


Rail Strategy Study

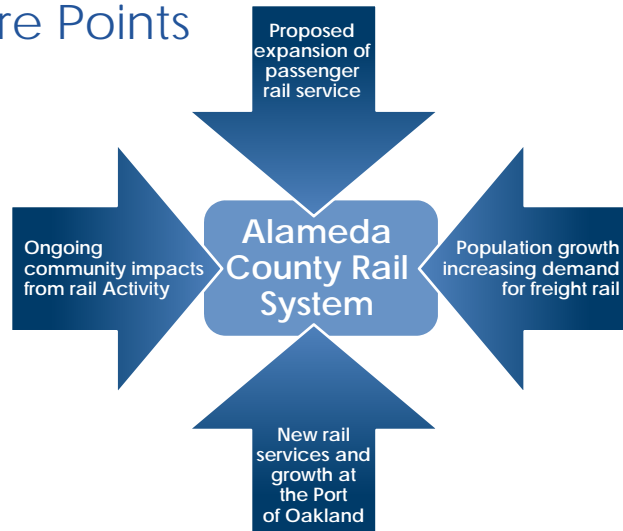


Goods Movement Committee Meeting
October 9, 2017

Agenda Overview

1. Overview of rail system issues and growth scenarios
2. Capacity and operations analysis and improvement options
3. Grade crossing improvements and prioritization

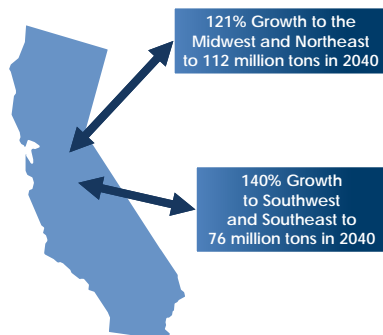
Alameda County Rail System Pressure Points



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California Freight Rail Growth Markets

California freight rail volumes are projected to more than double between 2013 and 2040.



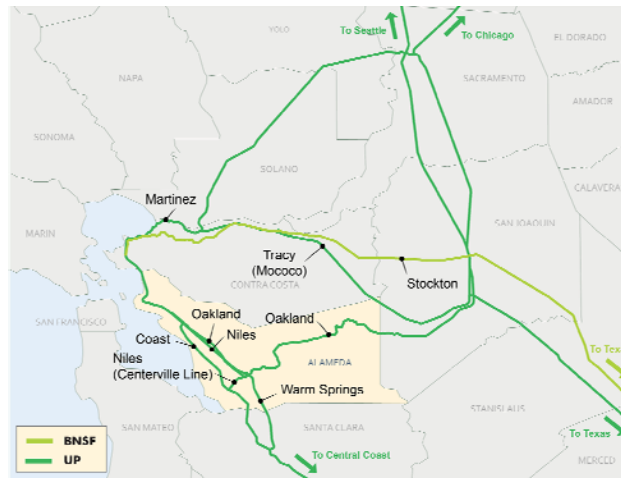
Port of Oakland Top Commodities (2014)

Top 5 Exports	Top 5 Imports
Wood pulp	Furniture
Fruits and nuts	Packaging
Meats and fish	Glass products
Beverages, spirits, and vinegar	Non-Electrical Machinery
Grains and seeds	Electrical Machinery



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Bay Area Freight Rail Network



- Circuitous routes for freight due to lack of connections
- Redundant parallel track has value and provides opportunity
- Much shared track could be reduced with targeted improvements



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National Freight Rail Network



- Rail in Alameda County is a small part of national freight rail networks
- Railroads make routing decisions based on business, operational and customer needs along with existing operating agreements



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Rail Subdivisions and Rail Junctions



- Most freight rail uses Martinez, Coast, and Oakland subs between Port and Central Valley
- Newark Junction used by traffic moving on Coast subdivision



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Daily Freight and Passenger Train Volumes (2016)



Segments with Most Trains

Subdivision	Location	Pax Trains	Freight Trains	Total Trains
Martinez	North of Port	42-44	18	60-62
Niles	South of Port	16	16	32
Niles (Centerville)	Fremont	22	11	33
Coast	South of Centerville	24	6	30
Oakland	East of Niles Junction	8	11	19



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ACE and Capitol Corridor

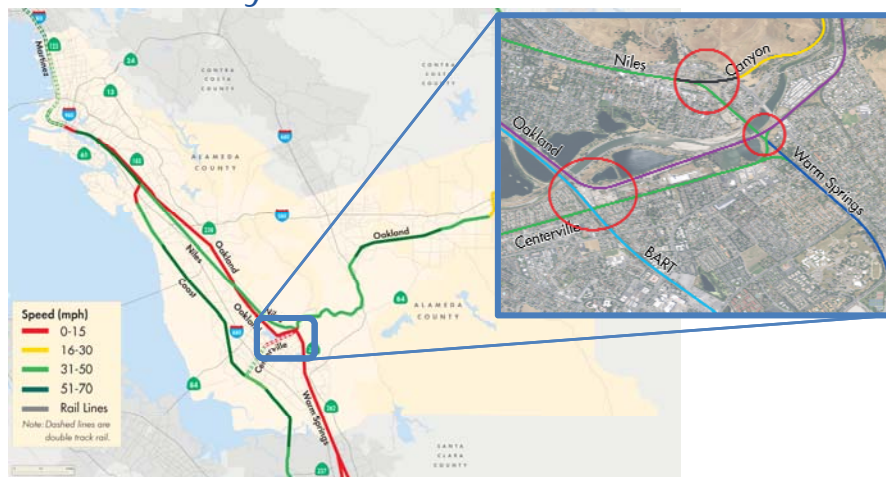


- Capital Corridor Vision Plan identifies market potential in Oakland to San Jose route
- Significant investments required by UP for Capitol Corridor and ACE to increase service levels
- Capacity constraint concerns on shared Centerville line and through Niles Canyon



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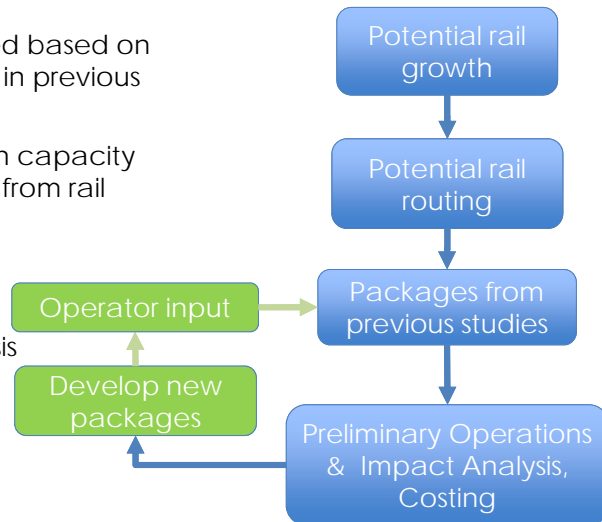
Issues – Capacity and Flow Constraints, Connectivity



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Package Development and Analysis

- Packages analyzed based on projects identified in previous studies
- Adjusted based on capacity analysis and input from rail operators
- More refined capacity and operational analysis will need to be done by UP



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Overview of Growth Scenarios

Scenario ID#	2035 Growth Scenarios and Key Assumptions	
	Freight Trains	Passenger Trains
1	Moderate <ul style="list-style-type: none"> • Historical 2% growth • Maintain 23% rail share at Port 	None <ul style="list-style-type: none"> • Same service as 2016
2	High <ul style="list-style-type: none"> • Higher Port growth consistent with Oakland Army Base EIR • 40% rail share at Port 	Moderate <ul style="list-style-type: none"> • Add 4 daily Capitol Corridor Oakland - San Jose roundtrips for a total of 11 (22 daily trains) • Add 2 daily ACE roundtrips for a total of 6 (12 daily trains)
3	High <ul style="list-style-type: none"> • Higher Port growth consistent with Oakland Army Base EIR • 40% rail share at Port 	High <ul style="list-style-type: none"> • Based on Capitol Corridor Vision Plan Phase 1, add 8 daily Oakland - San Jose roundtrips for a total of 15 (30 daily trains) • Based on ACEforward programmatic EIR, add 6 round trips for a total of 10 (20 daily trains).



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Rail Capacity Analysis Results



- Base Case (2016)
 - Freight trains based on Unified Service Concept Analysis
 - Current passenger train volumes



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Rail Capacity Analysis Results



- Scenario 1 (2035)
 - Moderate freight growth
 - No passenger growth



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Rail Capacity Analysis Results



- Scenario 2 (2035)
 - *High freight growth*
 - *Moderate passenger growth*



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Scenario 2 – Routing Alternatives

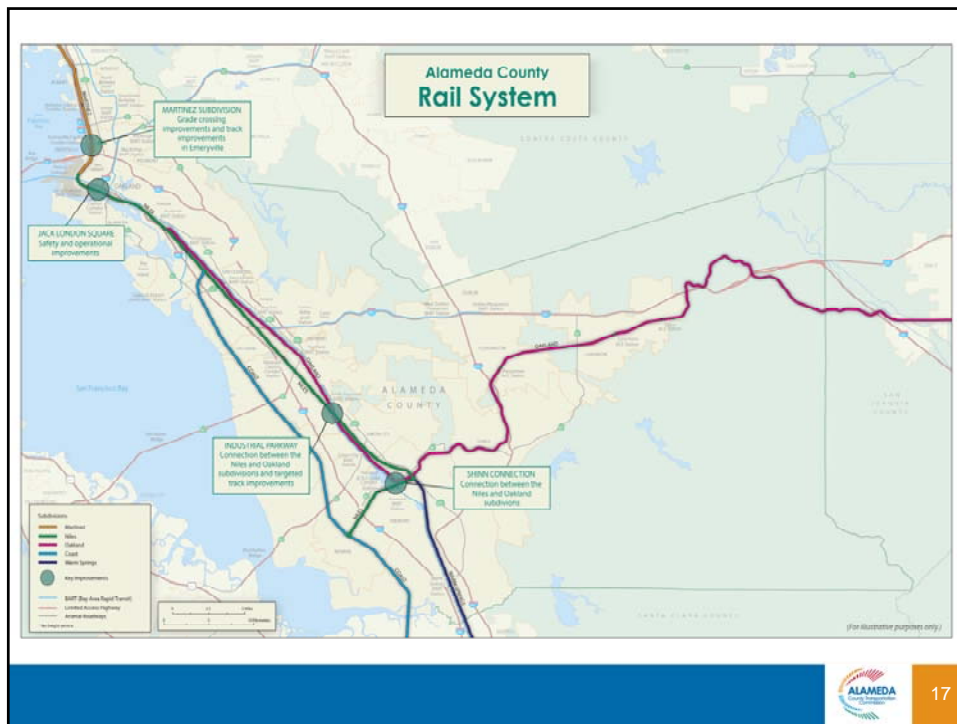
Capitol Corridor on Coast,
Freight on Niles



Tracy Subdivision
(Northern Alternative)



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Capacity Analysis Conclusions and Next Steps

- Complete project package evaluation
 - *Assess mobility, environmental, and equity considerations of different alternatives*
- Complete grade crossing toolkit and prioritization methodology
- Discussions underway with rail operators

Grade Crossing Improvements



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Grade Crossing Analysis

- Examining 136 individual crossings and 25 crossing corridors
- Factors considered for crossings analysis
 - *Safety (historical and predicted), delay, noise, air quality, fuel savings, sensitive land uses, and Communities of Concern*
- Developing toolbox matching issues with improvements
 - *Grade separations, road closures, warning device improvements, quiet zones*
- Developing preliminary design solutions at select locations
- Prioritization based on several factors
 - *Monetizing some factors, qualitatively evaluating other factors, and costs of improvements*



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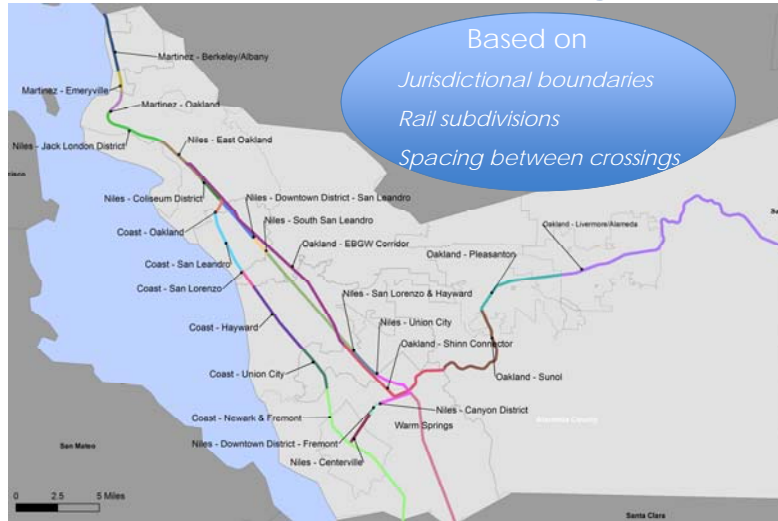
Crossings with High Safety, Delay, and Noise Impacts

Street Location	City	Rail Subdivision	Top Ten in Incurred Safety Costs	Top Ten in Delay Costs (Prelim.)	Top Ten in Residential Noise Index	In Community of Concern
Gilman St.	Berkeley	Martinez	X		X	
Cedar St.	Berkeley	Martinez			X	
67th S.	Emeryville	Martinez			X	
66th St.	Emeryville	Martinez			X	
65th St.	Emeryville	Martinez			X	
29th Ave	Oakland	Niles	X		X	X
Fruitvale Ave.	Oakland	Niles	X		X	X
37th Ave	Oakland	Niles	X		X	X
High St	Oakland	Niles	X	X	X	X
98th Ave.	Oakland	Niles		X		X
Davis St.	San Leandro	Niles	X	X		X
Washington Ave.	San Leandro	Niles	X			X
Hesperian Blvd.	San Leandro	Niles	X	X		
Tennyson Rd.	Hayward	Niles		X		
Industrial Pkwy.	Hayward	Niles		X		
Fremont Blvd.	Fremont	Niles		X		
Union City Blvd.	Union City	Coast		X		
Dyer St.	Union City	Coast		X		
Santa Rita Rd.	Pleasanton	Oakland		X		

Implementation Benefits of Corridor Approach

- Conduct similar analysis as done for individual crossings
 - *Does this change priorities?*
- Identify most cost effective combination of crossing improvements
- Recognize interactions of crossings and safety issues in between crossings
- Set stage for more effective advocacy (e.g., FAST Corridor, CREATE, Alameda Corridor East)

Development of Crossing Corridors



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Illustrative Crossing Corridors

Subdivision – Corridor Name (examples)	Total AADT (2016)	Daily Trains (2016)	Number of Incidents (Last 10 years)	Nearby Population (2016)
Martinez - Berkeley/Albany	30,486	62	7	1,790
Martinez - Emeryville	13,202	60	1	1,976
Niles - Centerville	52,554	33	1	9,007
Niles - Downtown District - Fremont	36,165	33	2	2,976
Niles - East Oakland	91,527	32	18	4,481
Niles - Coliseum District	73,690	32	6	6,055
Niles - Jack London District	37,485	32	7	3,198
Oakland - Shinn Connector	64,421	19	0	17,654
Oakland - Pleasanton	53,467	19	1	2,675
Oakland - Sunol	9,282	19	0	550



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Next Steps

- Project packages
 - *Continue working with UP to analyze operations and needs*
 - *Continue working with public agency partners to refine comprehensive package of priorities*
- Grade crossing analysis
 - *Alameda CTC is forming a Working Group of interested ACTAC members*
 - *Two working group meetings*
 - November 9 – discuss methodology
 - December 11 – discuss initial findings
 - *Return in early 2018 with update*



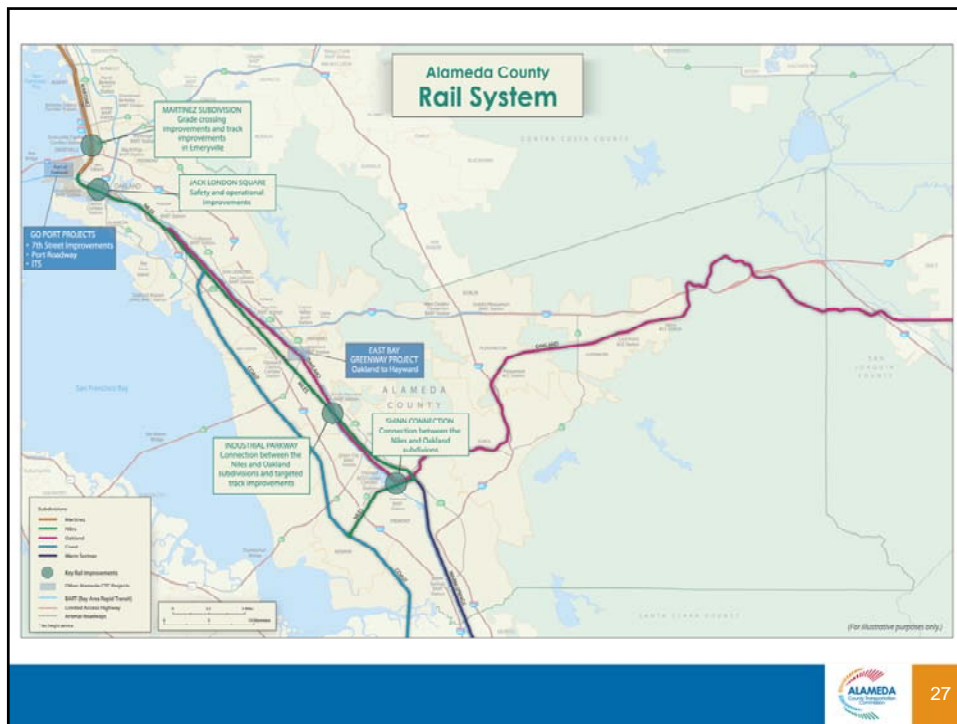
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Framework for Discussions with UP

- **Martinez Subdivision improvements and grade crossing improvements in Emeryville** – improves Port of Oakland access and reduces Emeryville grade crossing impacts
- **Jack London Square improvements** – improves safety and operations and reduces need for major track expansion
- **Industrial Parkway connection and Niles Junction improvements** – improves overall system connectivity, reduces Centerville impacts and improves operations for Capitol Corridor and UP
- **Shinn connection** – creates system redundancy, consistent with future Union City intermodal center and potential Dumbarton rail plans
- **7th Street Grade Separation Projects** – project cooperation
- **East Bay Greenway** – right of way



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Recommendation

- Approve the Executive Director to initiate negotiations with Union Pacific Railroad and other public agency partners to advance recommendations identified to date in the Rail Strategy Study, the East Bay Greenway and 7th Street Grade Separation projects.