


ALAMEDA COUNTY TRANSPORTATION COMMISSION

Countywide Multimodal Arterial Plan

Improving multimodal mobility for better economic, health and environmental outcomes



PlanTAC July 21st, 2015 Meeting
Francisco Martin and Matthew Ridgway, Fehr & Peers
Phil Erickson, CD+A

Presentation Overview

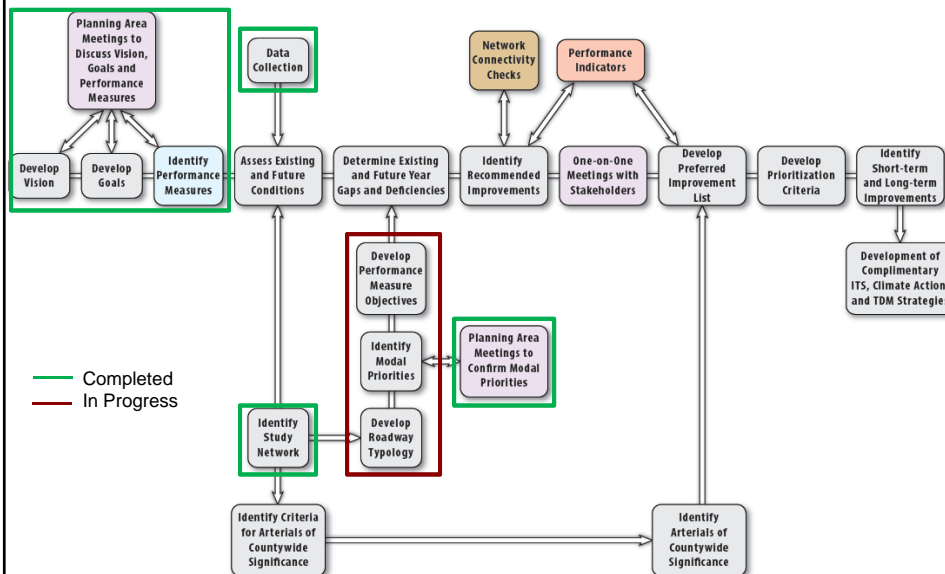
- Arterial Plan Status Update
- Updated Draft Typology Framework and Modal Priorities
- Updated Draft Performance Objectives
- Requested Actions:
 - ✓ Provide input on revised Typology Framework and Modal Priorities
 - ✓ Provide input on revised Performance Objectives
- Next Steps

Arterial Plan Progress Status Update

Arterial Plan Component	In Progress	Submitted	Approved	Notes
Vision and Goals			✓	Approved by Commission 2/26/15
Performance Measures			✓	Approved by Commission 2/26/15
Updated Draft Typology and Modal Priority Framework		✓		Anticipated Approval – September 2015
Updated Draft Performance Objectives		✓		Anticipated Approval – September 2015
Draft Arterial Network Criteria and Maps	✓			Anticipated Submittal – August 2015
Draft Existing Conditions	✓			Anticipated Submittal – August 2015
Draft Future Year Forecasts	✓			Anticipated Submittal – September 2015



Arterial Plan Framework



Stakeholder Review Process

Typology, Modal Priority and Performance Objectives:

- April 9th PlanTAC Meeting
- April 20th – 22nd Planning Area Meetings
- April 20th Non-Agency Stakeholder Meeting
- 50+ comments received on typology, modal priority and performance objective framework
- 400+ typology/modal priority comments received via GIS Server

Typology Review

Why Complete Streets Typology?

- Creates Street classification system that reflects
 - ✓ Multimodal function of streets
 - ✓ Land use context fronting streets
- Offers more than the traditional street classification systems
 - ✓ Provides detail for balancing modes within existing space of urban streets inform appropriate street design
 - ✓ Defines an integrated modal network
 - ✓ Based on more than vehicular traffic volumes



Grand Avenue, Oakland



Railroad Avenue, Livermore



Logan Drive, Fremont

Typology Review

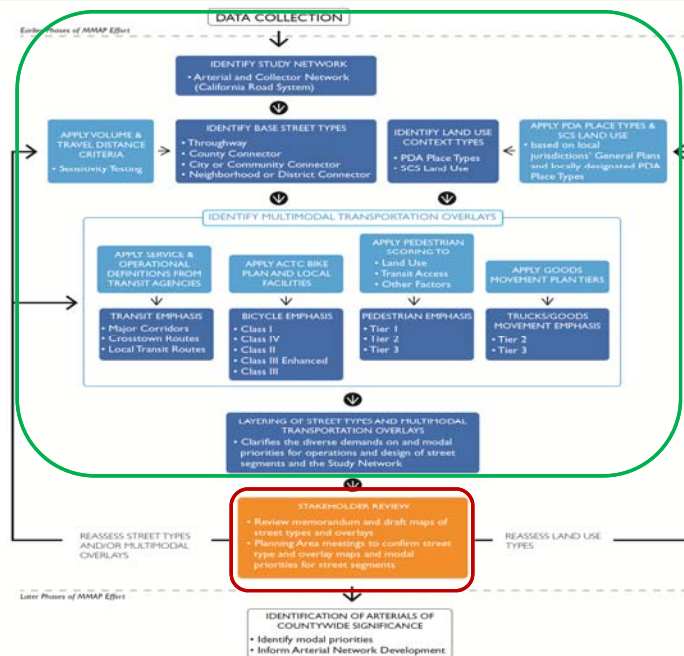
Key Typology Framework Components:

- **Land Use Context** – The built and natural environments that the streets pass through.
- **Street Type** – based on travel and access characteristics of existing vehicle travel.
- **Multimodal network overlays** – Emphasis given to goods movement, transit, bicyclists, or pedestrians.



Typology Framework and MMAP Effort

— Completed
— In Progress



Land Use Overlay

- Land use overlay informs appropriate contextual design of key elements in street cross section.
 - ✓ Example: *Pedestrian priority street in PDA should have a wider sidewalk than a residential street.*

• ABAG PDA Place Types

- Regional Center
- City Center
- Suburban Center
- Transit Town Center
- Urban Neighborhood
- Transit Neighborhood

• Alameda CTP SCS Land Use

- Mixed Use
- Commercial
- Business Park/Industrial
- Industrial
- Education/Public/Semi-Public
- Residential
- Rural Residential & Open Space
- Parks/Open Space
- Agriculture/Resource Extraction
- Other/Unknown

March 25, 2015

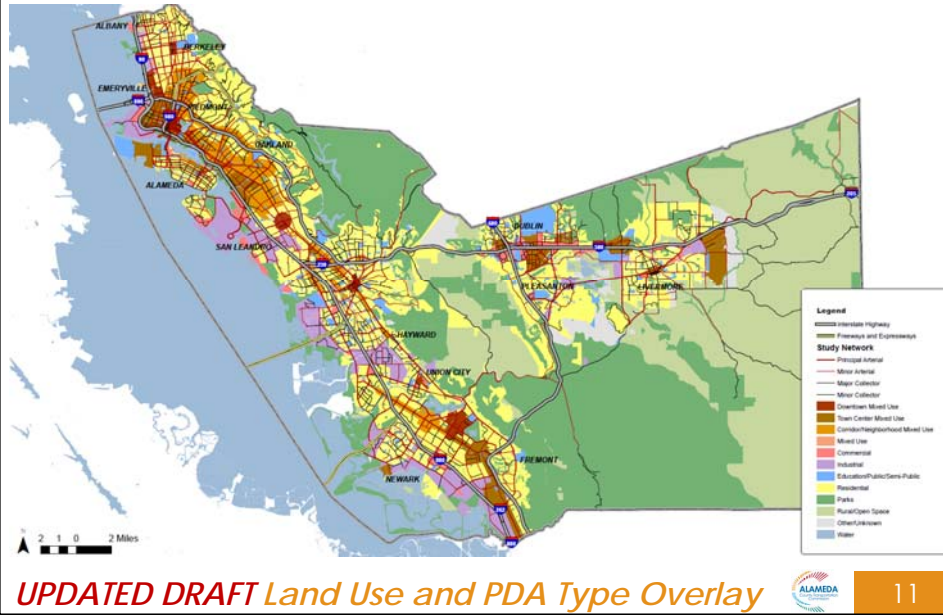
ACTC Multimodal Arterial Study Network
Land Use and Priority Development Area Overlays

Land Use Emphasis General Comments

- Several jurisdictions requested revisions to land use mapping.
- There are several areas throughout the County where new land use plans have been adopted since the land use database development as part of the *2012 Countywide Transportation Plan and Plan Bay Area SCS*.
- Land use revisions were made only if it affected the resulting modal priorities for a street segment.

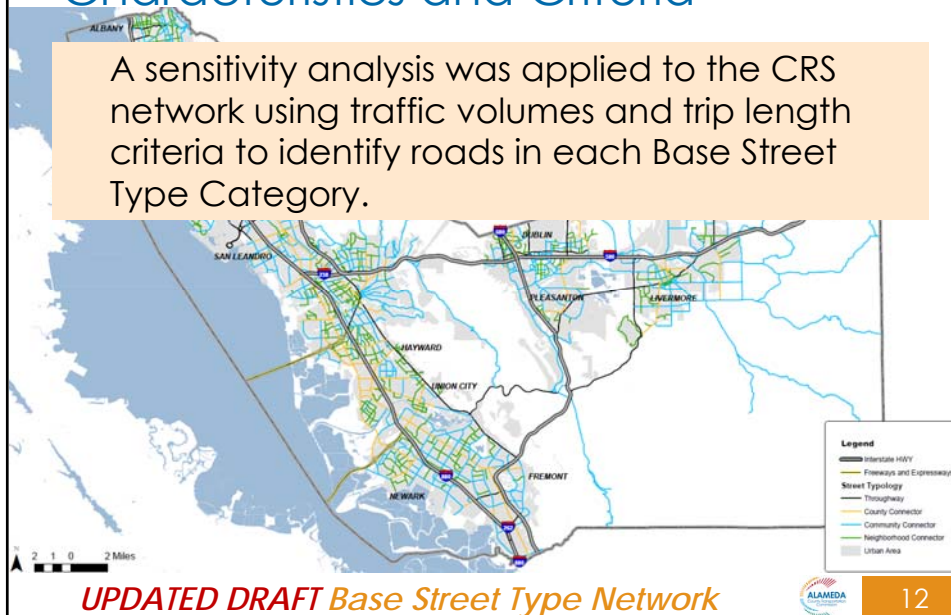


Revised Land Use Overlay



Base Street Type Characteristics and Criteria

A sensitivity analysis was applied to the CRS network using traffic volumes and trip length criteria to identify roads in each Base Street Type Category.



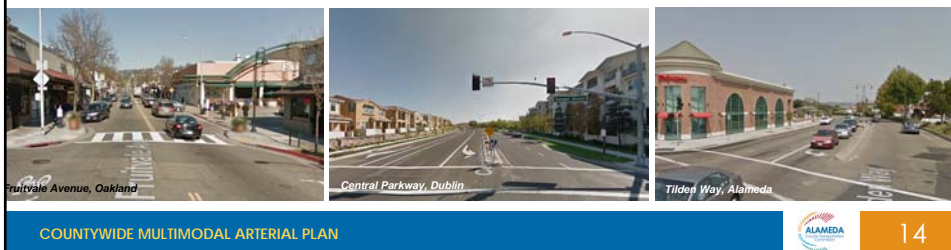
Base Street Type General Comments

- Several requests for manual changes to base street types to reflect jurisdictions' knowledge of their streets and its function.
- Majority of requested changes were made by manually adjusting base street type map.

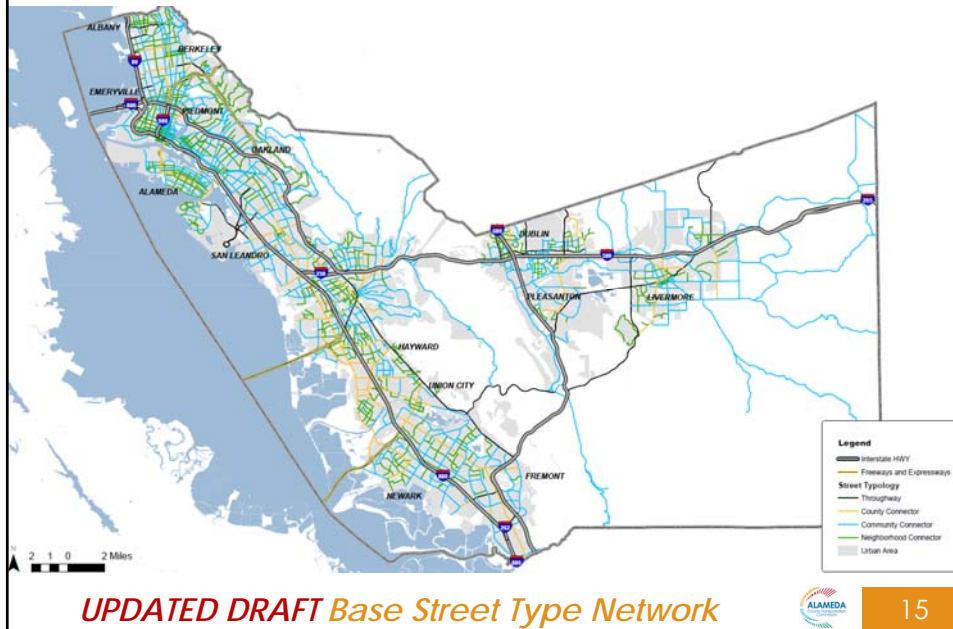


Base Street Type General Comments

- Several requests for additions to Study Network.
- Study Network was based on CRS classification and is extensive already for a Countywide Plan of this nature.
- Planned and funded future roadways will be assumed in the future scenario.

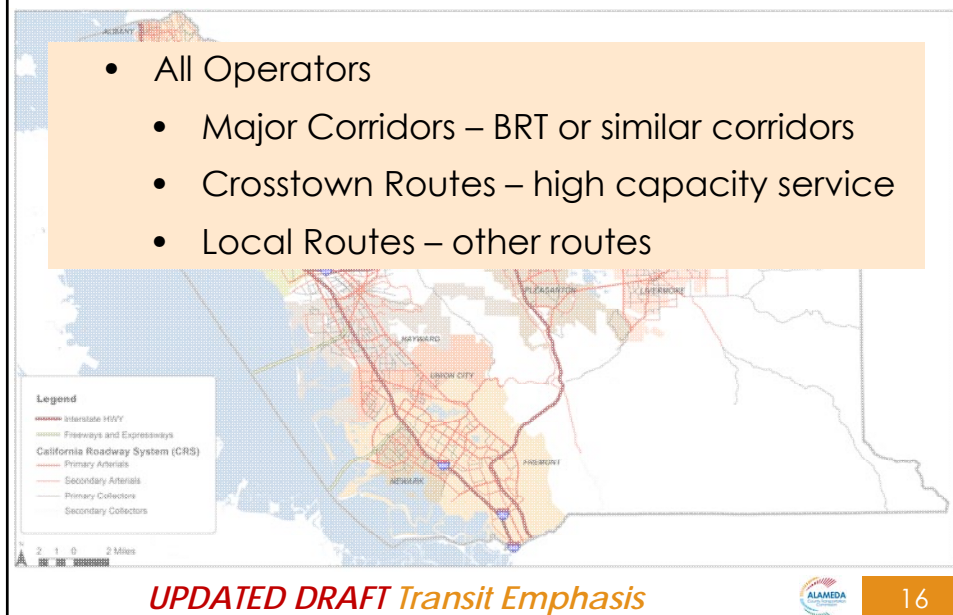


Revised Base Street Type Network



Multimodal Overlays - *Transit*

- All Operators
 - Major Corridors – BRT or similar corridors
 - Crosstown Routes – high capacity service
 - Local Routes – other routes



Transit Emphasis General Comments

- AC Transit requested many routes to be designated as Major Corridors based on their proposed COA alternatives.
- Coordinated to include Alameda CTC's Transit Plan priority network alternatives.
 - Majority of requested changes were made

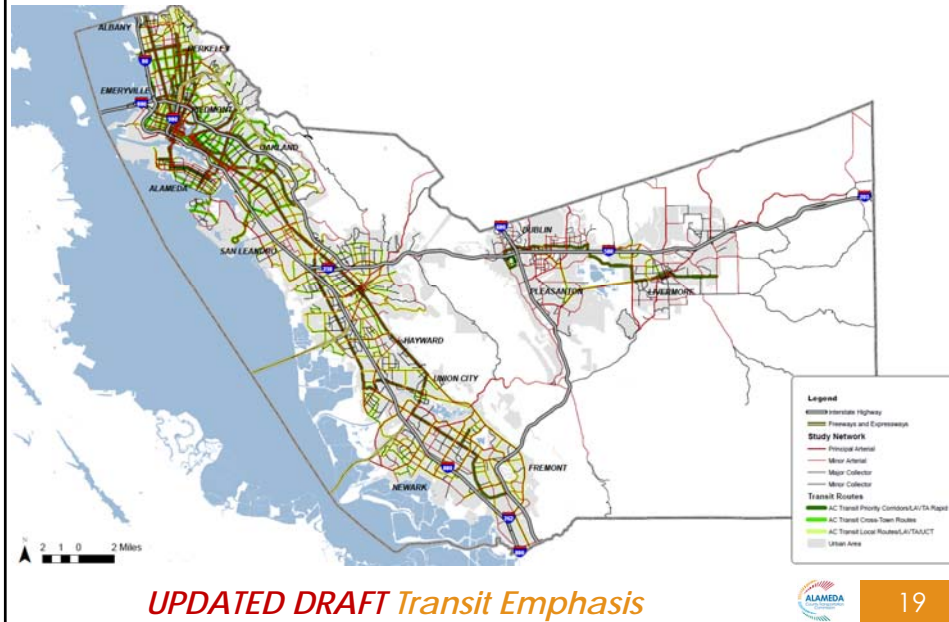


Transit Emphasis General Comments

- Emeryville requested Emery Go-Round service be added to transit emphasis map.
- LAVTA and several cities requested additions to transit emphasis map.
 - Majority of requested changes were made except for routes not on Study Network.



Revised Multimodal Overlays - *Transit*



Multimodal Overlays - *Bicycle*

- 2012 Countywide Bicycle Plan Vision Network
- 4 Regional Trails
- Other Existing Bicycle Facilities
- Total of six facility classes:
 - ✓ Class I – bicycle and multiuse paths
 - ✓ Class IV – cycle tracks and similar protected facilities
 - ✓ **Class II Enhanced – buffered bicycle lanes**
 - ✓ Class II – bicycle lanes and green bicycle lanes
 - ✓ **Class III Enhanced – bike boulevards and similar enhanced bike routes**
 - ✓ Class III – bike routes, sharrows, shoulders, and curb lanes

UPDATED DRAFT Bicycle Emphasis



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Bicycle Emphasis General Comments

- Revised bike network map to include Class II and Class III Enhanced designation.
- Several jurisdictions requested changes to bike network. Cities of Oakland, Dublin and Livermore provided GIS layer of bike network.
- Majority of requested changes were made by either adding/revising bike facilities on Study Network or by providing “markers” on non-Study Network streets.

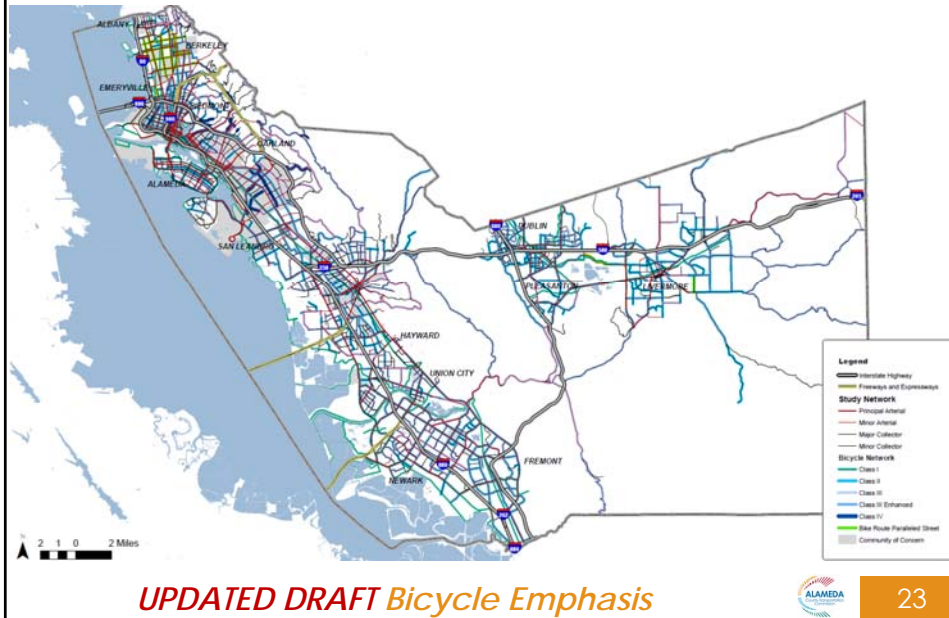


Bicycle Emphasis General Comments

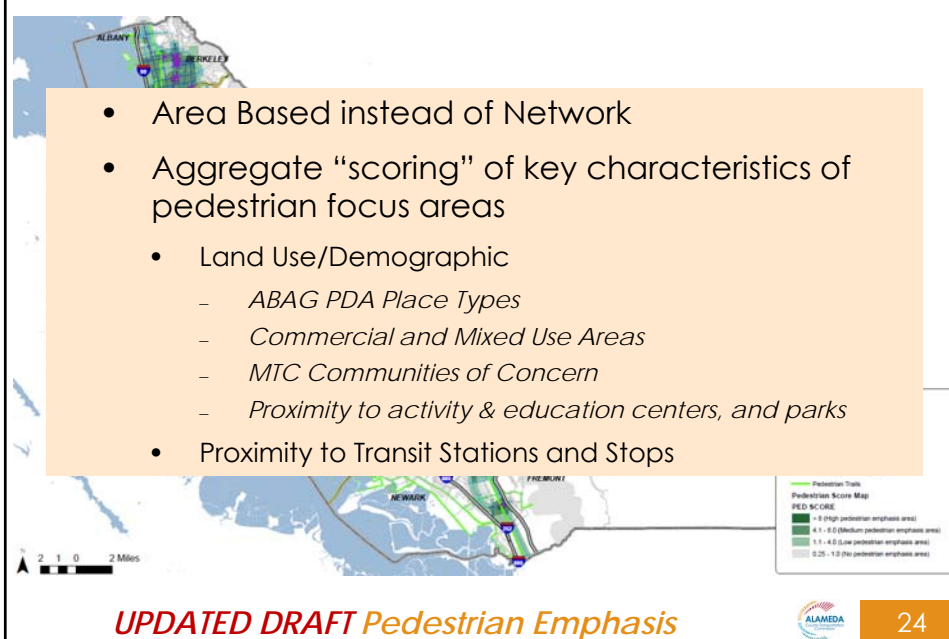
- Bike network is based on documents and policies adopted by jurisdictions, majority of which do not include protected bike lanes, which came about later
- Following industry standard, Multimodal Arterial Plan is consistent with adopted documents and policies prepared by jurisdictions.
- Guidance on future update to the Arterial Plan will address how, what and when to include the updates from the local bike plans regarding the protected bike lanes.



Revised Multimodal Overlays - *Bicycle*

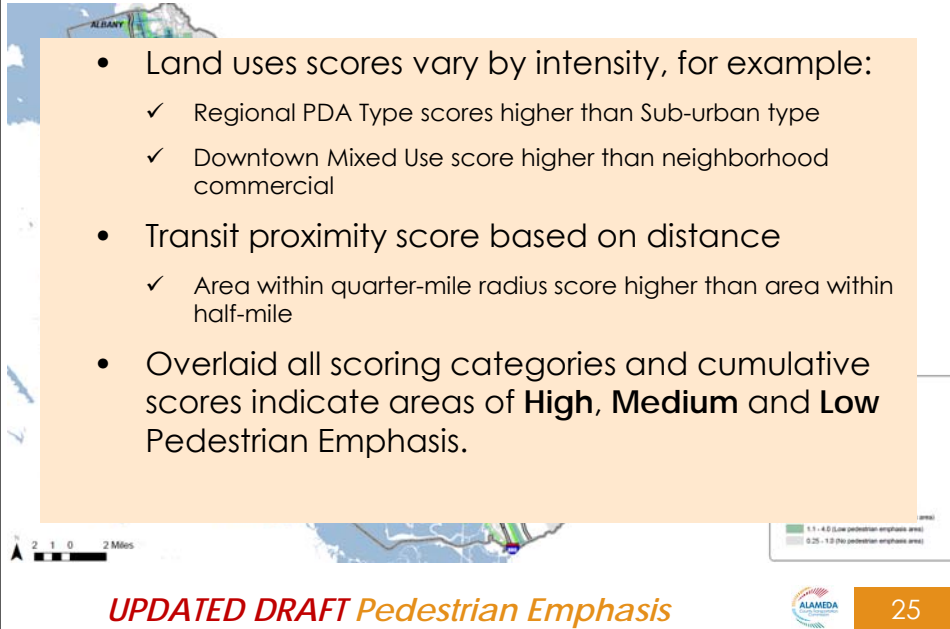


Multimodal Overlays - *Pedestrian*



Multimodal Overlays - *Pedestrian*

- Land uses scores vary by intensity, for example:
 - ✓ Regional PDA Type scores higher than Sub-urban type
 - ✓ Downtown Mixed Use score higher than neighborhood commercial
- Transit proximity score based on distance
 - ✓ Area within quarter-mile radius score higher than area within half-mile
- Overlaid all scoring categories and cumulative scores indicate areas of **High, Medium** and **Low** Pedestrian Emphasis.



UPDATED DRAFT Pedestrian Emphasis



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Pedestrian Emphasis General Comments

- Several cities commented on the desire to increase ped emphasis on certain streets.
- Ped scoring method modified to:
 - Increased score for commercial mixed-used land uses by adding score for 1/8 mile buffer for commercial main street land uses.

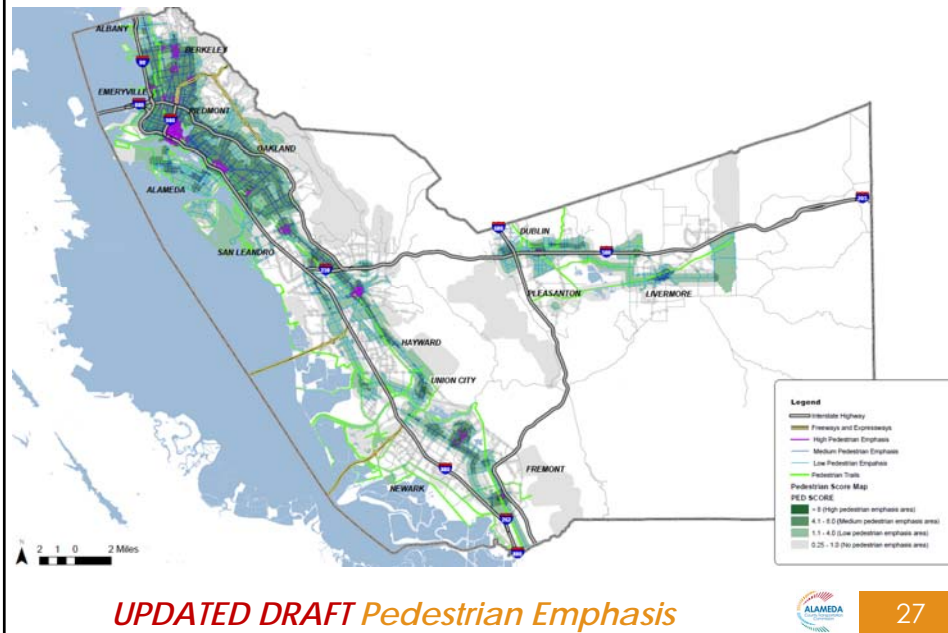


COUNTYWIDE MULTIMODAL ARTERIAL PLAN

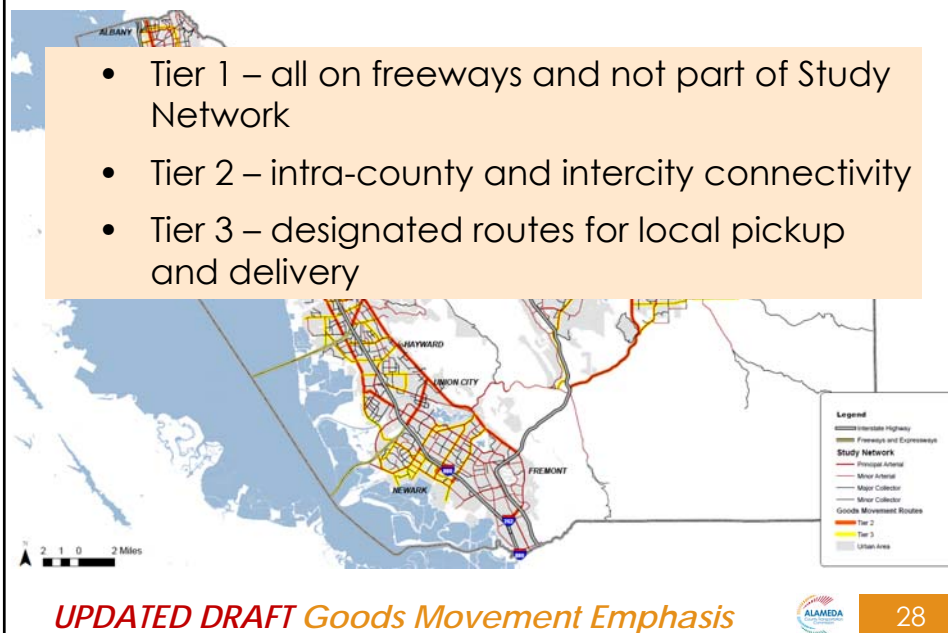


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Revised Multimodal Overlays - Pedestrian



Multimodal Overlays – Goods Movement

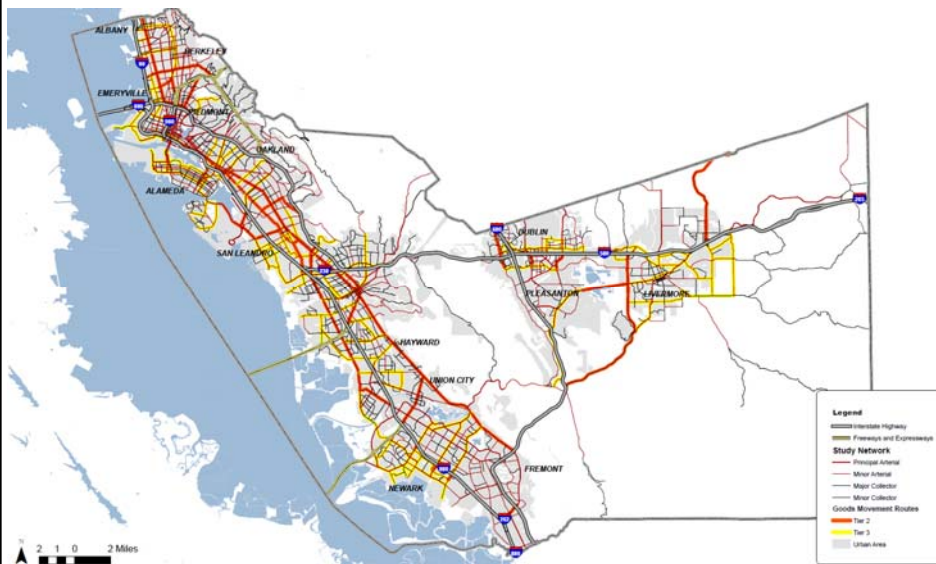


Goods Movement Emphasis General Comments

- Few jurisdictions requested additions to goods movement network.
 - Majority of requested changes were made.
- Clarification between federal/state truck route designations and goods movement three-tier network.
 - Goods movement three-tier network is based on Countywide Goods Movement Plan and does not necessarily fully represent designated federal/state truck routes. The prior slide defines the functional basis for the three tiers.



Revised Multimodal Overlays – Goods Movement



Modal Priorities

Modal Priorities

- Priorities are informed by the combination of land use context type, street type, and any modal overlays that apply to a particular street section



Modal Priorities - Concepts

- Land Use Context –
 - More dense and mixed use areas give more priority to transit, walking, and biking
 - Less dense and more single use areas give more priority to transit and then auto
 - Industrial areas give more priority to transit and then goods movement

Table 1
MMAP Modal Priorities - General

Land Use Context Types <ul style="list-style-type: none"> ▪ Downtown Mixed Use ▪ Town Center Mixed Use ▪ Corridor/Neighborhood Mixed Use ▪ Education/Public/Semi-Public ▪ Parks 	Land Use Context Types <ul style="list-style-type: none"> ▪ Mixed Use ▪ Commercial ▪ Residential ▪ Rural/Open Space ▪ Other/Unknown 	Land Use Context Types <ul style="list-style-type: none"> ▪ Industrial
Associated Modal Priorities <ol style="list-style-type: none"> 1. Transit 2. Pedestrian 3. Bicycle 4. Auto 5. Goods Movement/Truck 	Associated Modal Priorities <ol style="list-style-type: none"> 1. Transit 2. Auto 3. Goods Movement/Truck 4. Bicycle 5. Pedestrian 	Associated Modal Priorities <ol style="list-style-type: none"> 1. Transit 2. Goods Movement/Truck 3. Auto 4. Bicycle 5. Pedestrian

Modal Priority General Comments

- Enhanced Class II and III bike facilities given same priority as Class I and IV facilities in view of the similar higher level of protection they offer to biking.
- Modal priorities were also updated as a result of the revisions made to base street type and modal emphasis networks.



Modal Priority General Comments

- Several jurisdictions requested specific modal priority changes for certain streets to be reflective of jurisdictions' knowledge and function of their streets .
- Majority of requested changes were made except for routes not on Study Network.

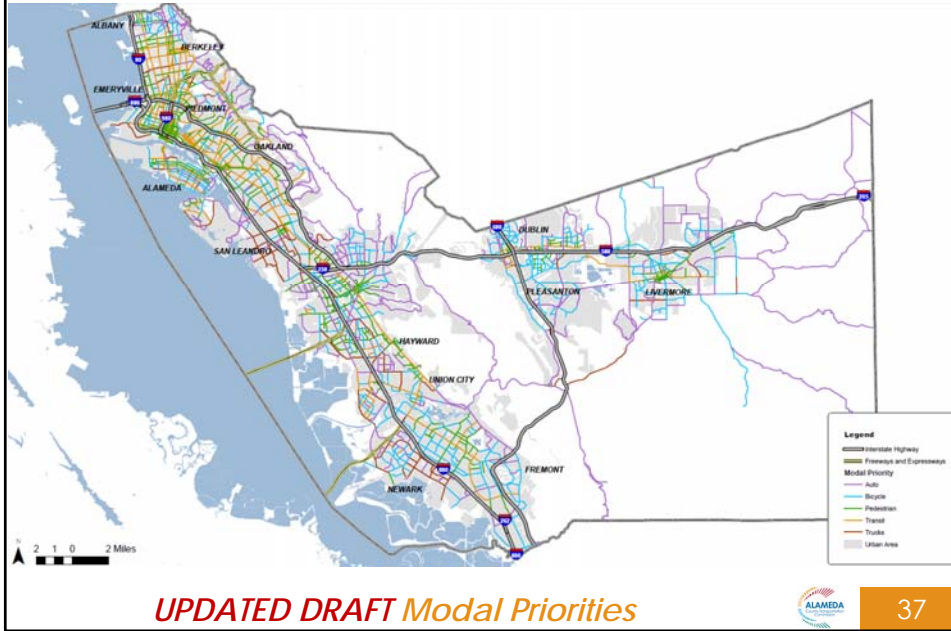


Updated Modal Priorities

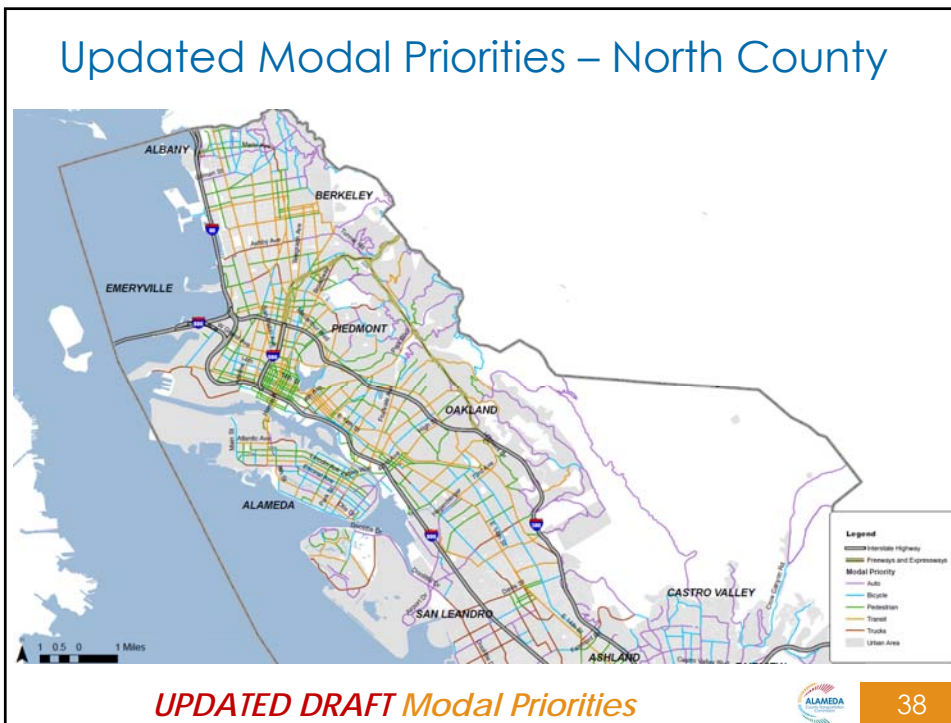
- Specific types and emphasis levels – Updated

Column 1	Column 2	Column 3
Land Use Context Types <ul style="list-style-type: none"> ▪ Downtown Mixed Use ▪ Town Center Mixed Use ▪ Corridor/Neighborhood Mixed Use ▪ Education/Public/Semi-Public ▪ Parks 	Land Use Context Types <ul style="list-style-type: none"> ▪ Mixed Use ▪ Commercial ▪ Residential ▪ Rural/Open Space ▪ Other/Unknown 	Land Use Context Types <ul style="list-style-type: none"> ▪ Industrial
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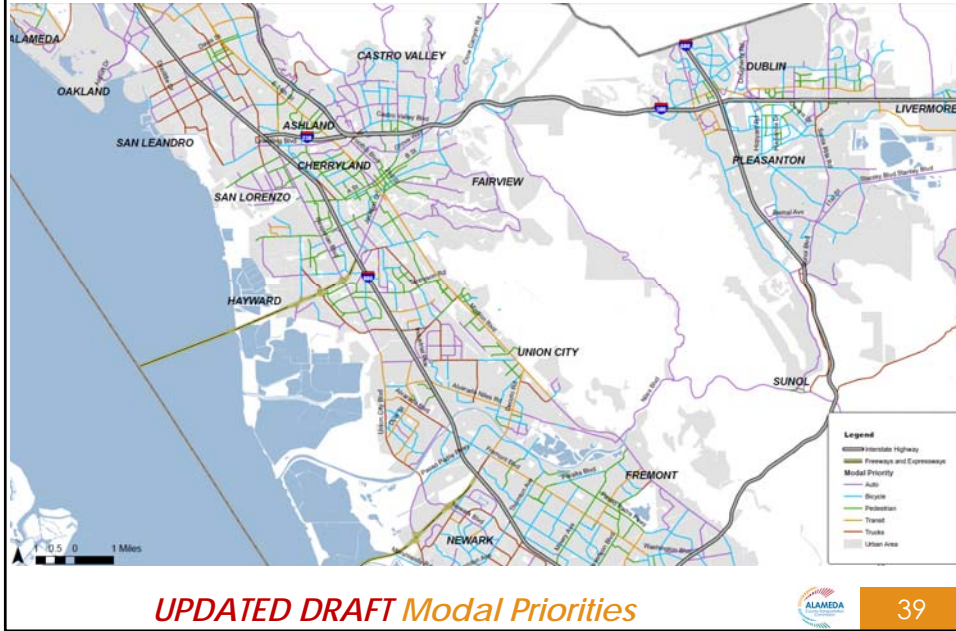
Updated Modal Priorities



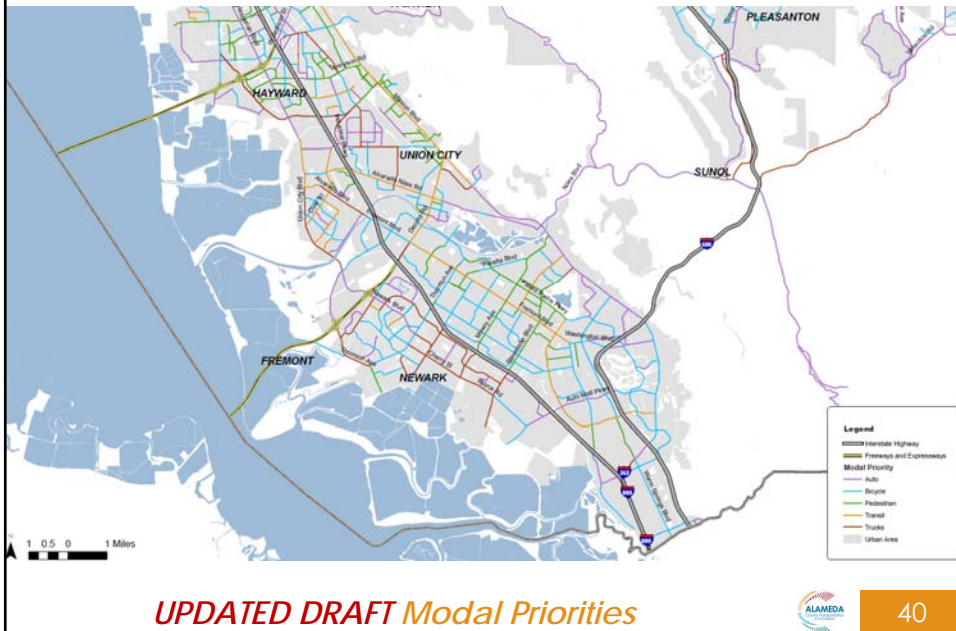
Updated Modal Priorities – North County



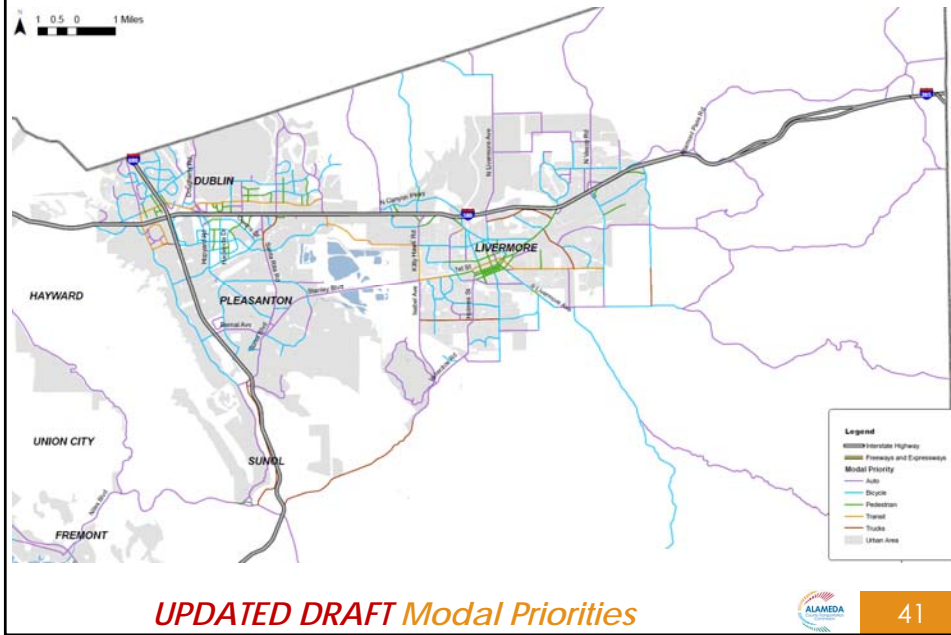
Updated Modal Priorities – Central County



Updated Modal Priorities – South County



Updated Modal Priorities – East County



Performance Objectives

Performance Measures Overview

- Performance Measures:



- ✓ Facility-specific, assess existing and future year transportation conditions

- Performance Indicators:

- ✓ Area-wide, evaluation to ensure that short- and long-term improvements meet the Plan's vision and goals



- Network Connectivity Checks:



- ✓ Mapping exercise that evaluates transit, pedestrian, bicycle and truck network connectivity and continuity

Performance Objectives

- Thresholds applied to existing and future transportation conditions ***to identify Study Network multimodal improvement needs***
- Provide guidance in identifying short-term (year 2020) and long-term (year 2040) improvements
- Vary by modal priority
- Not applicable to performance indicators and network connectivity checks



Performance Objectives General Comments

- Comments received on transit related measures and truck route accommodation index
- Transit objectives:
 - Congested Speed objective adjusted to not apply to transit priority corridors
 - Transit Speed objective increased to be greater than 75% of auto congested speed
 - Transit Reliability objective increased to be greater than 0.7 PM peak hour-to-non-peak hour transit speed ratio
- Truck Route Accommodation Index methodology adjusted to exclude consideration of on-street parking

Update to Performance Objectives

Performance Measure	Application	Modal Objectives					Rationale
		Autos	Transit	Pedestrian	Bicycle	Trucks	
1.1A – Congested Speed	Facility-Specific Measure, Existing and Future Conditions	> 40% of Posted Speed	N/A >> 40% of Posted Speed	N/A	N/A	> 40% of Posted Speed	Similar to LOS D threshold – HCM 2000 Arterial LOS Method
1.1B – Reliability	Facility-Specific Measure, Existing and Future Conditions	Reliable	N/A	N/A	N/A	Reliable	Similar to LOS D threshold – HCM 1994 Arterial V/C Method
1.7 – Pavement Condition Index	Facility-Specific Measure, Existing Conditions	Good or Very Good	Good or Very Good	Good or Very Good	Good or Very Good	Good or Very Good	Based on MTC's PCI objectives



Update to Performance Objectives

Performance Measure	Application	Modal Objectives					Rationale
		Autos	Transit	Pedestrian	Bicycle	Trucks	
1.2A – Transit Travel Speed	Facility-Specific Measure, Existing and Future Conditions	N/A	> 75% 50% of Auto Speed	N/A	N/A	N/A	Based on feedback from AC Transit staff
1.2B – Transit Reliability	Facility-Specific Measure, Existing and Future Conditions	N/A	> 0.7 0.4 (PM peak hour-to-non-peak hour transit speed ratio)	N/A	N/A	N/A	Based on feedback from AC Transit staff
1.2C – Transit Infrastructure Index	Facility-Specific Measure, Existing and Future Conditions	N/A	Good or Very Good	N/A	N/A	N/A	Based on similar applications on other planning studies (e.g. <i>ACBD Specific Plan</i> , <i>San Pablo Avenue Specific Plan</i>)



Next Steps

- All updated typology, modal overlay and modal priority maps available online for one more review:
 - <http://gis.fehrandpeers.com/AlamedaCTC/Typology/>
 - Username: AlamedaCMAP
 - Password: fpgis_Alameda
- Online comments: please state name, agency and specify roadway segment limits in comment field
- Deadline to submit comments: **July 31st, 2015**
- Revised typology, modal priority framework and performance objectives to be presented at September 2015 ACTAC, PPLC and Commission meetings for approval

Questions?