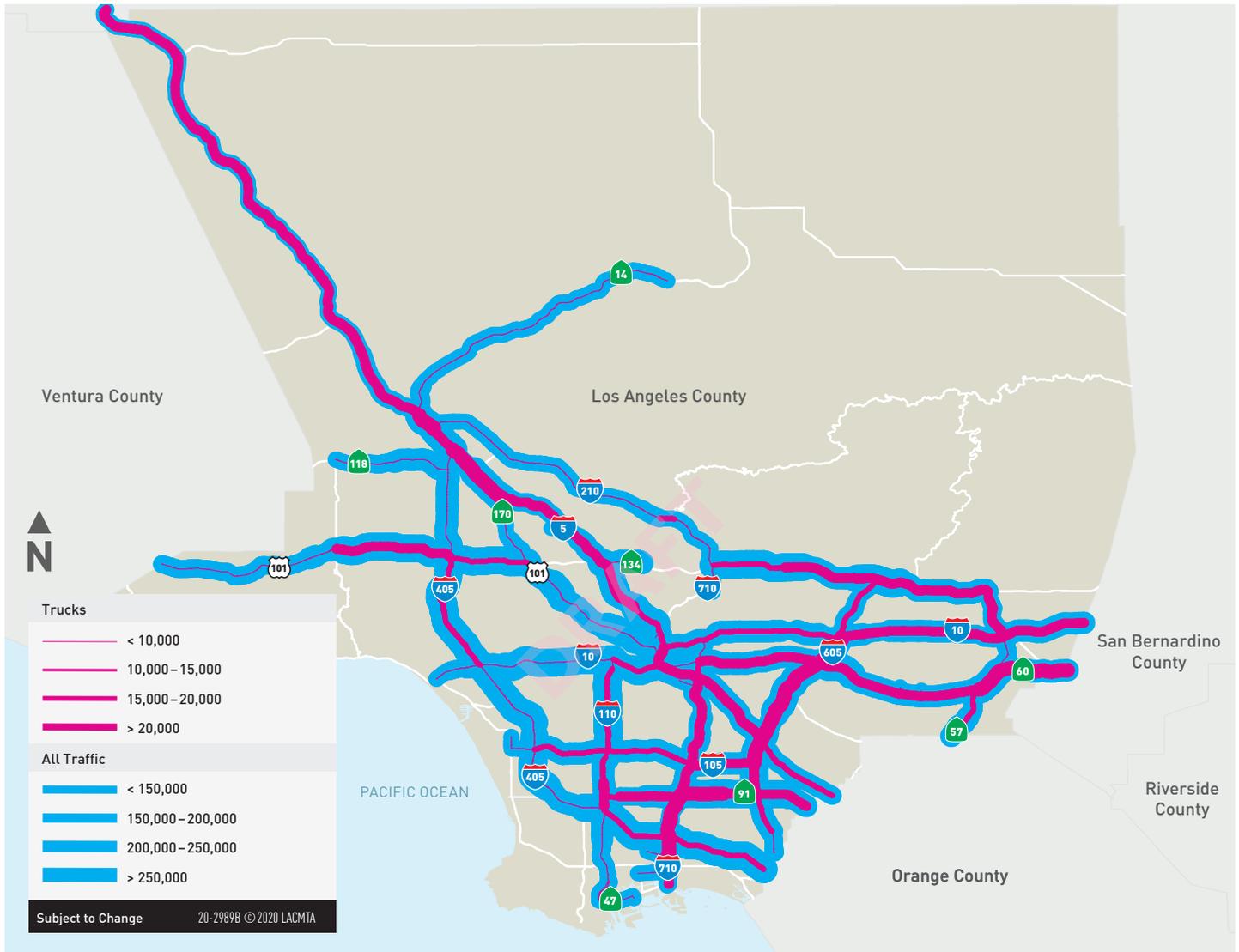


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Los Angeles County serves as a national and international goods movement hub, connecting producers and consumers around the globe.

Figure 5

VOLUMES ON THE NATIONAL HIGHWAY FREIGHT NETWORK



Los Angeles County is known for its expansive highway system that serves the goods movement and personal mobility needs of over 10 million county residents⁶. This system is also a shared regional, state and national freight resource, connecting adjacent counties, states and national markets to the San Pedro Bay Ports and local freight facilities – thus earning much of the system designation as part of the National Highway Freight Network.

Several freeways (I-710, I-605, SR-60 and SR-91) carry upwards of 25,000 trucks a day on some segments – with SR-60 carrying more than 51,000 daily trucks during its peak traffic hours. Other highway corridors (I-5, I-10, I-15 and I-210) see on a daily basis more than 20,000 trucks. (Figure 3)

These freeways also serve as key commute corridors, handling volumes of up to half a million vehicles per day in some locations⁷. These constrained corridors will only see increased demand from trucks and vehicles as LA County’s population, goods consumption and port-related container traffic increase in the coming years.

Figure 6

OWNERSHIP OF RAIL NETWORK



While Metrolink, the regional commuter rail operator for LA County, owns and operates on a significant portion of its right of way, it also operates in the southern and eastern part of the county on heavily used freight rail corridors owned by UP and BNSF. More than 25 percent of intermodal containers at the Ports of Long Beach and Los Angeles move on these shared use regional rail corridors.

Nearly 40,000 Metrolink passengers board each weekday, while Amtrak’s Pacific Surfliner serves 5 million passengers annually^{8,9}. Without capacity improvements on the shared use system, efforts to increase ridership (and reduce congestion on the county highway system) will be curtailed, especially on UP and BNSF corridors that will need to accommodate additional container traffic in future years^{10,11}.

These railroads – a vital mode of long distance transportation for passengers and freight – face constraints to adding capacity and improving throughput unless the region develops partnerships to invest strategically in the rail system, such as Metrolink’s Southern California Optimized Rail Expansion (SCORE) Program.

Freight is our economy in motion.

Freight movements are often described as the “economy in motion.” The Los Angeles County multimodal freight system moves not just the local economy, but also sustains the vitality of Southern California and the nation. Collectively, the trade and logistics industry in the greater Los Angeles County area generates nearly \$225 billion in economic output annually, supported by direct spending of \$132 billion, which includes \$44 billion in labor income paid to its employees in 2016 (per the most recent data available)¹².

The county’s unparalleled strength in international trade benefits not just large, multi-national companies, but also is essential to the success of the more than 200,000 small and mid-sized businesses in Los Angeles County, particularly those that rely on an efficient goods movement system, like restaurants, construction, manufacturing and markets¹³.

Collectively, businesses in Los Angeles County – along with their customers and employees – help drive property and sales tax revenue, which is used to support critical needs across the County like law enforcement, fire protection, transportation and education.



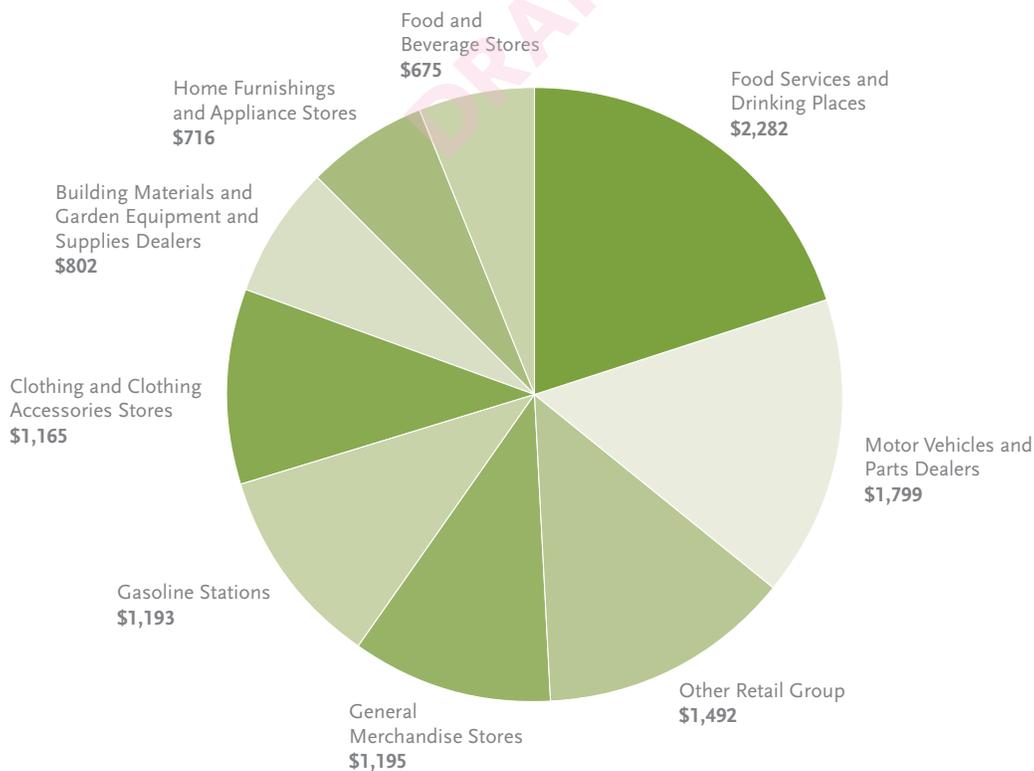
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In 2018, LA County recorded taxable sales transactions over \$166 billion. Although the sales tax amount generated by the trade and logistics sector is low because of its nature as a service provider, it provides essential support to the retail and food service sectors whose contribution to sales tax revenue is tremendous (see Figure 6). These industries rely on consistent, safe and efficient deliveries of goods to sustain their operations and maintain their own competitiveness. Altogether, these retail and food sectors generated approximately \$11.6 billion in sales taxes¹⁴.

Metro cannot understate or ignore the oversized role the county’s goods movement sector plays in driving the local economy – especially when Metro’s annual budget depends heavily on the sales tax receipts generated through the county’s four ½ cent sales tax measures. Metro’s core services – building the county’s transit system and operating bus and rail service – are funded primarily through the sales taxes generated by LA County’s robust economy and goods movement industry.

Figure 7

LA County Sales Taxes Generated by Business Type, 2018 (\$ in millions)



Goods movement drives our quality of life.

A reliable goods movement system is essential to maintaining the region's collective quality of life, not only allowing access to basic items such as water, fresh food, medicine and jobs; but also supporting the events, activities and destinations that make Southern California an attractive place to live, work and visit. By connecting producers and consumers, supplying power plants, hospitals and gas stations and providing a wide range of employment opportunities (discussed in a later section), the freight system contributes to quality of life in LA County in a number of ways.

Linking Farmer and Consumer

For local food manufacturers like Farmer John – famous for their Dodger Dogs sold at Dodger Stadium – or Huy Fong Foods, the maker of the Sriracha Hot Chili Sauce, LA County is an epicenter for the food production industry. Food processing and manufacturing employs over 40,000 employees in LA County and as recently as 2012 created more than \$16 billion of economic output^{15/16}. The local industry thrives because of a large concentration of suppliers, distributors, access to an abundance of fresh produce and ingredients, national distribution centers and a transportation and logistics infrastructure that serves regional, national and international markets. These producers offer an incredible variety of products to customers around the country and the globe¹⁷.

Supplying an Island Getaway

Just 22 miles off the coast of Southern California, Catalina Island is a tourist hotspot known for its natural beauty, outdoor activities and seaside charm. With an estimated 1 million visitors every year and 3,500 yearly residents, the island relies on daily overnight deliveries to support its way of life. It must import food, fuel, raw materials and consumer goods. For small businesses, such as Abe's Liquor Store, which has been supplying groceries for the island since 1933, business would not exist without the supply shipment that runs almost daily between the Port of Los Angeles and the island¹⁸.



Image to come

Supporting International Events

As LA County prepares to host the 2028 Summer Olympic and Paralympic Games, transportation and logistics will be instrumental to its success. Hundreds of thousands of fans will watch over ten thousand athletes compete in about 300 events. The USA is also a co-host for the 2026 World Cup, and LA County will likely be host to multiple games as part of that event. For LA County, this means transporting tons of goods to sites and venues scattered across the region. Leading up to the Games, massive amounts of equipment to support athletes, coaches and game operations from around the world will be shipped, stored and returned. For the 2012 Summer Olympic Games in London, 30 million items were moved in and out of the City¹⁹. A reliable goods movement system will allow the Olympic Games to increase the prestige of the region and bring an enjoyable event to LA County residents and visitors.

Responding to a Global Pandemic

The outbreak of the novel coronavirus (COVID-19), which first began as a regional crisis in Wuhan City, China, quickly became a worldwide threat to health, travel and commerce due to the virus' nature as a highly infectious respiratory disease. With entire nations under "shelter in place" orders, the global pandemic is having sweeping impacts on manufacturing and production, consumer demand and supply chains. The effects of COVID-19 are rippling through global distribution networks and reducing the volume of goods, with direct impacts on LA County. The Port of LA is reporting a 23 percent decrease in cargo movement compared to just one year ago, while the Port of Long Beach is down approximately 10 percent compared to February 2019. In the midst of this crisis, the logistics industry has provided critical, life-saving services to LA County and the rest of the country by delivering essential supplies such as food, paper products, personal protective equipment (PPE) and sanitation supplies. These efforts have helped "flatten the curve" more quickly while raising the public consciousness about – and appreciation of – the importance of efficient supply chain and distribution operations.



Image to come

In the midst of the COVID-19 crisis, the logistics industry has provided critical services to LA County by delivering essential supplies such as food, paper products, personal protective equipment and sanitation supplies.

One in three jobs in LA County depends on a robust system.

The health of the region's goods movement industry is directly related to the health of its overall economy. Nearly one-third of jobs in LA County are in goods-producing and freight-dependent industries²⁰. The San Pedro Bay Port Complex alone accounts for 1 in every 12 jobs in Los Angeles and Long Beach, nearly one million jobs in the six-county Southern California Association of Governments (SCAG) region, and almost 3 million jobs throughout the United States^{21,22}. In total, the trade and logistics industry (which includes wholesale trade, transportation and warehousing) accounts for nearly 600,000 jobs in LA County – and the industry continues to expand. Between 2008 and 2017, LA County's employment in the transportation and warehousing sectors increased to more than 300,000 workers, reflecting a growth rate of 38 percent, the highest growth rate of any industry during this time period²³.

The trade and logistics industry accounts for nearly 600,000 jobs in LA County – and the industry continues to expand.

Figure 8

Jobs Generated through the San Pedro Bay Port Complex



1 in 12 Jobs in Los Angeles/Long Beach

190,000 total jobs



1 in 9 Jobs in Five-County Region

992,000 total jobs



Jobs throughout United States

2,800,000 total jobs

The goods movement industry serves as a stable employment base for low- and middle-skill workers with limited education attainment, offering opportunities for advancement and upward mobility – and ultimately greater equity for LA County. Trade and logistics industry jobs have an average annual wage of over \$63,000 – fourteen percent higher than the average wage of all other industries in Southern California²⁴. Yet, jobs in this sector have historically required relatively few specialized skillsets, providing ladders of opportunities to a broad segment of the population with lower to middle levels of education.

Like many sectors in the economy, the goods movement industry is also experiencing significant change and disruption largely due to widespread adoption of technology and changes in supply chain operations. As a result, workers with current technical credentials will continue to need on-the-job training and professional development to adapt to and use new systems²⁵. Recognizing the all-important need to build and

maintain a skilled workforce pipeline, LA Metro established the Workforce Initiative Now – Los Angeles (WIN-LA), a workforce development program focused on careers in all sectors of the transportation industry²⁶. Other public sector entities in the transportation and logistics industries have also taken active roles in building and strengthening the local labor pool. Both the Port of Los Angeles and the Port of Long Beach have formed partnerships with local high schools to cultivate an interest in the trade and logistics sectors and to build connections between the classroom and the port terminal. Similarly, the web-based Professional Designation Program for Global Logistics Specialist (GLS) certification, established in partnership with the Center for International Trade and Transportation (CITT) and the California State University – Long Beach (CSULB) College of Continuing and Professional Education, provides conceptual learning and skillset development on international trade and supply chain management.

We have challenges to solve.

LA County's current goods movement system creates challenges and hurdles for LA County residents. Growing demand has increased congestion and worsened air quality. A history of inequitable investment has placed the impacts of freight-related burdens disproportionately on low-income communities of color.

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Our system is strained

The short and long-term economic competitiveness of Los Angeles County relies on an efficient multimodal system, access to a strong labor force and freight infrastructure that can adapt to fast-changing supply chain strategies and logistics networks. There are several key issues and challenges facing the region's goods movement system that could threaten its overall competitiveness as a premier gateway for freight traffic.

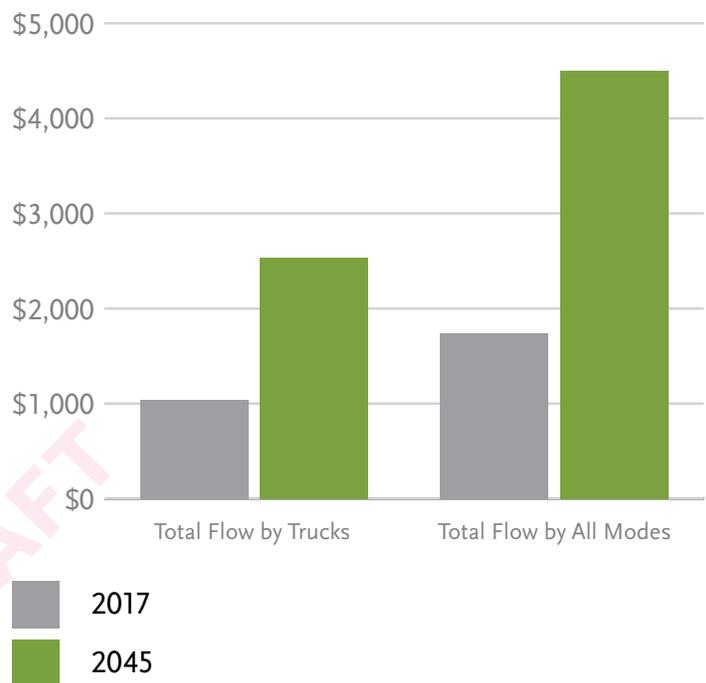
In 2018, LA County moved over 740 million tons of goods on its multimodal freight system²⁷. Trucks carried the vast majority of this traffic – over 500 million tons with a combined value of over \$1 trillion. These trucks are operating on a system that is already incredibly congested. The Los Angeles metro area has the second slowest average truck speeds in the US (second only to the Bay Area) and LA County is home to two of the nation's top 10 worst truck bottlenecks²⁸. All told, heavy-truck congestion cost the six-county SCAG region \$2.6 billion in 2010²⁹.

The region's freight rail system is equally strained, as much of the freight rail system shares tracks with passenger rail. Nearly 40,000 Metrolink passengers board each weekday and more than 25 percent of intermodal containers at the San Pedro Bay Ports utilize the same regional rail corridors to deliver goods to their next destination^{30,31}.

Further, the County's international trade gateways are operating at or near their practical capacities. The Ports of Los Angeles and Long Beach are the two largest container ports in the US – and the 9th largest in the world. Although recent volumes have diminished in the past two years due to trade war tariffs and the COVID-19 pandemic, the ports handled a combined 17 million twenty foot-equivalent units (TEU) in 2018³². Air cargo volumes at LAX – already the nation's fifth largest cargo airport – have been dropping slightly, but have increased recently in the wake of COVID-19. LAX suffers from congestion on and around the airport caused by its decades-old cargo handling facilities that cannot accommodate today's larger aircraft and that have only one entrance/exit area³³.

Figure 9

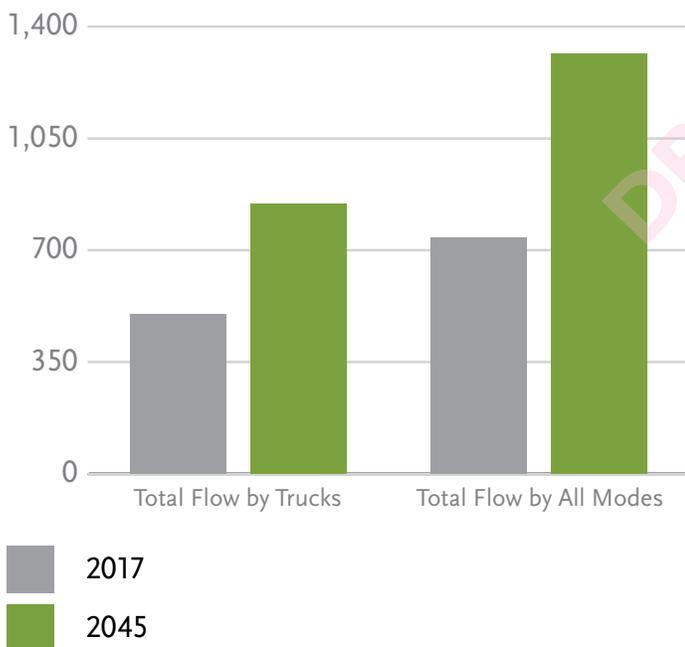
Value of Goods Movement by Mode in the LA Region (in billions)



These existing issues will be magnified by expected growth in freight traffic. By 2045, an estimated 1.3 billion tons of goods valued at \$4.5 trillion are projected to be moved by all modes through the Southern California region annually, representing an increase of 78 percent by weight and 159 percent by value. Trucks are estimated to be moving 846 million tons of goods valued at \$2.5 trillion in 2045 (Figure 9)³⁴. Further, more than one and a half million people will be added over the next 25 years to the six-county Southern California region³⁵. Combined, the vast increase in freight movement and regional population growth will exacerbate existing congestion on key local trade corridors and arterials that already rank among the most congested in the nation.

Figure 10

Goods Moved (in million tons)



Summary of Our Challenges

- > Goods movement has previously been treated in ways that are either in alignment/misalignment with other Metro goals and priorities.
- > Volumes are increasing and supply chains are changing but the shared use infrastructure capacity remains the same. Both trucks and freight rail are competing for the strained capacity against other roadway users.
- > LA County serves as the gateway for national commerce – yet, the benefits are broadly distributed through the regional and national economy while the impacts and externalities disproportionately affect local communities. A history of inequitable policies and investments have worsened these issues.
- > The goods movement industry provides jobs to a range of demographics and skill levels, but required skills are changing.
- > Competing investment priorities severely outpace constrained resources for investment, both nationally and locally.
- > All of these challenges undermine LA County's economic competitiveness, ability to attract an optimal share of discretionary cargo and support the efficient movement of goods throughout the region.

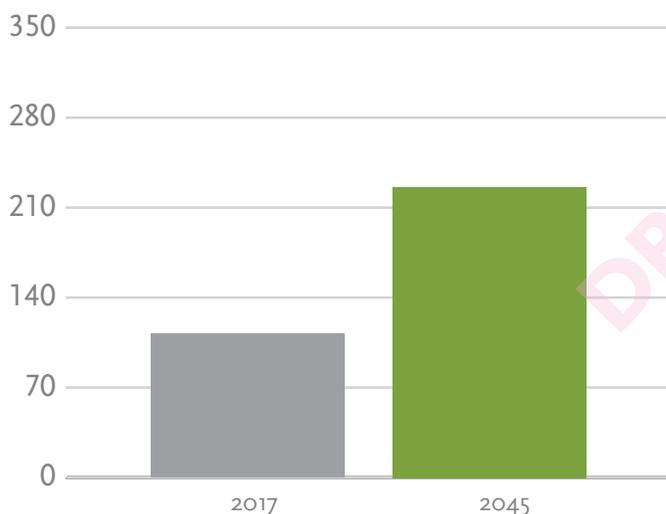
Anticipated Growth Will Affect Every Mode

Freeways

Freeways link goods movement facilities to outside destinations along the interstate highways. This dynamic increases truck traffic that is anticipated to clog further our already-congested roads. Truck volumes on some interstate segments are expected to increase by up to 60 percent by 2045, which translates to more than 50,000 trucks per day³⁶. Heavy duty truck hours of delay will more than double, to 223 annually (Figure 10).

Figure 11

Daily Heavy-Duty Truck Hours of Delay



Ports

The San Pedro Bay Ports anticipate a doubling of container volumes before 2045 only limited by the estimated capacity of the port facilities. Efficiency improvements supported by technology and automation, combined with port expansion projects, could drive growth even higher. The global trend towards using larger container ships further compounds the demand and infrastructure capacity challenge. With larger container ships, higher volumes of goods arrive at once, straining the handling capacity of port infrastructure, labor and the surrounding road and rail infrastructure. The financial and environmental challenges associated with building “near dock” facilities makes it difficult to relieve this pressure quickly.

Rail

The anticipated growth in intermodal container traffic, combined with a projected increase in Metrolink passengers by as much as 95 percent by 2025, will constrain rail system capacity, causing bottlenecks and increased delays on the shared system³⁷. This is particularly true on the UP Alhambra and Los Angeles subdivisions, which will have up to 110 freight trains daily by 2040, and the BNSF segment from Los Angeles to San Bernardino which could have as many as 125 freight trains by 2040. Without improved/new sidings, electrification, double- or triple-tracking, grade separations and line speed improvements, slots available for passenger trains will be capped, reducing overall freight and passenger mobility countywide. Strategic investment partnerships with the freight and passenger rail operators – such as Metrolink’s SCORE program – will be important to address these constraints³⁸.

Streets

Increasing volumes of goods purchased on-line – both before and during the COVID-19 pandemic – will stress arterials and other surface streets throughout the County due to an increase in delivery truck trips to and from local destinations. Worldwide e-commerce sales have doubled since 2014 and are expected to double again by 2023, significantly influencing the flow of goods directly to consumers³⁹. Many retailers have adopted a strategy of multiple, small distribution facilities closer to population centers, posing concerns over developing incompatible land use types, and generating freight traffic into, out of and around these facilities in an urban environment.

Without capacity or operational improvements, these trends will reduce cargo velocity into and out of the region, making LA County a less attractive gateway for discretionary cargo (i.e., those shipments that are not destined for local consumption). Many other freight gateways – on both coasts – are making policy and investment decisions aimed at attracting this discretionary cargo, using the freight travel time to Chicago as a benchmark. The ability of LA County to continue to compete effectively against other burgeoning seaports in the “race to Chicago” (see page 30) will make or break the county’s ability to protect market share and avoid significant economic and employment disruptions.

Worldwide e-commerce sales have doubled since 2014 and are expected to double again by 2023, significantly influencing the flow of goods directly to consumers.



Image to come

Losing National Market Share

Los Angeles County's standing as the nation's trade gateway of preference cannot be taken for granted. Ranked as the top two busiest Ports in the United States for several decades, the Ports of Long Beach and Los Angeles are suffering steady erosion of national market share despite moving more cargo than before – as the nation grows economically and international trade continues to burgeon, LA County risks exclusion from the prosperity, employment and economic benefits associated with capturing new discretionary cargo destined for the rest of the country.

Rival gateways in Canada, the East Coast and the Gulf Coast have invested heavily in their infrastructure to capitalize on the widening of the Panama Canal and international trade trends to attract more port cargo traffic, national market share and the resulting economic and employment benefits—all at the great expense of LA County.

From 2006 to 2019 the San Pedro Bay Ports' growth has sputtered at only 8% in total container volumes (see Figure XX), while rival ports have grown at rates of 47% (New York/New Jersey), 86% (Houston), 102% (Canada's West Coast ports) and 113% (Savannah). Many of these ports enjoy a strong vision for growth and unified support from the Governor down to the local level to implement cohesive plans to deepen ports, build on-dock rail and improve the surrounding surface transportation system to attract bigger ships and move more cargo at a faster pace.

Increasing freeway traffic congestion, uncertainty associated with labor disputes and under-investment in the region's freight rail system are some examples of why LA County's ports struggle to gain a greater share of national container imports and exports. Through the LA County Goods Movement Strategic Plan, Metro supports the development of the infrastructure, funding, policy and political leadership necessary to rekindle the county's national economic competitiveness while advancing our shared equity and sustainability goals.



Image to come

Figure 12
Port Cargo Growth (2006 – 2019)

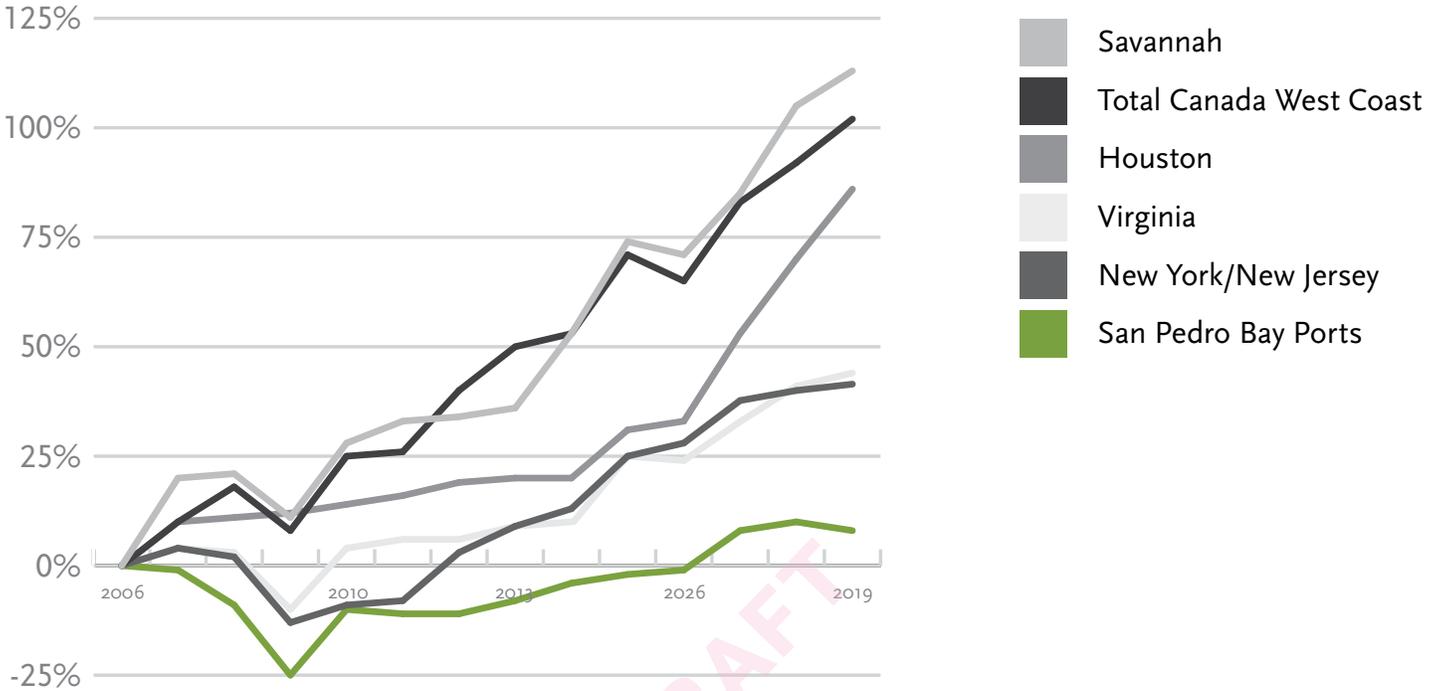
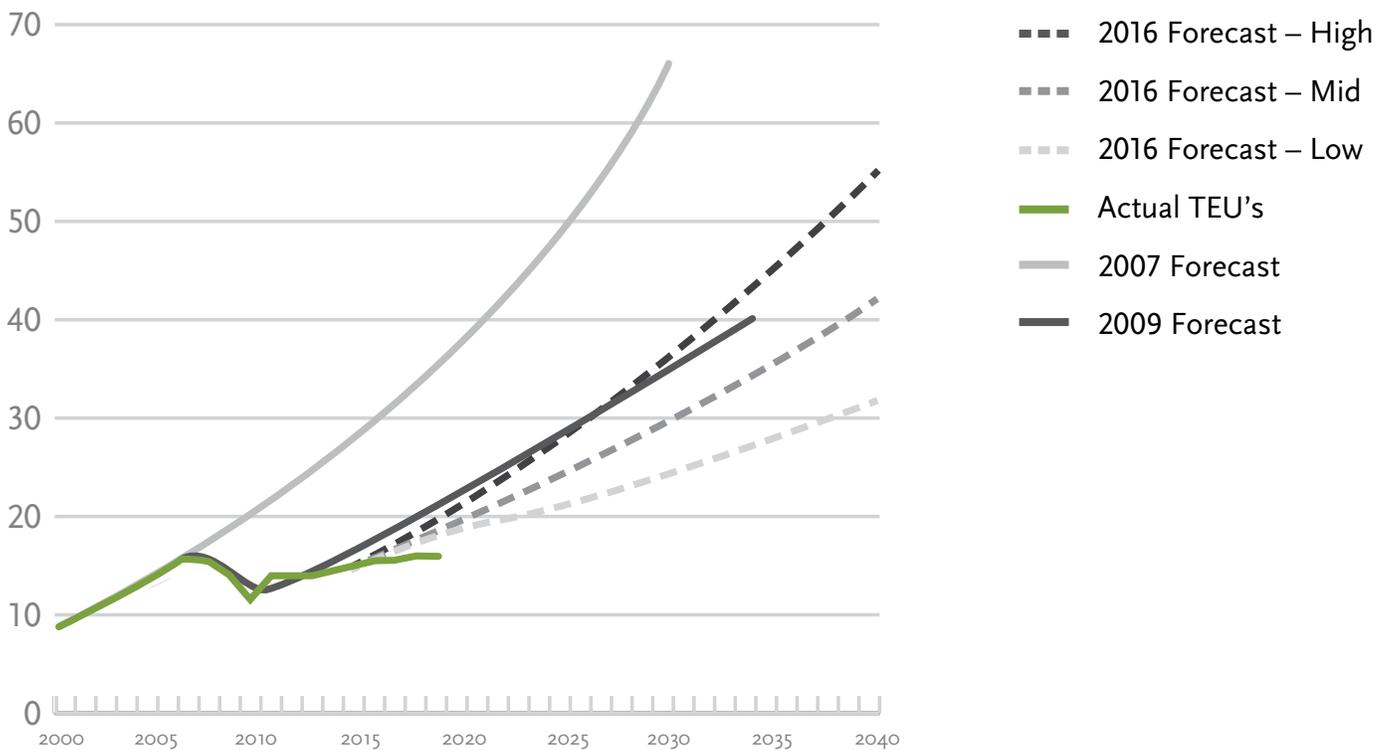


Figure 13
TEU Container Forecasts for San Pedro Bay Ports (in millions)



Cargo Race to Chicago

Chicago is North America's trade crossroads – over 80% of rail container traffic moving across the US moves through the “Windy City”. The total transit time spent moving a container from the port of origin to Chicago by sea and land oftentimes determines which North American port will receive this discretionary cargo.

Today, with similar transit times to Chicago via rail from ports across the West Coast, the San Pedro Bay Ports' competitiveness in this “Race to Chicago” boils down to how quickly containers move from the docks to rail – a process that can take two days or more. Meanwhile, the widening of the Panama Canal in 2016 – allowing for larger ships to travel faster to East Coast ports, thus bolstering diversion of Pacific Rim cargo from the West Coast – combined with significant investments in capacity and efficiency enhancements by rival ports on both coasts have led to the erosion of market share and economic opportunities historically enjoyed by the Ports of Los Angeles and Long Beach.

To remain economically competitive in securing discretionary cargo, LA County stakeholders must work together to accelerate the movement of cargo through the Ports of LA and Long Beach by making strategic investment in on-dock and off-dock freight rail capacity, optimizing data sharing, implementing operational improvement measures and increasing terminal efficiency. Investments at the Ports – especially in rail infrastructure – pay off at the regional level, supporting the regional economy and employment in numerous goods movement industries and ensuring Los Angeles County's position as the preeminent national freight gateway.

The total transit time spent moving a container from the port of origin to Chicago by sea and land oftentimes determines which North American port will receive this discretionary cargo.

Figure 14

NORTH AMERICA TRADE GATEWAY: CHICAGO



Major Safety Concerns

Roadway Safety

Roadway safety is another area that is heavily impacted by robust goods movement activities. During the five-year period between January 1, 2014 and December 31, 2018, there were 9,612 truck involved collisions on roadways in Los Angeles County. Of these, 287 individuals were killed, and 12,971 reported injury. The number one cause was unsafe speed at 35.35%, followed by unsafe lane change (17.31%) and improper turning (14.39%). Majority of collisions resulted in rear end at 3,899 collisions and sideswipe at 2,677 collisions⁴⁰.

Truck involved collisions are concentrated on major freeways with heavy truck traffic. These include SR 57/60 confluence, SR-60 between I-605 and SR-57, I-605, I-710 and I-5 near downtown Los Angeles⁴¹. Between 2014 and 2017 where the most recent traffic count information is available from Caltrans, I-710 at the interchange of SR 91 and SR 57/60 confluence consistently ranked one of the heaviest truck volume locations in Southern California⁴².

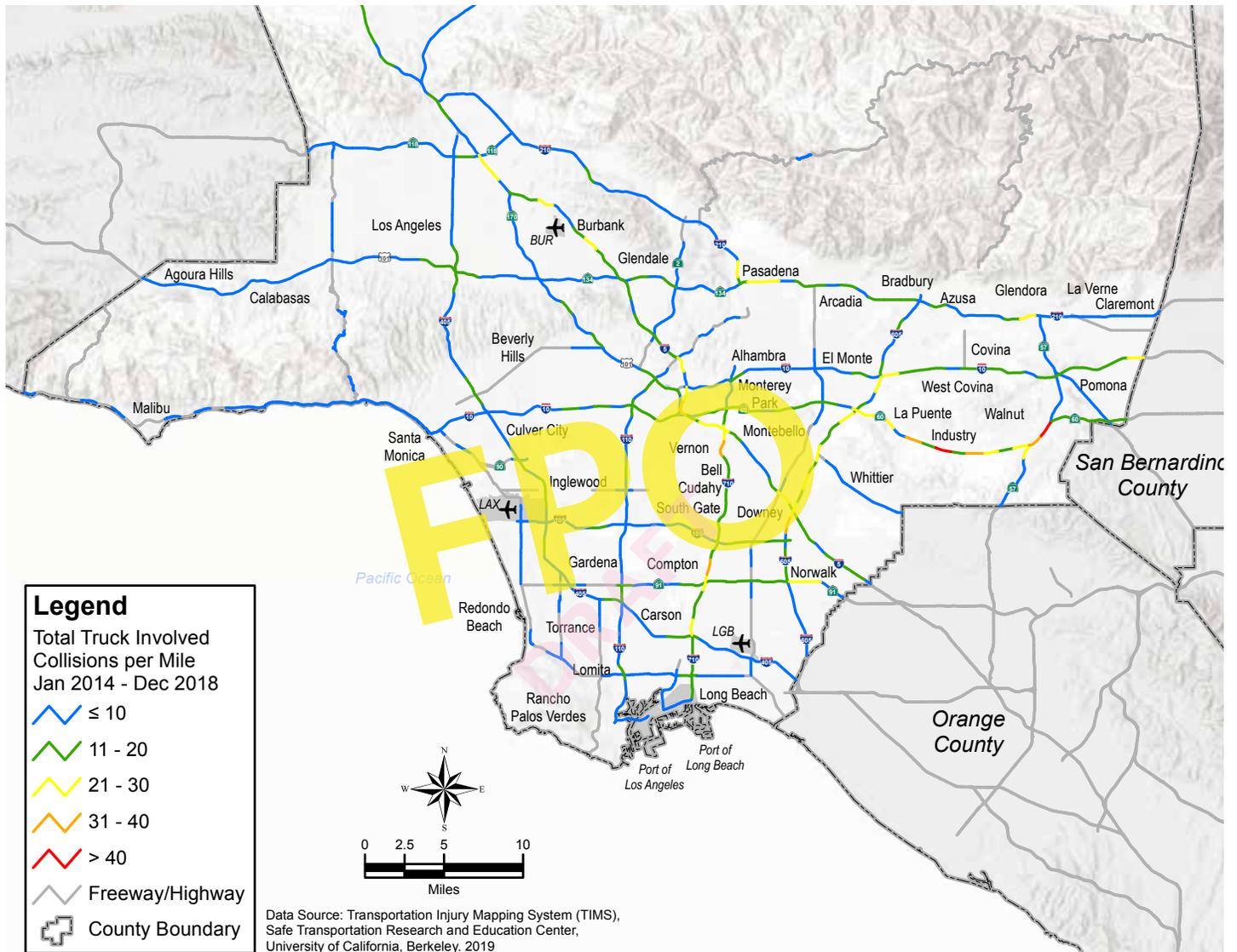
On local streets, increasing number of delivery trucks are serving the last mile delivery needs. These include deliveries to residential units and local businesses. Lack of consideration for last mile delivery vehicle needs in planning, design and implementation of street treatments such as complete streets treatments and delivery vehicle parking provisions have resulted in unintended consequences in some cases, and created safety hazard for vulnerable roadway users as well as truck operators. These instances highlight the need to integrate freight vehicle consideration in all aspects of planning, designing and execution to ensure roadway safety.

Rail Safety – Grade Separations

At-grade crossings where freight rail lines and roadways cross at grade have been one of the major safety concerns for communities along these corridors. In LA County, majority of the mainline of Union Pacific Railroad travel through dense urban areas of the San Gabriel Valley, carrying both imported containerized cargo and exports to be shipped out of the San Pedro Bay Ports. The freight trains are generally longer in length than commuter rail, and the gate downtime at at-grade crossings are much longer, causing traffic delays and congestion at such crossing locations. Some of the at-grade crossings were ranked nationally high for the severity of collisions between trains and automobiles. Longer gate downtime is also a concern for limiting emergency vehicle access and response time. For these reasons, the Alameda Corridor East (ACE) Construction Authority was established in 1998 by the San Gabriel Valley Council of Governments to implement a construction program intended for separating the rail lines and roadways to eliminate collisions between trains and motorists, cyclists and pedestrians, and to mitigate vehicle delays.

To date, the ACE Project has completed safety improvements at 40 at-grade crossings, and construction of 14 rail-roadway grade separations.

Figure 15
HIGHWAY TRUCK COLLISIONS (JANUARY 2014 – DECEMBER 2018)



Evolving Workforce Needs

Nearly one-third of jobs in Los Angeles County are in goods-producing and freight-dependent industries⁴³. These jobs, such as delivery service drivers, shipping and receiving clerks and maintenance workers, routinely pay above average wages and traditionally have had few barriers to entry for low- and middle-skill workers. These jobs historically have relied on experience and knowledge that is most effectively gained in the workplace or in apprenticeship programs. In recent years, however, the logistics industry across the board is transforming its operations in pursuit of higher efficiency and productivity to remain competitive amidst growing consumer demand and changing supply chain practices. For example, the Ports of LA and Long Beach, along with many logistics companies, are embracing automation within their facilities – a shift that brings changes to skillsets required to work in the industry. Increasingly, data scientists, project managers, computer programmers and engineers that can diagnose and repair machines are in high demand, instead of manual labor roles like pick-packers.

The growing demand for skilled workers will create pressures for logistics companies to ramp up their recruitment and hiring pipelines as they respond to another challenge: a growing number of retirees. Like many other parts of the economy, the goods movement sector is confronting a “silver tsunami” of upcoming retirements that will create high demand for replacement workers. For example, to meet the nation’s freight demand, the industry will need to hire 1.1 million new truck drivers over the next decade – an average of 110,000 per year – to replace retiring drivers⁴⁴.

The global demand for goods has also transformed the industry into a 24-hour sector, with workers needed to fill orders and process shipments around the clock. This schedule creates a need for continual access to these employment locations, many of which are outside of LA County in the Inland Empire, where land is more affordable and suitable parcels can be larger and adjacent to mainline highway and rail corridors. This stretching out of the jobs/housing balance for freight-related industries creates a number of workforce-related challenges:

Increased Interest In Automation

The “fourth industrial revolution,” which emphasizes automation and data exchange, the internet of things, cloud computing, robotics and artificial intelligence, is already reshaping, automating and integrating supply chains and logistics practices. While these trends can improve efficiency and transparency of supply chain networks, they require new skills in the workforce, such as data interpretation and visualization, forecasting, programming and compliance.

Mobility Concerns

LA County’s increasing housing costs are pushing the logistics workforce farther away from the County’s employment centers toward the outer reaches of the region. In LA County, the average commute time has increased every year since 2013, with an average commute of 31 minutes in 2017⁴⁵. Mobility for the logistics workforce is particularly challenging – only 3.3 percent of goods movement jobs are accessible within a one-hour transit trip⁴⁶.

Equity Impacts

Both the jobs/housing balance and the limited mobility options can have significant equity impacts by preventing some County residents from accessing the jobs, and resulting ladders of opportunity, that the goods movement sector provides.

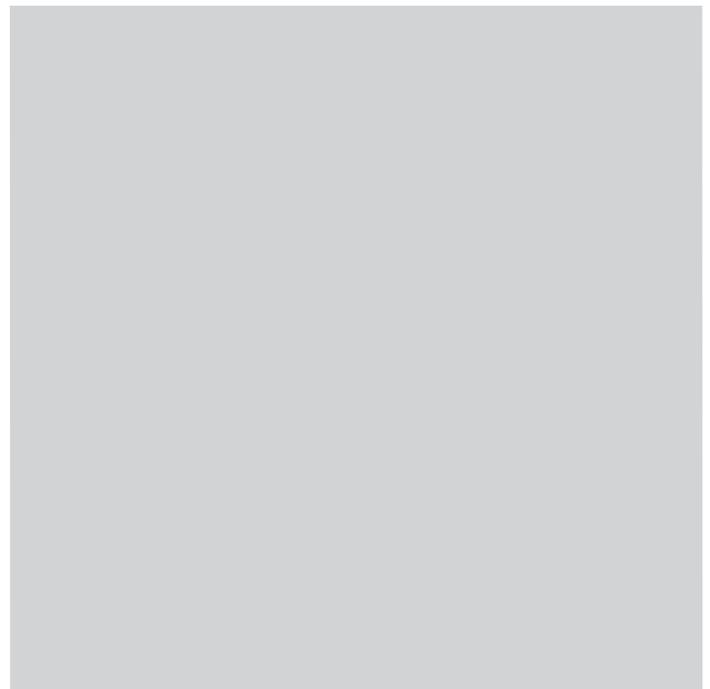


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Air Quality Challenges and Implications

Goods movement sources including ships, trucks, train locomotives and other goods moving equipment are major sources of regional air pollution. Much of Los Angeles County (except for the Antelope Valley) falls within the South Coast Air Basin (SCAB), which exceeds federal Clean Air Act standards for ozone and particulate matter (PM_{2.5}). If the SCAB region fails to demonstrate air quality conformity by target attainment dates for criteria pollutants, federal sanctions may be imposed, jeopardizing transportation funds and the permitting of stationary facilities may become substantially more burdensome. The federal government may also take over local air quality regulation if state plans are not adequate to meet federal standards.

Along with San Joaquin Valley in the Central California, the SCAB region is currently one of only two areas in the nation classified as “extreme” nonattainment for the 1997, 2008 and 2015 8-hour ozone standards. The target attainment dates to meet these standards are June 2024, July 2032 and August 2038, and by those years, the SCAB region must reduce ozone concentrations to 80 parts per billion (ppb), 75 ppb and 70 ppb, respectively. Ozone is formed when volatile organic compounds (VOC) and nitrogen oxides (NO_x) react in the presence of ultraviolet sunlight. This is why NO_x reduction is a key to meeting the ozone standards.

For the SCAB region in 2016, NO_x emissions from goods movement sources were estimated to be 52 percent of the total NO_x emissions. In 2016, heavy-duty trucks were responsible for 58 percent of goods movement related NO_x emissions, or 30 percent of total NO_x emissions. Locomotives were responsible for 7 percent of goods movement NO_x emissions and 3.6 percent of total NO_x emissions. To meet the 1997 and 2008 8-hour ozone standards by target attainment dates, the SCAB region needs to reduce NO_x emissions by 45 percent above and beyond the existing regulations by 2023, and 55 percent by 2031. This is not an easy task.

The SCAB is also a serious nonattainment area for the 2012 Annual PM_{2.5} standards, with an attainment deadline of December 2025. However, in scenarios run by the South Coast Air Quality Management District (SCAQMD), the basin is expected to meet this deadline by 2025.

California has set ambitious goals to reduce greenhouse gas (GHG) emissions, 40% below 1990 levels by 2030 and 80% below 1990 levels by 2050, through Executive Order B-30-15 and Executive Order B16-12. Many criteria pollutants, such as NO_x, sulfur oxides (SO_x) and particulate matter (PM_{2.5} and PM₁₀) are precursors to the formation of GHGs. Reducing criteria pollutants from goods movement source to meet the federal Clean Air Act standards also helps in reducing GHGs^{47,48}.

Air pollution and GHGs are known to negatively affect human health. These negative health impacts are felt by the residents as:

- > reduced visibility
- > increased episodes of respiratory infections and other illnesses
- > increased number of days of discomfort
- > absent days from work and school
- > increased symptoms related to respiratory disease, including asthma
- > slowed lung function growth and increased asthma risk in children
- > heart disease
- > shortened life spans⁴⁹

Meeting the federal Clean Air Act standards and reducing GHGs are no easy tasks. These are challenges that call for regional partnerships and collaboration to figure out effective strategies and funding mechanisms to operationalize strategies. Fortunately, LA County has a precedent for such leadership. The Ports of LA and Long Beach are leading the way by implementing their 2017 Clean Air Action Plan, which set forth aggressive goals to reduce particulate matter, NO_x, SO_x and GHG from port-related emissions and sources at levels that far exceed volumes and schedules found in existing state and federal regulations.

Congestion at the Curb

An “urban renaissance” has shaped the goods movement space for urban areas like those throughout LA County. Moving and delivering goods efficiently, safely and reliably becomes increasingly more challenging as more people and businesses move back into cities, creating a denser and more vertical environment. Consumer-generated activities – such as dining at restaurants and shopping for groceries and clothing – generate the need for goods to be brought in and out of urban areas, otherwise known as urban freight. Further fueling urban freight is the advent of online shopping, leading retailers to strive to provide quick and on-time delivery, resulting in an increase in freight movements in urban areas. These deliveries are increasingly being made by a variety of smaller vehicles, including vans, pickup trucks, passenger vehicles and bicycles, with autonomous vehicles and drones looming in the future. These new vehicles have smaller payload capacity, so more vehicles are required to handle an increasing volume of deliveries.

All these urban freight trends converge at the curb, which is at the heart of urban freight and mobility issues. From parking to bus stops and loading zones to bike lanes, curbside assets play many roles within a city. Yet, curb space “real estate” has not historically received as much attention from transportation planners as the roads and highways on which vehicles travel, even though congestion or lack of space at the curb impacts freight movements and deliveries, leading to roadway congestion. Spillover impacts, such as double parking and other forms of illegal parking, also negatively impact safety, accessibility and mobility for many users. Particularly, small business owners without adequate off-street parking near their businesses experience these impacts more severely as they rely on foot traffic and on-street parking for business. With 88 individual cities and over 100 unincorporated communities, LA County faces a daunting task to achieve coordinated delivery practices, maintain infrastructure and manage curbside parking across the multitude of jurisdictions. As demand increases and diversifies, and as urban landscapes densify, managing curbside assets in ways that allow space for vital economic activities, protect sensitive users like bikes and pedestrians from trucks and vehicles and encourage mobility and traffic flow throughout urban areas will become even more vital. The “final 50 feet” of urban deliveries is increasingly a focus of research and innovation⁵⁰.



Image to come

Moving and delivering goods efficiently, safely and reliably becomes increasingly more challenging as more people and businesses move back into cities, creating a denser and more vertical environment.

Competing Investment Priorities

Substantial investment in the multimodal freight system is needed to ensure that goods move efficiently and in a socially responsible manner. However, the amount of available funding to allow the region to continue investing in and innovate on the shared use system is limited. The Proposed Final 2020 SCAG Connect So Cal, 2020–2045 Regional Transportation Plan and Sustainable Communities Strategies estimates costs of all regional transportation projects from FY2020-21 to FY2044-45 at \$638.9 billion, compared with reasonably available resources estimated at only \$493.1 billion⁵¹. The constrained nature of transportation funding places considerable weight on project priorities and benefits in making investment decisions. While LA County generates locally-controlled transportation investment funds through proceeds from four sales taxes (for a combined 2 percent), the vast majority of those funds are dedicated through

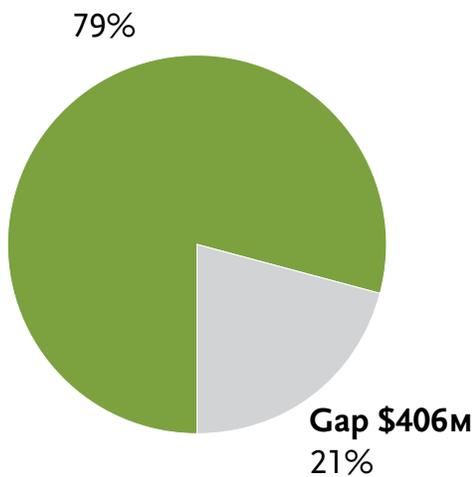
expenditure plans and categorical limits to support transit capital and operational improvements, with very little funding expressly dedicated to goods movement-related projects. State and federal grant programs provide some amount of funding for freight projects, but the competition for these funds is ferocious. For example, USDOT received 258 applications for funding from across the country in the FY2017/2018 cycle for federal INFRA grants, yet only 26 awards were made. With limited funding to meet transportation needs, identification of priorities and strategic investment decisions are needed to maintain freight transportation and mobility while advancing equity and sustainability goals.

Figure 16

California Project Funding Gaps

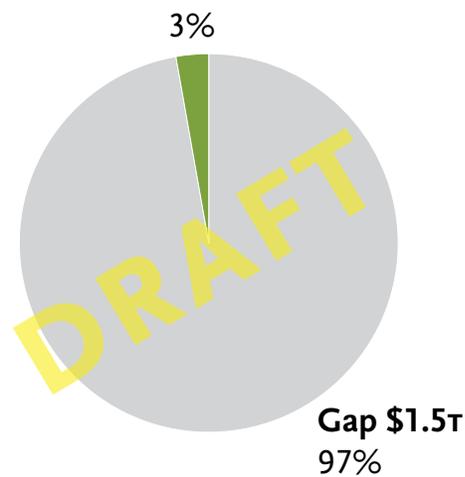
TCEP 2018

Total Funding Requested \$2.0T



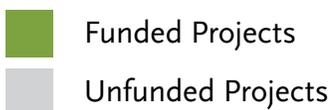
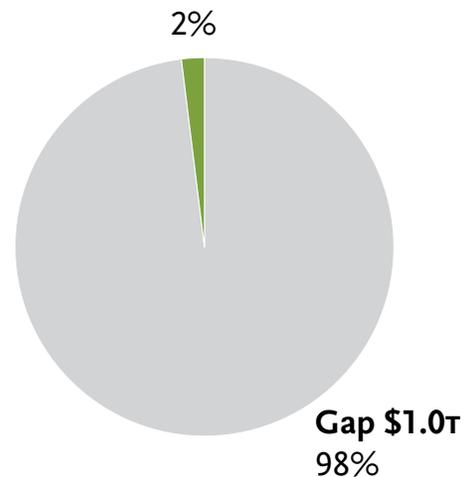
INFRA 2019

Total Funding Requested \$1.5T



BUILD 2019

Total Funding Requested \$1.0T



We must remedy negative impacts.

While LA County's role as a global trade gateway contributes significantly to the national and local economy, goods movement activities that support this international trade directly impact local communities. Freight-related activities negatively impact the region's quality of life, generating air pollutants that threaten public health as well as traffic, noise pavement deterioration and "visual pollution" or blight.

Economic Disparities

The economic benefits of goods movement are not distributed equally across the communities of Los Angeles County, particularly for those most affected by freight activity. The goods movement sector creates well-paying jobs for both skilled and unskilled workers, which typically include benefits such as health insurance, retirement packages or pensions, for example. These jobs tend to be located near cargo distribution centers. However, since these employees live all over the area, the region's economy benefits from these jobs. Money spent by employees on housing, food and day-to-day living supports jobs for others and generates further revenues for local communities. As a result, some communities may bear the brunt of goods movement environmental impacts without experiencing the economic benefits of well-paying jobs associated with freight⁵².

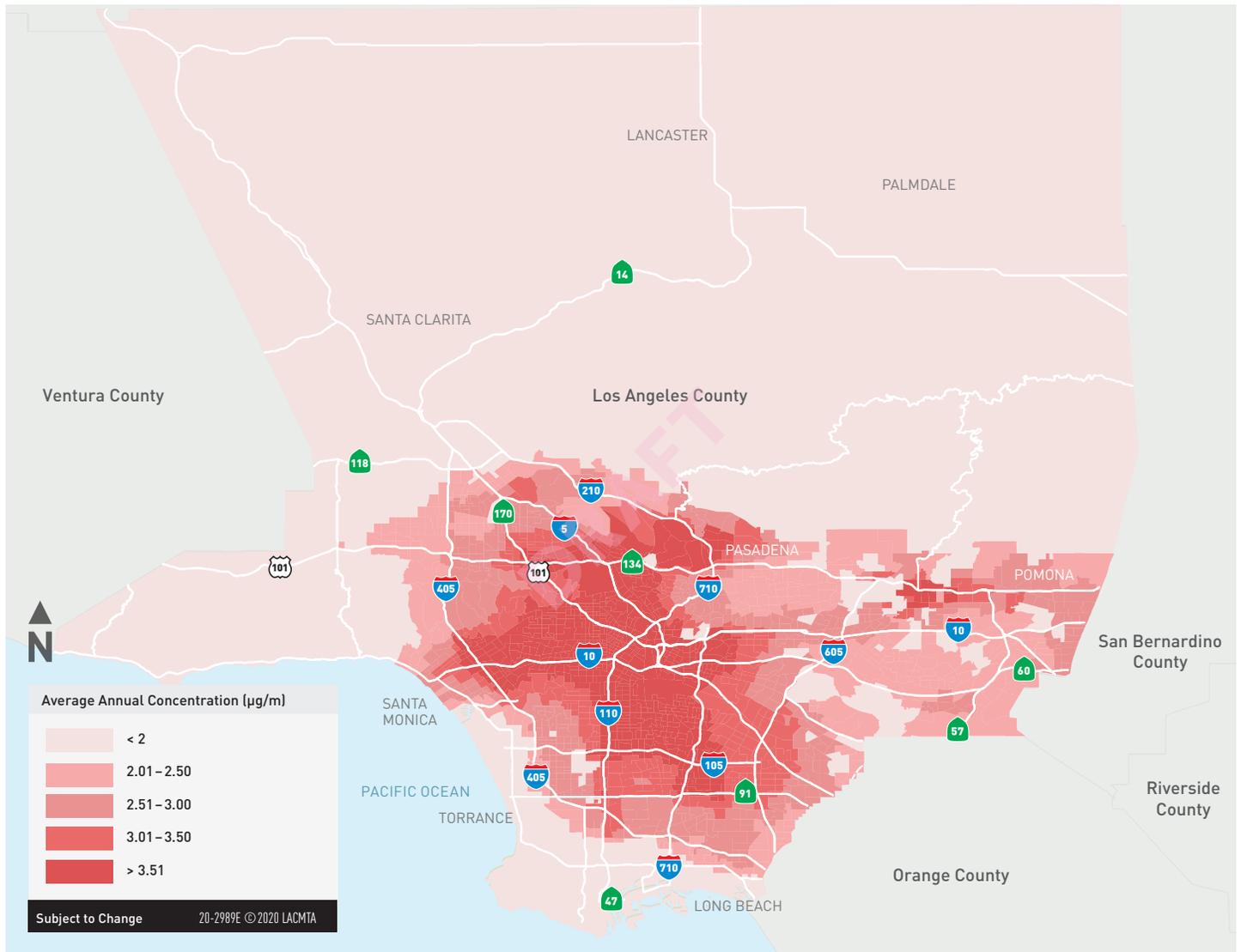
Air Quality Impacts

According to the National Ambient Air Quality Standards, LA County is classified as an extreme non-attainment area for pollutants, of which goods movement sources are significant contributors⁵³. Residents of LA County are exposed to 60 percent more vehicle pollution than the state average, with the lowest-income households exposed to more than those with the highest incomes. Exposure to tailpipe emission leads to increased risk of premature death, lung cancer, heart and lung diseases and asthma. This public health crisis is particularly true for disadvantaged communities located next to highway and rail corridors where the impacts of poor air quality are disproportionately observed.

LA County is also a majority/minority county, with nearly one-half of residents being Hispanic or Latino. Pollutant emissions have a pronounced impact on air quality, health of residents living near freight routes and facilities, livability and the environment, often impacting underserved or minority communities who live close to emission sources more than others. Negative health and community impacts on families and neighborhoods include asthma, missed days of school, trips to the hospital, families dying of cancer and other illnesses related to air pollution and the daily noise and disruptions due to trucks and trains traveling through their neighborhoods.

Figure 17

EXPOSURE TO AIR POLLUTION FROM VEHICLES IN LA COUNTY



Source: ucsusa.org/resources/inequitable-exposure-air-pollution-vehicles-california-2019

Traffic and Safety Impacts

The freight transportation network is a shared system with other users. Truck travel on local streets to access ports, warehouses and railyards affects pedestrians and bicyclists that share these same roads. Generally, there is a correlation between the truck traffic volume and frequency of truck involved incidents. Truck involved incidents tend to have more severe damages to people, vehicles and infrastructure than incidents between passenger modes. Truck involved incidents are also increasing on local streets, especially in vibrant mixed-use environments that attract many pedestrians and bicyclists.

Freight rail and highway crossings are another major safety concern stemming from goods movement activities. At-grade crossings pose risks for collisions with freight rail and other modes, typically resulting in severe damages. Because freight trains are much longer than commuter rail and usually travel at slower speeds, they hold the arms down at the crossing for a longer time, thus causing cars to idle while waiting. Trains blocking roadways for an extended period of time also poses a public safety problem as these closures impede emergency vehicle access. While investments are made to grade separate priority rail and highway crossings across the County, there still remains a number of crossings to be grade separated or mitigated.

Near the Ports, trucks frequently travel on local streets to access freeways, railyards and warehouses in the area, exposing the communities to safety risks associated with truck traffic. Many of the truck corridors and rail corridors traverse disadvantaged communities, which describe past local transportation investments and mitigations as non-responsive to their needs. This issue is an important one to address and correct moving forward.

Noise Impacts

Noise coming from trucks, locomotives and loading/unloading activities can negatively affect local residents. The greatest noise impacts come from roads and rail lines, which often run through or adjacent to residential neighborhoods that predominately represent non-white and low-income communities. Excess noise can be a health risk for nearby residents, possibly leading to hearing impairment. Most ports, railyards and cargo distribution centers are intentionally located in industrial areas, where their noise has less impact. Yet even the fringes of industrial areas can have impacts where they meet the edges of residential areas if the land uses are not compatible.

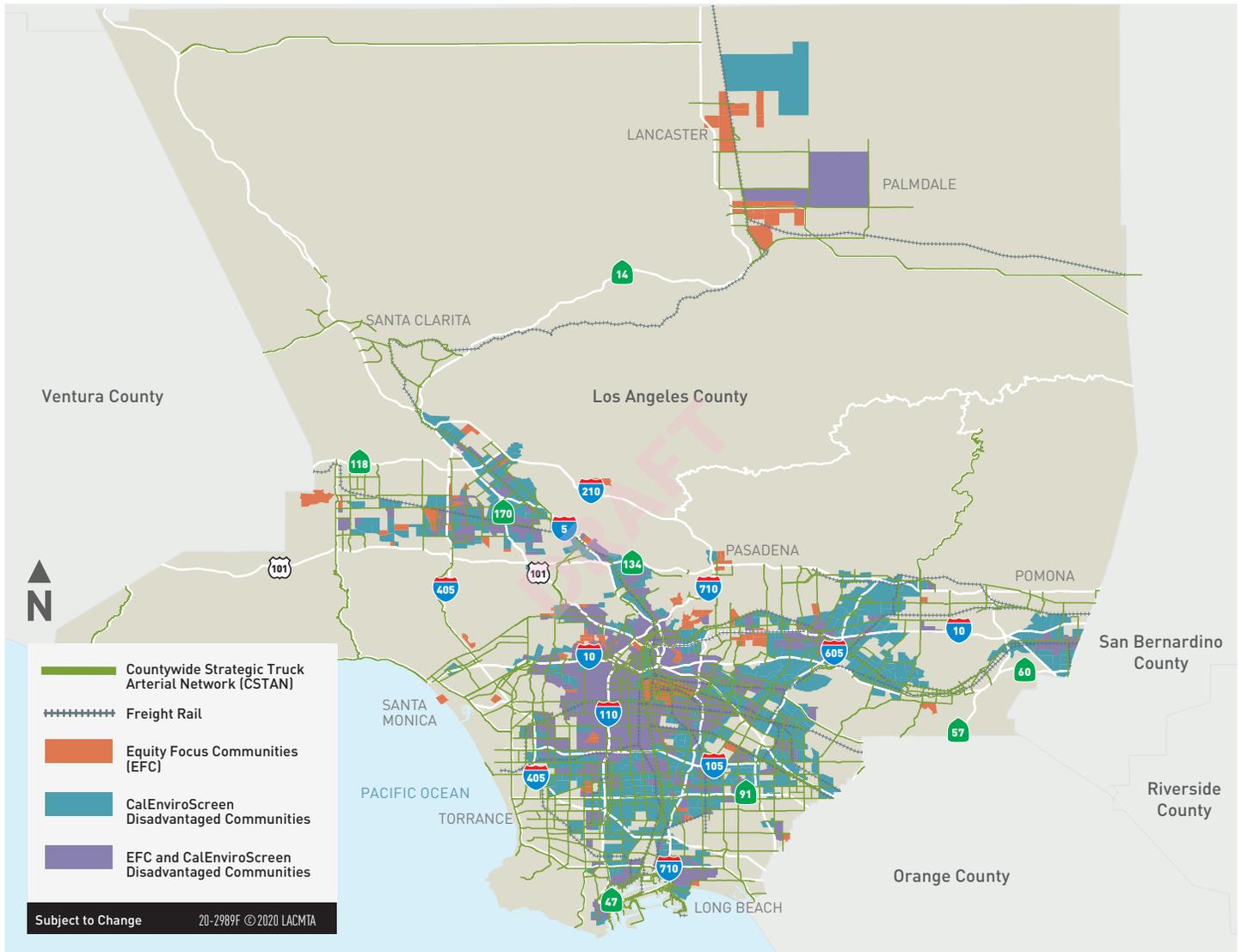
Aesthetic Impacts

Depending upon the location, local conditions and facility design, goods movement facilities can have varying aesthetic impacts on communities. Some facilities may be the result of redevelopment and provide an improved use for the local community, replacing blight or other undesirable uses with attractive architecture, building design and landscaping. However, goods movement facilities can also cause aesthetic or visual impacts both during and after construction including degrading the appearance of an area, restricting views, illuminating neighborhoods with excess light and glare, or featuring building and landscape designs that are not well-suited to a surrounding community's design.

All of the impacts described above fall predominantly on low income communities and communities of color that can be traced to racial discrimination in housing, its impact on the design and growth patterns of Los Angeles and the inequitable distribution of improvement funds throughout the region.

Figure 18

INEQUITABLE IMPACTS



We must recognize past wrongdoings.

Redlining

Racial discrimination in housing was legal until 1968 in the United States. Legally sanctioned redlining policies created inequitable impacts on the patterns of development, financial investment, infrastructure and social dynamics in Los Angeles County communities. The legacy and ongoing ripple effects of these discriminatory policies constitute an integral part of any discussion about transportation and the county's goods movement system, as redlined communities—particularly the communities and neighborhoods around the Ports of Los Angeles and Long Beach—struggled to receive federally-backed home loans, making property ownership and obtaining loans for home improvements difficult for homeowners. “Neighborhoods fell into a circle of decline: the inability to access capital led to disrepair and the physical decline of a community’s housing stock, which in turn reinforced the redline designation.”⁵⁴

Freeway Construction and Displacement

The federal Home Ownership Loan Corporation (HOLC), a government-sponsored corporation created as part of President Franklin D. Roosevelt’s New Deal, created a rating system to assess mortgage risk for various communities, with an A rating reserved for communities representing the best investments and a D rating identifying communities deemed “hazardous”. These ratings then in turn led to neighborhoods assigned a D rating to be designated as an area through which to construct new freeway projects, creating greater community impacts. In Boyle Heights, for example, proposed freeway projects were approved leading to the neighborhoods on the Eastside being bisected and disrupted by six freeways, displacing 10,000 people and destroying the cohesive nature of the community.

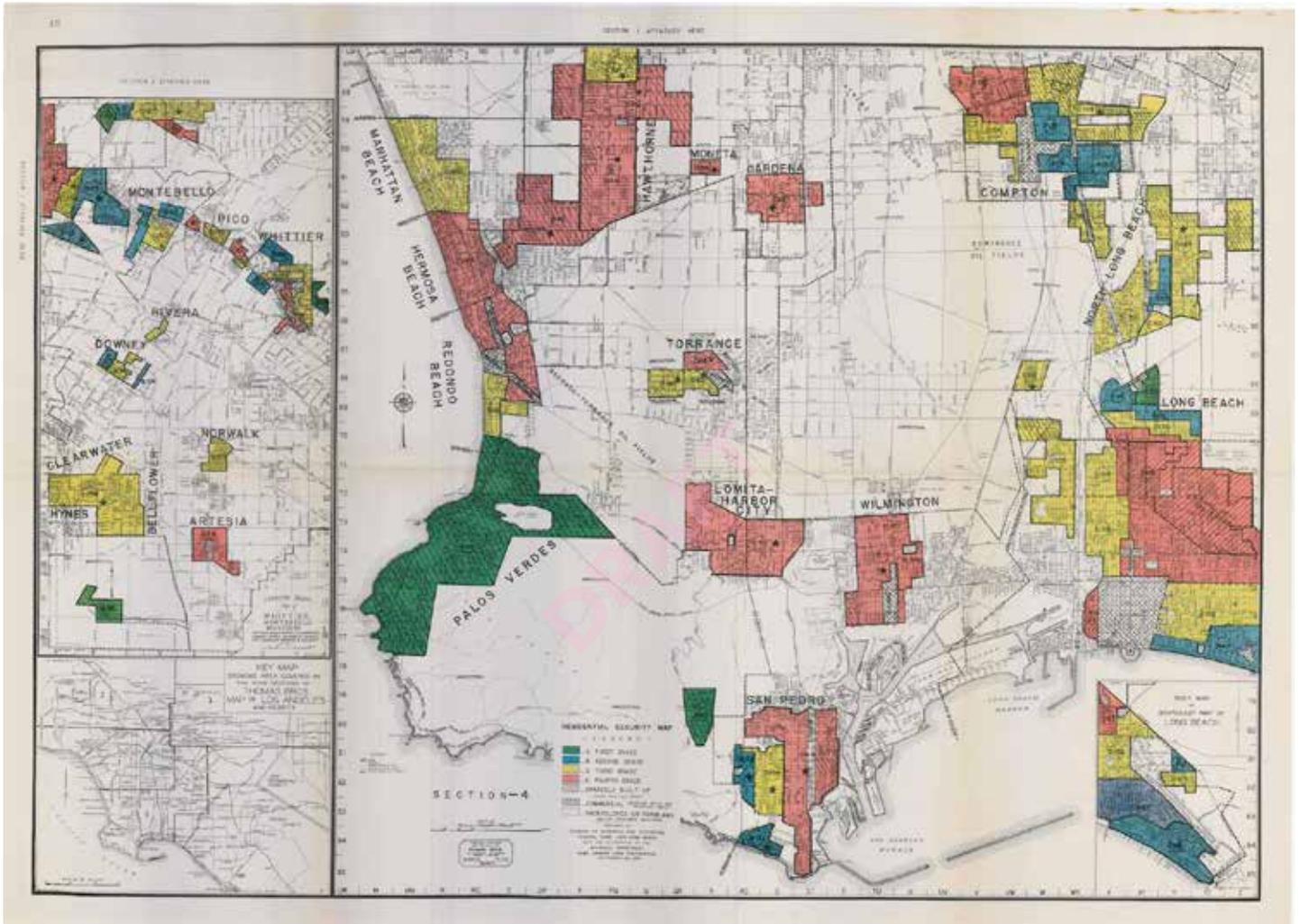
The residual influence of redlining, officially brought to an end by the Fair Housing Act of 1968, could still be felt in LA County with the construction of the 105 Freeway between Norwalk and El Segundo. By the time the \$2.2 billion freeway opened on October 15, 1993, approximately 25,500 people were displaced, and 8,000 structures were destroyed or removed along a wide swath that cut through predominantly minority communities adjacent to Imperial Highway. Unlike previous freeway projects, the final 105 Freeway project received multiple mitigations as the result of a lawsuit and a preliminary injunction that halted freeway construction in 1972, leading to a federal consent decree that included “a housing program, jobs program, jobs training program, affirmative action program” and, eventually, the Metro Green (C) Line ⁵⁵.



Image to come

Figure 19

HISTORICALLY REDLINED COMMUNITIES IN SOUTH LA



Source: kcet.org/shows/lost-la/segregation-in-the-city-of-angels-a-1939-map-of-housing-inequality-in-la

LA County's competitiveness is at risk.

All of these trends – a history of inequitable investments and impacts, increasing freight demand on a congested system, rapidly evolving industry and workforce needs and competing demands for limited funding sources – are factors affecting the competitiveness of LA County as a place that offers a skilled and knowledgeable workforce, safe and healthy living and a strong multimodal transportation network that position LA County as the gateway of choice. The region's ability to enhance its competitiveness in a sustainable, equitable fashion will be key to helping Metro and its partners achieve aggressive economic, mobility, environmental and public health goals.

To pursue comprehensive and holistic approaches to addressing these interconnected challenges, the goods movement stakeholders and Metro staff worked collaboratively to identify challenges and opportunities facing LA County that should inform the purpose of the Plan. Metro convened a Freight Working Group, comprising public, private and community representatives to guide the planning process and ensure that a broad range of perspectives were reflected⁵⁶. Because Metro does not control many aspects of the regional goods movement system, convening these stakeholders helped to ensure the Plan reflects and meets the needs of the various public and private agencies and entities that plan, operate and use the freight system throughout the County.

Through workshops, focus groups and one-on-one interviews, these stakeholders came to a consensus on priorities and values that should serve as elements of a Sustainable Goods Movement Framework. This framework (*Figure 15*) provides a structure through which to evaluate and make improvements to LA's freight competitiveness in a sustainable way that is consistent with Metro and regional stakeholders priorities and values. These elements will serve as the framework for Metro's goods movement planning activities as Metro pursues integrated and holistic approaches to improve mobility, accessibility, safety and quality of life while supporting economic sustainability, equity and prosperity.

We embed core values into everything we do.



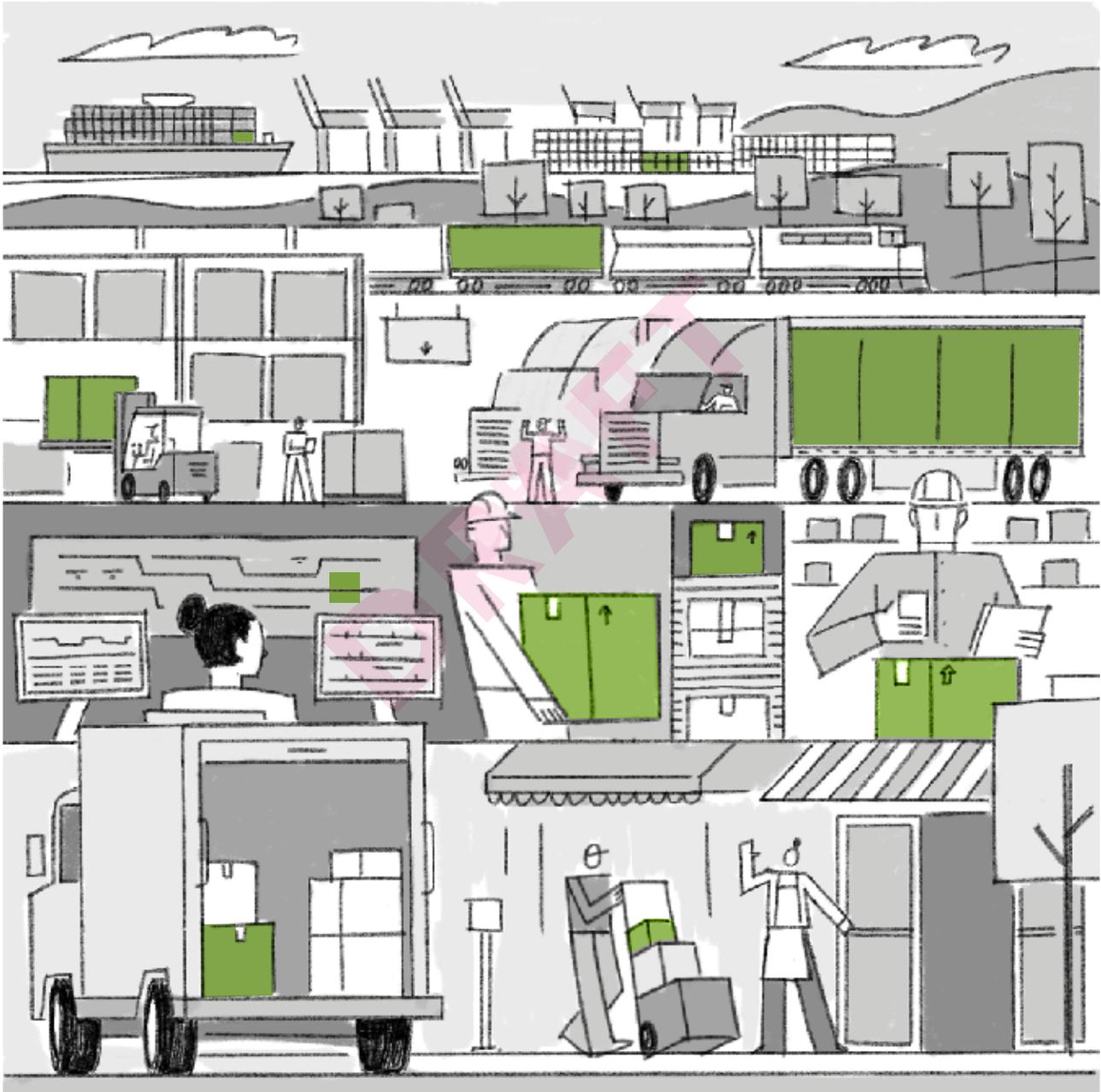
Core Values: Equity and Sustainability

How can we achieve competitiveness that is founded on equity and sustainability?

This question – and challenge – is the foundation of the Sustainable Goods Movement Framework. It reflects Metro's commitment to correct inequity within the County while balancing environmental, economic and social goals. As core values equity and sustainability must permeate the four priorities of the Sustainable Goods Movement framework and create observable impacts on their development. This Plan recognizes that countywide prosperity needs to be based on equity and inclusion. To do so, both equity and sustainability need to be considered as a starting point and foundation for any goods movement planning activities and resulting policies, strategies and project concept development. Each of the framework's priorities, described next, will consider and incorporate equity.

Figure 20
Our Framework

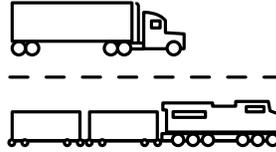
Together, we're creating an economically competitive LA County by moving goods in a sustainable way:



Our extensive work with stakeholders resulted in consensus on these guiding priorities:

- > A Strong Labor Force
- > A Safe and Efficient Multimodal System
- > Strong Markets and Reliable Supply Chains
- > A Culture of Investment and Innovation

Important priorities shape this plan.



A Strong Labor Force

Is the local labor force positioned to support the industries of today and tomorrow? Does the transportation system provide adequate connections between residents and these industries?

LA County must capitalize on new employment opportunities by investing in education and training. The type of employment opportunities in the logistics sector is changing rapidly, with an increasing number of technology intensive jobs that require special skills. Ensuring pathways for new workforce and existing workforce to harness such opportunities is a key to LA County's quality of life and economic sustainability. One important equity consideration to evaluate is the accessibility to logistics jobs by public transit within a reasonable commute time of one hour. Increasingly, there is a major imbalance between logistics jobs that offer new employment opportunities and locations of affordable housing, and the transit services that connect the two. Jobs and affordable housing – and the transit system that connects them – are elements that also shape LA County's competitiveness.

Equity Considerations: [will be flushed out during discussion]

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A Safe and Efficient Multimodal System

How can we ensure the shared system safely meets future demand as the population grows and responds to changes in the way people and goods move?

The ability of the County's multimodal freight transportation infrastructure to move goods safely, efficiently and effectively has significant implications for LA County's freight competitiveness and Metro's ability to meet the mobility needs of LA County residents and businesses. Majority of the freight transportation system in the County are shared infrastructure with passenger mobility needs. Some areas of the County's goods movement transportation system are already operating at capacity or are expected to reach capacity in the future. An efficient multimodal system is a prerequisite for minimizing negative impacts to mobility of both freight and passengers while ensuring sound economic activities that are supported by transportation services.

Equity Considerations: [will be flushed out during discussion]

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Strong Markets and Reliable Supply Chains

Do we have the right mix of consumers, importers, exporters, etc. to grow our economy effectively?

For LA County to thrive it must be able to support businesses and industries through a reliable goods movement system, generating diverse markets that form a resilient economy. LA County already has myriad industry sectors and a wide range of skilled and non-skilled labor that support the economy. A reliable transportation system forms a strong backbone that supports all the activities by supplying both goods and services, as well as ensuring that workers can access jobs. Our investment decisions must consider the need to maintain strong and diverse markets and support reliable and efficient supply chains to continue fostering LA County's economic sustainability.

Equity Considerations: [will be flushed out during discussion]

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A Culture of Investment and Innovation

Is the regional leadership, policy environment and available capital sufficient to support investments in infrastructure and technology? How do we balance our unique regulatory and policy environment with the need for private sector investment?

To develop fully the ecosystem of complementary industries that stimulate transportation infrastructure investment and innovation, LA County must desire to invest in both catalytic infrastructure and intellectual capital. LA County is already a well-established incubator for emerging transportation technologies. The County also has four voter-approved sales tax measures to fuel transportation investment which demonstrate the County's strong commitment to investment in its transportation system. This culture of investment and innovation shall be further nurtured to facilitate a full ecosystem of investment, infrastructure improvements and technology advancement to reap further benefits.

Equity Considerations: [will be flushed out during discussion]

- > Ihitib usdant mo consequam libusant alicid magname nistem velicat essunt ra pos modit quat
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How will we get to better?

Metro has developed the LA County Goods Movement Strategic Plan to facilitate an equitable, sustainable and robust goods movement system throughout the County. This Plan provides a framework to guide Metro's goods movement-related activities, investments, partnerships and decision-making over the next five to seven years.

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image to come

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Here's our roadmap.

Metro will implement this vision by undertaking a series of activities that will allow the region to preserve and enhance LA County's competitiveness in an equitable and sustainable manner. This package of recommendations, summarized in Table 16 and detailed in the next section, presents an opportunity for Metro to take a leadership role in addressing goods movement issues in the County, working with regional and national partners as appropriate. Each of the following focus areas will be supported by specific implementation steps.

Freight movements have impacts across boundaries- jurisdictional boundaries between individual cities in LA County; interest boundaries between the public and private sector; and institutional boundaries, both among and within agencies, including between individual divisions within Metro. Implementing this Plan will require Metro to work across these boundaries, both within and outside the agency, in order to help the region to make progress on its mobility, economic, environmental and equity goals.



Image to come

Incorporating Equity Considerations

Metro's Equity Platform is a policy framework for addressing disparities in access to opportunity. Equity Focus Communities (EFCs) – defined by the Board in 2019 through the assessment of non-white populations, car ownership rates and annual income – are those communities most heavily impacted by gaps in equity throughout the County.

To capture the creation of new or aggravated inequalities in our communities, we enhanced this circumscribed EFC definition to incorporate air and water pollution impacts, the presence of hazardous wastes and the rates of asthma and heart disease using CalEnviroScreen data. This expanded definition will be used throughout this strategic plan to ensure our activities are consistent with Board guidance while reflecting the real impacts of goods movement on our most vulnerable communities. Through ongoing dialogue with equity stakeholders we will further refine and ground truth this definition with input from the Equity Freight Working Group.

*CalEnviroScreen identifies California communities by census tract that are disproportionately burdened by, and vulnerable to, multiple sources of pollution.

Figure 21

Strategic Goods Movement Early Action Initiatives

INITIATIVES	DESCRIPTION	TIMELINE	LEAD	PARTNER
1. Equity for Goods Movement	Initiate a recurrent goods movement-focused task force comprising equity-focused stakeholders as a forum to give and receive input to guide Metro’s planning efforts on goods movement related issues.	TBD	●	
2. LA Metro Countywide Clean Truck Initiative	Develop a Countywide Clean Truck Initiative to accelerate the deployment of near-zero and zero emission trucks in the region to address air quality and public health concerns, particularly for our most vulnerable communities along major freight highway corridors.	TBD	●	
3. Southern California Rail Investment Partnership	Craft a public-private framework for a collaborative freight rail investment partnership focused on improving the region’s shared use freight rail corridors.	TBD	●	
4. Urban Freight Delivery	Foster a regional forum for urban delivery and curbside demand management challenges and best practices in the County to mainstream this policy issue across other planning efforts developed by Metro and LA County jurisdictions.	TBD		●
5. Logistics Workforce and Competency	Support research and initiatives to identify and address workforce skillset gaps and investment needs to ensure that LA County has a strong labor pool to support its economy.	TBD		●

Initiative 1: Equity for Goods Movement

Over the past few years Metro has acknowledged and embraced the need to understand equity issues and incorporate recommendations into its various planning processes. Through the formation of the Policy Advisory Committee (PAC) and in working with various stakeholders to advise Metro in creating the Board-approved Equity Platform, Metro is now investing considerable effort and resources to understand equity concerns and risk factors to address impacts to vulnerable communities in its major planning initiatives and programs⁵⁷.

Metro initiated the LA County Goods Movement Strategic Plan in the wake of this heightened commitment and sought from the onset to understand better the relationship between goods movement and equity and how best to acknowledge past impacts, mitigate existing issues and identify future opportunities to improve the lives of county residents most affected by the movement of goods through the region. While prior goods movement planning efforts in the region have touched on these important issues, the Plan provides an opportunity to spotlight equity issues related to goods movement and create new approaches to working with affected communities.

To accomplish this goal Metro should set equity as the foundation for its Goods Movement Strategic Plan and the Sustainable Freight Competitiveness strategy that has emerged through dialogue with the myriad goods movement stakeholders in LA County. Metro should also broaden and cement its communication channels to seek input from community-based organizations and equity-focused non-profit groups to better understand LA County's diverse ecosystem and existing health disparities. By doing so Metro will ensure that input from communities impacted by goods movement will shape the alignment of transportation and economic investment in the LA County goods movement system with equity, health, environmental and quality of life-related policies, programs and considerations.

More than just a symbolic gesture of support for equity issues, Metro's designation of equity as the core of the LA County Goods Movement Strategic Plan's Sustainable Freight Competitiveness Framework will serve as an ever present reminder that implementation of strategies developed through the Framework must be achieved in a way that lifts up those communities most marginalized and impacted by the movement of goods through the nation's most vital seaports and trade corridors. Metro must see through the lens of equity and sustainability as it develops programs, projects and policies that create safer and more efficient multimodal freight systems, maintain a resilient supply chain, generate a strong labor force and foster a culture of investment and innovation all in support of maintaining LA County's economic competitiveness in the national and global economy.

Actively and frequently engaging affected communities in the development, refinement and implementation of the Plan's programs and strategies will be crucial for Metro to achieve its goal of creating a relevant, effective and forward-thinking LA County Goods Movement Strategic Plan that serves the needs of the entire county.



Image to come

Strategy 1.1

Establish a formal, recurring Goods Movement Equity Initiative Working Group comprising representatives from community-based environmental and health organizations, non-profits, universities, health agencies and foundations to accomplish the following goals:

ACTION	LEAD	PARTNER
1.1a. Engage in meaningful, ongoing dialogue with equity-focused stakeholders to develop a deeper understanding of equity issues, risk factors and disparities confronting LA County residents.	●	
1.1b. Mainstream equity considerations and priorities in Metro's goods movement planning efforts.	●	
1.1c. Ensure that equity considerations permeate recommendations developed through the Plan (e.g. Countywide Clean Truck Initiative, Workforce Development activities).	●	
1.1d. Develop on-going communication channels with other equity focused committees and activities within Metro and with other regional efforts to ensure effective, consistent and collaborative planning, development and deployment of goods movement equity goals throughout Metro and within LA County.		●
1.1e. Serve as an advisory body to evaluate Metro's goods movement investment policies and programs and to ensure that project delivery mechanisms are grounded in equity considerations.	●	

Strategy 1.2

Develop a list of equity risk factors for Metro's Goods Movement Planning to analyze and consider.

ACTION	LEAD	PARTNER
1.2a. Apply Metro's Equity Platform to work with CBO, public health, environmental and academic partners to identify equity risk factors that are most affected or exacerbated by goods movement activities in LA County to serve as focus areas for Metro's goods movement planning initiatives.	●	
1.2b. Incorporate equity risk factors identified under 2.a. into Metro's agency-wide definition of Equity to further develop steps to operationalize equity into day-to-day planning work across the agency.	●	

Strategy 1.3

Develop an information clearinghouse on goods movement equity strategies and programs in partnership with other departments within Metro in support of an agencywide Equity Program.

ACTION	LEAD	PARTNER
1.3a. Work with Metro’s Equity Officer and other departments to develop a collaborative system to disseminate information on Metro’s initiatives on equity through updates provided to the public and within Metro.		●
1.3b. Collect, maintain and distribute information on LA county equity goods movement programs (e.g., scope, eligibility, available funding) to impacted parties.	●	

Strategy 1.4

Include Representation from the Goods Movement Equity Initiative Working Group at the PAC.

ACTION	LEAD	PARTNER
1.4a. Work within Metro’s institutional structure to add a voice to the Policy Advisory Council representing community-based stakeholders with expertise on goods movement issues.	●	

Initiative 2: LA Metro Countywide Clean Truck Initiative

Metro should lead a Countywide Clean Truck Initiative to reduce toxic emissions from the movement of goods by diesel-powered trucks throughout Los Angeles County. The Initiative can accomplish this goal by securing funding, developing and advocating for supportive policies and programs and fostering partnerships to accelerate the delivery and use of clean medium- and heavy-duty trucks. Accelerating the deployment of cleaner truck technologies and supporting infrastructure, particularly around high volume trade corridors in LA County, can help improve air quality and public health in equity-focused communities and is consistent with the Governor's Executive Order N-19-19, which calls for aligning transportation investments with the State's emissions goals through a wide deployment of clean vehicles.

A successful Countywide Clean Truck Initiative will feature several hallmarks. First, the Initiative will be built upon Metro's partnership with local, state and federal agencies and private entities such as the trucking industry, original equipment manufacturers for vehicles and charging infrastructure and energy suppliers. Second, the Initiative will increase federal and state investment into LA County, lower the cost of zero emissions trucks and facilitate the development of a market environment that further stimulates the acceleration and market penetration of clean vehicle technology. Third, the implementation of the Initiative will help advance a variety of individual clean truck programs – including the programmatic element of the I-710 EIR, which would unlock additional transportation enhancements along critical trade corridors and accelerate the delivery of public and private benefits. Finally, the Initiative will further cement Metro's position as a leader in developing and implementing innovative solutions that improve community, sustainability, public health and goods movement challenges.

This Countywide Clean Truck Initiative will complement, enhance and leverage existing efforts already underway in Los Angeles County. These efforts include the Ports of Los Angeles and Long Beach Clean Air Action Program (and associated Clean Truck Program), LA Cleantech Incubator programs, Mobile Source Air Pollution Reduction Review Committee investments, the AQMD Community Air Protection Program (AB617) and others. Metro's ability to provide regional leadership and collaboration through this Initiative and ability to complement and enhance existing programs while incorporating the input and needs of surrounding communities, the market readiness of clean fuels and technology and the operating requirements of the trucking industry will be fundamental success factors of the overall Countywide Clean Truck Initiative.



Image to come

Strategy 2.1

Establish a formal, recurring Countywide Clean Truck Initiative Working Group consisting of representatives from community groups, the trucking industry, air quality regulators, the ports, utilities, researchers and manufacturers.

ACTION	LEAD	PARTNER
2.1a. Ensure affected communities are actively engaged in the design, development and implementation of the program throughout its lifespan.	●	
2.1b. Identify equity issues related to Initiative development and implementation, focusing on avoiding unnecessary financial, operational and emotional burden on any given communities.	●	
2.1c. Develop subcommittees to focus on equity implications, coordination with existing regional efforts, technology and funding/financing.	●	
2.1d. Ensure that planning, development and deployment of vehicle technologies and supporting infrastructure take place in a concerted and simultaneous manner.	●	
2.1e. Ensure that LA County will have a sufficient labor pool with appropriate skillsets to meet the increasing demand for new technology-based vehicle and infrastructure maintenance and operations.	●	
2.1f. Identify and prioritize specific clean truck programs to be developed through the Initiative.	●	
2.1g. Propose governance and delivery mechanisms to oversee and implement the Initiative's various programs.	●	

Strategy 2.2

Develop an information clearinghouse in partnership with other agencies for Countywide clean truck programs.

ACTION	LEAD	PARTNER
2.2a. Develop a collaborative structure for maintaining an information clearinghouse with regional partner agencies.		●
2.2b. Collect, maintain and distribute information on regional truck programs (e.g., scope, eligibility, available funding) to impacted parties.	●	

Strategy 2.3

Establish revenue streams to fund the Countywide Clean Truck Initiative.

ACTION	LEAD	PARTNER
2.3a. Secure Metro-controlled funding as “seed funding”.	●	
2.3b. Collect, maintain and distribute information on regional truck programs (e.g., scope, eligibility, available funding) to impacted parties.	●	

Strategy 2.4

Develop scope, funding eligibility, funding methods, evaluation processes, performance metrics and performance monitoring mechanisms for programs developed through the Countywide Clean Truck Initiative.

ACTION	LEAD	PARTNER
2.4a. Coordinate with other established programs.	●	
2.4b. Define eligibility requirements and evaluation process.	●	
2.4c. Finalize funding levels and financing options.	●	
2.4d. Identify delivery mechanisms and governance needs.	●	
2.4e. Develop performance metrics to measure success.	●	
2.4f. Develop performance monitoring system.	●	

Strategy 2.5

Develop and implement the 710 Clean Truck Program on the I-710 corridor.

ACTION	LEAD	PARTNER
2.5a. Develop program parameters and evaluation process.	●	
2.5b. Receive and incorporate feedback and input from community groups into the design of the program.	●	
2.5c. Coordinate the implementation and evaluation with Metros Highway Program, the Gateway Cities COG and other stakeholders.	●	
2.5d. Identify lessons learned and recommend modifications to Countywide Clean Truck Initiative and other clean truck programs.	●	

Initiative 3: Southern California Rail Investment Partnership

Los Angeles County's success in meeting numerous goods movement related challenges can be realized if the region invests in its expansive freight railroad system to improve its performance efficiency and address equity gaps. The freight railroad system in our County connects the ports to intermodal yards, manufacturing centers, farms and businesses throughout the region and country. It is a vital piece of the County's freight transportation system to handle the forecasted growth in and attendant consumption of goods by the county's population, the anticipated increase in national container cargo through the Ports of Long Beach and Los Angeles and the regional demand for a more environmentally-responsible movement of goods

Improving the region's freight rail network – primarily owned and operated by the Union Pacific Railroad (UPRR), Burlington Northern Santa Fe (BNSF) Railway and Pacific Harbor Line – will help secure Los Angeles County's competitiveness as a gateway for global trade. The much-needed investment into the freight rail network will enable container movements to and from the ports at the requisite volumes and speeds to keep up with demand for goods generated or consumed in every congressional district in the United States^{58,59}. Such an ability to fulfill demand will stave off competition from other ports in the United States and Canada seeking to siphon off economic and employment benefits created by discretionary cargo flowing through the San Pedro Bay Port Complex.

Expanding the capacity and improving the safety of the region's freight rail system will also allow for augmented commuter rail service that will increase mobility throughout Southern California by shifting long-distance trips from car to train. The Southern California Regional Rail Authority (Metrolink) and Amtrak operate commuter and intercity rail service in Los Angeles County (respectively), often on shared use freight rail corridors owned by UPRR and BNSF, and face constraints to their ability to provide more service without strategic investment in and partnership with the freight railroads to add additional tracks, grade separations and supporting technology.

While most of the goods moved through the ports, warehouses and logistics centers in LA County must travel by truck for a portion of its movement, moving cargo by train versus truck—where possible—reduces highway congestion

and greenhouse gas emissions, thus contributing to greater mobility and air quality across the region. Mitigating or eliminating externalities caused by increased rail traffic (e.g. localized diesel particulate matter, rail/highway at-grade conflicts and noise pollution) will be vital to ensure that increasing rail traffic – through natural or incentivized demand – will not result in public health and equity impacts felt by residents adjacent to freight rail rights-of-way.

The enormity and complexity of goods movement in Los Angeles County – and in Southern California – creates challenges to the development of a strategic optimization of the regional freight rail system. While freight, intercity and commuter rail services operate on shared tracks throughout much of the region, no formal institutional arrangement currently coordinates investment priorities across these public and private entities that serve different stakeholders. While funding for freight rail projects has increased in recent years at the federal and state levels, the need for infrastructure and technology to improve regional operations far surpasses the availability of such funding, thus creating competition among agencies applying for funding. Furthermore, the line separating public funding from private benefit also calls for coordinated investment strategies to secure support and leverage funding from freight railroads for projects on private right-of-way that provides both private and public benefit.

Existing regional rail system's conditions, performance and capacity need to be dramatically improved to meet our County's aggressive air quality, sustainability, public health and mobility goals. As the regional public transportation agency and facilitator of goods movement in LA County, Metro should serve as a catalyst to transform the regional freight railroad network. To accomplish this goal Metro should convene major freight rail stakeholders to develop a formal rail partnership program that will identify project priorities and create a strategic investment plan to modernize the existing regional rail system while keeping equity and public health as important goals to achieve together. Such an effort could be modeled after successful programs in Chicago (Chicago Region Environmental and Transportation Efficiency Program [CREATE]), the mid-Atlantic states (Mid-Atlantic Rail Operations [MAROps] Task Force) and Los Angeles (Alameda Corridor Transportation Authority [ACTA]).



Image to come

STRATEGIES UNDER DEVELOPMENT

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STRATEGIES UNDER DEVELOPMENT

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Initiative 4: Urban Freight Delivery

Increasing demand in curb space usage – ranging from package delivery, bikeshare and other shared mobility services, residential street parking, transit services, or combinations of these uses – creates obstacles impeding Metro’s ability to provide a world class transportation system. Moreover, a wide variety of curb demands affects many divisions within the agency, including Operations, Countywide Planning, the Office of Extraordinary Innovation and others. Because of their impacts to bus run times, last mile access and mobility and overall sidewalk environment, curbside demands can significantly complicate Metro’s ability to achieve the goals of Vision 2028; namely, improve travel speed on the Countywide bus network by 30 percent, reduce wait times and enhance accessibility to high quality mobility services.

The volume of urban freight deliveries is rapidly expanding due to increased demand for two day or even same day shipping from e-commerce vendors, creating a significant source of curbside congestion. While Metro serves as the regional transportation planning agency for LA County, it is only one in a constellation of agencies that have authority over and/or utilize curb assets affected by these shipments. In the City of Los Angeles alone, the LA Department of Transportation (LADOT), Department of Public Works (DPW, which includes Bureaus of Engineering Street Services, Sanitation and Street Lighting), LA Department of Water and Power (DWP) and municipal transit providers exert some responsibility over curb space regulation and usage, a phenomenon that also exists throughout the other jurisdictional jungle of 87 cities and over one hundred unincorporated communities in LA County. These overlapping and competing interests find a parallel within Metro, where many divisions – including transit operations and planning divisions for station areas, first and last mile, active transportation and complete streets – demonstrate interest in what happens on the curbside, in particular how limited capacity along the curbside is affected by the growing presence of urban deliveries. To develop a cohesive set of policies governing the urban curbside, Metro should gather input from the voices of delivery companies and small businesses to develop solutions and integrate recommendations into Metro’s planning efforts to ensure best practices and opportunities to provide a fair and rational approach to using the curbside all users of urban infrastructure.

Within this complex environment the Metro Goods Movement Planning Division recognizes its opportunity to play an influential role in curbside management across LA County, both within Metro and in collaboration with its many jurisdictional partners. Metro’s countywide reach, extensive service and multimodal approach to transportation investments position the agency to lead by example and exercise its broad access to the many agencies and stakeholders that require efficient curbside access. Metro’s Freight Working Group already comprises members that represent industry stakeholders currently engaged in urban deliveries – this existing institutional infrastructure provides an opportunity for Metro to convene key stakeholders to discuss common challenges, identify best practices and coordinate collaborative solutions to curbside conflicts. With all five County Supervisors, the Mayor of Los Angeles and subregional representatives for all of LA County’s 88 cities on its Board, Metro wields unique political power to create a platform of best practices and policy recommendations to influence local, regional, statewide and federal policies; attract grant funding to the County; and conduct pilot programs that will produce lessons useful for countywide application.

To begin implementing the goals of Vision 2028 through coordinating curbside demand across the County, Metro must understand the impact of urban freight deliveries on its operations, and the need for curbside access for small businesses and residences that rely heavily on curbside deliveries. Metro should explicitly define its own set of policies and priorities related to multimodal curbside demand management to ensure the agency is consistent across all planning teams in its approach to this issue. Metro should also determine how best to utilize its strength as a regional convener and policymaker to coordinate curbside demand management approaches with its regional partners and users. In 2019 Metro’s Goods Movement Planning team initiated a major effort to address curbside demand management concerns by working in collaboration with the Federal Highway Administration to convene the LA Metro Curbside Demand Management Symposium, drawing participation from several Metro departments and cities across the county to discuss various issues of importance. The Goods Movement Planning team should build upon the success of the symposium and develop a framework and corresponding action items for Metro to integrate into its planning work to achieve effective and equitable curbside demand management to meet the Vision 2028 goals.

Strategy 4.1

Continue the existing curbside mobility working group to serve as a recurring forum for regional issues and challenges surrounding urban deliveries and curbside demand management.

Strategy 4.2

Develop an Agencywide Curbside Mobility Policy platform.

ACTION	LEAD	PARTNER
4.2a. Conduct outreach to all Metro Divisions to understand existing curbside approaches, and inform agencywide policy applications.	●	●
4.2b. Identify, lead and support Metro Divisions dealing with curbside management issues.		●
4.2c. Develop a platform for Board consideration.		●

Strategy 4.3

Develop a Countywide Curbside Mobility Partnership strategy.

ACTION	LEAD	PARTNER
4.3a. Use the existing Metro curbside mobility working group to develop a meaningful partnership framework to identify and address curbside mobility issues countywide.		●
4.3b. Develop and maintain list of active and planned curbside management pilot programs in LA County.		●
4.3c. Serve as a platform to exchange information, knowledge and best practices on curbside operations, plans and policies by various organizations and users.		●

Strategy 4.4

Develop best practices guidance for countywide curbside management.

ACTION	LEAD	PARTNER
4.4a. Use the Curbside Mobility Policy platform to develop best practices in curbside management, with a specific focus on targeting subregional Councils of Government.		●
4.4b. Sponsor, partner and support curbside pilot and demonstration initiatives across the County.		●

Initiative 5: Investment in Logistics Workforce and Competency

The continued success of LA County as a global freight gateway not only depends on the quality of the multimodal freight infrastructure and the connections among its industries, gateways and supply chain service providers, but also on the quality, quantity and mobility of the regional workforce. The workforce required to support the goods movement sector is complex, diversified and evolving in order to fulfill the many different roles required within myriad supply chains. Moreover, changes in technology, delivery expectations and supply chain strategies are increasing the complexity and sophistication of logistics operations and creating new demands on and expectations of worker skills and knowledge. As a result, cultivating and supporting this workforce requires careful coordination across many partners, from workforce development entities and academic institutions that identify and train workers, to major logistics companies and entities that hire them. Providing the goods movement workforce with the skills they need to meet evolving industry needs is crucial to maintain the competitiveness of the greater Los Angeles area as the gateway of choice, to sustain the region's economic vitality and to provide pathways toward socioeconomic advancement and equity for the over 10 million people that call LA County home.

As the regional transportation planning, construction and operations agency for LA County, Metro already recognizes the importance of workforce development. Given the intrinsic link between mobility and equity, Metro – the major mobility provider for LA County – continues to support one of its core values of addressing equity disparity by investing in workforce development and addressing accessibility issues around job opportunities. More specifically, Metro's Workforce Initiative Now-Los Angeles (WIN-LA) program; the Expose, Educate & Employ (E3) initiative and associated Metro Transportation School; and the Project Labor Agreement and Construction Careers Policy (PLA/CCP) are designed to provide exposure, educational programming and career pathways in construction, operations/maintenance, administration and professional services both within Metro and throughout the transportation industry.

Many of the skills developed as part of Metro's programs – particularly related to project management, data visualization, forecasting and compliance – also apply broadly across industry sectors, particularly goods movement and logistics.

The undeniable connections and parallels between Metro's workforce development efforts in the transportation sector and other agencies in the logistics sector are ripe to be paired together to create overlapping and mutually reinforcing efforts, all in support of regional equity and economic growth.

While it is not Metro's core purpose to provide goods movement-specific workforce development training, Metro certainly plays an important role as a major regional employer through the programs identified above. More broadly, Metro serves important roles as a workforce development partner, a regional mobility provider and a policymaking body. Several opportunities are available for Metro to amplify its status as a regional leader in workforce development programs.

Metro should:

- > Partner with local academic and research institutions to pursue applied research to analyze gaps in skills and competencies of the region's logistics workforce.
- > Continue and expand its partnership with trade schools and other major employers to offer opportunities to experiment and validate existing workforce development programs.
 - For example, Metro can partner with the Ports of Los Angeles and Long Beach, local high schools and community colleges to ensure those curricula meet the needs of goods movement workers both within and outside port terminals.
- > Consider explicit impacts and benefits to the goods movement workforce in its mobility investment decisions, particularly given that only 3.3 percent of goods movement jobs are accessible within an hour transit trip.
- > Develop, implement and advocate for regional, statewide and federal policies that support investment into workforce development and competency building so that those who are in the working age in LA County will be able to capitalize on employment opportunities presented today and in the future.

A well-trained and competent labor pool is a foundation for a region that embraces innovation and desires to be competitive. Metro can play a role in leveraging its connections to effectively influence policymaking bodies for investment in this area.



Image to come

Strategy 5.1

Inventory existing regional workforce development and training programs managed by regional stakeholders, like METRANS, the ports, Long Beach City College and others to:

ACTION	LEAD	PARTNER
5.1a. Identify areas where Metro can partner most effectively and complement or augment existing Metro workforce development programs.		●
5.1b. Develop a sustainable partnership plan and MOU to support workforce development research and training initiatives.		●
5.1c. Adopt regional or national standards for skill/tool certification and internship/ apprenticeship programs to build a consistent regional workforce development pipeline.		●

Strategy 5.2

Review existing goods movement workforce gap analyses developed by Ports of Los Angeles and Long Beach, METRANS and others to:

ACTION	LEAD	PARTNER
5.2a. Identify a focus segment(s) within job classifications for which Metro's Goods Movement Planning group can take initiatives on through an in-depth understanding of skill gaps across various job classifications.		●
5.2b. Identify skills that are considered transferable between the transit industry and logistics industry; work with Metro's workforce development programs to identify these skills as "portable".		●
5.2c. Join Metro's Workforce Development Working Group led by the Human Capital and Development Department to ensure gaps in skills and competencies in logistics industries are integrated as opportunity areas for Metro's workforce development initiatives.		●

Strategy 5.3

Identify workforce needs to support the LA Metro Countywide Clean Truck Initiative.

ACTION	LEAD	PARTNER
5.3a. Define skills and competencies needed to support and maintain infrastructure.		●
5.3b. Define skills and competencies needed to operate and maintain clean technology trucks, in conjunction with the Countywide Clean Truck Initiative Working Group.		●

Strategy 5.4

Advocate for changes in existing regional and statewide policies that hinder technology testing and pilots in LA County and the state.

ACTION	LEAD	PARTNER
5.4a. Evaluate and identify specific areas for policy changes to enable the region’s ability to conduct technology, vehicle development and testing activities.		●
5.4b. Establish a Goods Movement Technology Working Group to assess tests and pilots and develop frameworks for accelerating/scaling up deployment of successful case studies.		●

Strategy 5.5

Advocate for regional, state and federal funding programs for workforce development.

ACTION	LEAD	PARTNER
5.5a. Evaluate existing policies surrounding workforce development investment.		●
5.5b. Establish a regional funding partnership to develop local and regional revenue streams for matching requirements and to pursue regional/state/federal grants cooperatively.		●
5.5c. Establish a regional funding advocacy campaign in coordination with the partnership to call for increased/targeted funding for goods movement workforce development programs.		●

Strategy 5.6

Improve the Metro transit service network and ancillary regional services to meet the needs of the goods movement workforce.

ACTION	LEAD	PARTNER
5.6a. Understand disparities in access to jobs for workers who use transit services, with a focus on logistics jobs.		●
5.6b. Conduct a gap analysis of Metro’s transit service to identify opportunities to better serve future populations of workers.		●
5.6c. Develop recommendations to improve access to jobs throughout the day. For example, assess Metro’s ability to provide “third-shift” service and other nontraditional commute services for the goods movement workforce.		●
5.6d. Partner with regional municipal operators to address these mobility issues in areas that are wholly or partially served by other transit agencies.		●

Let's get moving.

Los Angeles County has served as “America’s Global Freight Gateway” for many decades, linking consumers, markets, farms and manufacturers across the country to suppliers, customers and economic opportunities around the globe. More importantly, county residents and businesses have benefitted from the employment, economic opportunities, and quality of life offered by a vibrant goods movement system serving the nation’s most populous county and all of Southern California.

As international trade grows and the needs of our businesses and homes shift, the goods movement system and workforce must adapt and evolve to remain agile and ready to meet new demands brought on by disruptive trends such as e-commerce and just-in-time shipping. Meanwhile LA County continues to grow in population and need more goods, placing a greater emphasis on the efficient use of our existing highway, rail and curbside infrastructure to allow the increased movement of goods to flow unimpeded by and make room for other demands on the same facilities.

LA County will face many challenges—external and internal—to keep its standing as the nation’s dominant trade gateway. Focused and coordinated competition from other freight gateways in Canada and on the East and Gulf Coasts has undercut LA County’s economic position and eroded the San Pedro Bay Ports’ national market share for the movement of imports and exports. Increasing traffic congestion on constrained shared use highway and rail corridors reduces the speed—and increases the cost—to move goods within and through the region. Recent labor disputes at the ports have led to shippers moving discretionary cargo through other ports to reduce risks to the supply chain and bringing products to market. LA County’s size—at times a boon—also creates additional layers of institutional conflicts and coordination problems as 88 cities and over 130 unincorporated communities offer differing priorities, visions and policies through which goods movement operates.

Most importantly, LA County must overcome a long history of equity impacts to many communities adjacent to freight corridors by reducing displacement, implementing mitigations, creating employment opportunities and improving public health for those residents most burdened by the movement of trucks and trains through the region. Additionally, the county faces stringent mandates to reduce truck and locomotive emissions and improve regional

mobility to attain federal standards for air quality conformity. Meanwhile, international trade wars, tariffs and COVID-19 remind us that not every peril can be expected or planned for at the regional level—but creating a resilient freight system will help protect LA County from major disruptions to its supply chain, economy and workforce.

Moving LA County forward together toward a future marked by greater equity, economic opportunity and public health for all will require a concerted effort across the spectrum of stakeholders involved with, dependent upon and impacted by the movement of goods through the region.

Metro has convened these stakeholders—public agencies and private businesses, community groups and elected officials, universities and non-profits, manufacturers and technology experts, truck drivers and warehouse workers, to name a few—to identify a common vision and purpose for the LA County Goods Movement Strategic Plan. Our partners have spent many months helping us develop the Plan’s Sustainable Freight Competitiveness Framework which is grounded in the principle of equity. In the many workshops and conversations we held across the county, our stakeholders have identified five priority strategies to be implemented to advance our shared equity, economic and environmental goals in support of a shared LA County vision for goods movement in the 21st Century.

Through these partnerships Metro seeks to engage communities more directly to understand and address equity issues, to create strategies to improve the highway and rail infrastructure across the county, to deploy cleaner truck and train technology as soon as possible to improve air quality and public health, to help provide the necessary training and education to generate the local logistics workforce of tomorrow, and to support our communities’ management of local freight conflicts at the curb and on city streets. By creating a more resilient and efficient goods movement system, LA County will support regional, state and national economic growth even in the face of trade tariffs, COVID-19 and the disruptions of tomorrow. Implementing the priorities of our Plan will require a unified regional voice as we work with our state and federal partners to develop pilot programs, supporting legislation and funding opportunities to advance the economic, environmental and equity goals of LA County and its goods movement stakeholders.



Image to come

Endnotes

- ¹ Including local (Measure M) state (SB1) and federal (FAST Act) sources
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- ²⁶ For more information, please visit metro.net/about/win-la/
- ²⁷ Federal Highway Administration, Freight Analysis Framework (FAF) 4.5, 2017.
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- ³⁴ Federal Highway Administration, Freight Analysis Framework (FAF) 4.5, 2020.
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- ³⁷ Metrolink 10 Year Strategic Plan, 2014.
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