

The average aerial concentration of toxic chemicals
in the Gateway Cities¹ is almost...

5x

...greater than in the Inland Cities².

¹[CalEnviroScreen 4.0](#) Oct. 2021 release. Toxicity-weighted concentrations of modeled chemical releases to air from facility emissions and off-site incineration averaged over 2017 to 2019 and including releases from Mexican facilities averaged over 2014 to 2016. Averaged over zip codes for the 27 Gateway Cities (Artesia, Avalon, Bell, Bellflower, Bell Gardens, Cerritos, Commerce, Compton, Cudahy, Downey, Hawaiian Gardens, Huntington Park, La Habra Heights, Lakewood, La Mirada, Long Beach, Lynwood, Maywood, Norwalk, Paramount, Pico Rivera, Santa Fe Springs, Signal Hill, South Gate, Vernon, Walnut Park, and Whittier).

²[CalEnviroScreen 4.0](#) Oct. 2021 release. Toxicity-weighted concentrations of modeled chemical releases to air from facility emissions and off-site incineration averaged over 2017 to 2019 and including releases from Mexican facilities averaged over 2014 to 2016. Averaged over zip codes for the Inland Cities (Alhambra, Monterey Park, Pasadena, San Marino, and South Pasadena).

The average diesel particulate matter (PM)
in the Gateway Cities¹ is approximately...

20%

...greater than in the Inland Cities².

¹[CalEnviroScreen 4.0](#) Oct. 2021 release. Spatial distribution of gridded diesel PM emissions from on-road and non-road sources 2016 (tons/year). Averaged over zip codes for the 27 Gateway Cities (Artesia, Avalon, Bell, Bellflower, Bell Gardens, Cerritos, Commerce, Compton, Cudahy, Downey, Hawaiian Gardens, Huntington Park, La Habra Heights, Lakewood, La Mirada, Long Beach, Lynwood, Maywood, Norwalk, Paramount, Pico Rivera, Santa Fe Springs, Signal Hill, South Gate, Vernon, Walnut Park, and Whittier).

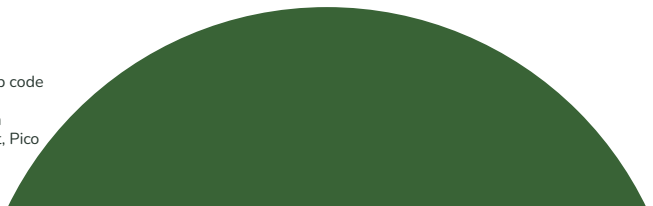
²[CalEnviroScreen 4.0](#) Oct. 2021 release. Spatial distribution of gridded diesel PM emissions from on-road and non-road sources 2016 (tons/year). Averaged over zip codes for the Inland Cities (Alhambra, Monterey Park, Pasadena, San Marino, and South Pasadena).



9,136

Number of asthma emergency
department (ED) visits across the
Gateway Cities in 2018

Source: [CA.gov Open Data Portal](#) Asthma ED Visit Rates, 2018, all ages, filtered by zip code for the 27 Gateway Cities (Artesia, Avalon, Bell, Bellflower, Bell Gardens, Cerritos, Commerce, Compton, Cudahy, Downey, Hawaiian Gardens, Huntington Park, La Habra Heights, Lakewood, La Mirada, Long Beach, Lynwood, Maywood, Norwalk, Paramount, Pico Rivera, Santa Fe Springs, Signal Hill, South Gate, Vernon, Walnut Park, and Whittier)




The rate of asthma ED visits in the Gateway Cities¹ is approximately...

2x

...greater than in the Inland Cities².

¹[CalEnviroScreen 4.0](#) Oct. 2021 release. Spatially-modeled, age-adjusted rate of ED visits for asthma per 10,000, averaged over 2015-2017. Averaged over zip codes for the 27 Gateway Cities (Artesia, Avalon, Bell, Bellflower, Bell Gardens, Cerritos, Commerce, Compton, Cudahy, Downey, Hawaiian Gardens, Huntington Park, La Habra Heights, Lakewood, La Mirada, Long Beach, Lynwood, Maywood, Norwalk, Paramount, Pico Rivera, Santa Fe Springs, Signal Hill, South Gate, Vernon, Walnut Park, and Whittier).

²[CalEnviroScreen 4.0](#) Oct. 2021 release. Spatially-modeled, age-adjusted rate of ED visits for asthma per 10,000, averaged over 2015-2017. Averaged over zip codes for the Inland Cities (Alhambra, Monterey Park, Pasadena, San Marino, and South Pasadena).



It is a common misconception that environmental remediation comes at the cost of economic growth, and that jurisdictions must choose which to prioritize. To that, we ask...

...why not both?



A Greener Gateway

Prepared by: Electric Connections Consultants (ECC), LLC

Prepared for: Gateway Cities Council of Governments (GCCOG)



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Principal

Connecting Communities and Commerce

Agenda

Introduction

Nexus, importance of 710 corridor, community concerns, key issues

01

02

Proposal

Mission statement, process framework, case study

Implementation

Timeline, phasing, tactics, community engagement, stakeholder analysis, funding strategy

03

04

Conclusion

Roadblocks and mitigation strategies, other options, recommendations

01

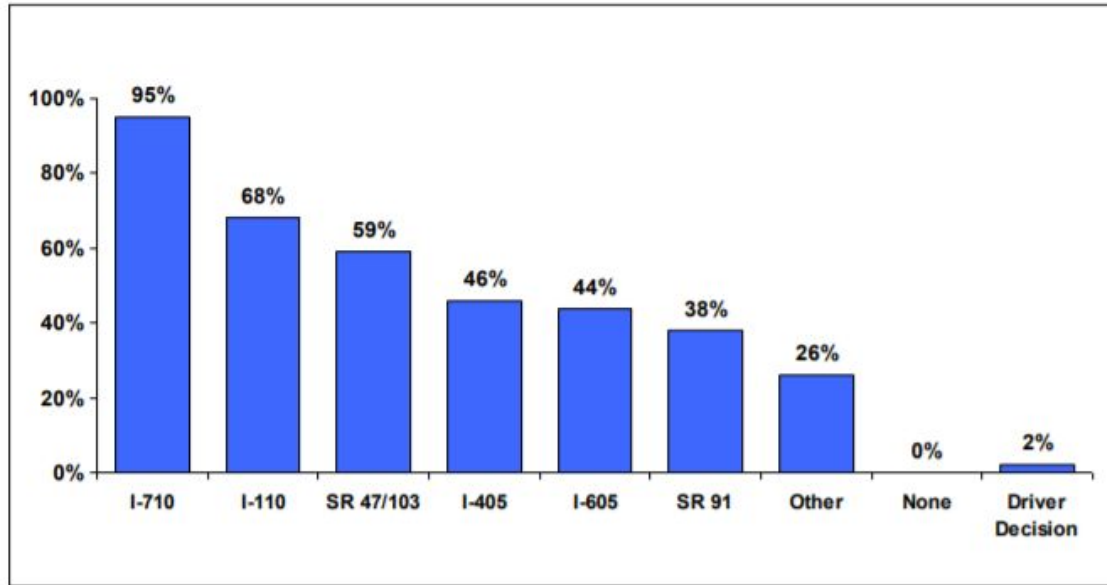
Introduction

Nexus, importance of 710
corridor, community concerns,
key issues

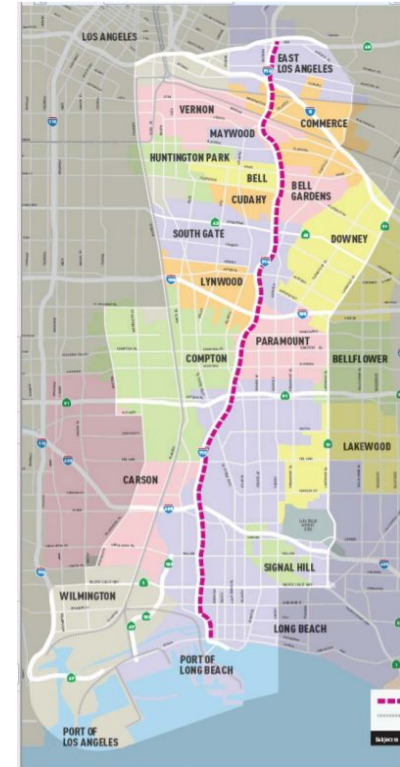


Nexus and Importance of 710 Corridor

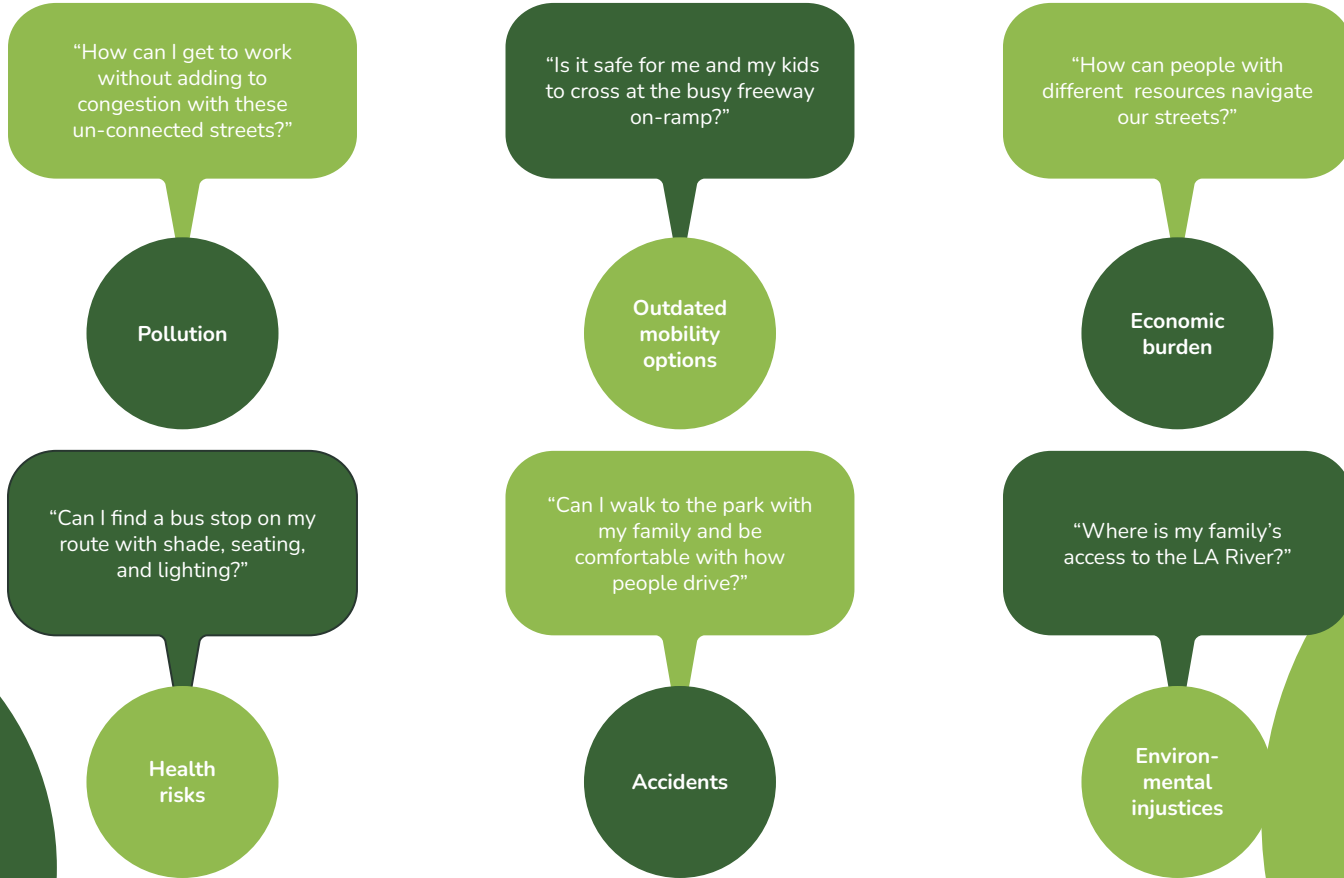
Freeways Used for Port Access/Egress



Note: As this is a multiple response question, combined percentages may exceed 100 percent.



Community Concerns and Key Issues





02

Proposal

Mission statement, process
framework, case study

Mission Statement

“To simultaneously promote **environmental remediation** and **economic development** in the Gateway Cities by creating safe, sustainable freight transit alternatives that will both **improve air quality** and **generate jobs.**”

Process Framework



Improve air quality and rectify environmental injustices via mode shift



Initiate economic development through a robust workforce development program



Create **freight light rail** network and supplemental **Electric Vehicle fleets** for Last Mile



Revamp GCCOG



Community-based environmental research



Create and maintain jobs



Freight light rail advisory council



P3



Incentives for freight light rail use



Focus groups



Outreach



Freight light rail maintenance plan



Local hiring incentives



Educational partnerships

STRATEGIES

GOAL

TACTICS

TOOLS

Case Study: Victoria, British Columbia



- Environmental improvements
- Job creation
 - Well-paid jobs

03

Implementation

Timeline, phasing, tactics,
community engagement,
stakeholder analysis, funding
strategy



Project Timeline

2024-2026
(36 months)

Information + Ideation
What do we want?

Planning + Policy
What do we need?

Materialization + Marketing
How do we do it?

2022-2023
(18 months)

2027-2031
(72 months)

Project Phasing

PHASE I: Information + Ideation (18 months)

aka... what do we want?

1. Inform community about strategic issues

- Air quality
- Environmental injustices (i.e., asthma and other adverse health effects)
- Workforce development

2. Revamp GCCOG

- Begin networking for freight light rail advisory council
- Conduct feasibility study for freight light rail
- Issue RFQ and RFP
- Create funding plan/apply for grants
- Network with public high schools, community colleges, construction companies, job training centers, etc. on workforce development initiatives

PHASE II: Planning + Policy (36 months)

aka... what do we need?

1. Initial design

- Roadmap
- Stations, facilities, EV fleet
- Construction design

2. Initial study

- EIR
- Traffic report
- Health and safety report

3. Budget

- Soft costs (preconstruction, analysis report, and maintenance costs)
- Hard costs (investors, funds, grants/programs)
- Subsidy structures
- Propose scholarship fund
- Environmental injustice research

PHASE III: Materialization + Marketing (72 months)

aka... how do we do it?

1. Form P3
2. Enact subsidies for shipping companies
3. Plan information sessions and job training seminars with public schools and community colleges
4. Execute scholarship fund
5. Publish freight light rail maintenance plan
6. Establish environmental action plan
7. Finalize workforce development plan and local hiring subsidies
8. Report submission
9. Marketing (to shipping companies and the public)

Tactic 1: Revisit GCCOG Structure

Freight Light Rail Advisory Council

- Begin networking for freight light rail advisory council
- Conduct feasibility study for freight light rail
- Initial design and studies
- Freight light rail maintenance plan

Public-Private Partnership (P3)

- Issue RFQ and RFP
- Create funding plan/apply for grants
- Form P3

Economic Development + Incentives

- Establish incentives for freight light rail use by shipping and transportation companies
 - Subsidy structure for freight light rail use, local hiring initiatives
- Establish Workforce Development Plan
- Partner with public high schools, community colleges, construction companies, job training centers, etc. on workforce development initiatives, trainings
 - Scholarship fund
 - Community outreach + support services

Additionally...

- Recruit target stakeholders to lead organization
- Establish council parameters for policy creation, implementation, and funding



Tactic 2: Community-Based Environmental Research

Community Outreach

- Inform Gateway Cities communities about strategic issues
 - Air quality, environmental injustices, workforce development
- Conduct community studies
 - Health and safety report
 - Environmental Injustice research
 - Data collection, analysis, and monitoring of change over intime to measure impact

Environmental Injustice Mitigation Report

- **Problem formulation**
 - scope, context, goals, parameters
 - Collaboration between community members (lived experience) and subject experts
- **Conduct research**
 - stakeholder engagement, focus groups, identification of stressors and inequities, data collection and monitoring
- **Reporting**
 - Share data analysis, recommendations, next steps
 - Submit Environmental Injustice Mitigation Report to GCCOG



Tactic 3: Create and Maintain Jobs

Preparation

- Begin working subsidy structures for freight light rail use and local hiring requirements
- Begin engaging educational stakeholders on mentorship programs, job training, etc.
- Propose scholarship fund

Implementation

- Advertise freight light rail to the public
- Host information sessions for the public and employees in the shipping industry
- Implement local hire programs

Sustainability

- Publish long-term freight light rail maintenance plan with local hire component
- Gateway Cities Workforce Economic Stability Plan



Community Engagement Phasing

PHASE I: Inform

aka... what is the issue?

1. Inform community about strategic issues
 - Air quality, Environmental injustices
Workforce development
 - Social media campaigns, public communication channels (schools, churches, radio, tv, etc.)
2. Inform community about the Greener Gateway Initiative
 - Freight light rail plan
 - Environmental research
 - Creation and maintenance of jobs, economic development
3. Notify community of what to expect, ways to get involved, next steps
 - Location of meetings, types of involvement, timeframe
 - Newsletter, website, social media, office location, town halls

PHASE II: Ideate

aka... what is the solution?

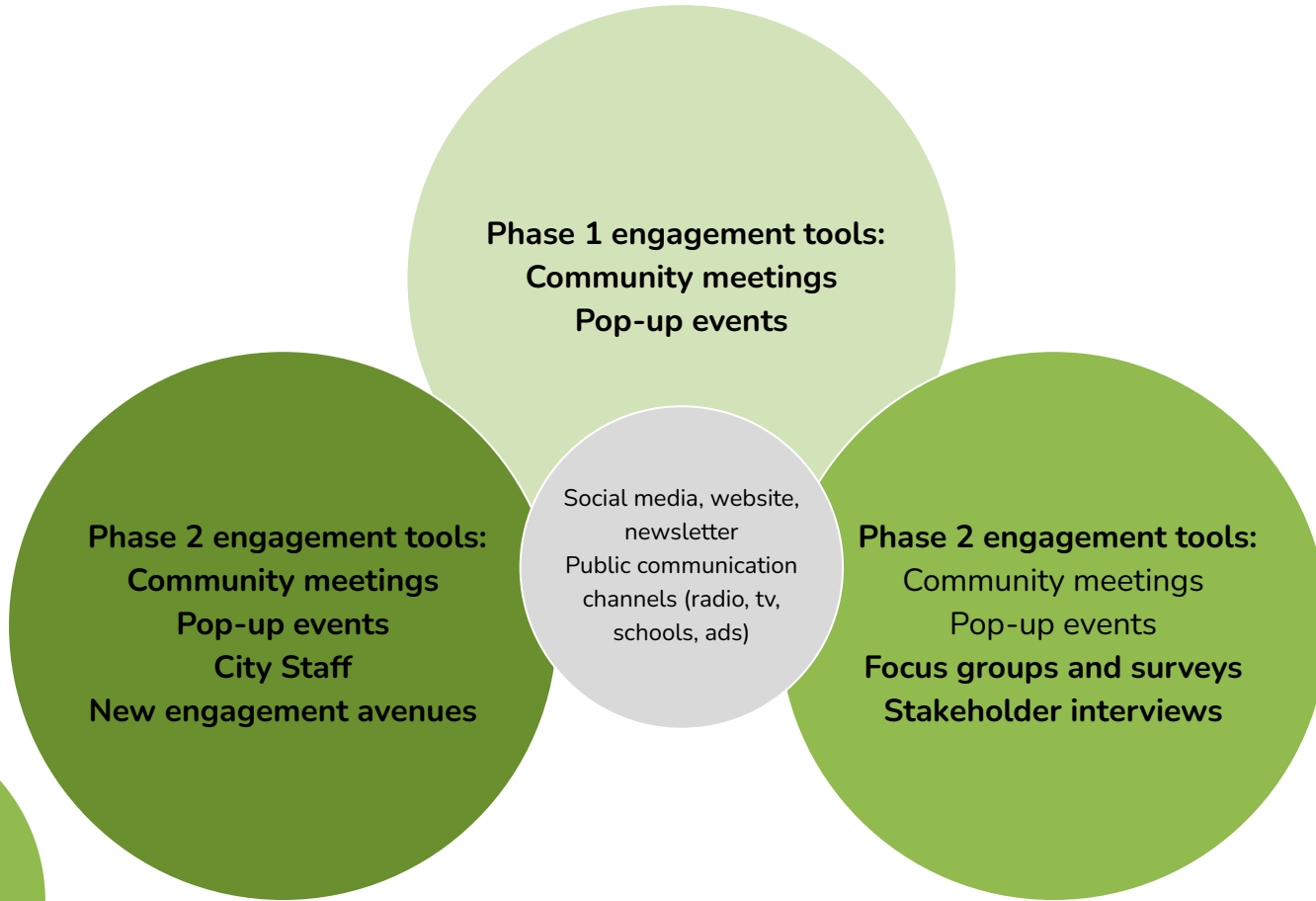
1. Community outreach re: Initial design
 - Roadmap, Stations, facilities, EV fleet, construction design
 - Survey, town hall meetings, pop-ups
2. Community outreach re: Economic Development
 - Collaborate with community members to understand need
 - Survey, town hall meetings, pop-ups
3. Initial studies
 - Health and safety report
 - Environmental injustice research
 - Data collection
 - Surveys
 - Focus groups
 - Stakeholder Interviews
 - Prioritization of community input and participation

PHASE III: Implement

aka... how do we do it?

1. Inform community members about research findings
 - Health and safety report
 - Environmental injustice research
 - Data analysis and monitoring
 - Measure success of project
2. Inform community members about next steps
 - Recommendations to GCCOG
 - Freight light Rail plan, timeline
 - Workforce development plan
3. Inform community members of resulting opportunities
 - Scholarship fund
 - Education, training, job opportunities
 - Information sessions, job fairs, training seminars
 - Intensive advertising

Community Outreach Tools



Tools:

- Social media
- Website
- Newsletter
- Ad campaign
- Public communication channels
- Community meetings
- City Staff
- Pop-up events
- Focus Groups
- Surveys
- Stakeholder interviews
- City staff
- Continuation of engagement

Phase 1: Inform

Inform community about relevant issues

- Air quality
- Environmental injustices
- Workforce development

Inform community about Greener Gateway Initiative

- Light rail plan
- Environmental research
- Creation and maintenance of jobs

Notify public: next steps, what to expect

- Timeline
- Meeting location
- Ways to get involved
- How to stay updated and informed

Phase 1 engagement tools:

- Social media, website, newsletter
- Public communication channels (radio, tv, schools, ads)
- Community meetings
- Pop-up events

Phase 2: Ideate

Community Outreach: Freight Light Rail

- Initial design: roadmap, stations, facilities
- Concerns and questions

Community Outreach: Economic Development

- What does the community need?

Initial Studies

- Health and safety report
- Environmental injustice research
- Data collection

Phase 2 engagement tools:

- Social media, website, newsletter
- Public communication channels (radio, tv, schools, ads)
- Community meetings
- Pop-up events
- Focus Groups and surveys
- Stakeholder interviews



Phase 3: Implement

Inform Community: Research Findings

- Health and Safety report
- Environmental injustice research
- Data analysis and monitoring
 - Measure success of project

Inform Community: Next Steps

- Recommendations to GCCOG
- Freight Light Rail plan, timeline
- Workforce development plan

Inform Community: New Opportunities

- Scholarship fund
- Education, training, job opportunities
- Information sessions, job fairs, training seminars

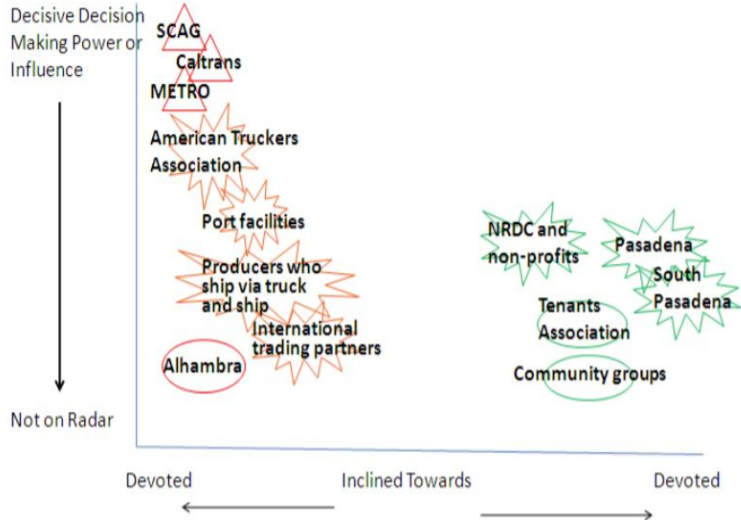
Phase 3 engagement tools:

- Social media, website, newsletter
- Public communication channels (radio, tv, schools, ads)
- Community meetings
- Pop-up events
- City Staff: communication
- New engagement avenues



Key Stakeholders

Power Analysis



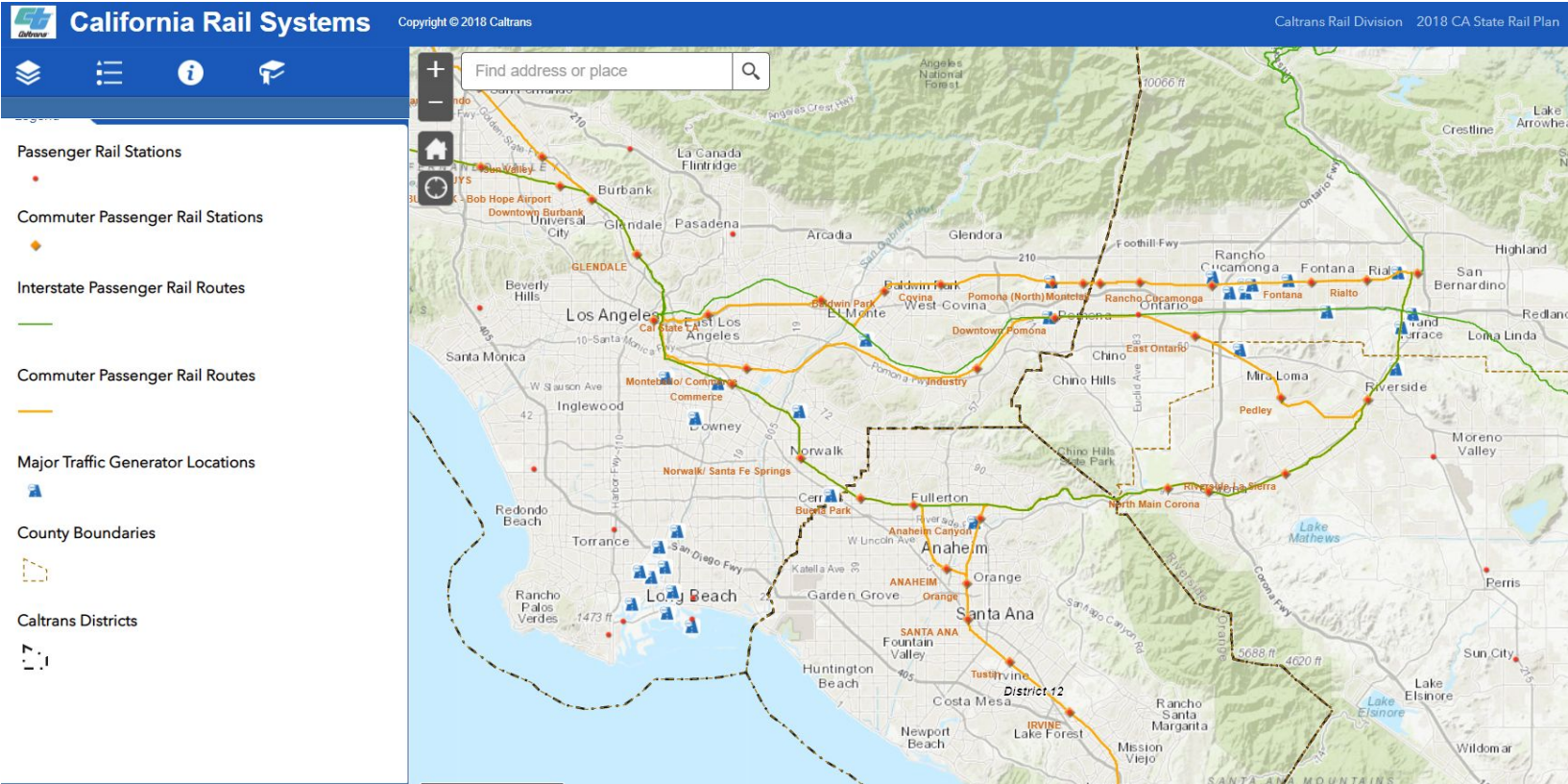
Public sector	Los Angeles County*
	Representatives from all 27 Gateway Cities (already part of Gateway Cities Council of Governments)*
	<u>Caltrans*</u>
	<u>Los Angeles Community College District</u>
	<u>Paramount Unified School District</u>
	<u>Downey Unified School District</u>
	<u>Long Beach Unified School District</u>
	<u>Bellflower Unified School District</u>
	<u>Whittier Union High School District</u>
	<u>US Small Business Administration - Los Angeles District</u>
<u>CAL EPA*</u>	
Private sector	<u>Port of Long Beach*</u>
	<u>Port of LA*</u>
	<u>Pacific Gateway</u>
	<u>Environmental Resources Management*</u>
	<u>Canoo*</u>
	<u>EV Go*</u>
	<u>Roadway Construction Service</u>
Other	<u>East Yard Communities for Environmental Justice</u>
	<u>Los Angeles Collaborative for Environmental Health and Justice</u>
	Traffic safety commission (specific location will depend on where freight light rail is proposed)
	<u>SCAG</u>

* = recommended for Freight Light Rail Advisory Council

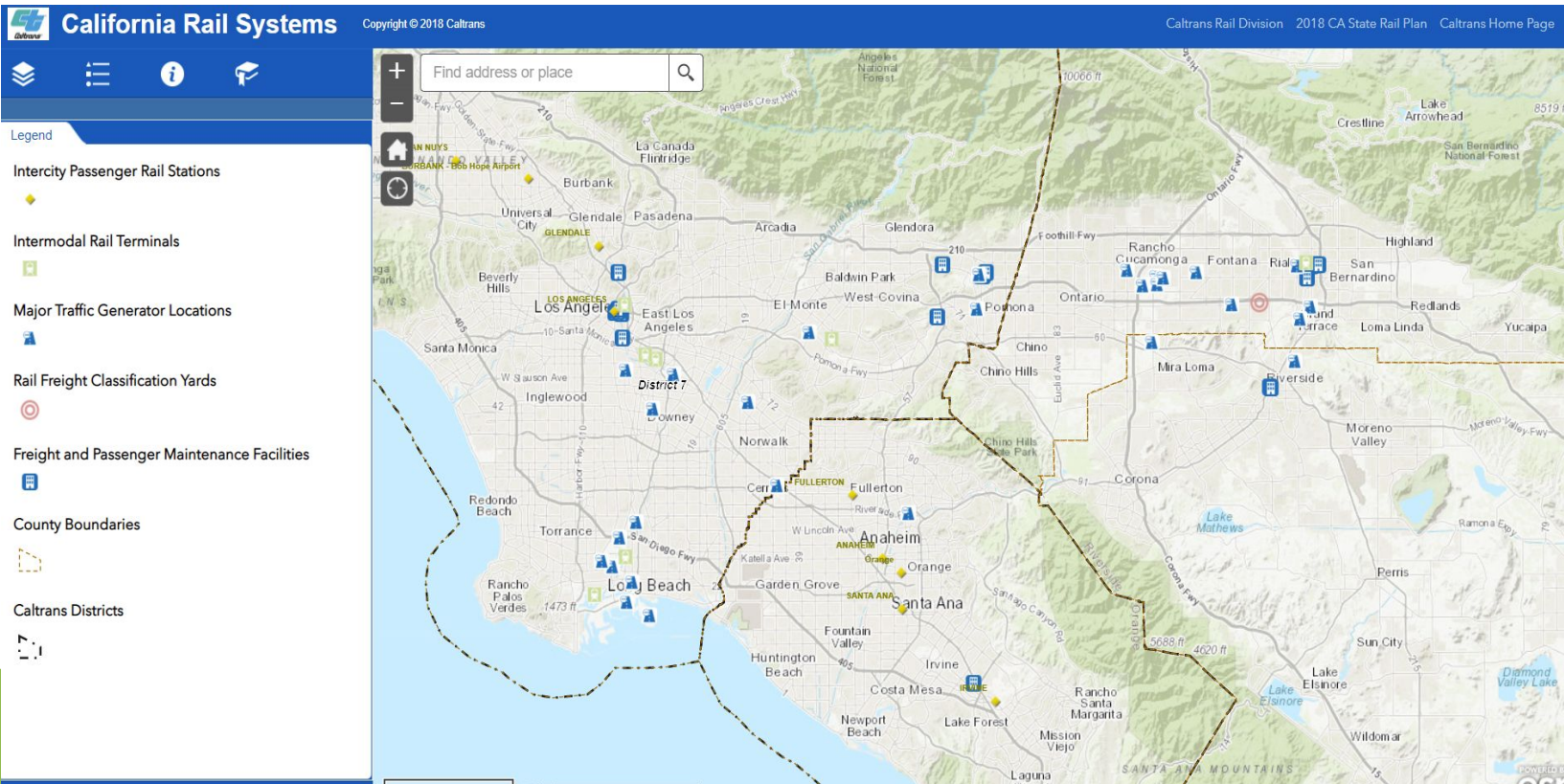
The background is a solid light green color. It features several white circular outlines of varying sizes and positions. One large white circle is in the top-left corner, another is in the bottom-right corner, and a third is partially visible in the top-right corner. The text is centered horizontally and vertically.

Let's talk Freight Light Rail

Passenger Lines



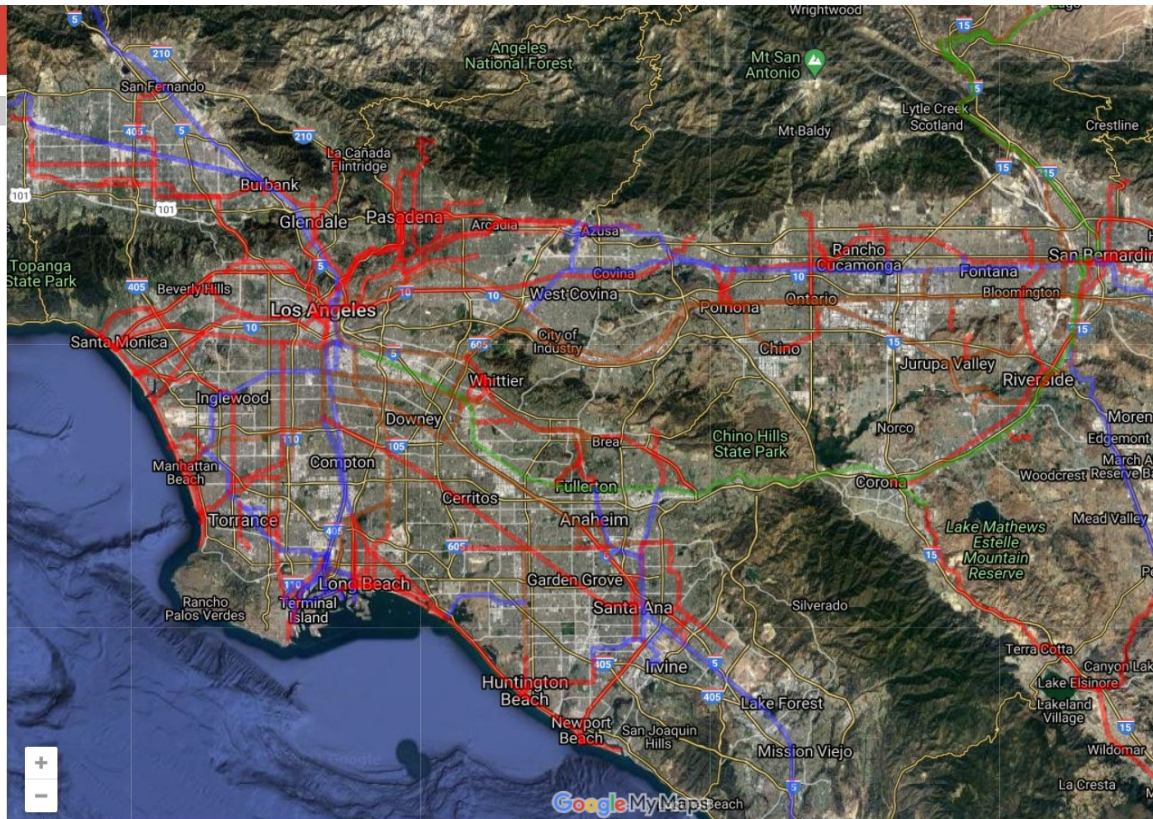
Freight Lines



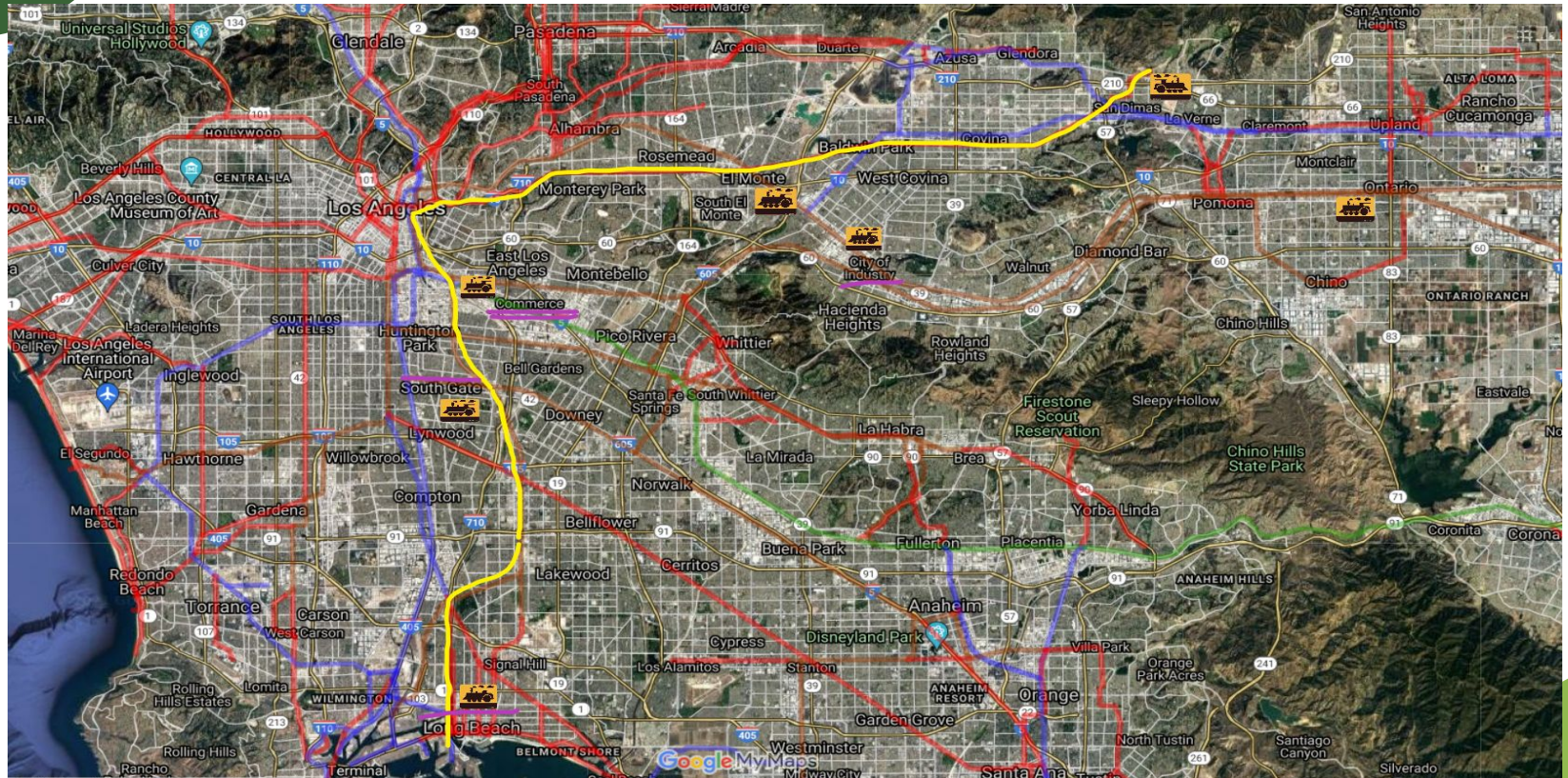
Abandoned Lines

California Railroads

- Abandoned line
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Route 1



Implementation: Route 1

Port → 10, 210 via 710

Pros

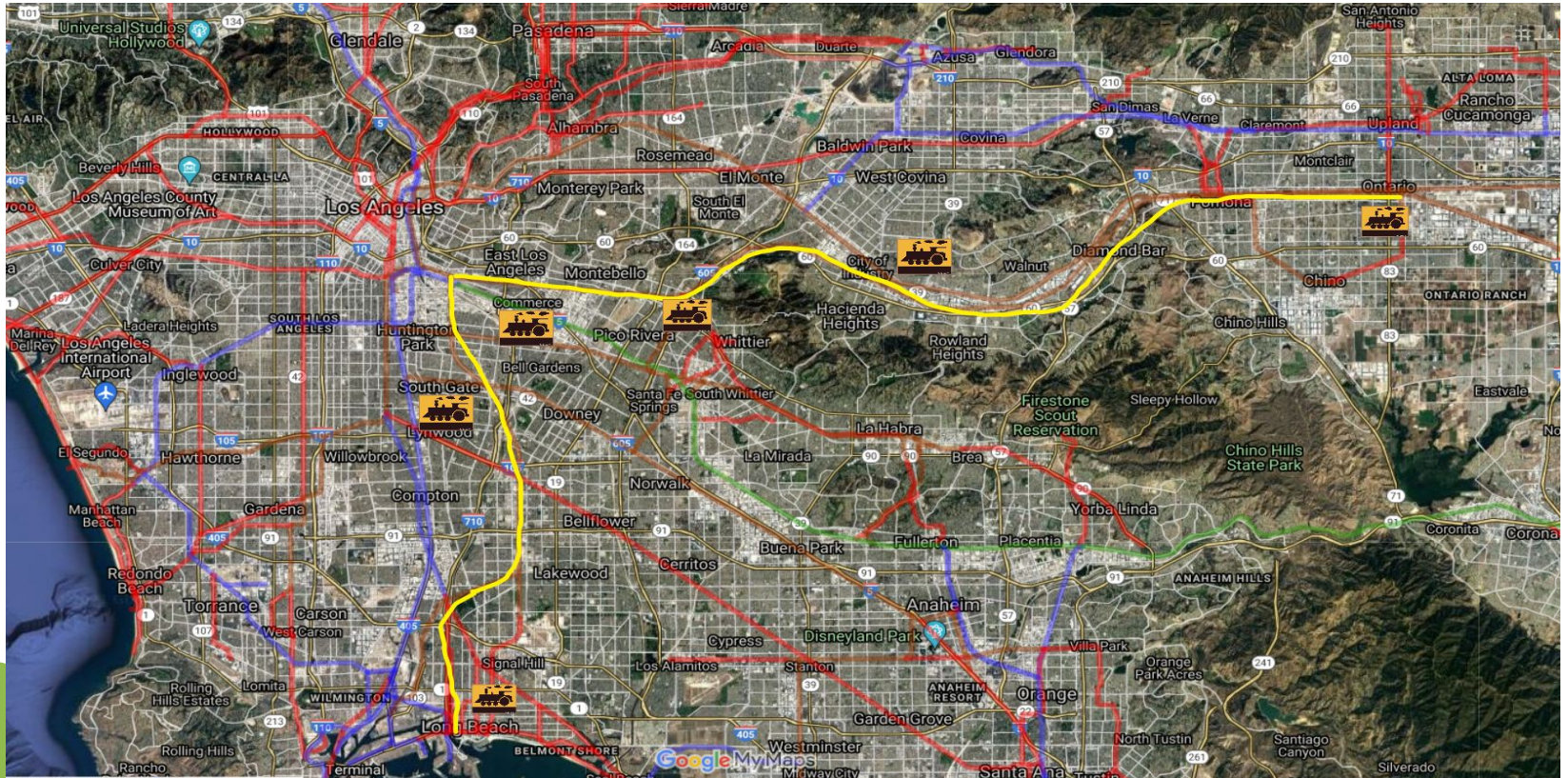
- Follows pre-existing 710 infrastructure
- Minimize displacement
- Connects ports with dispersion routes, warehouse hubs

Cons

- Increase infrastructure density in a vulnerable zone
- Limited expansion potential for passenger rail



Route 2



Implementation: Route 2

Port → 10 via 710, 60, 10

Pros

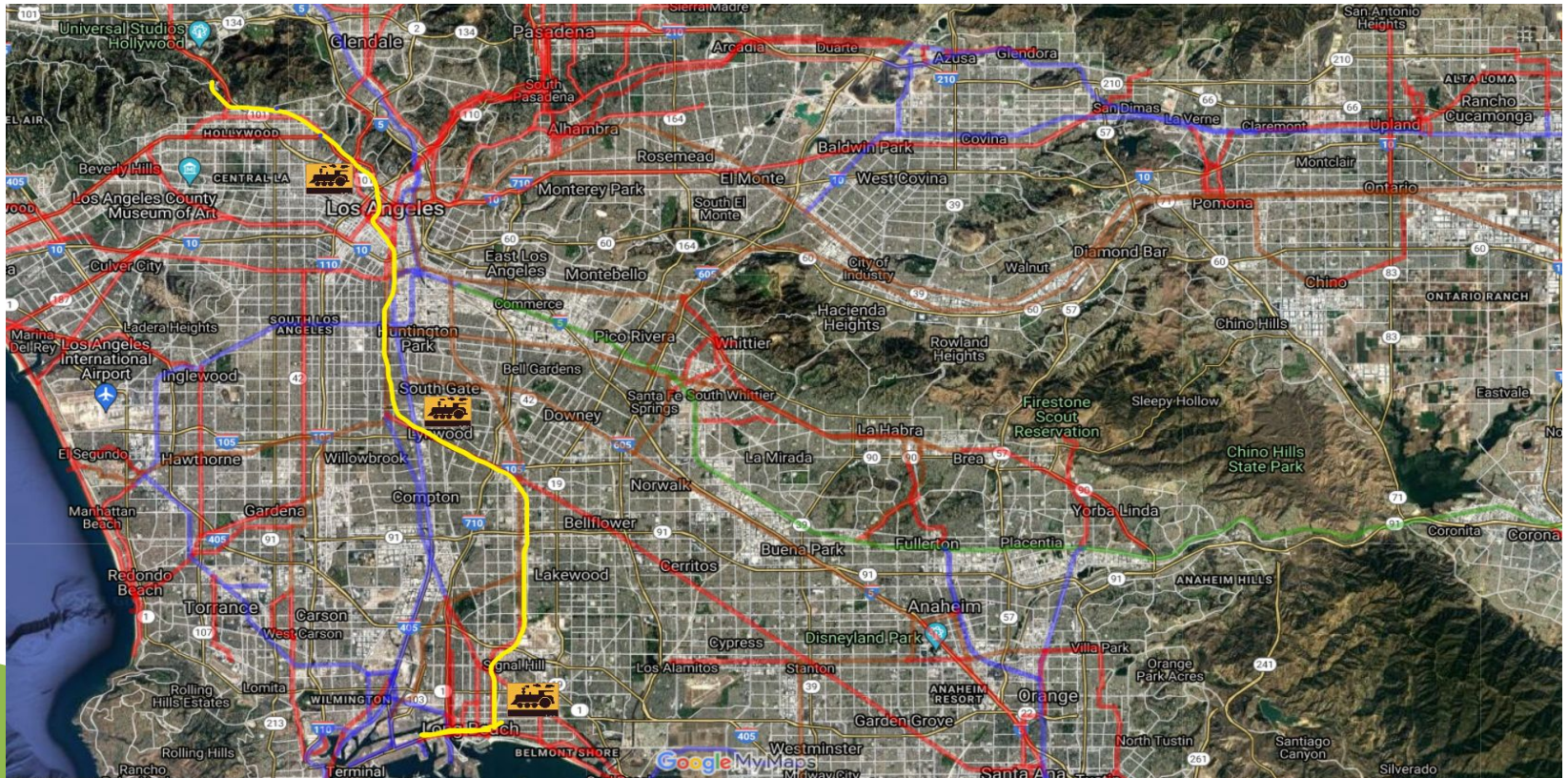
- Follows pre-existing 710 infrastructure
- Minimize displacement
- Connects ports with dispersion routes, warehouse hubs
- Potential for future expansion of passenger rail

Cons

- Potential disruption to previously less impacted residents/regions



Route 3



Implementation: Route 3

Port → 10, 101 via LA river

Pros

- Minimize displacement
- Connects ports with dispersion routes, warehouse hubs via natural channel
- Potential for future expansion of passenger rail

Cons

- May deter potential environmental development of LA river
- Potential pushback from locals in proximity to LA River



Funding Strategies



Federal
Grants



P3 (DBFOM)
Design-Build
Finance-Operate
Maintain



State
Funding

Public-Private Partnerships (P3)

Why P3 DBFOM?

- Turnkey Solution (**D**esign-**B**uild-**F**inance-**O**perate-**M**aintain)
- Leverage Private Capital and Financing
- Risk transfer
- Reduced First costs and Lifecycle Costs
- Project Acceleration
- Innovation and Value Creation
- Improved Design and Performance

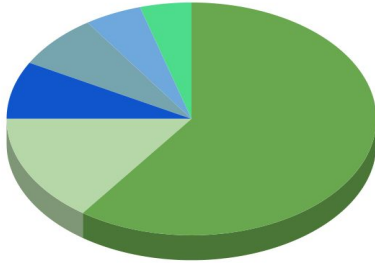
Incentivize Partners:

- Improved rail cargo service
- Efficiency in operations and enhanced rail capacity
- Fuel cost savings and reduced emissions



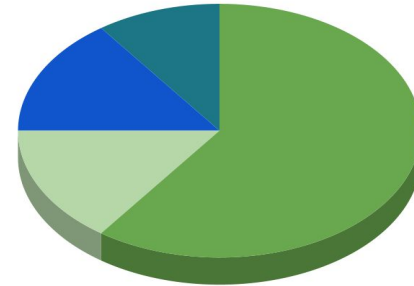
Funding Sources

Budget Allocation



- Light Rail Infrastructure (60%)
- Last Mile Fleet (15%)
- Utility Relocation (8%)
- Professional Services (7.5%)
- Program Management (5%)
- Marketing and Outreach (4.5%)

Funding Sources



- P3 Partners (60%)
- Federal (15%)
- State (15%)
- Port Contributions (10%)

Proposed Budget: \$ 4.5B

** 40-yr maintenance will be included with the P3 partner (DBFOM) in accordance to Light Rail maintenance plan paid using AP Availability payments.*

Project Comparables

Completed Rail P3 Projects

PROJECT	Description	Project Cost (completed)	Escalated Costs	Rail Length	\$/ Mile*
Proposed Freight Light Rail (Gateway Cities) 2031	Sustainable Light Rail Freight Transit (Re-use portion of existing infrastructure)	N/A	\$4.5 B*	30 Miles	\$ 150 M
Alameda Corridor (LA County) 2002	High Capacity Freight Expressway and Corridor Upgrade w/ Tunnels	\$2.4 B	\$5.1 B	20 Miles	\$ 240 M
Eagle P3 (Denver Metro) 2019	Railway Corridor, Electric Powered Railcar	\$2.2 B	\$2.5 B	23 Miles	\$ 108 M
National Gateway (Midwest and along Atlantic Coast) 2013	Doubled Stacked Intermodal Trains, Rail Corridor Upgrade	\$842 M	\$1.2 B	20 Miles	\$ 60 M

* Preliminary Budget - to be reviewed and verified when cost consultancy group is onboarded and scope of work is further defined.

Funding Contributions

Grants	Public Agencies	P3 Partners (Prospects)
<div data-bbox="123 342 624 465">  <p>Federal Transit Administration Capital Investment Grants Program</p> </div> <div data-bbox="92 489 374 648">  </div> <div data-bbox="280 678 369 705"> <p>STATE</p> </div> <div data-bbox="386 489 620 615"> <p>USDOT TIGER DOT.GOV</p> </div> <div data-bbox="426 656 556 683"> <p>FEDERAL</p> </div> <div data-bbox="394 736 612 871"> <p>Measure M Los Angeles County #RebuildSoCal</p> </div> <div data-bbox="85 762 340 965">  </div> <div data-bbox="394 899 612 1019"> <p>MEASURE R</p> </div>	<div data-bbox="861 345 1022 492">  </div> <div data-bbox="799 594 1126 707">  </div> <div data-bbox="699 784 1205 932">  </div>	<div data-bbox="1244 331 1373 481">  </div> <div data-bbox="1406 347 1707 470"> <p>PORT OPERATORS BNSF RAILWAY</p> </div> <div data-bbox="1263 517 1476 568"> <p>FLUOR</p> </div> <div data-bbox="1553 517 1850 598"> <p>DESIGN-BUILD ENTITY Balfour Beatty</p> </div> <div data-bbox="1329 667 1412 740">  </div> <div data-bbox="1309 751 1431 773"> <p>RIVIAN</p> </div> <div data-bbox="1445 762 1669 816">  </div> <div data-bbox="1734 725 1831 823">  </div> <div data-bbox="1489 674 1676 702"> <p>TECHNOLOGY</p> </div> <div data-bbox="1271 805 1495 888"> <p>PROTERRA</p> </div> <div data-bbox="1360 805 1412 856">  </div> <div data-bbox="1566 834 1812 915">  </div> <div data-bbox="1483 936 1624 964"> <p>LOGISTICS</p> </div> <div data-bbox="1387 976 1754 1030"> <p>XPOLogistics</p> </div>

Freight Light Rail



Create Freight
Light Rail network
and supplemental
Electric Vehicle fleets
for Last Mile

GOAL

- Higher transport speed
- Reliability and improved punctuality of deliveries
- Compatibility with existing light rail infrastructure
- Infrastructure can be used for both passenger and freight
- Lower operational expenditures
- Low emissions and energy consumption



Electric Cargo Rail

- \$500M in annual fuel savings
- Low emissions and full horsepower capabilities
- Part of California Climate Investments (Nexus)- a statewide program that invests cap and trade dollars in greenhouse and improving public health and environment in disadvantaged communities.
- Pilot Tested (September 2021) in CA in partnership w/ CARB (California Air Resource Board)



FLXdrive is Wabtec's newest development a battery electric freight locomotive. Leveraging decades of application expertise, coupled with industry leading performance optimization, the hybrid consist that is being demonstrated has the capability of saving fuel and reducing emissions.

EV Fleet for Last Mile



PROTERRA





04

Conclusion

Roadblocks and mitigation strategies, other options, recommendations

Roadblocks and Mitigation Strategies

Roadblock	Why?	Mitigation Strategies
Funding	Public funding sources and grants are competitive and difficult to secure	Focus on P3 as primary funding source
Entitlements	Freight light rail entitlements will involve multiple cities	Earn support of LA County as early as possible
Fear of Loss of Jobs	“Automation”, “green energy”, and “electric vehicles” are often associated with job loss	Control the narrative through meaningful community engagement and compelling marketing materials
		Publish freight light rail maintenance plan to ensure long-term job growth
		Partner with public school districts, community colleges, and job training orgs on workforce development initiatives
Displacement	A huge concern for locals, especially those impacted by previous expansion plans; costly and damaging to community relations	Prioritize route that minimizes displacement, follows existing infrastructure; engage with community members to understand concerns; minimize neighborhood disruption; establish generous compensation package for those impacted by construction
Public Pushback	Some light rail route options will enter the inland cities, where residents have been largely opposed to the 710 expansion	Involve key stakeholders early
		Invigorate and motivate Gateway Cities residents to support plan

Other Options



Explore traditional freight rail in lieu of light rail

Heavy rail



Implement cap + trade regime for industrial land uses

Cap + trade



Create zero emission lanes on 710 rush hour

EV corridor



Disincentivize use of the 710 through the Gateway Cities

Tolls

Recommendations



Revamp

Ask county to grant GCCOG policy-making and fundraising capabilities



Inform

Host events on environmental injustice and its intersection with workforce development



Recruit

Network with stakeholders and begin forming light rail advisory council



Deliberate

Choose target route for freight light rail (or another option) and conduct feasibility study



Solicit

Issue RFQ and RFP; network with public education institutions and job trainers



Fund

Refine budget (hard + soft costs), create funding plan, and apply for grants

Thank You

We look forward to taking your questions next week!

hello@ecc.com | +1 (562) 902-2223 | ecc.com



Additional References

1. <https://kellen1994.wixsite.com/kaguila1hist359fp/i-710-corridor-project>
2. <https://development.patbrowninstitute.org/wp-content/uploads/2017/02/710-Corridor-FWY-Report.pdf>
3. <https://www.planningreport.com/2011/11/07/future-ports-conference-en-gaging-expansion-710-freeway>
4. <https://www.readcube.com/articles/10.1007/s40864-017-0073-1>
5. <http://reconnectingamerica.org/assets/Uploads/bestpractice135.pdf>
6. http://www.gatewaycoq.org/media/userfiles/subsite_9/files/rl/ITSBackgroundResearch/GatewayCitiesITSPlanBackgroundResearchReport.pdf