



Meeting Notice

1111 Broadway, Suite 800, Oakland, CA 94607

• 510.208.7400

• www.AlamedaCTC.org

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Mayor Carol DuTra-Vernaci

Executive Director

Arthur L. Dao

Goods Movement Planning Committee

Monday, October 9, 2017, 1:30 p.m.

**1111 Broadway, Suite 800
Oakland, CA 94607**

Mission Statement

The mission of the Alameda County Transportation Commission (Alameda CTC) is to plan, fund, and deliver transportation programs and projects that expand access and improve mobility to foster a vibrant and livable Alameda County.

Public Comments

Public comments are limited to 3 minutes. Items not on the agenda are covered during the Public Comment section of the meeting, and items specific to an agenda item are covered during that agenda item discussion. If you wish to make a comment, fill out a speaker card, hand it to the clerk of the Commission, and wait until the chair calls your name. When you are summoned, come to the microphone and give your name and comment.

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Glossary of Acronyms

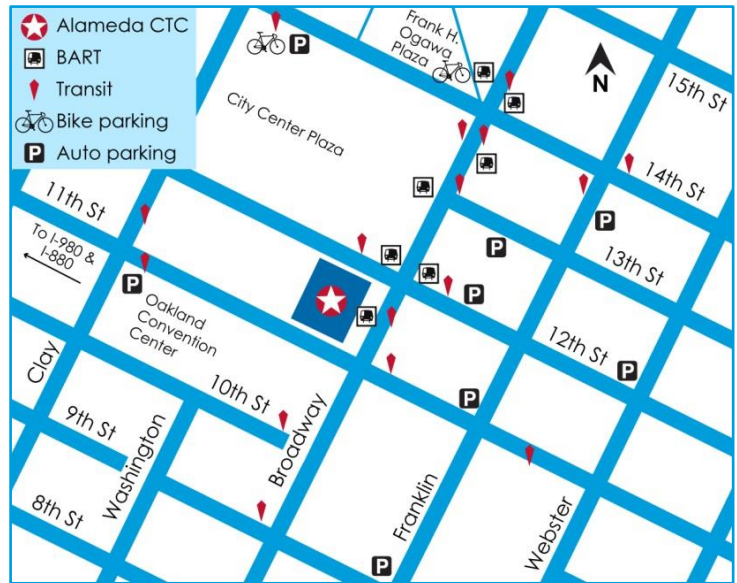
A glossary that includes frequently used acronyms is available on the Alameda CTC website at www.AlamedaCTC.org/app_pages/view/8081.

Location Map

Alameda CTC

1111 Broadway, Suite 800
Oakland, CA 94607

Alameda CTC is accessible by multiple transportation modes. The office is conveniently located near the 12th Street/City Center BART station and many AC Transit bus lines. Bicycle parking is available on the street and in the BART station as well as in electronic lockers at 14th Street and Broadway near Frank Ogawa Plaza (requires purchase of key card from bikelink.org).



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Meeting Schedule

The Alameda CTC meeting calendar lists all public meetings and is available at www.AlamedaCTC.org/events/upcoming/now.

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Goods Movement Planning Committee Meeting Agenda Monday, October 9, 2017, 1:30 p.m.

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Chair: Supervisor Scott Haggerty, Alameda County, District 1
Vice Chair: Mayor Lily Mei, City of Fremont
Commissioners: Keith Carson, Luis Freitas, David Haubert, Jerry Thorne
Ex-Officio Members: Rebecca Kaplan, Richard Valle
Staff Liaison: Tess Lengyel
Executive Director: Arthur L. Dao
Clerk: Vanessa Lee

1. Pledge of Allegiance

2. Roll Call

3. Public Comment

4. [Approve the April 10, 2017 GMPC meeting Minutes](#)

5. [Goods Movement Funding Updates](#)

6. [Rail Strategy Study Update](#)

7. Committee Member Reports

8. Staff Reports

9. Adjournment

Page A/I

1 A

5 A/I

11 A

Next Meeting: TBD

All items on the agenda are subject to action and/or change by the Committee.

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Goods Movement Committee
Meeting Minutes
Monday, April 10, 2017, 1:30 p.m.

4.0

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1. Pledge of Allegiance

2. Roll Call

A roll call was conducted. All members were present with the exception of Commissioner Thorne.

Commissioner King was present as the alternate for Commissioner Carson.

3. Public Comment

There were no public comments

4. Approve the January 9, 2017 GMPC meeting minutes

Commissioner Mei moved to approve this item. Commissioner Haubert seconded the motion. The motion passed with the following vote:

Yes: Haggerty, Mei, King, Freitas, Haubert, Kaplan, Valle

No: None

Abstain: None

Absent: Thorne

Carolyn Clevenger directed the committee to the Goods Movement Report Card that was developed to track implementation of the plan and she highlight efforts around planning, projects, programs and partnerships.

5. Update from the Port of Oakland on overall activity and key initiatives at the Port of Oakland

John Driscoll, from the Port of Oakland presented an update on the Port of Oakland. The update included an overview of the Port and a description of the terminal characteristics. The update also covered key events in 2016, terminal improvements as well as information on emission levels. Mr. Driscoll also provided information on the funding investments at the Port as well as information on the former Oakland army base and Cool Port.

Commissioner King asked what caused the decreased in emission levels. Mr. Driscoll stated that there are rules and regulations that the state of California has implemented surrounding decreasing truck and vessel idling, that has allowed for a decrease in emission levels.

Commissioner Valle wanted information on truck centers and truck stops. Mr. Driscoll that there are areas set aside that truckers can rent on a monthly or nightly basis where they can park the trucks.

Commissioner Valle asked if there is a C & G station near the Port. Mr. Driscoll stated that there is a state of the art C & G station at the Port.

6. Rail Strategy Study Update

Michael Fischer, of Cambridge Systematic provided an update on the Rail Strategy Study. The presentation covered the background on the study, a description of rail infrastructure and preliminary rail issues and information on grade crossings and community impacts. Mr. Fischer concluded the presentation with information on next steps in the plans development.

Commissioner Haggerty wanted to ensure that the Rail Study was led by Alameda County and wanted to know why the agency undertook development of the study. Tess Lengyel confirmed that the study was administered through the Alameda County Transportation Commission and she noted that the purpose of the study was to address growth at the Port of Oakland, expansion of ACE and Cap Corridor service, and to help coordinate Goods Movement with Union Pacific Rail Road. Art Dao also noted that the study will gather information on freight volume versus passenger volume, will help determine where passenger rail can go, and will help with policy decisions that affect Goods Movement.

Commissioner Kaplan wanted to ensure that a pedestrian count was included in the study. Mr. Fischer confirmed that it was included in the study as well as emission levels, accidents counts and several other factors that affect Rail.

There were public comments on this item heard by:

Jill Ratner of the Rose Foundation/ Ditching Dirty Diesel Collaborative regarding the adoption of the Goods Movement plan and the importance of ensuring that implementation of the plan advances equity and community health.

Carlos Zambrano of the Rose Foundation/ Ditching Dirty Diesel Collaborative stated that community engagement was needed in the development of the rail strategy study plan as well of the goods movement plan.

Adenike Adeyeye of the Ditching Dirty Diesel Collaborative wanted to ensure that the plan considers health impacts and air pollution

This item was for information only.

7. State and Federal Funding Opportunities Update and Approval of Alameda CTC Goods Movement Project List

Carolyn Clevenger provided an update on State and Federal Funding Opportunities. She focused on the FAST ACT formula, Regional Measure 3 and SB1. Ms. Clevenger recommended that the Commission approve the freight project list to submit to Metropolitan Transportation Commission (MTC) for funding to the California Transportation Commission Freight Investment Program or other freight funding opportunities as they arise. She noted that once approved, staff will then submit those projects from the list that best meet the requirements of each funding program for submittal.

Commission Kaplan wanted to make sure that grade crossings throughout the county are included in the list. Ms. Clevenger stated that there is language in the list that advocates for a broader grade separation crossing program.

There were public comments on this item heard by:

Ana Lee of the Alameda County Public Health Department regarding the Health's departments mapping analysis that identifies freight impacted communities and potential mitigation.

Adenike Adeyeye of the Ditching Dirty Diesel Collaborative requested information on how the emission reduction pilot could compete for other funding opportunities.

Commissioner Mei moved to approve this item. Commissioner Kaplan seconded the motion. The motion passed with the following vote:

Yes: Haggerty, Mei, King, Freitas, Haubert, Kaplan, Valle
No: None
Abstain: None
Absent: Thorne

8. Committee Member Reports

There were no committee member reports.

9. Staff Reports

There were no staff reports.

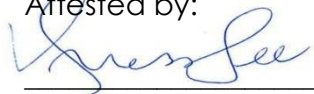
10. Adjournment/ Next Meeting

The next meeting is:

Date/Time: Monday, October 9, 2017 at 1:30 p.m.

Location: Alameda CTC Offices, 1111 Broadway, Suite 800, Oakland, CA 94607

Attested by:



Vanessa Lee,
Clerk of the Commission

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DATE: October 2, 2017

SUBJECT: Update on State and Federal Freight Funding Opportunities

RECOMMENDATION: Receive Update on State and Federal Funding Opportunities

Summary

One of the primary implementation activities identified in the Countywide Goods Movement Plan (Plan) is on-going and active advocacy for funding for goods movement priorities in Alameda County. Alameda CTC is currently monitoring a number of funding opportunities to best position our county to receive funding to advance the goals adopted in the Plan. This item provides an update on the upcoming funding opportunities and demonstrates how the agency will continue to seek to leverage our local funds to the greatest extent possible.

In April, the Commission approved a freight project list (Attachment A) identifying candidate projects to submit for funding opportunities as they arise. Staff will continue to work off of this list to identify the most competitive projects for each funding program for submittal.

Upcoming Funding Opportunities

There are currently multiple funding programs in development which include funding for goods movement projects. The most relevant and timely program is the Trade Corridors Enhancement Program, being administered by the California Transportation Commission (CTC). The Trade Corridors Enhancement Program includes funding from the federal National Highway Freight program (\$535 million) as well as the Senate Bill 1 (SB 1) Trade Corridor Enhancement Account (\$794 million) as well as \$11 million in loan repayments. In May 2018 the CTC will program an estimated \$1.3 billion to fund infrastructure improvements on corridors that have high volumes of freight.

The CTC is in the process of finalizing the program guidelines in October. Current guidelines are largely consistent with program discussions that have been underway for the past year. Key elements include:

- State and regional framework: The CTC guidelines build from the 2007 Trade Corridors Improvement Fund, which provided \$2 billion to goods movement

projects statewide. In Alameda County, that program provided funding for the I-880 improvements at 23rd and 29th Avenues, the I-580 truck climbing lane, and the Outer Harbor Intermodal Terminal at the Port of Oakland. The framework includes a regional/corridor-based focus that aligns with the state's major trade corridors. In Northern California, the Bay Area works closely with the Central Valley to prioritize projects for funding. The CTC is establishing programming targets for each major trade corridor, as well as a statewide target for Caltrans.

Draft Programming Targets (3-year Program)

Statewide Target		
	Percentage	Estimated Funding (\$ millions)
Caltrans	40%	
Regional Corridor Targets		
Regions	60%	
	Percentage of Regional	Estimated Funding (\$ millions)
Regional Shares		
• Bay Area/Central Valley	27%	\$217
• Central Coast	2%	\$16
• Los Angeles/Inland Empire	58%	\$467
• San Diego/Border	11%	\$89
• Other	2%	\$16

- Eligibility: Projects must be located on the federally designated Trade Corridors of National and Regional Significance, on the Primary Highway Freight Network as defined by the California Freight Mobility Plan, or along other corridors that have high volumes of freight as determined by the Commission.

For this first cycle of the program, the CTC intends to only fund the construction phase of projects. Therefore, the current draft guidelines require projects to have completed environmental in order to receive funding. This requirement is under discussion to determine what type of flexibility the CTC might allow for projects that are reasonably close to completing environmental and/or have very limited environmental requirements.

- Match: Projects must provide a minimum 30 percent match to be nominated by the regions. Caltrans is able to nominate projects for the statewide portion

of the program with no match. Projects must be fully funded or demonstrate they can reasonably expect to receive full funding.

- **Nomination process:** The Metropolitan Planning Organizations are responsible for compiling and submitting project nominations to the CTC. MTC is currently finalizing their process for nominations. Staff anticipates project submittals will be due to MTC as early as December. The CTC is currently anticipated to require final project submittals via the MPOs by January 31st, with the CTC adopting the program at its May meeting. Project sponsors may also work with Caltrans to seek funding from the Caltrans portion of the program.

In addition, the Cap and Trade program also includes funding for emission reduction programs, often working directly with the local air districts. The Bay Area Air Quality Management District is leading a multi-agency effort, including Alameda CTC, the Port of Oakland, the City of Oakland, MTC, the California Air Resources Board, the Environmental Protection Agency, and the Alameda County Public Health Department to come together around a coordinated regional framework for investments to reduce emissions related to goods movement in the Bay Area, with a particular focus on West Oakland. Staff has been working directly with members of the Ditching Dirty Diesel Collaborative in order to understand their priorities for emissions reduction investments and ensure those are considered in the development of the larger strategy. Staff anticipates bringing a detailed update on that effort to this Committee later this year.

Regional: At the regional level, goods movement and rail improvements were included in SB 595, Regional Measure 3 (RM3). Alameda CTC was listed as a co-sponsor on these funding categories.

Goods Movement Project List (Attachment A)

Given these upcoming opportunities for funding, Alameda CTC reviewed the Goods Movement Projects List approved by the Commission in April and is proposing no changes to the Project List at this time. Staff proposes to work off of this list to identify projects to submit for funding. As the program guidelines are finalized, staff will evaluate how well each project meets the criteria and requirements, and submit the project(s) that best meet the program. Should a program emerge that is significantly different than those described above, staff will return to the Committee to identify additional projects for consideration. The primary criteria used to develop this list were: project eligibility and competitiveness based on the draft CTC guidelines; project readiness; and inclusion in the Countywide Goods Movement Plan.

Recommendation: Staff recommends the Commission re-approve the freight project list (Attachment A) for consideration for submission to MTC and the CTC or other freight funding programs as appropriate.

Fiscal Impact: There is no fiscal impact.

Attachment:

A. Goods Movement Project List

Staff Contacts

[Tess Lengyel](#), Deputy Executive Director of Planning and Policy

[Carolyn Clevenger](#), Director of Planning

[Vivek Bhat](#), Director of Programming

Attachment A: Alameda County Freight Projects

Project
7th Street Grade Separation (East and West), Port Arterial Improvements and ITS
City of Berkeley Railroad Crossing Safety Improvement Project
City of Fremont Railroad Quiet Zones
City of Berkeley Gimán Street Multimodal Railroad Grade Separation
I-80 Gilman Interchange
I-80 Ashby Interchange
I-880 Winton Avenue Interchange
I-880 Whipple Road and Industrial Blvd Interchange Improvements
Oakland International Airport Perimeter Dike
SR 84 Expressway and SR84/I-680 Interchange
South County Access (SR 262/Mission Blvd Cross Connector)
Adeline Street Bridge Improvements
Grade Crossing and Separation Program (individual crossing improvements to be identified)
Emission Reduction Pilots

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DATE: October 2, 2017

SUBJECT: Update on Alameda CTC Rail Strategy Study

RECOMMENDATION: Receive update on the Rail Strategy Study and approve Executive Director to initiate negotiations with Union Pacific Railroad and other public agency partners to advance recommendations

Summary

This memo provides an update on the Alameda CTC's Rail Strategy Study. The Study is an outgrowth of recommendations included in the Countywide Goods Movement Plan and the Countywide Transit Plan, which both identified significant growth potential for rail in the county. The Study is a one-year technical effort to examine possible future freight and passenger rail growth scenarios and the implications for Alameda County, and to identify potential improvements that support more efficient freight and passenger rail operations while reducing impacts on communities adjacent to rail infrastructure.

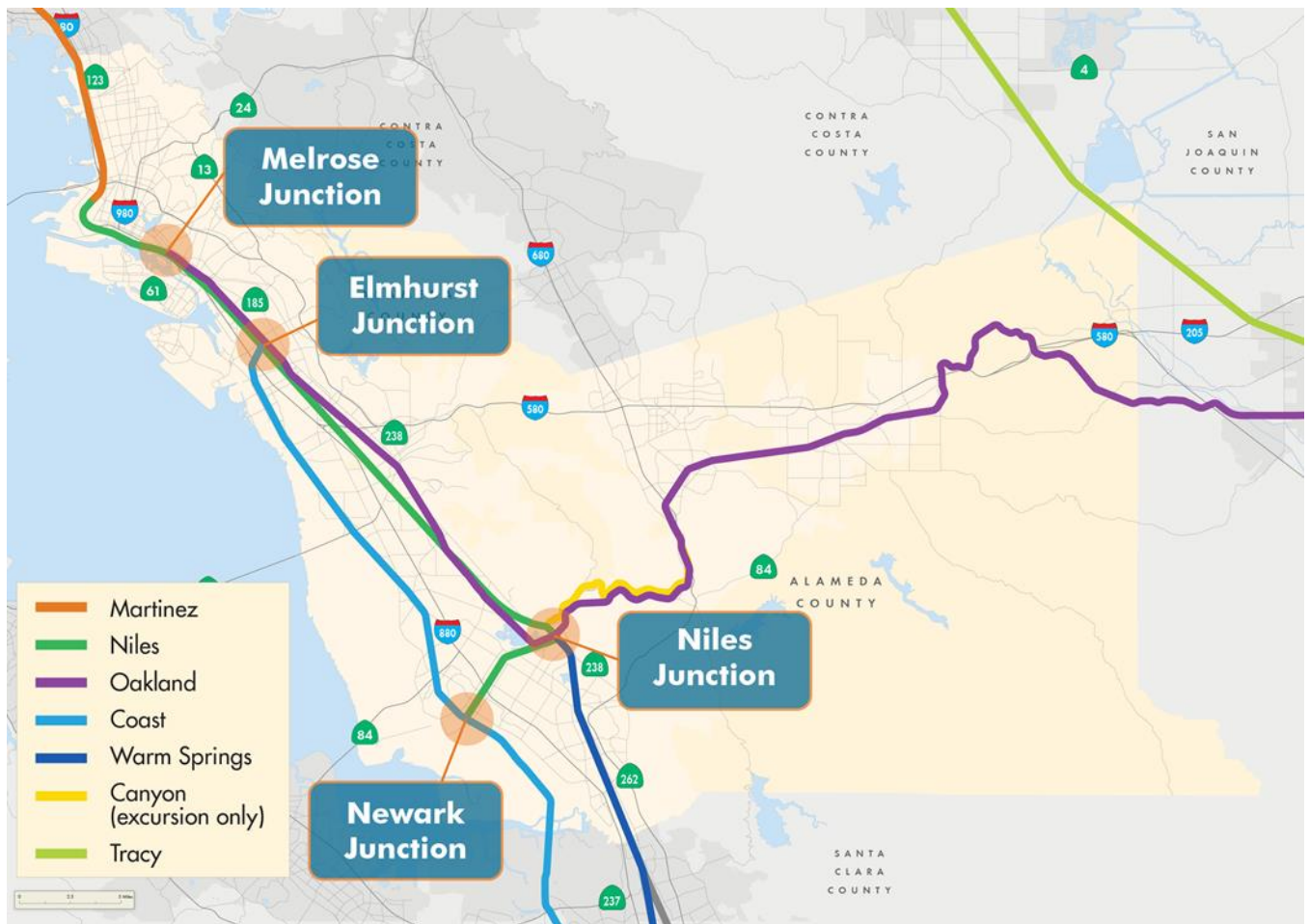
This update focuses on the initial results of high-level capacity and operations analysis of the rail system in Alameda County that identifies current and future system constraints and provides an indication of the types of improvements that could improve operational efficiency of the system and/or reduce local impacts. In addition, this update describes the initial work underway to develop a strategic framework for advancing grade crossing improvements. This includes a methodology being developed to evaluate and prioritize railroad grade crossing improvements in order to establish an ongoing framework to advance grade crossing improvements, which focuses on improving safety and reducing impacts such as vehicle delay, emissions, and noise.

Background

The rail system in Alameda County is a critical transportation link serving a unique role for both people and goods movement. Alameda County contains the core of the Bay Area/Northern California freight and passenger rail system. Two Class 1 freight railroads (the Union Pacific Railroad (UP) and the BNSF Railway), two intercity regional railroads (Capitol Corridor and Altamont Corridor Express), and two longer distance intercity rail

services (Amtrak Coast Starlight and the San Joaquin's intercity rail service) operate on this system. The system is owned by UP, with the passenger rail providers operating on UP-owned right of way. The intercity rail services provide an alternative to autos for intercity and longer distance commuter trips. **Figure 1** presents a map of the existing rail infrastructure and identification of some critical rail junctions in Alameda County.

Figure 1. Existing Rail Infrastructure in Alameda County



The rail system is currently under pressure from multiple growth patterns. With new rail services and economic development at the Port of Oakland, and local and regional populations that continue to grow and consume goods and services, freight rail demand is anticipated to grow in the future. Efficient freight rail service is critical to the success of the Port of Oakland as well as providing the most cost-effective long haul transportation option for certain commodities produced or used by Bay Area industries. While moving goods by rail rather than truck can reduce highway and local road congestion and emissions from trucks, increased rail activity can also result in local-level community impacts as trains travel through the county where rail infrastructure and

operations about communities. In addition, there are multiple planning efforts for increased passenger rail services, both locally and in the larger Northern California mega-region, all of which pass through and serve Alameda County.

The Countywide Goods Movement Plan identified significant economic, congestion, safety, and potential air quality benefits of a program that would create improved rail connections between the Port of Oakland and the state and national rail network. Such a program, if properly implemented, could complement efforts of regional intercity rail providers to expand and improve their services while also supporting rail mode share growth at the Port. Another key element of the Study is a robust analysis of grade crossings in the county and the establishment, based on quantitative and qualitative metrics, of a prioritized grade crossing program to support ongoing advocacy for funding and provide jurisdictions with tools to assist in grade crossing analysis.

Work Completed To Date

In April, staff and consultants provided an introduction to the study that included an overview of the rail infrastructure in Alameda County, current train volumes, rail network and infrastructure issues, and an overview of rail grade crossings in the County. Since April, the consultant team completed and distributed an existing conditions analysis, developed a range of potential growth scenarios based on existing planning efforts (State Rail Plan, Port of Oakland planning documents, Capitol Corridor Vision Plan, and ACEforward), and prepared an initial analysis of capacity and operational constraints in the system based on the potential growth scenarios. The capacity analysis also considered potential changes in operations and infrastructure improvements in order to gain insight into the types of investment packages that could improve the overall performance of the system. The next step in the analysis process will be to examine impacts of the best-performing packages, develop cost estimates, and recommend potential packages that could form the basis for partnership discussions with UP, intercity passenger rail operators, and regional and state partners.

Rail Network and Infrastructure Issues

In the existing conditions analysis, a number of issues and constraints were identified and their impacts on system performance were subsequently evaluated in the capacity analysis. Three major categories of infrastructure issues that were identified:

- **Single track segments** – South of the Port of Oakland, much of the rail system consists of single track subdivisions running in parallel with some rail-rail crossings (junctions). As train volumes grow and freight and passenger trains share these single track segments, operations will begin to break down and capacity will limit potential for growth.

- **Speed restrictions** – Many segments in the system have significant speed constraints that have the effect of limiting capacity. These constraints are often due to the track geometry, the level of maintenance, or the presence of at-grade crossings and safety concerns.
- **Poor connectivity** – The rail system in Alameda County is a legacy system which reflects the fact that in the past, different subdivisions had different operators. As a result, there are missing connections between subdivisions at key locations. This can result in circuitous routing and a lack of system redundancy and flexibility.

A base year capacity analysis was conducted that verified many of the known operating constraints and choke points. Additional more detailed analysis would need to be completed by UP to fully verify these observations. Key existing and developing constraints, listed from north to south, include the following:

- Martinez Subdivision through Emeryville and into the Port of Oakland has sufficient track capacity for current and projected volumes but there are access issues into the Port of Oakland that can result in rail congestion and impact grade crossings throughout Emeryville.
- The Niles Subdivision through Jack London Square is nearing the upper limit of optimal operations¹ due to speed constraints, many closely spaced at-grade crossings and high train volumes.
- Newark Junction is at the upper limit of optimal operations. This is a location where freight and both regional rail providers converge as they move to and from the busy Centerville line (Niles Subdivision).
- Niles Junction/Niles Canyon is at the upper limit of optimal operations. This is a location with complicated movements by passenger and freight trains in a segment with track geometry that slows down trains.
- The Coast Subdivision is at the upper limit of optimal operations north of Newark Junction and above the upper limit of optimal operations south of Newark Junction (where both intercity passenger services move between Oakland and San Jose and where some freight trains continue south).

Figure 2 summarizes the key assumptions about train volumes for the future potential growth scenarios.

¹ The term “optimal operations” indicates that the rail segment has adequate capacity for additional train traffic and to perform routine maintenance to infrastructure. If a delay occurs to one train, it will not necessarily delay any of the following trains. All trains are able to complete their trips, most without any delays or minor delays. This roughly equates to a highway LOS C.

Figure 2. Growth Scenario Assumptions

2035 Growth Scenarios and Key Assumptions		
	Freight Trains	Passenger Trains
1	<p>Moderate</p> <ul style="list-style-type: none"> Historical 2% growth Maintain 23% rail share at Port 	<p>None</p> <ul style="list-style-type: none"> Same service as 2016
2	<p>High</p> <ul style="list-style-type: none"> Higher Port growth consistent with Oakland Army Base EIR 40% rail share at Port 	<p>Moderate</p> <ul style="list-style-type: none"> Add 4 daily Capitol Corridor Oakland to 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	<p>High</p> <ul style="list-style-type: none"> Higher Port growth consistent with Oakland Army Base EIR 40% rail share at Port 	<p>High</p> <ul style="list-style-type: none"> Based on Capitol Corridor Vision Plan Phase 1, add 8 daily Oakland to 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).

The capacity analysis for Scenario 1 indicates that all of the constraints identified for the existing conditions become more severe with no passenger train growth and moderate freight growth. While the analysis does show partially constrained capacity in Niles Junction/Niles Canyon, there is sufficient capacity so that UP can accommodate the freight train growth assumed in this scenario. In this scenario, improvements were examined that would convert an existing drill track north of the Port of Oakland to a third main track within the existing rail right of way and would add grade crossing safety improvements in Emeryville. These projects would improve access to the Port of Oakland while reducing community impacts. A series of grade crossing improvements to address safety concerns in the Jack London Square area were also examined. These improvements would improve pedestrian and motorist safety while at the same time increase allowable speeds in Jack London Square and potentially create an opportunity to pursue a quiet zone in the area. Detailed analysis of these potential improvements by the cities, rail operators and the Public Utilities Commission would be needed before any projects could move forward.

In Scenario 2, with higher freight growth, moderate passenger growth, and current train routing, most of the rail system south of the Port of Oakland will be fully constrained and

improvements would be needed to accommodate this growth without significant delays and congestion on the system. One operational alternative that is already being explored by the Capitol Corridor in discussion with the UP, and was articulated in the Capitol Corridor Vision Plan, is to shift Capitol Corridor operations to the Coast Subdivision and freight operations largely to the Niles/Oakland Subdivisions (from Elmhurst Junction to Niles Junction). This would not change the volume of freight trains moving through Niles Junction/Niles Canyon, but would eliminate congestion at Newark Junction, significantly reduce the number of trains on the Centerville Line, and eliminate the need for a third main track on the Niles Subdivision from Jack London Square to Elmhurst Junction. This would require a new connection to allow freight trains to move from the Niles Subdivision to the Oakland Subdivision. One option that was analyzed would create a new connection at Industrial Parkway in Hayward. Additionally, a new rail junction between the Centerville Line and the Oakland Subdivision, a project known as the Shinn Connection, could provide system redundancy, improve fluidity and operational flexibility through Niles Junction and potentially serve future passenger rail services (i.e. Dumbarton Rail plans).

Scenario 2 did indicate that with or without the changes in routing already discussed, there would not be sufficient capacity in Niles Canyon to accommodate the growth in freight and ACE passenger trains without double tracking through Niles Canyon. Since this may not be feasible for environmental, community impact, and engineering reasons, another routing alternative was examined. In this case, some of the freight trains that would otherwise be routed through Niles Canyon are assumed to be routed north along the Martinez Subdivision to UP's Tracy Subdivision, which connects with the Martinez Subdivision in Richmond and runs east-west through Contra Costa County. It is assumed that most of these freight trains would eventually connect to a southern route (to markets in the Southwest and Southeast) in Stockton. At the present time, the Tracy Subdivision is inactive and would require track upgrades if UP were to use it more regularly. In addition, the Martinez Subdivision would require extension of the third main track, which would be a conversion of an existing track within the rail right of way as described for Scenario 1, to North of Richmond and an additional segment of third main track in Hercules. This routing option would reduce the number of freight trains on the Niles/Oakland Subdivisions as compared to the previous alternative routing and could potentially encourage UP to allow ACE to increase passenger service while still significantly reducing train volumes on the Centerville Line. Additional coordination with Contra Costa County would need to be done if this is a routing option UP would take.

Scenario 3, with high freight growth and high passenger growth produces similar results as Scenario 2 with similar impacts on operations and capacity from changes in routing and improvements previously discussed. In this scenario, analysis was conducted to determine what the needs would be for high Capitol Corridor train volumes from Oakland to San Jose. The analysis confirmed that for Capitol Corridor to achieve the service levels outlined in the Capitol Corridor Vision Plan Phase 1, they would need to

operate on dedicated passenger tracks, rather than continuing to operate on shared infrastructure with UP. Given the difficulties in accommodating moderate levels of passenger growth through the Niles Canyon as described in Scenario 2, the higher levels of growth for the ACE services were not analyzed further in Scenario 3.

Grade Crossings and Community Impacts

The density of the rail network and land use patterns in Alameda County results in a large number of locations where roadways and the rail system cross each other at-grade. Collisions, congestion, noise, and emissions at crossings are major concerns for communities located along the rail infrastructure. With significant growth being concentrated along the existing rail infrastructure, these conflicts are expected to increase in the future.

The Rail Strategy Study is developing a methodology to prioritize grade crossings based on the social cost (collisions, noise, emissions, fuel consumption, etc.) of impacts at the crossings. The methodology will also include an approach to identify the types of safety and impact reduction improvements (improved signals and warning devices, grade separations, crossing closures, quiet zones) that are most cost-effective in different types of locations and typical situations around the County.

The study team has compiled data for 136 individual public crossings on railroad mainlines and is in the process of monetizing the social costs of the impacts at these crossings. Data have been collected on train and vehicle volumes (current and projected), collisions (10-year accident history and predictions), vehicle delay, potential noise impacts, emissions from idling vehicles, and proximity to sensitive land uses (including residential uses) and Communities of Concern. **Figure 3** shows some of the crossings that rank among the top 10 in the County for safety costs, delay costs, and potential noise impacts. The ranking based on social costs of impacts will provide a first cut at high priority crossings that may need improvements.

Figure 3. Crossings with High Safety, Delay, and Noise Impacts

Street Location	City	Rail Subdivision	Top Ten in Incurred Safety Costs	Top Ten in Delay Costs	Top Ten in Residential Noise Index
29th Ave	Oakland	Niles	X		X
37th Ave	Oakland	Niles	X		X
65th St.	Emeryville	Martinez			X
66th St	Emeryville	Martinez			X
67th S.	Emeryville	Martinez			X
98th Ave	Oakland	Niles		X	

Street Location	City	Rail Subdivision	Top Ten in Incurred Safety Costs	Top Ten in Delay Costs	Top Ten in Residential Noise Index
Cedar St.	Berkeley	Martinez			X
Davis St.	San Leandro	Niles	X	X	
Dyer St	Union City	Coast		X	
Fremont Blvd.	Fremont	Niles		X	
Fruitvale Ave.	Oakland	Niles	X		X
Gilman St.	Berkeley	Martinez	X		X
Hesperian Blvd.	San Leandro	Niles	X	X	
High St	Oakland	Niles	X	X	X
Industrial Pkwy.	Hayward	Niles		X	
Santa Rita Rd.	Pleasanton	Oakland		X	
Tennyson Rd.	Hayward	Niles		X	
Union City Blvd.	Union City	Coast		X	
Washington Avenue	San Leandro	Niles	X		

In addition to analyzing crossings individually, the methodology is looking at corridors that contain multiple crossings that are generally placed relatively close to each other. By looking at corridors and the roadway circulation patterns for vehicles that use the crossings, it should be possible to identify more cost-effective solutions and to take into consideration the interaction of crossings in a corridor in terms of operations and safety. This may also create new opportunities for quiet zones. The social costs for each of the individual crossings in a corridor will be aggregated so that the corridors can be compared to each other. This may elevate the importance of certain groups of crossings that might not rank as highly when considered individually. Another potential advantage of considering corridors is that it can set the stage for more effective funding advocacy by bringing groups of stakeholders together rather than having them compete with one another for limited funding. A plan for the whole corridor can then be pursued over time. This approach has proved very effective in funding improvements in the Puget Sound region (the FAST Corridor), Southern California (the Alameda Corridor East), and in the Chicago area (the CREATE program).

Next Steps

The results of the capacity analysis are being compiled in a tech memo that will be shared with staff from the Capitol Corridor, ACE, and UP for technical review as well as with ACTAC. Additional analysis is also being conducted to compare impacts and

benefits of different improvements and their relationship to surrounding communities. Preliminary cost analyses of potential improvements have been developed and are under review. This analysis will form the basis for detailed discussions with our state and regional partners and UP. It is anticipated that discussion with UP will also include discussions of the East Bay Greenway and the 7th Street Grade Crossing projects at the Port of Oakland, two complex projects being led by Alameda CTC's Project Delivery team. Both projects require significant partnership with UP.

Improvement concepts for grade crossings are being identified in parallel with completing the initial evaluation of the social costs associated with crossing impacts. An initial analysis of social costs for individual crossings has been completed in draft and a similar analysis is underway for corridors. The prioritization methodology will be completed by the end of the year with an initial assessment of high priority crossing improvements and strategies for pursuing funding. In order to advance this work and secure input from the jurisdictions, Alameda CTC is forming a Working Group for interested ACTAC members. The Working Group will meet on November 9th and December 11th to review initial methodology and data analysis and provide input on the prioritization framework.

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 Crossing projects.

Fiscal Impact: There is no fiscal impact.

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