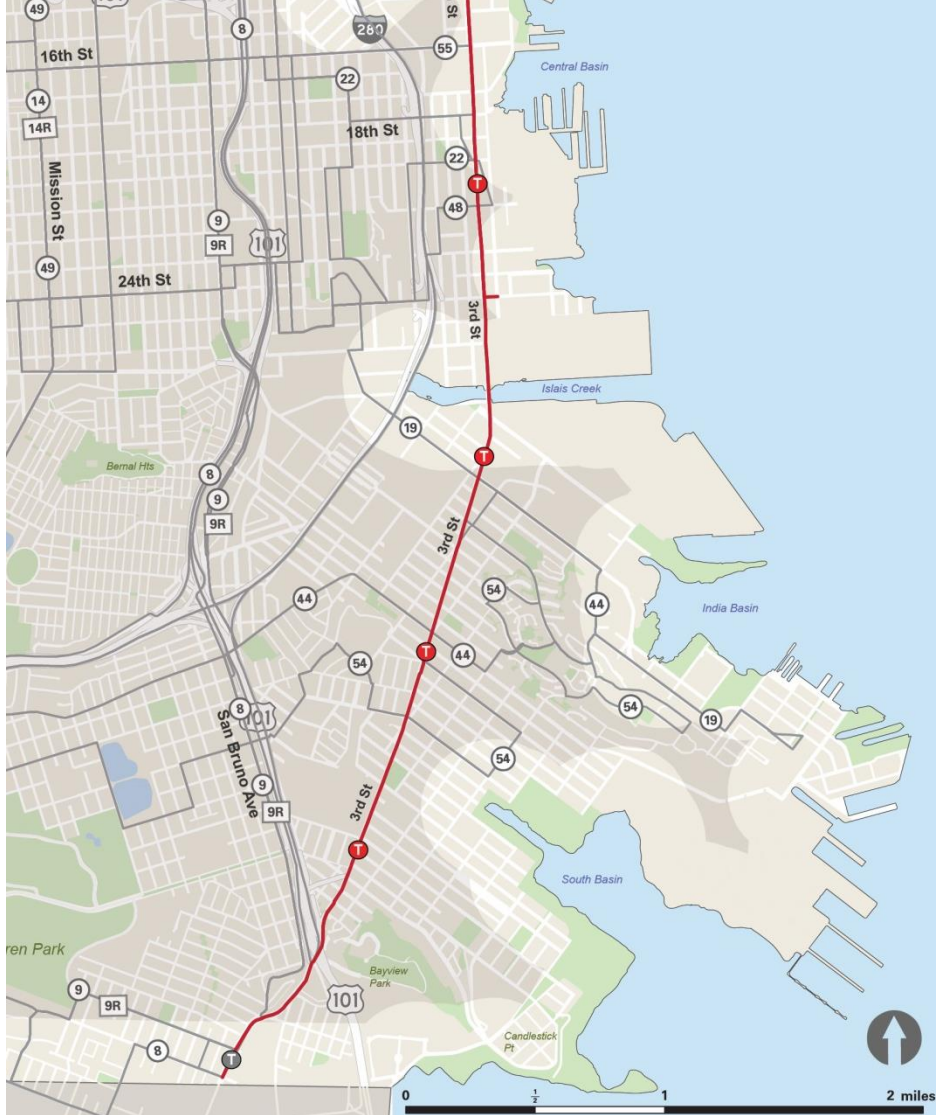
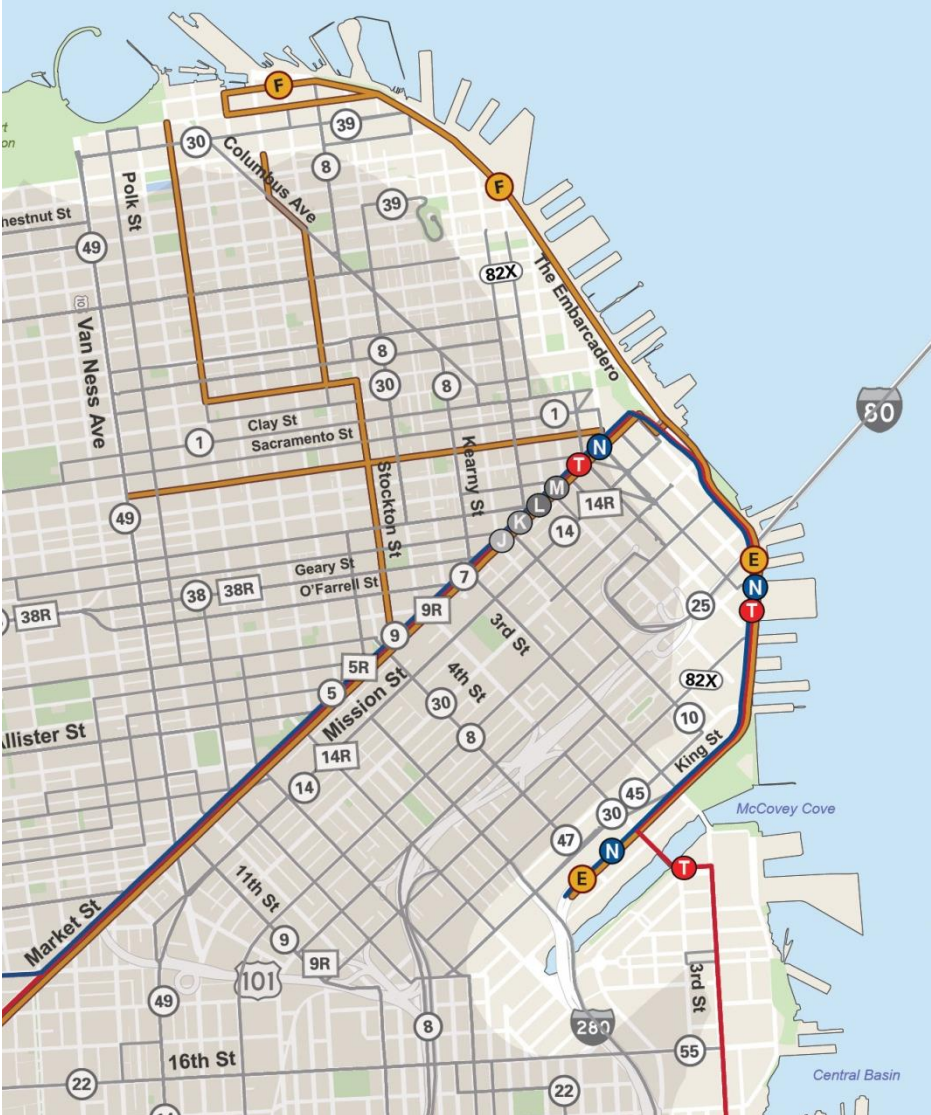


Waterfront Transit Service



Transit Service Challenges

- Safety
- Rail Reliability and Flexibility
 - E Line operational constraints
 - 4th & King bottleneck
 - MME pull-in and pull-out constraints
- Traffic Congestion
- Storage and Terminal Facilities
- Intensity of Special Events
- Keeping up with Growing Service Needs
- Sea Level Rise



Muni Forward Implementation

- Service Changes
- Transit Priority Projects
- Pedestrian Safety Improvements



MUNI
FORWARD

Street Car & Light Rail Service Increases

- New rail service
 - E-Line: New service from 4th and King (Caltrain) to Fisherman's Wharf
- T-Third schedule improvements
- More capacity in peak service
- Increased weekend frequency
- Fleet Expansion



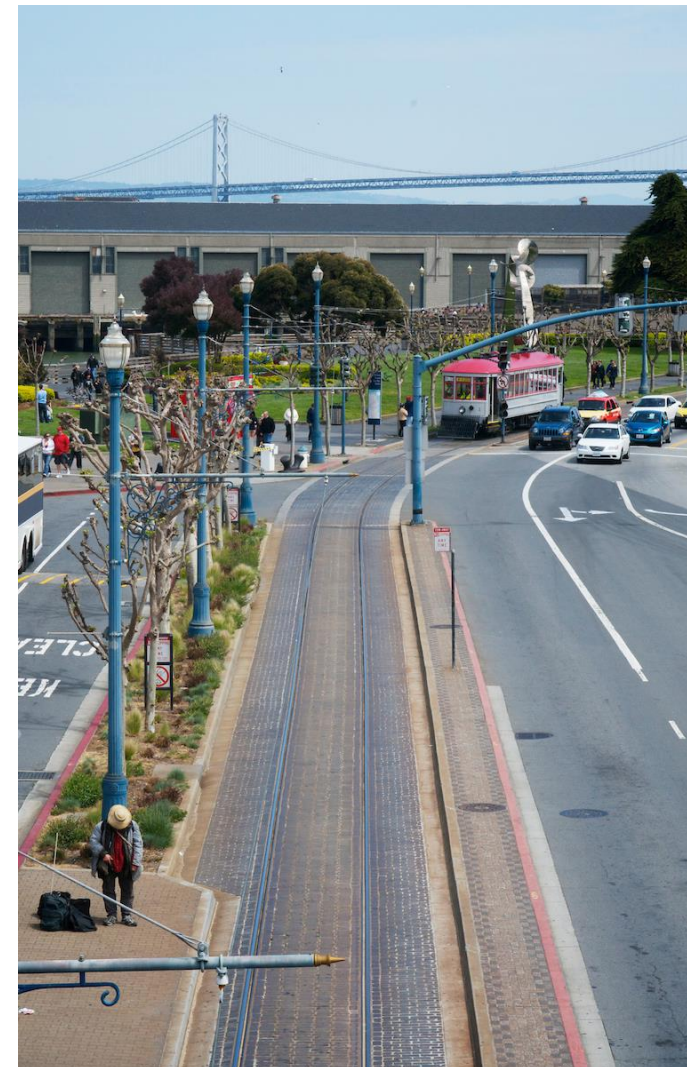
Expanded and Increased Bus Service

- New route (55-16th Street) from 16th Street BART to Mission Bay
- New late night Owl service connections to southern waterfront
- Frequency increases and changes to improve reliability on routes serving waterfront



Signal Improvements

- New and improved signal timing along King Street and Embarcadero
 - Increases reliability and travel time



Surface Light Rail Projects

- Turnback Pocket Track
 - Crossover:
Between Harrison
and Bryan
 - Pocket Track:
Between Brannan
and Townsend
- Surface Signaling
Enhancements
- ATCS upgrades
- Crossovers into
Warrior's Platform



Central Subway

- Direct link and more frequent service from southern waterfront and Mission Bay to SOMA, Downtown and Chinatown
- More fixed-rail flexibility in targeting service demands



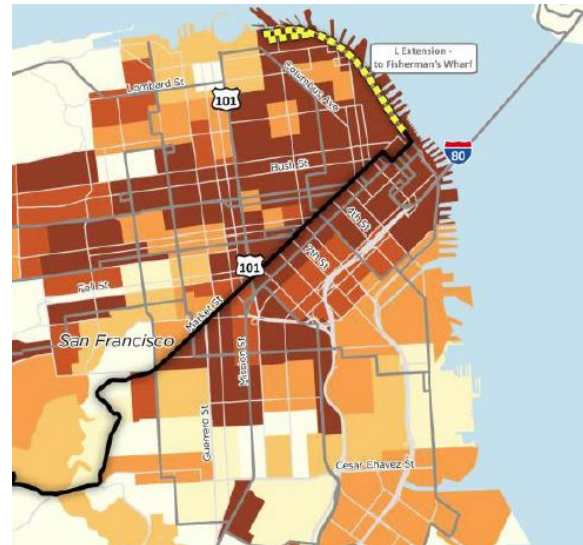
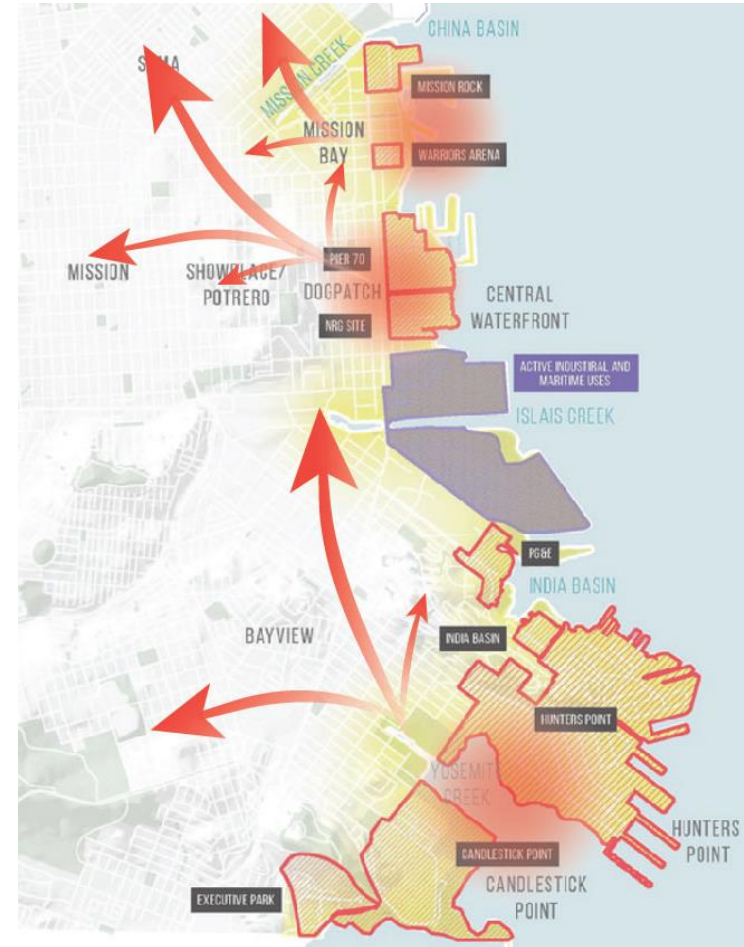
Historic Street Car Strategic Plan

- Improve service reliability and accessibility
- Preserve fleet availability
- Resolve E & F line shared terminals



New Service to Meet Future Growth

- New routes concepts to connect northern and central waterfront through SOMA and Downtown
 - Pier 70 and Candlestick/Hunter's Point
- Owl service to Fisherman's Wharf



Policy Recommendations

- Adopt SF Planning Department's Transit-Supportive Development Design Guidelines
- Support Transit Through Land Use Policy
 - Locate high density and activity centers within shortest walk to transit stops
- Promote Public Transit As Primary Mode
 - Design streets and transit facilities that support reliability, resiliency, and flexibility
- Encourage Transit Use Through Travel Demand Management





Embarcadero

SFMTA
Municipal Transportation Agency

Pedestrian and Bicycle Improvements





Pedestrian and Bicycle Planning Policy and Improvement Coordination

Taking a 'Complete Streets' approach towards transportation

- Embarcadero – Short and Long Term Enhancements
- Blue Greenway/Terry Francois Boulevard
- Challenges





How Popular and Multi-Modal is the Waterfront?

Very!

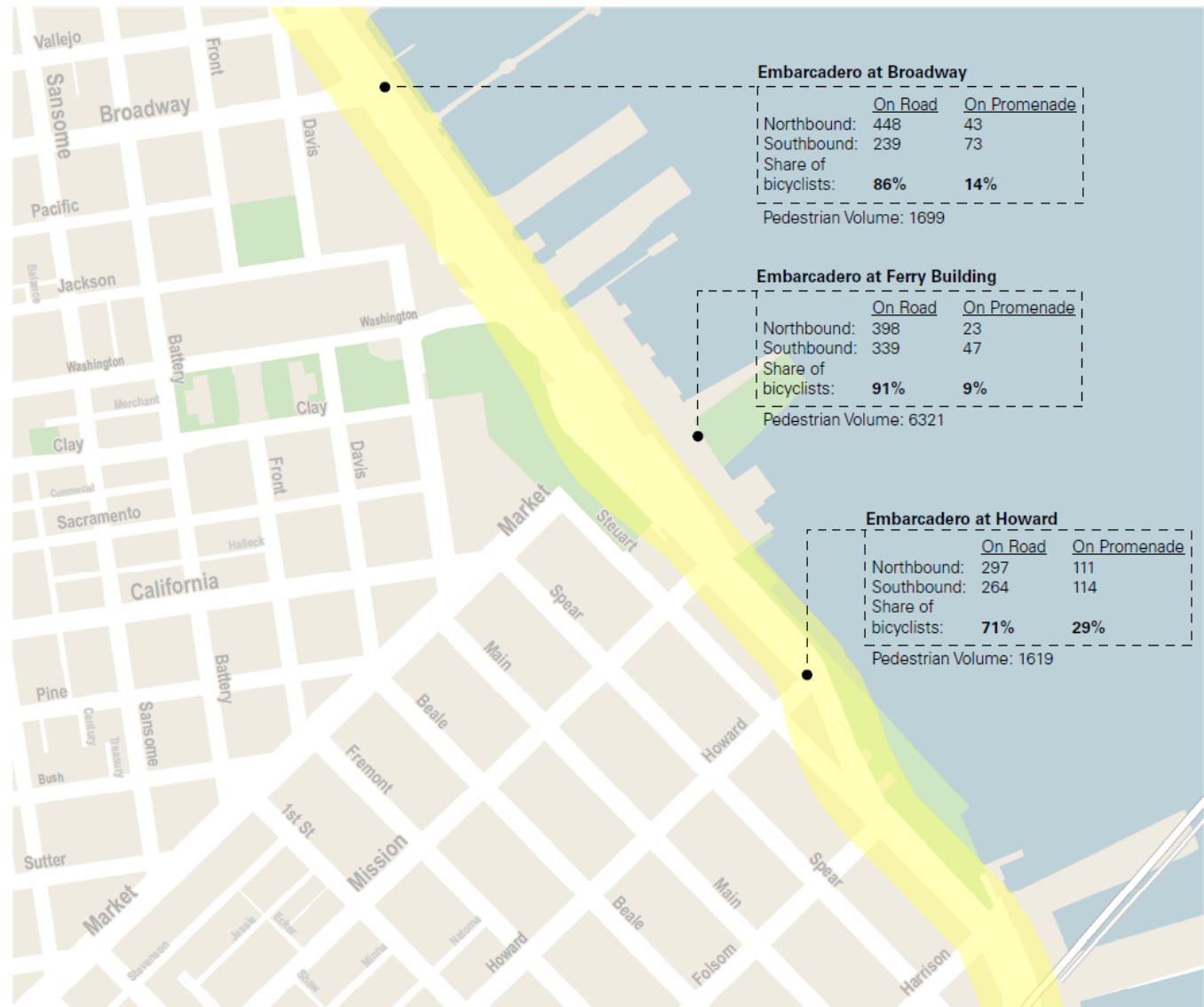




How Popular and Multi-Modal is the Waterfront?

Bicycle and Pedestrian Volumes – 2015

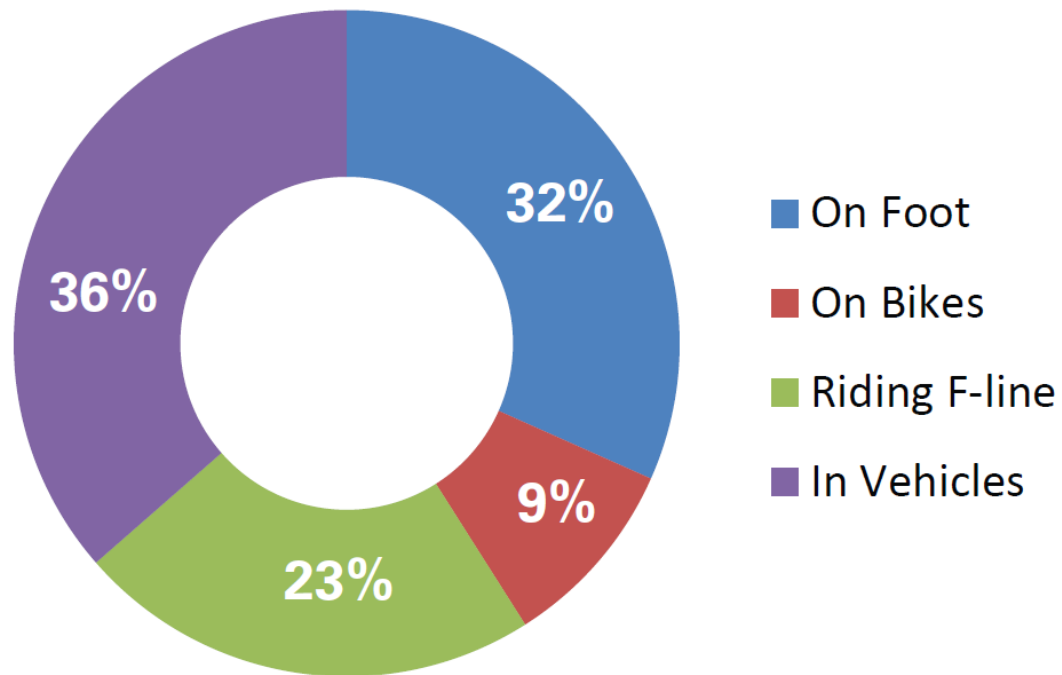
Weekday 2-hour PM peak





How Popular and Multi-Modal is the Waterfront?

**Estimated Mode Split at
the Embarcadero and Broadway (2014)**





Conflict



Conflict



Uncomfortable



Between 2011 and 2016, **192** people were killed or injured on The Embarcadero, including:

- 1 Pedestrian fatality
- 1 Motorist fatality
- 6 Pedestrians severely injured
- 10 Bicyclists severely injured
- 3 Motorists severely injured

Vision_Zero_Priority_Network

- Cyclist HIC Only
- Cyclist/Vehicle HIC
- Pedestrian HIC Only
- Pedestrian/Cyclist HIC
- Pedestrian/Cyclist/Vehicle HIC
- Pedestrian/Vehicle HIC
- Vehicle HIC Only





Embarcadero – Short Term Improvements

- Measures:
 - New signage and stenciling on Promenade
 - Bike Lane Improvements
 - Pedestrian Safety Treatments

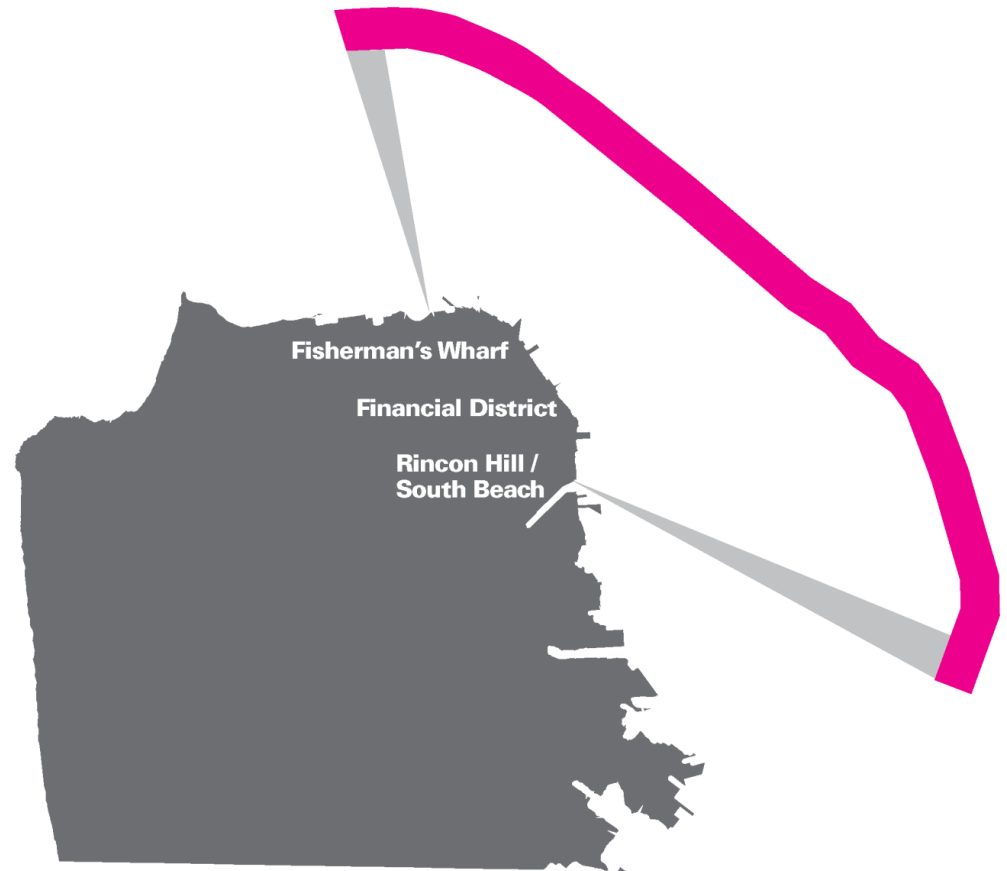




Embarcadero Enhancement Project

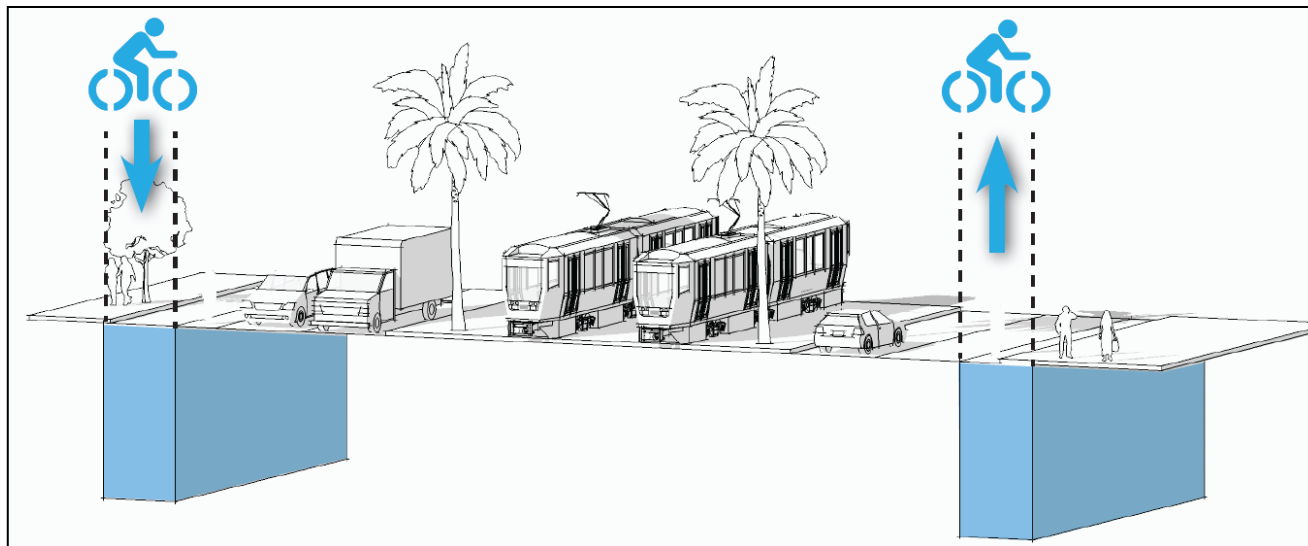
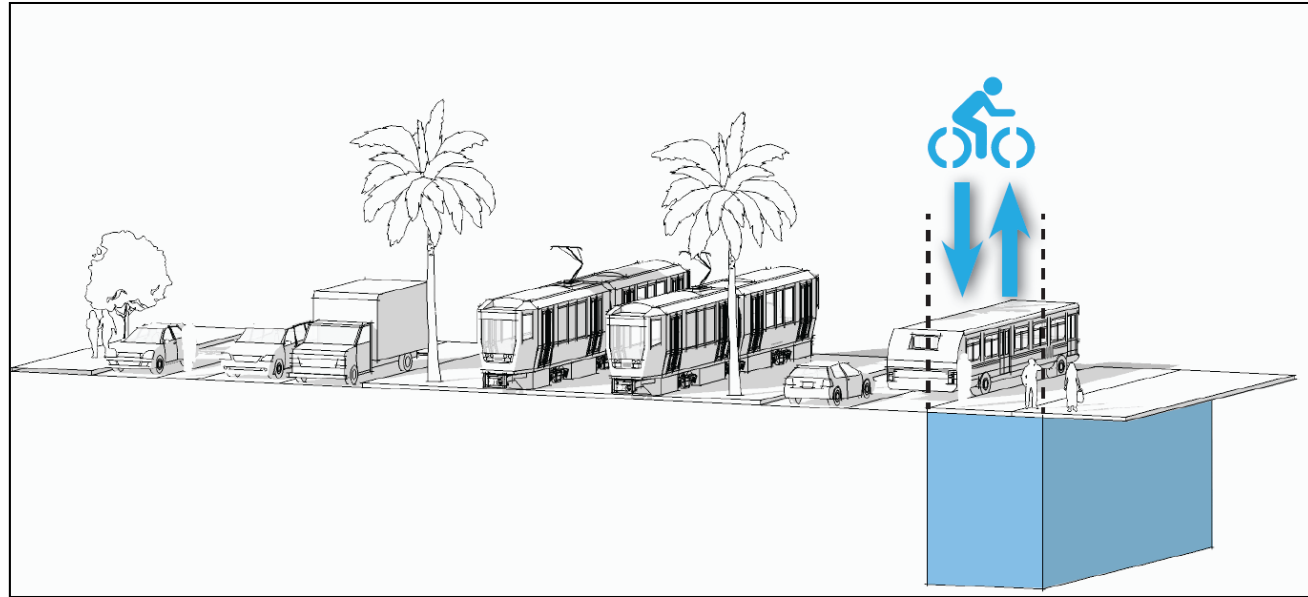
What is the Project?

- Planning
- Safety and Comfort
- Design Concept
- 'Complete Street'



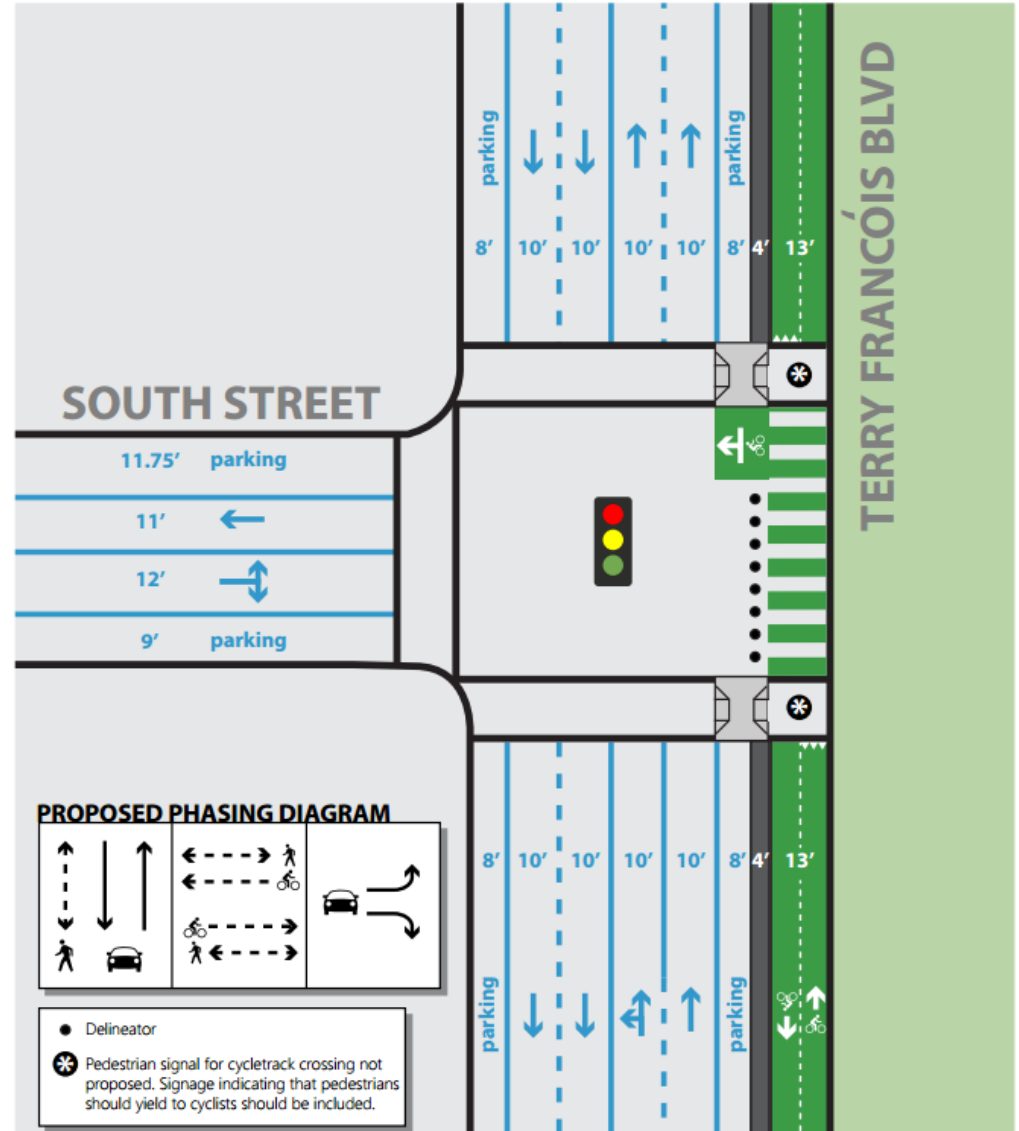
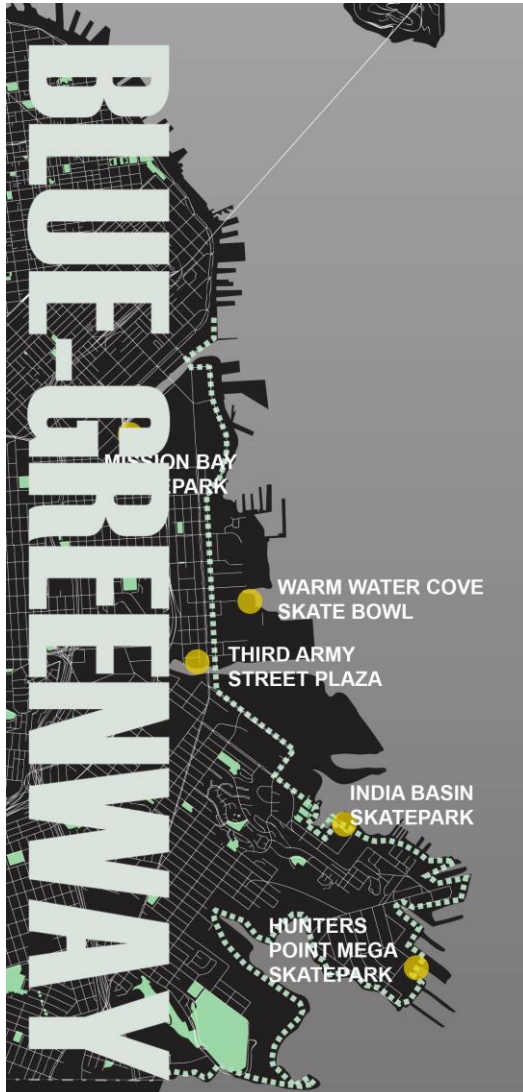


Alignment Options





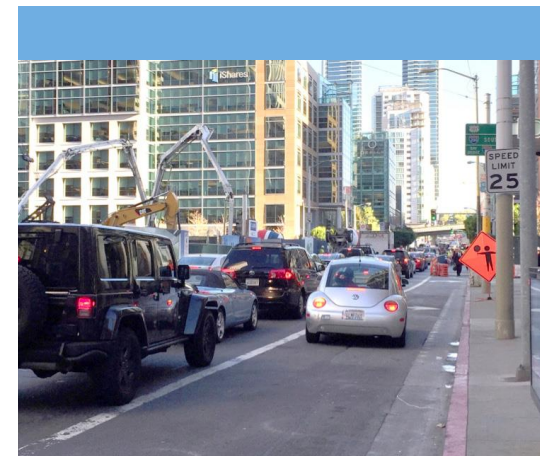
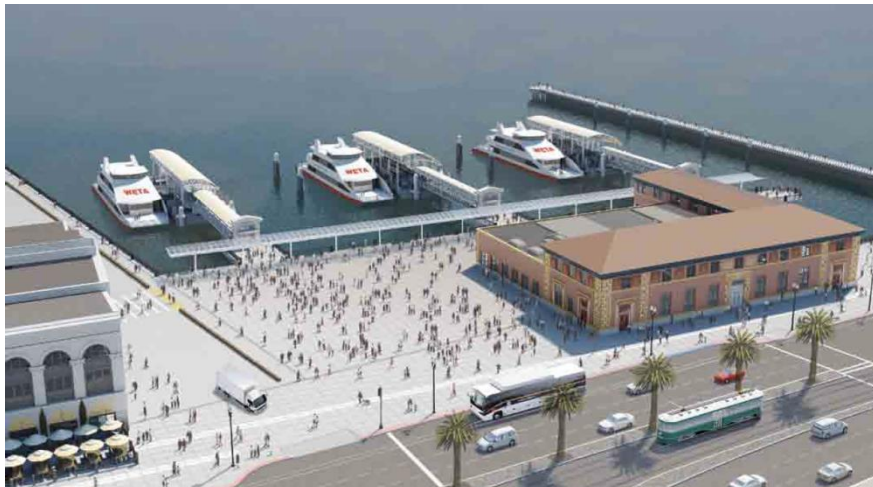
Terry Francois Boulevard Project





Supportive Projects

- Better Market Street
- Ferry Terminal Expansion Project
- Seawall Resiliency Project
- Transbay Center District Plan
- Blue Greenway/3rd Street Bridge Retrofit
- Jefferson Street Public Realm
- E-Line Streetcar Service Expansion
- Bay Bridge West Span Pathway Study
- Waterfront Transportation Assessment



Waterfront Transportation Assessment

"PHASE 2": SOMA/MISSION BAY/CENTRAL WATERFRONT
TRANSPORTATION ANALYSIS FINAL REPORT

AUGUST 2015



Challenges

- Funding
- Competing interests/demands
- Modal hierarchy does not necessarily apply
- Changing demands for curbside uses
- Lack of unifying transportation policy
- Congestion is variable
- Width of The Embarcadero

- *One-Size Fits All Approach will not work*

Curb Space: An Asset Hidden in Plain Sight



NACTO Designing Cities Conference

Kevin O'Neill, Meghan Shepard

September 28, 2016

Our mission, vision, and core values

Mission: deliver a high-quality transportation system for Seattle

Vision: connected people, places, and products

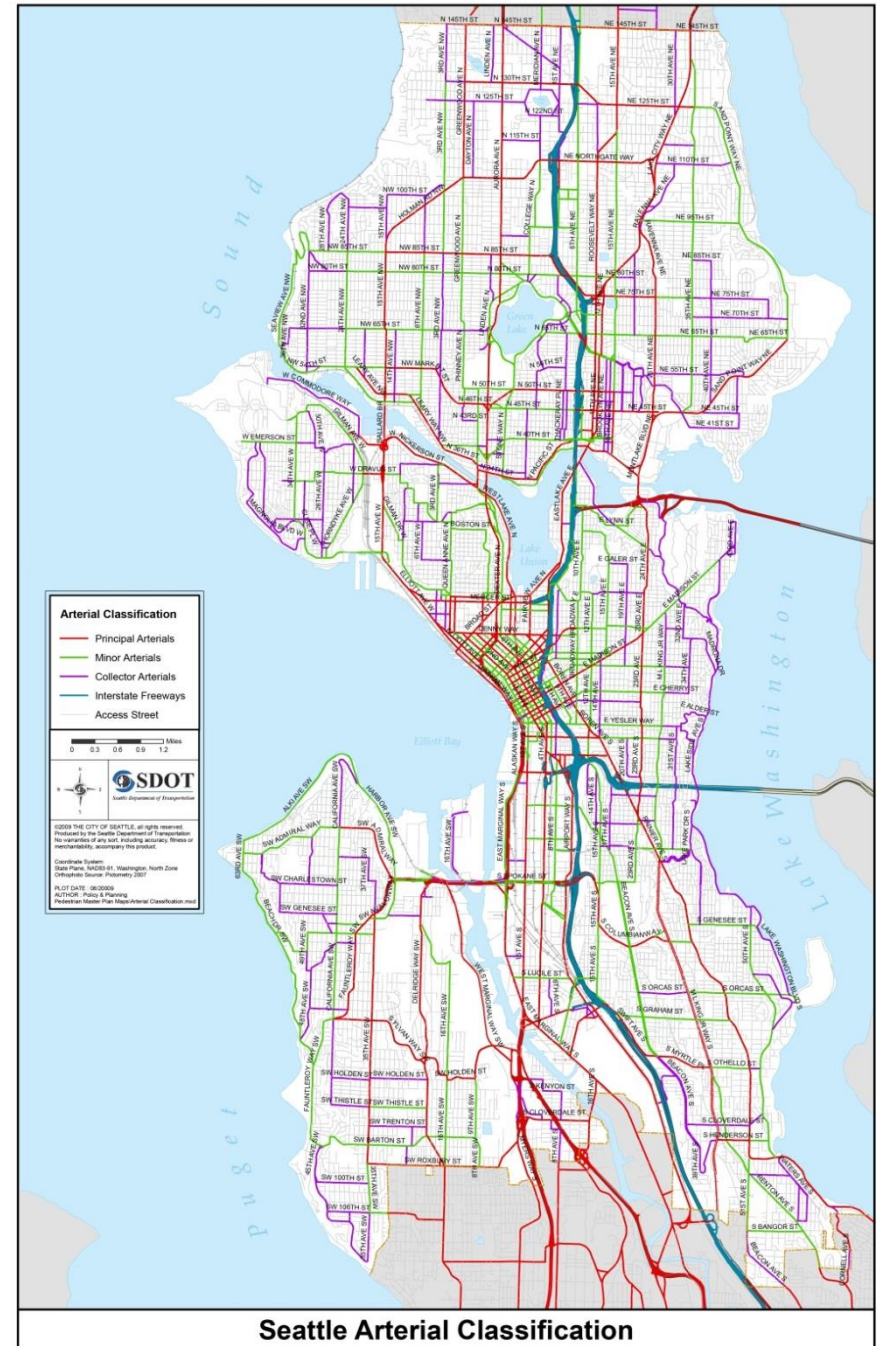
Committed to **5 core values** to create a city that is:

- Safe
- Interconnected
- Affordable
- Vibrant
- Innovative

For **all**

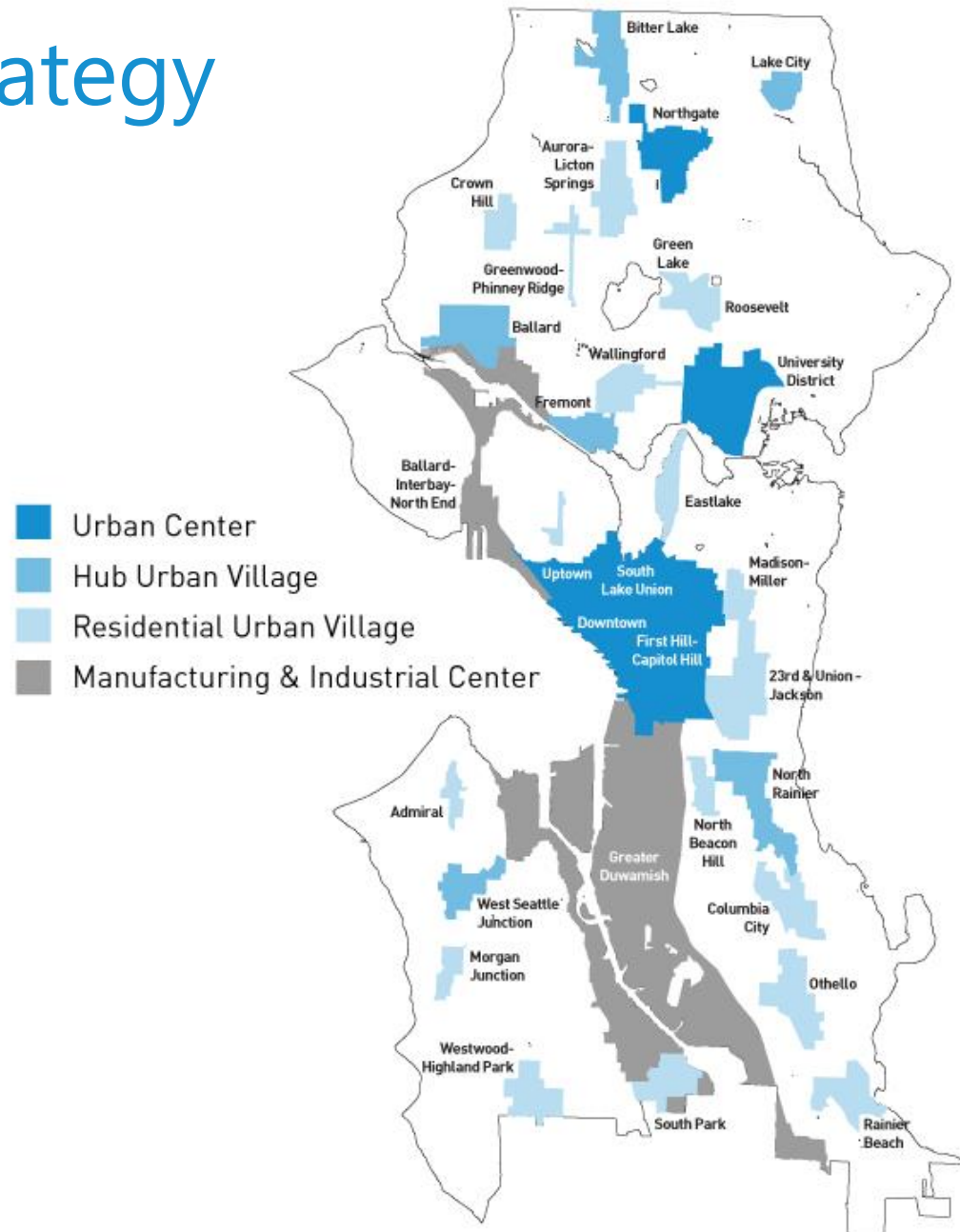
Seattle's street system

- System is constrained by geography (water, hills)
- Arterials are needed for multiple purposes (transit, freight, general purpose, access, etc.)



Seattle's growth strategy

- Comprehensive Plan focuses growth:
 - Urban centers
 - Manufacturing & industrial centers
 - Urban villages
- 80% of city growth in centers/villages since 1994
- Future growth targets 2015-2035
 - 70,000 additional households
 - 115,000 additional jobs



Comprehensive Plan Transportation Element: key themes



Invest in travel options



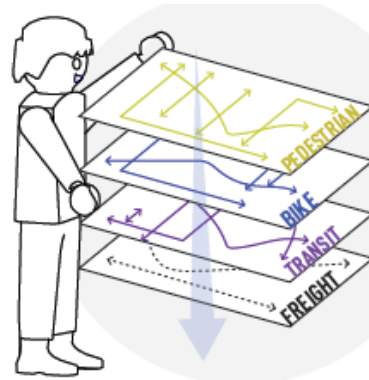
Ensure goods movement



Use right-of-way for multiple purposes

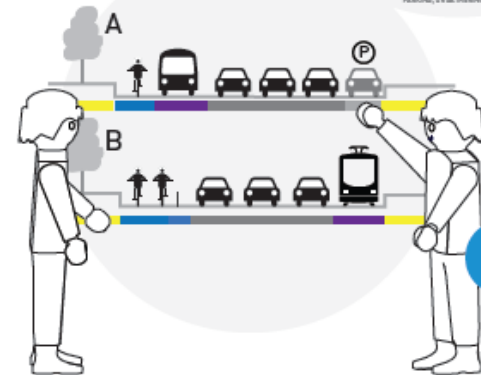
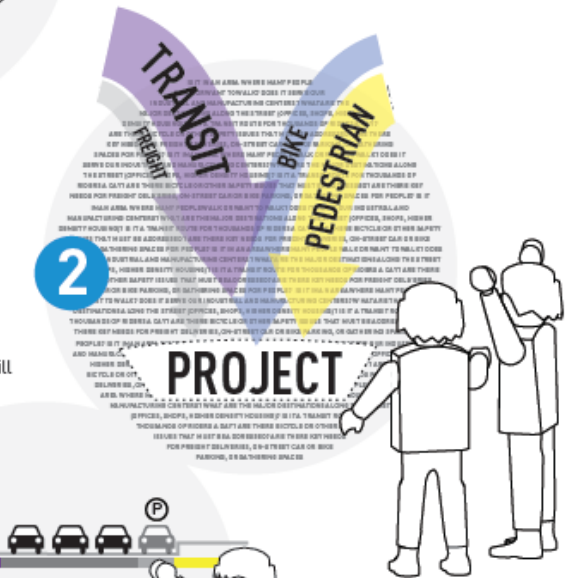
Right-of-way (ROW) allocation

- Interest in considering all functions of the public right-of-way, including access and activation (not just mobility)
- Comprehensive Plan identifies new framework ROW allocation decisions



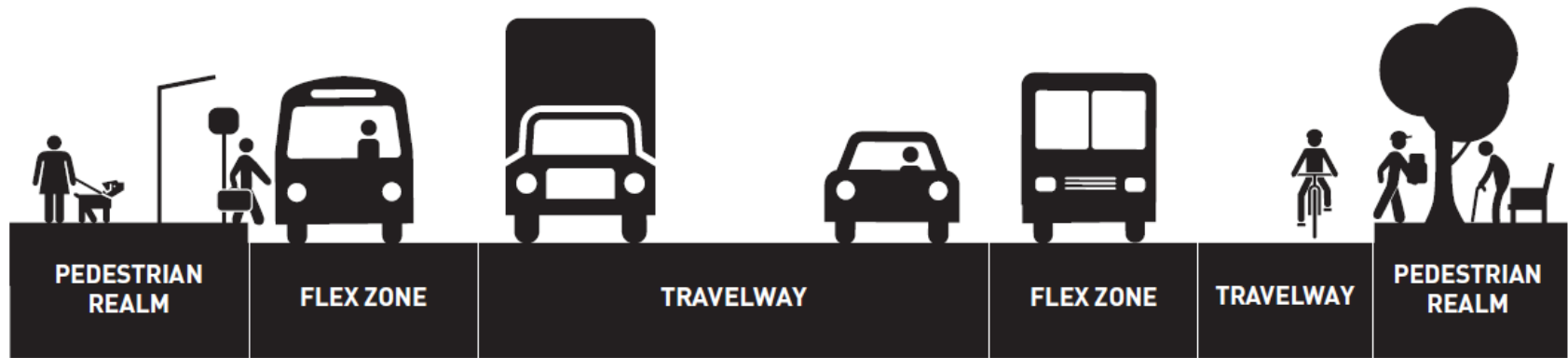
1 Step 1: Overlay the modal plans
Overlay the needs in the modal plans to identify where priority corridors for many modes exist.

2 Step 2: Identify the major purposes of the street
Each street in our city is different and they serve different land uses, so the purpose and design of each project will be distinctive.



3 Step 3: Develop alternatives
We look at different ways we can allocate space in the street based on the users and needs identified.

ROW allocation: zones



PEDESTRIAN REALM

Comprised of frontage, pedestrian mobility, and furniture zones between the property line and the flex or travelway zones. This space includes the sidewalk, planting areas, bus shelters, sidewalk cafes, and bike racks.

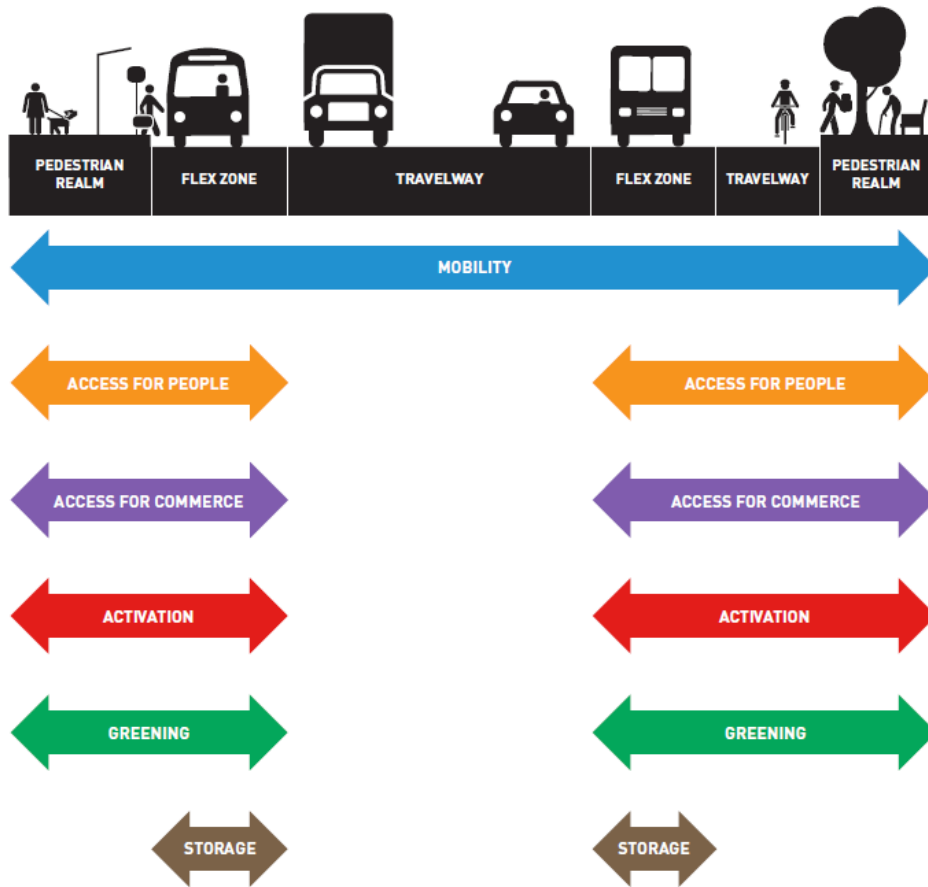
TRAVELWAY

Most often used for mobility purposes. Lanes can serve all modes or be dedicated to serve specific modes, such as a bus or bike lane.

FLEX ZONE

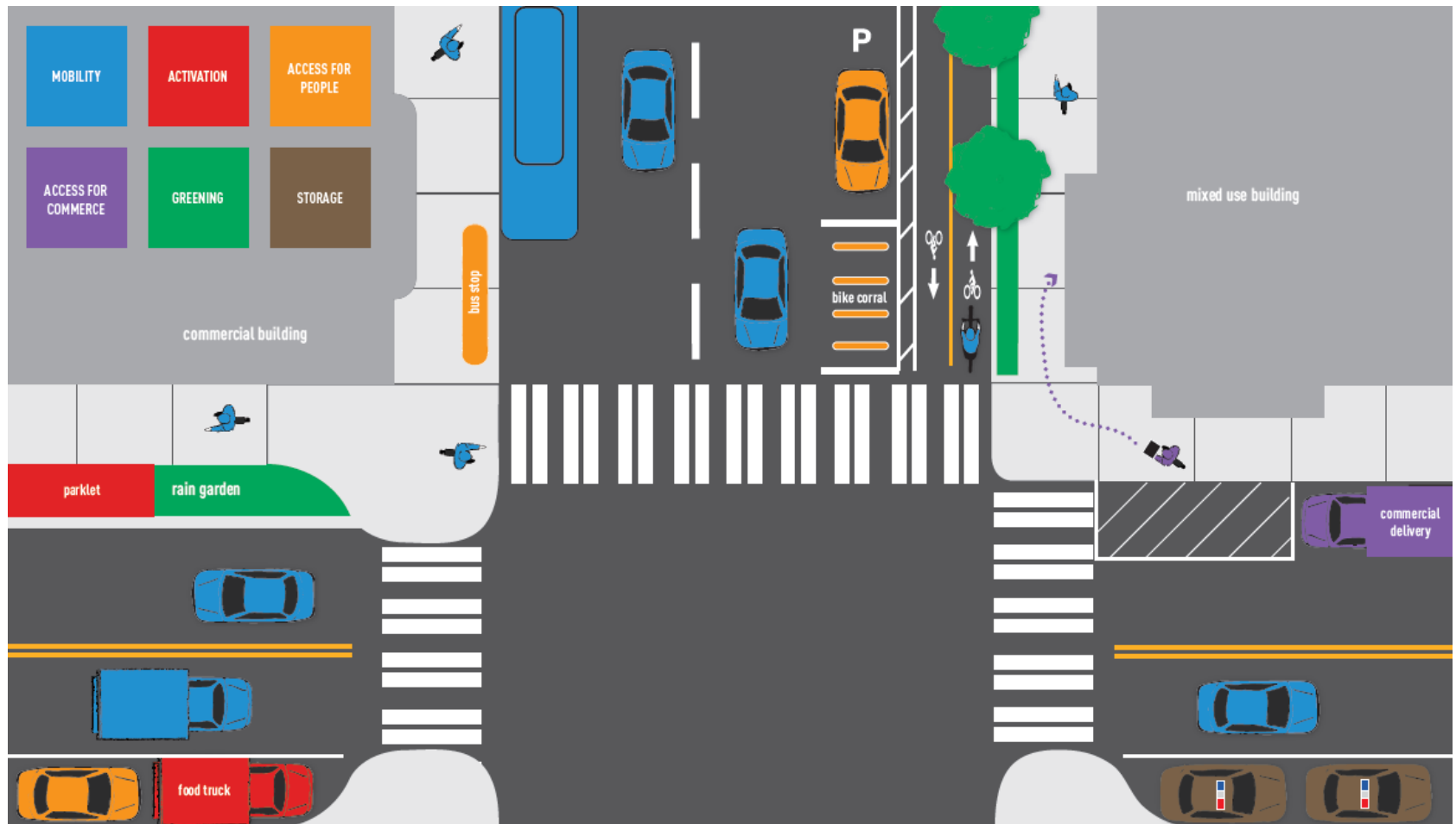
An essential zone for people and goods, providing separation between moving vehicles in the travelway and people in the pedestrian realm. This zone can contain multiple uses along a street - including commercial deliveries, parklets, on-street parking, and taxi zones. It can be used for mobility at specific times of the day.

ROW allocation: functions

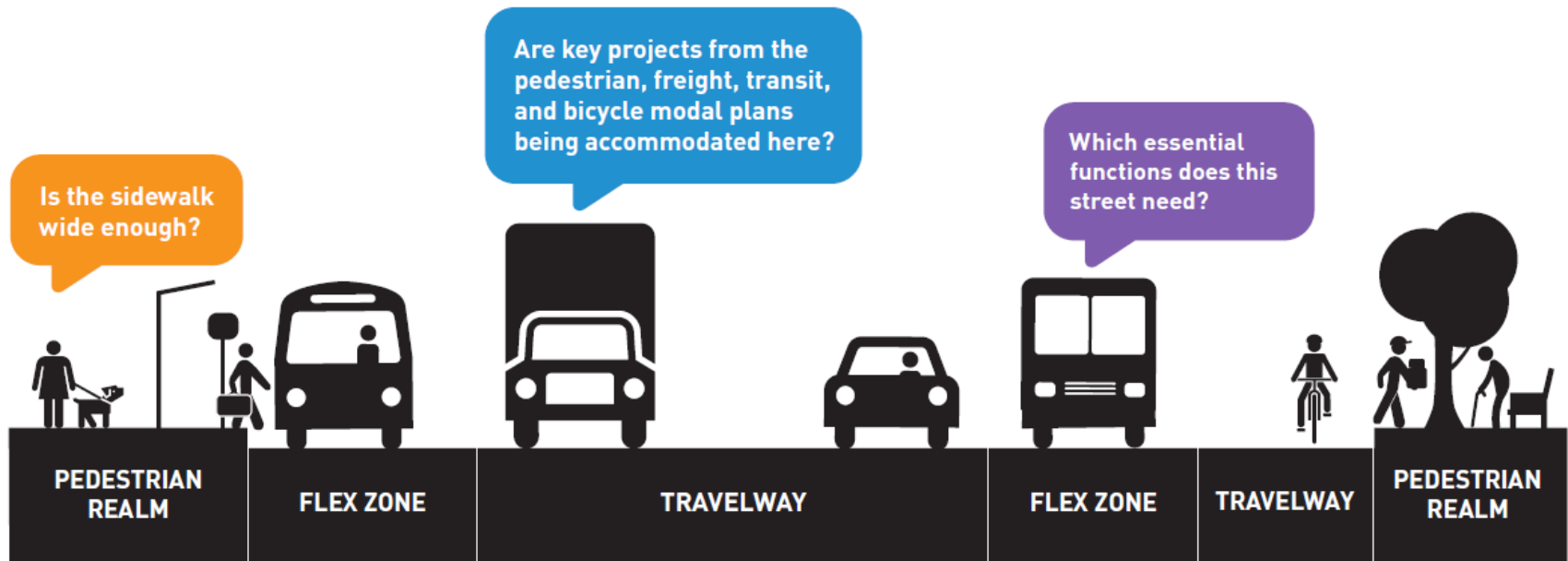


FUNCTION	DEFINITION	EXAMPLES OF USES
MOBILITY	Moves people and goods	<ul style="list-style-type: none"> • Sidewalks • Bus or streetcar lanes • Bike lanes • General purpose travel lanes (includes freight) • Right- or left-turn only lanes
ACCESS FOR PEOPLE	People arrive at their destination, or transfer between different ways of getting around	<ul style="list-style-type: none"> • Bus or rail stops • Bike parking • Curb bulbs • Passenger load zones • Short-term parking • Taxi zones
ACCESS FOR COMMERCE	Goods and services reach their customers and markets	<ul style="list-style-type: none"> • Commercial vehicle load zone • Truck load zone
ACTIVATION	Offers vibrant social spaces	<ul style="list-style-type: none"> • Food trucks • Parklets and streateries • Public art • Street festivals
GREENING	Enhances aesthetics and environment health	<ul style="list-style-type: none"> • Plantings <ul style="list-style-type: none"> - Boulevards - Street trees - Planter boxes • Rain gardens and bio-swales
STORAGE	Provides storage for vehicles or equipment	<ul style="list-style-type: none"> • Bus layover • Long-term parking • Reserved spaces (e.g., for police or other government use) • Construction

Outcome: multi-functional streets



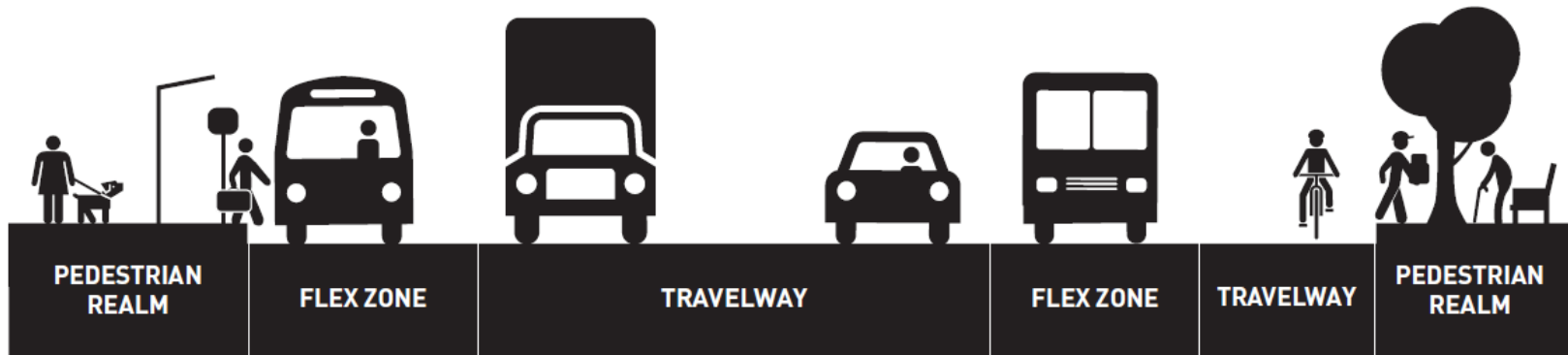
Making the best use of the streets we have



*Essential functions:



What is the flex zone?



New curb demands



Five year changes to curb*

- Transit projects
- Bicycle projects
- Streetscape projects
- Private development

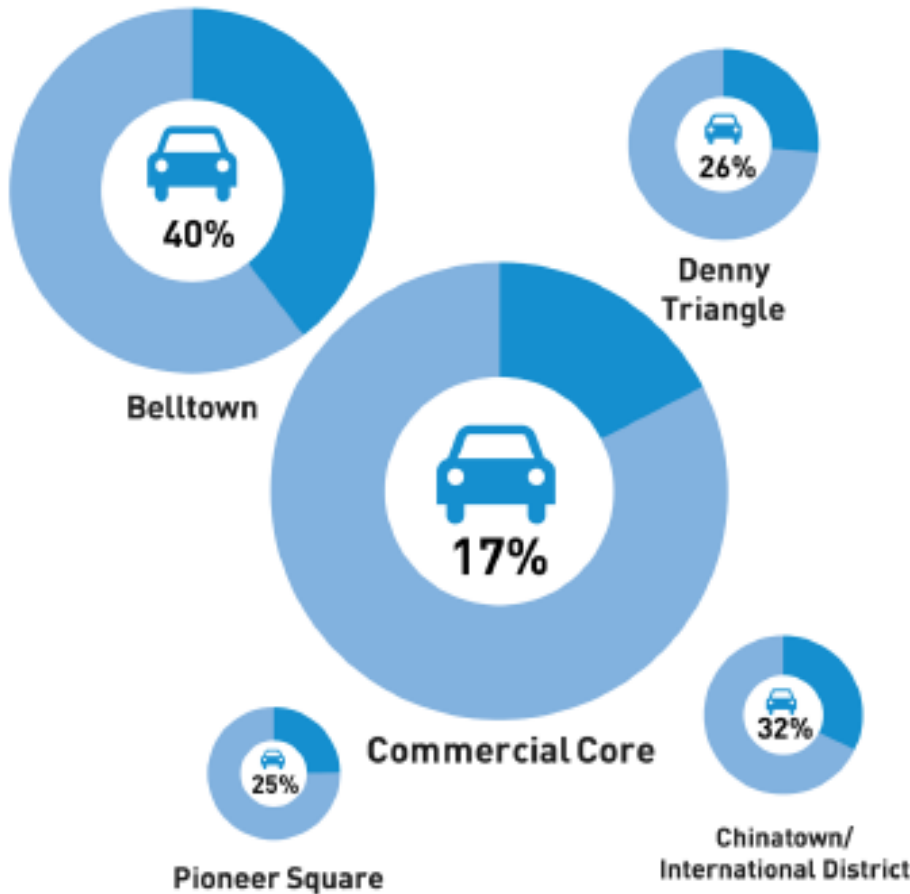
* Assumes build-out of projects in Transit, Pedestrian, Freight and Bicycle Modal Plans



Curbspace in Seattle's CBD

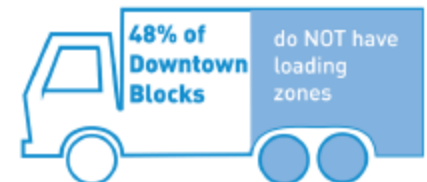
Private Vehicle Parking

■ Curb Space Dedicated to Private Parking

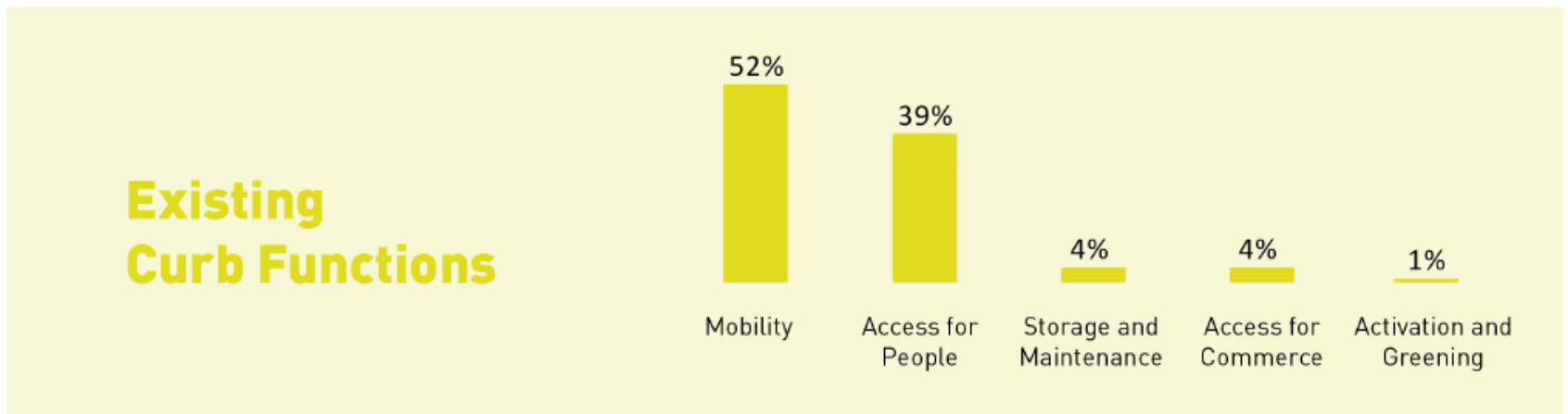
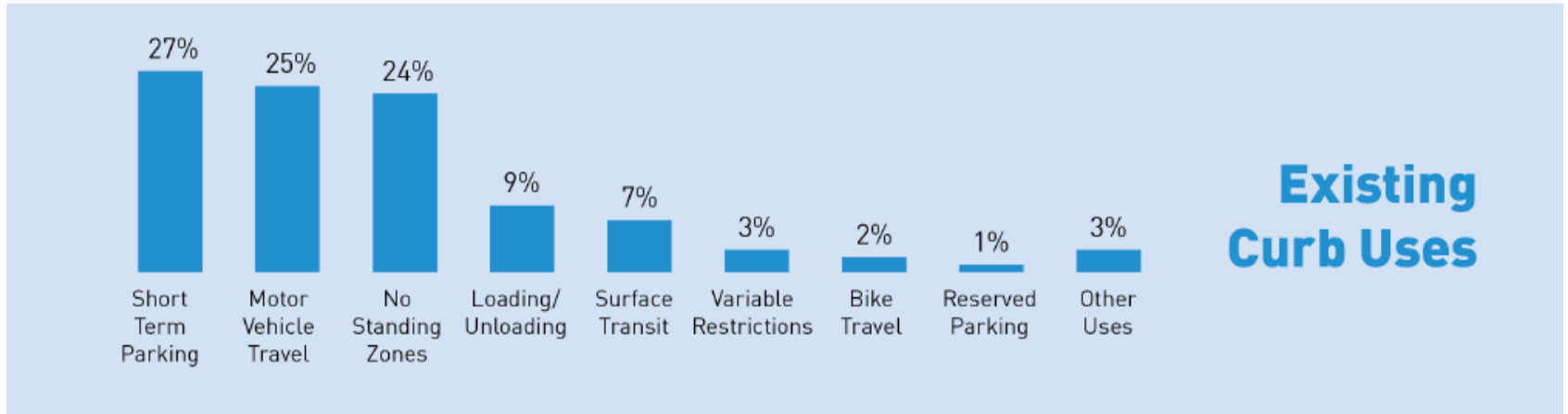


2.8%

of the curbspace has variable programming, serving different functions at different times of the day

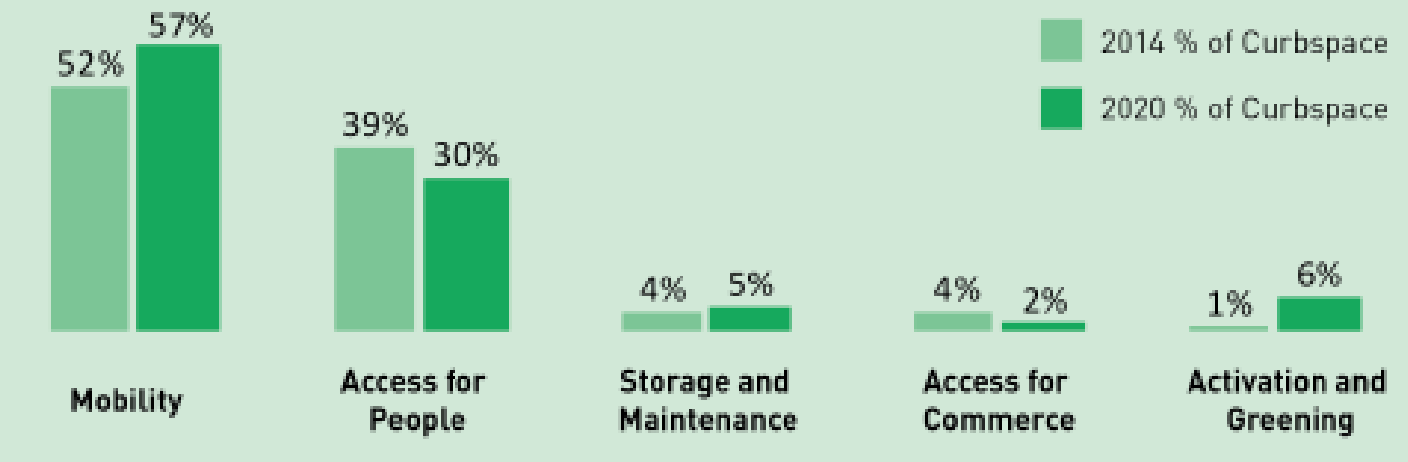


CBD curb use and function today

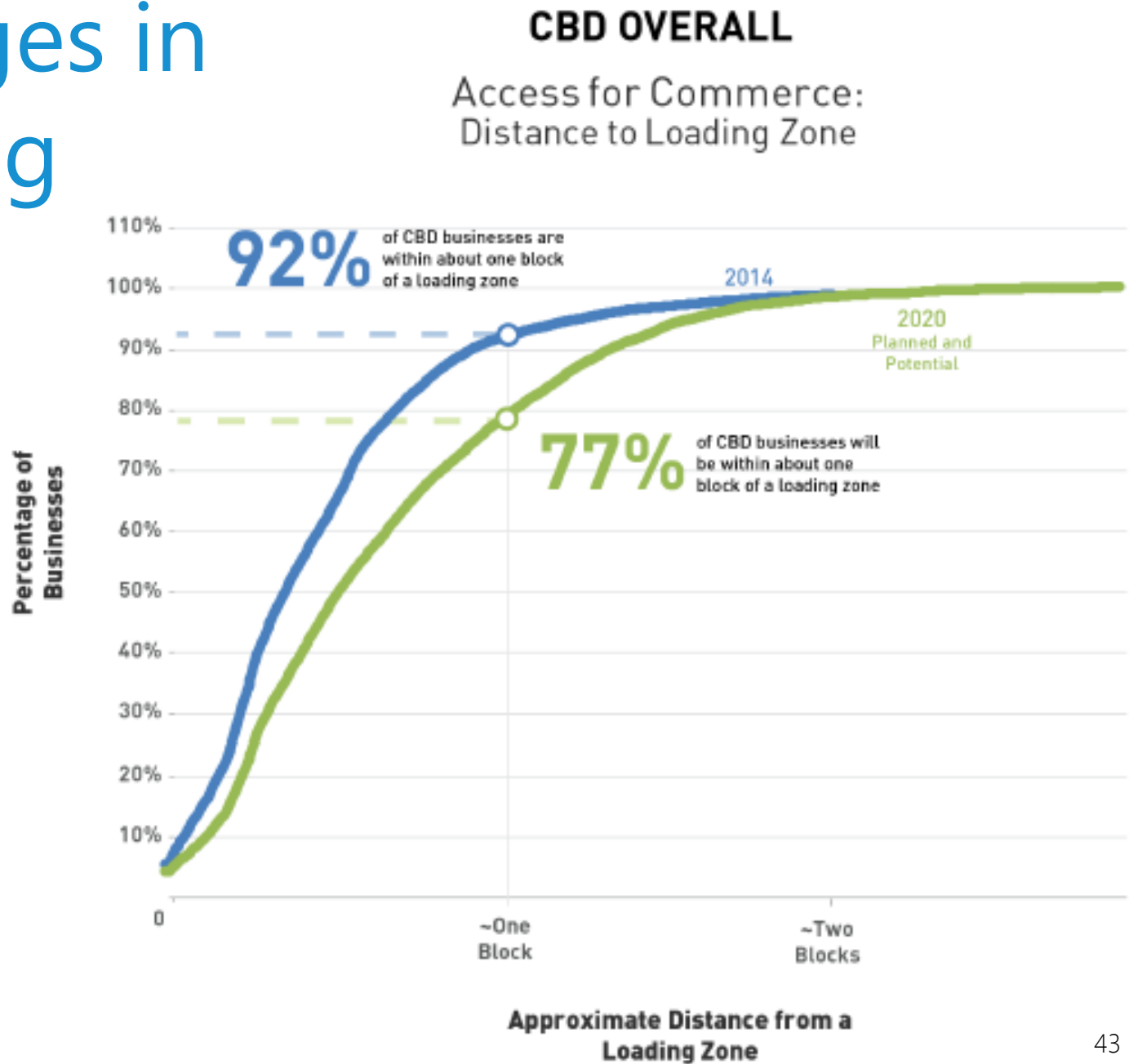


5-year function changes

Existing & Future Curb Functions



Changes in loading



Seattle curbspace priorities

	RESIDENTIAL	COMMERCIAL + MIXED USE	INDUSTRIAL
1	Support for Modal Plan Priorities	Support for Modal Plan Priorities	Support for Modal Plan Priorities
2	Access for People	Access for Commerce	Access for Commerce
3	Access for Commerce	Access for People	Access for People
4	Greening	Activation	Storage
5	Storage	Greening	Activation
6	Activation	Storage	Greening

Urban goods delivery strategy

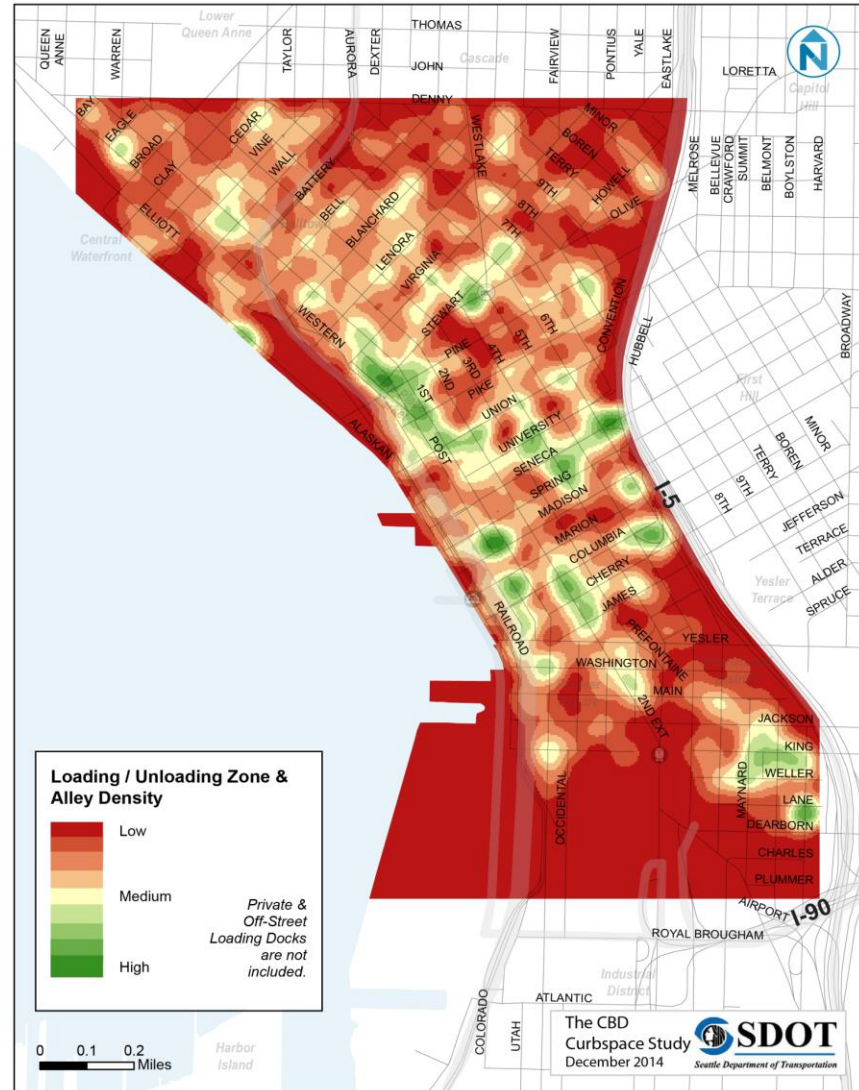


“Provide a freight network that supports a thriving and diverse economy for Seattle and the region.”

- Seattle Freight Master Plan, September 2016

Loading minimums

- Establish a minimum distance for loading opportunities from any business address either in on-street, alley or off-street locations



Design strategies

- Maintain or create access through creative design
- Address impact of alley vacations on nearby properties



3rd Avenue flex/load zone

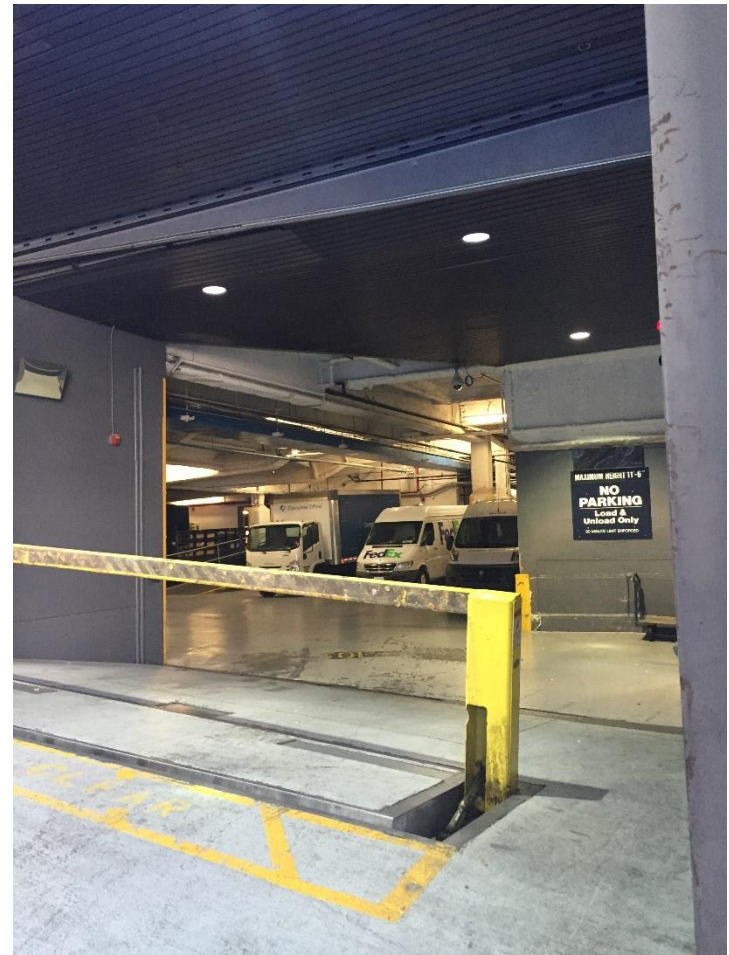
Commercial load zone strategies

- Investigate off-hour delivery pilot
- Change the commercial load zone permit pricing structure to better manage demand



Off-street strategies

- Explore best practices in off-street loading dock and use standards
- Update new development requirements for package storage



Freight demand management strategies

- Consolidate trips
- Enable right-size vehicles in dense areas
- Employ technology to guide deliveries and manage access



Questions?

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www.seattle.gov/transportation

