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PART A
STUDY BACKGROUND AND CONTEXT
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INTRODUCTION
The Baseline Assessment provides a snapshot summary of existing transportation and circulation conditions within the Comprehensive Circulation Study for Downtown Oakland and Access to/from West Alameda (CCS) Study Area.

Part A Study Background and Context provides an overview of the study purpose and scope, summary of the coordination with other on-going transportation and planning studies; and an overview of how this document is organized. Part B Summary of Findings summarizes the key findings related to the existing transportation and circulation conditions. Part C presents the specific data and information using primarily maps and graphs.

STUDY PURPOSE AND SCOPE
The Comprehensive Circulation Study for Downtown Oakland and Access to/from West Alameda (CCS) is a collaborative effort led by the Alameda County Transportation Commission (Alameda CTC), City of Oakland (Oakland) and City of Alameda (Alameda). The purpose of the CCS is to develop and identify a preferred transportation network that integrates on-going planning activities, restores (to the degree feasible) two-way street circulation, addresses freeway access, addresses access to/from West Alameda, and supports creating a safe, multimodal, and culturally and economically vibrant Downtown Oakland.

The scope of the CCS includes:

- Extensive stakeholder and community engagement throughout the study;
- Creating a baseline assessment of transportation characteristics in downtown Oakland;
- Identifying future conditions and needs;
- Developing and evaluating multimodal transportation circulation alternatives, including restoration of two-way streets, where feasible; and
- Identifying and documenting preferred alternative and implementation steps that address purpose, goals and objectives of the study.

In addition to Alameda CTC, the City of Oakland and the City of Alameda, the following stakeholder agencies are also involved in the CCS effort through the Technical Advisory Committee (TAC): Alameda-Contra Costa Transit District (AC Transit), Bay Area Rapid Transit (BART), Port of Oakland, California Department of Transportation (Caltrans), and Metropolitan Transportation Commission (MTC). As part of the extensive stakeholder outreach, the CCS is integrating and building from community stakeholder input with on-going involvement from community members and groups through small group stakeholder interviews, a Project Stakeholder Group (PSG), and design charrettes that will be open to the public. The CCS Study Area is shown on page 11. The Jack London District, Chinatown, Uptown, and Downtown neighborhoods comprise Focus Areas within the Study Area.

The CCS expands upon and is compatible with the City of Oakland’s Sustainable Communities Technical Assistance Program grant application to study downtown streets. In that application, the City sought to “determine the potential traffic impacts associated with converting one-way streets in the downtown system to two-way traffic.” The City’s intent in restoring the one-way streets in the Study Area to two-way streets is to decrease the distance vehicles travel within downtown (i.e., reduce vehicle miles traveled) which in turn helps to decrease vehicle emissions, reduce vehicle speeds, and make navigation and circulation more intuitive for all road users. The City would also like to develop a street network that is compatible with and supports higher-intensity, mixed-use downtown development that is easily accessible via walking, bicycling, and transit.
In addition to identifying opportunities to restore the original two-way street network in Downtown Oakland, the CCS will also identify and consider other changes to the streets that support the desired outcomes (e.g., reducing vehicle lanes to slow vehicle speeds) while also considering changes to improve walking, biking, transit operations, parking, and loading/unloading activities.

COORDINATION WITH OTHER ON-GOING STUDIES AND PROJECTS

There are several on-going or recently completed transportation and/or planning studies and projects that overlap with the CCS with respect to their geographic boundaries. Two of the most significant of those projects are the City of Oakland’s Downtown Specific Plan and Alameda CTC’s Freeway Access Project. The scope, timeline and overlap between those two study areas and the CCS are described below.

Downtown Specific Plan – In summer 2015, the City of Oakland initiated the Downtown Specific Plan to "comprehensively review a variety of land use-related issues to ensure continued growth and revitalization." The scope of the Downtown Specific Plan overlaps with respect to study area and technical topics. The study area included in the Downtown Specific Plan is a sub-area within the CCS’ study area and in considering land use related issues, the Downtown Specific Plan will be developing ideas for changes to Oakland’s streets (e.g., changes to encourage walking, biking, slow vehicle speeds as part of place making efforts) to support the land use vision for Downtown Oakland. The CCS team is coordinating with the Downtown Specific Plan team to share data, technical analysis findings, and coordinate community engagement activities. The Downtown Specific Plan team’s scope and schedule is such that they will produce the initial, high level transportation circulation ideas and concepts in collaboration with stakeholders and the community. The CCS team will then evaluate and refine those concepts while continuing to work with key stakeholders and the community to develop a preferred circulation alternative.

Freeway Access Project – In spring 2015, Alameda CTC initiated the Freeway Access Project (FAP) to develop, evaluate and arrive at a preferred freeway access solution for access to/from I-880 and West Alameda. The FAP is focused on access improvements that would help alleviate the challenges and problems related to the on and off-ramps that connect to Broadway and Jackson Street. The CCS team is coordinating with the FAP team to share data, technical analysis findings, and coordinate community engagement activities. The CCS team is tasked with defining the preferred local street circulation alternative, which will then be used by the FAP to develop a project that meets freeway access needs and is compatible with local circulation plans.

In addition to accounting for and coordinating with the Downtown Specific Plan and Freeway Access Project, the CCS is also taking into account and coordinating with the following studies and projects within the Study Area:

- Pedestrian Master Plan (in progress)
- Coliseum Area Specific Plan (in progress)
- Embarcadero Bridge Seismic Safety Replacement Project (in progress)
- BART Station Area Plans and Modernization Studies (in progress)
- West Oakland Specific Plan (2014)
- Broadway/Valdez Retail District Specific Plan (2014)
- Alameda Point Final EIR (2014)
- Lake Merritt BART Station Area Plan (2013)
- Chinatown One-Way Street Conversion Study (2009)
- Brooklyn Basin (formerly Oak to Ninth Avenue Project) (2006)
- Chinatown Community Transportation Plan (2004)

The map on page 15 identifies the studies and projects overlapping with the CCS study.
OVERVIEW OF BASELINE ASSESSMENT
The Baseline Assessment provides a snapshot summary of existing transportation and circulation conditions within the Study Area based on readily available and accessible data. The Baseline Assessment is summarized in information bulletins. The information bulletins display data graphically to facilitate an understanding of key information and provide a foundation for the Future Conditions and Needs Assessment and Development and Analysis of Circulation Alternatives. Underlying these summaries are rich data sets, the details of which will be accessed as needed during the development of circulation alternatives. Rather than presenting all available data in detail, the Baseline Assessment provides a higher level summary of key findings.

The Baseline Assessment is organized in the following parts:

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The following pages present a map of the CCS Study Area that was referenced above, information on historic street connectivity in Oakland to provide additional context for the study, and a map of projects and studies from on-going and recently completed transportation planning work. Parts B and C follow.
Historic Street Connectivity

The construction and convergence of regional freeways in Oakland shifted the burden of carrying vehicle volumes from today’s local streets to I-980, I-880, and I-580, leaving excess vehicle lanes on many of downtown Oakland’s city streets. This creates numerous opportunities to reallocate existing street space to other travel modes and uses.

NATIONAL/REGIONAL CONTEXT

- **1890**: Introduction of the Streetcar
- **1902**: San Francisco, Oakland and San Jose Railway (Key System)
- **1906**: Bay Bridge
- **1919**: US Highway System
- **1923**: Posey Tube
  - Opened as two-way travel.
  - Connects to Harrison Street.
- **1924**: Streetcars in Oakland discontinued
- **1930s**: Prior to 1950s Oakland was the economic/social center of the Inner East Bay
- **1950s**: Alameda County Highway Master Plan - Increased focus on a highway system, grid system in downtown Oakland no longer seen as primary circulation routes for region connectivity
- **1990**: Cypress Structure of Nimitz Freeway

DOWNTOWN OAKLAND MANIFESTATION

- **1926**: Eastshore Freeway
  - Introduction of region-wide circulation
- **1937**: Posey Tube
  - Opened as two-way travel.
  - Connects to Harrison Street.

CIRCULATION IMPACTS

- **1990**: Aligned Posey Tube with Harrison Street defines routing to San Pablo Ave, Telegraph Ave, and Broadway.
- **1950s**: Nimitz Freeway feeds 7th and 8th Streets couplet introducing major regional travel through downtown Oakland. San Pablo Ave, Broadway, and Harrison St continue to be main north-south connections.

Source: U.S. Census

Oakland Population

1900 1950 2010

0 400,000
1960s

Regional freeways carry traffic outside the downtown Oakland network while concentrating traffic flows on streets that connect with interchanges (Oak, Harrison, Broadway and Jefferson).

1971

BART stations in downtown Oakland open to travelers

1980

Webster Street Tube opens for one-way southbound traffic and Posey Tube converted to one-way northbound traffic.

1985

Loma Prieta Earthquake

1989

Collapse of Cypress structure

1998

New Nimitz Freeway Alignment

1999

I-980 Constructed

Deemphasized need for east-west connections within the Downtown core

Circulation Impacts

Regional freeways carry traffic outside the downtown Oakland network while concentrating traffic flows on streets that connect with interchanges (Oak, Harrison, Broadway and Jefferson).

New Nimitz Freeway Alignment

Cypress Freeway removal and completion of I-980 affect regional freeway access locations and concentrate connections to downtown Oakland at Broadway and Jackson interchange ramps.

Cypress Freeway removal and completion of I-980 affect regional freeway access locations and concentrate connections to downtown Oakland at Broadway and Jackson interchange ramps.


1968

1971

1985

1989

1998

NATIONAL/ REGIONAL CONTEXT

DOWNTOWN OAKLAND MANIFESTATION

CIRCULATION IMPACTS
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Proposed Projects in Recent Planning Studies

Telegraph Ave Complete Streets Study
Downtown Specific Plan
Plan in Progress
Latham Square Improvements
Freeway Access Project
Broadway Transit Circulation Study
Lake Merritt Station Area Plan

Proposed Improvements

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Additional Studies in Progress

- SB743 Study
- Parking Management Study
- Freeway Access Project
- Pedestrian Master Plan Update
- Downtown Specific Plan
PART B
SUMMARY OF KEY BASELINE ASSESSMENT FINDINGS
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PART B
SUMMARY OF BASELINE ASSESSMENT FINDINGS

The following provides a summary of the key findings based on the Baseline Assessment data and information assembled and presented in Part C Baseline Maps and Facts. The key findings are organized by topics that follow the information bulletins presented in Part C.

COMPLETE STREET TYPOLORIES
The City of Oakland is in the process of developing a Complete Streets Plan to create a multimodal transportation network that successfully serves walking, biking, taking transit, driving, and goods movement throughout the City. The information on the Complete Streets Typologies pages displays the current typologies identified for streets within the CCS Study Area. The CCS will have the opportunity to consider and further refine and define street typologies within downtown to best accommodate different road users.

MODE SPLITS – HOW DO PEOPLE TRAVEL IN DOWNTOWN OAKLAND
This page displays information about how people travel to, travel from, and travel within the CCS study area. The information is based on the most recent California House Travel Survey data for the study area which was conducted in 2012. The graphs show that within in the CCS Study Area:

- 18% of trips occur by walking;
- 3% of trips occur by biking;
- 21% of trips occur by using BART;
- 6% of trips occur by using bus service;
- 51% of trips occur by auto vehicle.

Compared to all trip activities in Alameda County, there are a higher percentage of trips occurring by walking, biking, and transit as opposed to by vehicle. Despite the lack of bicycle facilities and challenges to walking in parts of downtown Oakland (e.g., long crossings for pedestrians at streets), there are relatively high percentages of people choosing not to use a personal vehicle for travel.

WALKING IN DOWNTOWN
The density of walking activities is the greatest around BART stations and AC Transit stops or transfers points. The majority of BART and AC Transit riders in downtown walk to access the transit stops and stations (as opposed to driving or riding a bike). While 18% of all trips are made by walking, there are challenges and/or characteristics that make walking in downtown Oakland less convenient, attractive, desirable, or safe than it could be. These include:

- Long crossing distances at some intersections;
- Long delays at some signalized intersections;
- Speed of vehicles (actual and perceived) traveling on the downtown streets, particularly during off peak periods;
- Conflicts with vehicles turning movements at intersections, particularly intersections with channelized right-turn or left-turn movements that are not required to stop;
- Inconsistent presence of pedestrian “walk” indications at signalized intersections;
- Inconsistent presence of curb ramps at intersections and crossings;
- Dirty, uneven, unwelcoming, and narrow sidewalks in some locations;
- Freeway overcrossings with limited lighting and unwelcoming appearances; and
- Concerns about personal security.
BICYCLING IN DOWNTOWN
The current bicycle network in downtown has limited connectivity, although current plans and proposed projects aim to increase the connectivity and prevalence of bicycle facilities (e.g., bicycle lanes, buffered bicycle lanes). The bicycle activity within the study area is generally evenly distributed across the downtown with a slightly higher concentration along Broadway and near the 19th Street BART station. As noted above, the current mode split for bicycling is 3% of total trips occurring within, to and/or from the study area. Some of the challenges that make bicycling in downtown Oakland less convenient, attractive or desirable include:

- Lack of connected or continuous bicycle facilities;
- Lack of family friendly or novice friendly bicycle facilities (e.g., separate bicycle lanes);
- Speed of vehicles (actual and perceived) traveling on the downtown streets, particularly during off peak periods;
- Circuitous routes due to one-way streets;
- Loading/Unloading activities and conflicts; and
- Angled on-street parking and associated conflicts with vehicles.

TRANSIT SERVICE
Downtown Oakland is a significant transit hub. Transit routes from all over the region converge in downtown Oakland contributing to the high percentage of trips made on transit and also making transit service within downtown Oakland critical for Oakland’s and the region’s long-term vibrancy. BART and AC Transit are used for 53% of the work related trips to and from downtown Oakland; they are critical for access to jobs as well as services and recreation in downtown. The following transit services have stops or stations within the study area: AC Transit, BART lines, San Francisco Bay Ferry, and Amtrak. Some of the challenges that transit service providers’ face include:

- Limited continuous north-south streets through downtown Oakland;
- Buses rely heavily on Broadway as one of the few continuous north-south streets through downtown Oakland;
- Providing reliable and frequent service to riders while balancing and sharing street space with other modes and uses; and
- Providing sufficient space for passengers during peak commute periods.

MOTOR VEHICLE CIRCULATION – VOLUMES AND CAPACITY
The number of lanes allocated to vehicle travel within downtown Oakland is greater than what is needed to serve existing vehicle traffic volumes. More than 80% of the streets in downtown Oakland have excess vehicle capacity, meaning that space on those streets could be reallocated to better serve other road users by reducing vehicle lanes and widths and creating bicycling lanes, wider sidewalks, and/or transit-only lanes. The space could also be reallocated for other uses such as public space or loading/unloading for local business.

SAFETY PERFORMANCE
In considering crash data over a three-year period (August 2011 through July 2014), there were a total of approximately 2,000 crashes. Some of the key findings include:
Pedestrian and bicyclists were involved in 360 of those crashes (or 18%), and pedestrians and bicyclists experienced greater severity (e.g., severe injury or fatality) than passengers of vehicles. The majority of crashes occurred at or on approach to an intersection (as opposed to midblock between intersections). Commonly cited contributing factors were drivers ignoring signals or stop signs, drivers traveling at unsafe speeds, and improper turning maneuvers by drivers.

A key to making downtown Oakland more attractive for walking, biking and transit is to be able to reduce the potential for crashes. The CCS team will use the crash data to help inform potential street changes and alternatives as the CCS advances.

**PARKING**

The Downtown Oakland Parking Study inventoried over 30,000 parking spaces within the CCS Study Area with approximately half of those spaces on-street and half in off-street parking facilities. While total demand does not exceed the City’s goal of 85% occupancy, the demand is uneven across the study area. This means there are shortages in some areas and excess or underutilized parking in other areas. The parking data is primarily based on public parking (on-street and off-street); where private parking data were available, that has been incorporated into information bulletin and noted as private parking. The CCS team will continue to collaborate with the Downtown Oakland Parking Study to identify solutions that could be incorporated into the CCS preferred alternative.

**LOADING/UNLOADING**

Designated loading and unloading curb space is less than 7% of on-street parking spaces. The majority of those are yellow curb designations that reserve the space for loading/unloading from 7:00 a.m. to 6:00 p.m. Monday through Saturday. Within the study area, there are specific streets with high loading/unloading activity such as portions of Chinatown and Jack London Square.

**REGIONAL GOODS MOVEMENT THROUGH DOWNTOWN**

The majority of regional goods movement via large vehicles occurs on 7th Street, 8th Street, 5th Street, and Jackson Street. Each of these streets provides some degree of connection to the regional freeways I-880 and I-980. The highest percentage of trucks occurs near industrial areas such as the Port of Oakland. A challenge that the CCS team will need to consider when circulation alternatives are developed is how to balance the access needs of the large trucks to key locations while creating a downtown street network that is welcoming and vibrant for walking, biking and transit.

**PUBLIC LIFE**

There are a number of different urban and street design principles and treatments that can be used to enhance and support the vitality of downtown Oakland. The Public Life information bulletins identify a range of potential treatments and opportunity sites with the study based on existing conditions. The CCS team will consider these as the project advances as well as other opportunity locations that are brought up by stakeholders and community members via the Downtown Specific Plan and/or CCS outreach activities.

**TRANSPORTATION AND PUBLIC HEALTH**

The more transportation needs can be met by transportation modes that are active and/or have lower emissions, the more healthy individuals and communities can be. The statistics included in this information bulletin provide a benchmark for where different metrics related to public health are today for the CCS Study Area. As the CCS Team considers and evaluates alternative projects and circulation concepts, public health related metrics will be used as one type of metric to gauge the potential tradeoffs and benefits of different alternatives.
Roadways in Downtown Oakland are used by all modes of transportation: pedestrians, transit riders, bicyclists, autos, and goods movement. Understanding the priority roadways for each mode of travel can help to understand competing interests and priorities on each roadway and explain how they function within the Downtown Oakland, citywide, and regional transportation networks. The maps on these two pages represent the priority networks for each travel mode per the draft Oakland Complete Streets Plan.

Auto Overlay

**Throughway**
Highways and limited access roadways with high speeds and high auto volumes.

**Throughway Connector**
City streets that provide direct access to Throughways and are typically auto-oriented.

**Community Connector**
City streets that connect multiple neighborhoods and possibly multiple jurisdictions, typically more than 5,000 ADT.

**Neighborhood Connector**
City streets that may connect one or more neighborhoods and primarily serve local traffic, typically with less than 5,000 ADT.

1. Consistent with Alameda CTC Multi-Modal Arterials Plans and Oakland Complete Streets Plan “county connector” designation.

Pedestrian Overlay

Low Pedestrian Emphasis

Very High Pedestrian Emphasis
1. Definitions are in-progress will be finalized through the Oakland Complete Streets Plan.
How People Travel to, from and within Downtown

All Trip Types

Commute Trips

Non-Commute Trips

- Walking represents over a third of all trips, with 18% of trips made exclusively by walking and 70% of all transit trips beginning with a walking trip.

- About half of all trips are made by private automobile within Downtown Oakland, where as only 40% of commute trips are made by auto.

- The greatest share of workers travel to downtown using BART, and the majority of workers either take BART, the bus, walk or bicycle.

- One in five people are using walking or biking as their primary means of transportation (to/from/within) Downtown Oakland.

How Does the Focus Area Compare to Citywide and Countywide Travel Patterns?

- One in five people are using walking or biking as their primary means of transportation (to/from/within) Downtown Oakland.

- Driving for all trip types is lower in Downtown than across the city and county.

Note: The mode listed is the primary mode used. However, many trips begin and/or end with another travel mode, typically walking. 70% of all trips made on transit begin with a walking trip. In these graphs, the transit trip would typically be captured while the walking trip would not. This is the result of how travel survey questions are typically structured.

1. “All Trip Types” is a combination of commute and non-commute trips.
2. All data is from the 2012 California Household Travel Survey for census tracts in the CCS Study Area (4034, 4029, 4028, 4027, 4026, 4031, 4030, 4033, 9832, 9820). Data set includes all weekday and weekend trips by trip purpose for employees, residents, and other travelers in study area.
Walking in Downtown

Downtown Oakland has the highest concentration of pedestrians citywide, with heavy foot traffic on most streets despite the challenges that pedestrians face with respect to long crossing distances and varying sidewalk conditions. The highest concentration of pedestrians occurs around the three BART stations, employment centers along 20th Street and 12th Street, and Chinatown.

Downtown Oakland Has Lots of Walking Activity. Some of the Highest Pedestrian Volumes Are Around BART Stations and Bus Routes.

Percent of Riders that Walk to the Downtown Oakland BART Stations:

- 19th Street: 80%
- 12th Street/Oakland City Center: 70%
- Lake Merritt: 60%

Percent of Riders that Walk to AC Transit Stops: 95%

Source: Heat map presented is based on available pedestrian intersection counts taken between 2012 and 2015. No data is available in many areas, particularly west of Broadway, between 14th and 19th Streets, and the Jack London District.
Challenges for Walking

Downtown Oakland has a large number of pedestrians who rely on the City’s roadway network to get them safely to their destinations. However, there are a variety of obstacles to pedestrian connectivity, safety, and comfort in Downtown. Key challenges include:

**Conflicts with Freeway Traffic**

I-880, I-980, and the Webster/Posey Tubes ramps and frontage roads create barriers to pedestrian connectivity and make crossings uncomfortable and potentially unsafe for pedestrians. In some cases, autos turning to access the freeway are given a green light during the pedestrian phase and crosswalks are yield controlled across right-turning autos at off-ramps.

**Missing Pedestrian Countdown Signals & Long Cycle Lengths**

Pedestrian countdown signals tell pedestrians how long they have to cross the street before opposing traffic is given a green light. Many signals in Downtown are old and do not have pedestrian countdown signals, and in some cases, there is no pedestrian signal. As a result, pedestrians do not know how much time they have to clear the intersection.

**Sidewalk Gaps**

Sidewalk gaps are common in portions of the Jack London District and are often taken up by perpendicular parking. Sidewalk gaps also exist along freeway frontage roads adjacent to I-980 and I-880, such as portions of 5th Street and Castro Street.

**Street Life, Sidewalk Quality, and Accessibility**

While pedestrian volumes and densities are high, the quality of the sidewalk environment is lacking in many areas. Sidewalks are wide in some cases, but often do not have street trees, benches, and other amenities. Sidewalk quality is poor in some areas, and while bus shelters are provided, their placement often constricts the sidewalk environment. Diagonal curb ramps are common in Downtown, and do not orient users with mobility and visual disabilities into the crosswalk but, instead, into the intersection. Many curb ramps may need upgrades to meet new standards.

**Long Crossing Distances & Cycle Lengths**

Many streets in Downtown are wide multi-lane streets that create long crossing distances for pedestrians. In some cases cycle length are also long, increasing delay for pedestrians. Coupled with low opposing auto volumes, this encourages pedestrians to feel comfortable crossing against the light.
The City’s bicycle network is designed to connect key destinations citywide in a way that seeks to provide comfortable biking facilities, direct routes, and sensitivity to topography. However, with constraints in roadway connectivity and competing priorities from the auto and goods movement networks, not all bikeways in the network may feel comfortable for bicyclists of all ages and abilities. Research has shown, however, that in order to attract new biking trips, providing comfortable bikeways that reduce stress from auto traffic is critical. One way of describing a network of more comfortable bikeways is through describing which routes are “family-friendly”; that is, on which routes would parents and children feel safe and comfortable riding?

### Family Friendly Bicycle Network

Bicycle lanes, paths, and bicycle routes on roadways with a limited number of travel lanes and lower speeds. Through the build out of the Bicycle Master Plan, Oakland intends to expand the family friendly network, shown in dashed green, to provide a continuous network of family friendly bikeways through Downtown.

### Remaining Network

The remaining bikeways in the network may be best suited for those who are more tolerant of traffic stress. These may include individuals more familiar with biking or are otherwise more confident riding in traffic. Parents may not feel comfortable riding with their children on each of these streets, due to high speeds or number of travel lanes, but may rely on them for portions or all of their journey on bike. These are critical links in the bikeway network that maximize connectivity and access to destinations.

---

Source: Family Friendly network developed by Jason Patton, City of Oakland Bicycle & Pedestrian Program Manager.
Bicycling in Downtown Current Activity

Despite limited continuous, dedicated bicycle facilities, Downtown Oakland has a high number of bicyclists who used its roadways everyday. Some of the highest concentrations of bicyclists include Telegraph Avenue, Broadway, and the Franklin/Webster Streets couplet.

Class I Bicycle Paths provide for bicycle travel on a paved right-of-way that is completely separate from the street.

Class 2 Bicycle Lanes are striped lanes on streets, designated with specific signage and stencils, for the use of bicyclists.

Class 3 Bicycle Routes designate preferred streets for bicycle travel using lanes shared with motor vehicles. While the only required treatment is signage, bicycle routes are designated because they are suitable for sharing with motor vehicles and provide better connectivity than other streets.

Class 3A Arterial Bicycle Routes designate preferred streets for bicycle travel using lanes shared with motor vehicles on arterial streets where bicycle lanes are not feasible and parallel streets do not provide adequate connectivity.

Class 3B Bicycle Boulevards designate preferred streets for bicycle travel using lanes shared with motor vehicles on residential streets that prioritize through trips for bicyclists. The routes should appeal to cyclists of varied skill levels by providing direct connections on streets with low traffic volumes.

Source: Heat map presented is based on available bicycle intersection counts taken between 2012 and 2015. No data is available in many areas, particularly west of Broadway, between 14th and 19th Streets, and the Jack London District. Existing and proposed bicycle facilities per the City of Oakland's Bicycle & Pedestrian Facilities Program GIS data, up to date through February 2014. Bikeway classification definitions per Oakland Bicycle Master Plan (2007).
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Challenges for Biking

Many people bicycle in Downtown Oakland for work, utilitarian, and recreational trips. Downtown roadways have some dedicated bike lanes and sharrow routes on low-volume roadways; however, significant challenges remain, particularly at intersections and where dedicated bike lanes terminate.

**Gaps in Bicycle Lanes**

Downtown has several roadways with continuous bike lanes for many blocks, such as Franklin Street, Webster Street, Jackson Street, Broadway, and 10th Street. However, these bike lanes terminate, leaving bicyclists with limited guidance in high traffic stress situations. In some cases, bicycle lanes drop near large intersections to add turn pockets or, as shown above, maintain parking.

**Signal Timings**

On many bicycle routes, signal timings allow cars to hit multiple green lights; however, bicyclists typically do not travel fast enough to receive multiple green lights. As a result, bikes often have to stop each traffic signal, increasing delay for bicyclists. Where opposing auto volumes are low, this may also encourage red light running.

**Loading and Angled Parking**

In the Jack London District, many blocks have perpendicular or angled parking, even on bicycle routes. As a result, sightlines between drivers and bicyclists are obscured.

**One-Way Streets**

In its current configuration, the network of one-streets in Downtown is often inconvenient for bicyclists, who have to travel out of their way to reach their destination. This can encourage wrong-way riding and riding on the sidewalk.
Downtown Oakland is the heart of the East Bay’s transit network, and more than 50,000 people use transit to travel to, from, and within the CCS study area every day. AC Transit and BART services are particularly vital to people with lower incomes, youth, seniors, and people with disabilities.

**Combined AC Transit Bus Frequencies**
- < 2 min
- 2-5 min
- 6-10 min
- 11-15 min
- 16-20 min
- 21-30 min

**AC Transit Average Weekday Ridership**
(Combined Ons/Offs in Fall 2014)
- 1,258 - 2,625
- 220 - 614
- 614 - 1,258
- 0 - 220

**Downtown Oakland**

*Connected by 20 AC Transit routes, 4 BART lines, SF Bay Ferry, and 3 Amtrak routes*

**Ferry:** ~1,400 daily boardings & alightings at Jack London Square in 2014

**Amtrak:** ~1,000 daily boardings & alightings at Jack London Square in 2014

Sources: AC Transit Average Weekly Boardings & Alightings in Fall 2014; GIS data from AC Transit Data Resource Center; Other ridership data from Amtrak, San Francisco Bay Ferry, and SF BART
Heart of East Bay Transit

Regional Context
Transit routes from all over the region converge in Downtown Oakland

Demographics
Household Income (HHI) of Transit Riders

Transit Ridership

~35,000 average daily weekday boardings
in CCS study area - Nearly 450,000 system-wide

Ridership by Station

~23,000 average daily weekday boardings
in CCS study area - Nearly 200,000 system-wide

Ridership by Route

Sources: Demographic data from AC Transit 2012 On Board passenger Survey, 2008 BART Station Profile Study, and 2006-2010 American Community Survey; SF BART average weekday ridership data for July 2015; SF BART average weekday entries and exits from Jan 1 - July 21, 2015; AC Transit ridership data in Fall 2014
Street Network

The Street Network presented here was based on available City data regarding street connectivity within and beyond the Study Area, transportation volumes, and resource allocation.
Weekday AM Peak Hour Vehicle Volumes

Volumes in the weekday AM Peak Hour:

2,790 Northbound
1,950 Southbound

6th Street and Brush Street also carry relatively higher vehicle volumes as frontage streets to I-980 and I-880, respectively.

Weekday AM Peak Hour & Peak Direction Vehicle Volume to Capacity (v/c)

Data Available for 24.3 Centerline Miles

- 10.5 miles (43%) are under capacity
- 10.9 miles (45%) are under capacity
- 0.3 miles (1%) are approaching capacity
- 2.6 miles (11%) are at or over capacity

More than 80% of these streets have unused vehicle capacity. Right-of-way could be reassigned to other road users without compromising access and circulation for emergency vehicles, transit, and personal vehicles.

Weekday PM Peak Hour Vehicle Volumes

Streets connecting to or adjacent to I-980 and I-880 carry the highest volumes such as:
- 5th Street
- 6th Street
- 7th Street
- Brush Street
- Castro Street
- Grand Avenue

Volumes in the weekday PM Peak Hour:

2,097 Northbound
3,319 Southbound

While some streets in Downtown Oakland carry the highest vehicle volumes in the PM peak hour, the majority of the street network remains well under capacity. Right-of-way could be reassigned to other road users without compromising access and circulation for emergency vehicles, transit, and personal vehicles.

Weekday PM Peak Hour & Peak Direction Vehicle Volume to Capacity (v/c)

DATA AVAILABLE FOR 24.3 CENTERLINE MILES

7.8 miles (32%) are under capacity
12.7 miles (52%) are under capacity
1.3 miles (5%) are approaching capacity
2.5 miles (11%) are at or over capacity

More than 80% of these streets have unused vehicle capacity. Right-of-way could be reassigned to other road users without compromising access and circulation for emergency vehicles, transit, and personal vehicles.

V/C Ratios
- Under Capacity (<0.25)
- Under Capacity (0.25-<0.75)
- Approaching Capacity (0.75-<1.0)
- At or Over (>1.0)
- Data Not Available

Capacity based on number of vehicle lanes, median type/pressure, availability of turn lanes.
Safety Performance in Downtown Oakland

**CRASH SEVERITY**
- PDO - Property Damage Only
- Pain - Injury (Complaint of Pain)
- Vis. Inj. - Injury (Other Visible)
- Sev. Inj. - Injury (Severe)
- Fatal - Fatality

**Ignoring signals and stops (37%)**
- MLK Jr Wy. & W Grand Ave.
- 17th St. & Telegraph Ave.
- 27th St. & 29th St.
- 14th St. & Harrison St.
- Telegraph Ave. & W Grand Ave.

**Unsafe speeds (12%)**
- 7th St. & Harrison St.
- 14th St. & Broadway
- 6th St. & Broadway
- 8th St. & Broadway
- 12th St. & Broadway

**Improper Turning (19%)**
- 14th St. & Broadway
- 8th St. & Webster St.
- 27th St. & 29th St.
- 17th St. & Brush St.
- 12th St. & Oak St.

**Unsafe starting or backing (7%)**
- 9th St. & Franklin St.
- 8th St. & Webster St.
- 21st St. & Broadway
- 8th St. & Franklin St.
- 27th St. & Bay Pl.

**TOP TEN INTERSECTIONS**

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Percent of Reported Collisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>14th St. &amp; Broadway</td>
<td>2.3%</td>
</tr>
<tr>
<td>MLK Jr Wy. &amp; W Grand Ave.</td>
<td>1.4%</td>
</tr>
<tr>
<td>7th St. &amp; Harrison St.</td>
<td>1.3%</td>
</tr>
<tr>
<td>Telegraph Ave. &amp; W Grand Ave.</td>
<td>1.3%</td>
</tr>
<tr>
<td>27th St. &amp; 29th St.</td>
<td>1.3%</td>
</tr>
<tr>
<td>17th St. &amp; Brush St.</td>
<td>1.2%</td>
</tr>
<tr>
<td>7th St. &amp; Madison St.</td>
<td>1.2%</td>
</tr>
<tr>
<td>14th St. &amp; Harrison St.</td>
<td>1.1%</td>
</tr>
<tr>
<td>8th St. &amp; Webster St.</td>
<td>1.0%</td>
</tr>
<tr>
<td>12th St. &amp; Oak St.</td>
<td>1.0%</td>
</tr>
</tbody>
</table>

Source: Select Collisions from the California Statewide Integrated Traffic Records System (SWITRS) | Data between August 2011 and July 2014
Safety Performance in Downtown Oakland

COLLISIONS BY INVOLVED PARTY AND BY SEVERITY
Percent of Reported Collisions

Pedestrian and Bicycle collisions account for 18% of all collisions and have the highest average severity.

PEDESTRIAN COLLISIONS

<table>
<thead>
<tr>
<th>Location</th>
<th>Percent</th>
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</thead>
<tbody>
<tr>
<td>14th St. &amp; Broadway</td>
<td>6.0%</td>
</tr>
<tr>
<td>12th St. &amp; Brush St.</td>
<td>4.3%</td>
</tr>
<tr>
<td>27th St. &amp; Broadway</td>
<td>2.2%</td>
</tr>
<tr>
<td>San Pablo Ave. &amp; W Grand Ave.</td>
<td>2.2%</td>
</tr>
<tr>
<td>9th St. &amp; Jackson St.</td>
<td>2.2%</td>
</tr>
</tbody>
</table>

BICYCLE COLLISIONS

<table>
<thead>
<tr>
<th>Location</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLK Jr Wy. &amp; W Grand Ave.</td>
<td>4.5%</td>
</tr>
<tr>
<td>San Pablo Ave. &amp; W Grand Ave.</td>
<td>3.2%</td>
</tr>
<tr>
<td>14th St. &amp; Broadway</td>
<td>2.6%</td>
</tr>
<tr>
<td>27th St. &amp; Broadway</td>
<td>2.6%</td>
</tr>
<tr>
<td>14th St. &amp; Franklin St.</td>
<td>2.6%</td>
</tr>
</tbody>
</table>

Source: Select Collisions from the California Statewide Integrated Traffic Records System (SWITRS) | Data between August 2011 and July 2014
More than 30,000 public parking spaces have been counted in the CCS study area (half on-street, half off-street). Total occupancy never exceeds the City’s stated goal of 85%, but demand is uneven: localized parking shortages exist in some areas, while parking in other areas is underutilized. This map summarizes key occupancy & inventory data from past and ongoing parking studies.

**Downtown Oakland**

- **20,000+** public parking spaces

  - **6,330** on-street spaces
    - 1,327 unmarked
    - 3,565 metered
  - **14,000+** off-street spaces
    - 1,359 reserved
    - 143 other
    - 287 disabled
    - 12,349 regular

**Broadway-Valdez**

- **5,000+** public parking spaces
  - On-street spaces unknown
  - **1,761** off-street in study area
  - **3,000+** off-street nearby

**Jack London District**

- **4,000+** public parking spaces
  - **1,593** on-street
    - 27% unregulated
    - 52% metered
    - 18% time limited
  - **2,300+** off-street

- **68%** overall on-street parking utilization
- **73%** peak occupancy (11 a.m.) for on-street spaces
- **<50%** peak occupancy for Broadway & Washington Garages


Parking Study Areas
- Privately owned garage or lot; occupancy data not available.

Parking Occupancy of "Regular" Spaces at Peak Hour (Thursday 12 - 1 p.m.)

- **On-Street Spaces**
  - **0% - 65%**
  - **66% - 85%**
  - **85%+**
  - Closed for construction
  - No Parking

- **City-Owned Off-Street Spaces**
  - **0% - 65%**
  - **66% - 85%**
  - **85%+**

- **P** Other city-owned parking garage or lot; occupancy data not available

1. Telegraph Plaza (351)
2. 18th St Uptown Lot (71)
3. Franklin Plaza Garage (482)
4. Dalziel Garage (213)
5. Clay Street Garage (335)
6. City Center West Garage (1461)
7. UCOP Garage (146)
8. 1200 Harrison Garage (200)
9. Franklin BB Garage
10. Pacific Renaissance Garage (576)
An area-wide surplus, with localized shortages

Parking Principles for City of Oakland Commercial Districts

Adopted by the Oakland City Council on October 15, 2013:

* Parking should be managed to achieve an approximate 85% maximum occupancy per block so that there will always be some parking available to shoppers and visitors.

* Parking should be priced to achieve usage goals ("market pricing"); market prices may vary by area; by time of day and may be adjusted occasionally to reflect current use.

* Pricing and policies should encourage use of off-street parking lots where they are available.

* If possible, and where appropriate, time limits should be avoided in favor of market pricing.

Curbs & Loading

< 7% of spaces are loading zones

Yellow (<3 min for passengers, <30 min for commercial): 426 spaces
White (<3 min for passengers): 154 spaces
Green (<12 min): 32 spaces

* Applies for Downtown Oakland Parking Study Area Only *

86% of spaces are 2-hr time limited in Downtown Parking Study area; 56% are metered
In Jack London, 52% are time-limited and 18% are metered.
Time limits typically $2/hr Mon - Sat 8 am to 6 pm

Parking Supply

30,000+ Parking Spaces
20,000+ Downtown Parking Study Area
4,000+ Jack London area
5,000+ Broadway-Valdez area

Parking Regulations

86% of spaces are 2-hr time limited
in Downtown Parking Study area; 56% are metered
In Jack London, 52% are time-limited and 18% are metered.
Time limits typically $2/hr Mon - Sat 8 am to 6 pm

Parking Occupancy

79% overall occupancy during peak (Thu 12-1pm)

49% peak occupancy on Saturday

However, hot spots of high demand & localized shortages (e.g. Chinatown & City Center), while other lots & garages remain underutilized.

Loading / Unloading

EXISTING CURB MANAGEMENT

Less than 7% of on-street parking spaces are loading zones

- **RED CURBS**
  - no stopping, standing or parking at any time

- **YELLOW CURBS**
  - loading/unloading between 7 a.m. and 6 p.m.
  - 426 spaces in Downtown (about 6%)

- **WHITE CURBS**
  - loading/unloading of passengers
  - 154 spaces in Downtown (about <1%)

- **GREEN CURBS**
  - no standing or parking for longer than 12 minutes between 8 a.m. and 6 p.m.
  - 32 spaces in Downtown (about <1%)

AUTHORITY TO ESTABLISH LOADING ZONES

- The Traffic Engineer is authorized to determine and mark all loading zones identified in the curb management.
- The Traffic Engineer may authorize additional loading zone signs for specific hours, if necessary.
- Requests to change loading zones may be coordinated with the Traffic Engineer.

AREAS WITH REPORTED HIGH LOADING/UNLOADING ACTIVITY

- **CHINATOWN**
  Existing vibrant local businesses rely on store front load/unloading and selling activities.

- **JACK LONDON SQUARE**
  Produce Market high activity from 12 a.m. to 11 a.m. daily

Examples of streets with specific loading/unloading needs.
1. Automated Tube Counts taken April 2015

Regional Goods Movement through Downtown

Findings

<table>
<thead>
<tr>
<th>Trucks as Percent of Total Traffic</th>
<th>Higher truck percentages near freeway ramps with the highest uses occurring near industrial areas, such as the Port of Oakland.</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 3%</td>
<td>3-5%</td>
</tr>
<tr>
<td>&gt;5%</td>
<td></td>
</tr>
</tbody>
</table>

Roadway connectivity to the east across the Lake Merritt inlet is limited and may account for higher truck percentages.
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Public Life

Using Space within Streets to Support Vitality of Downtown Oakland

PUBLIC REALM IMPROVEMENT OPPORTUNITIES
Oakland’s Downtown has been a focus of new growth in entertainment, housing and employment over the past decade guided by the General Plan’s goal to make it a premier location in the region for urban residential living.

Improvements to access for all modes and users, and creation of safe and attractive streets needs to occur hand-in-hand with private investment in Downtown to enhance the overall quality of life in Downtown.

The map to the left identifies some of the range of possible opportunities for improving public life in Downtown’s streets and open spaces. Five types of opportunities are identified and the numbers relate to example opportunity sites that are discussed on the attached sheets.

Some streets and open spaces already build a strong sense of public life and could be further enhanced, such as Frank Ogawa Plaza, several streets in Old Oakland and Chinatown. Also, improvements have recently or are currently happening along Lake Merritt and at Latham Square to enhance public life in Downtown Oakland.

The streets throughout Downtown provide opportunities for landscape, lighting, bicycle and vehicle parking, parklets, seating, and a myriad of other improvements that will be identified by this Plan.

Redesign of a street that slows traffic, creates safer space for all modes, allows for street to function as flexible open space for a range of activities, while maintaining vehicle access to uses along the street.

Several of the existing parks and plazas in the Downtown are in disrepair or could otherwise be enhanced to improve their use, maintainability, and safety; much like the improvements that have been made around Lake Merritt and those being made to Latham Square.

Improvements to reclaim underused space between the curbs of a street or intersection. These are typically quick and inexpensive investments to create new public space and could include either the full or partial width of the space within the curbs.

Three freeways traverse Downtown creating physical and psychological barriers that fragment Downtown. Improvements to streets crossing the freeways can improve access for people walking and cycling, as well as benefit Downtown’s image and public life.
OPPORTUNITY  
EXISTING CONDITIONS  
POTENTIAL ENHANCEMENTS / EXAMPLE

### SIDEWALK AND PARKING ENHANCEMENT

- 13th Street between Webster Street and Harrison Street

This is an example location, most of the streets in downtown Oakland could use an investment in Sidewalk and Parking Enhancements. Recommendations for improvements throughout the network and prioritization of improvements will be developed later in this study and will be coordinated with the Downtown Specific Plan.

- No trees/landscaping on north side
- 12 to 13-foot sidewalks with on-street parking
- Both sides have complete frontages of storefront entries

- Addition of street trees, opportunities for green infrastructure
- Widening of sidewalks
- Addition of bulbouts and parklets

**EXAMPLE:** Old Oakland - Oakland, CA

### SHARED STREET

- Fallon Street from 8th Street to 10th Street

- Laney College frontage on street
- Identified as shared street in Lake Merritt Station Area Plan
- Access street to BART and Oakland Museum

- Expand Area Plan’s “festival street” concept to create shared street improvements
- Consider green infrastructure

**EXAMPLE:** Bell Street - Seattle, Washington

### PLAZA AND PARK ENHANCEMENT

- Bishop Begin Plaza
  - San Pablo Ave between 21st St and 22nd St

- Underutilized park
- Fronts on to Greyhound Station
- Anchors northwest corner of Uptown Area
- Adjacent to new housing
- Eroded by “free right” off San Pablo Avenue

- Improve to serve adjacent residents street improvements
- Design landscape and lighting for better visibility
- Improve connection between plazas on either side of 21st Street
- Consider green infrastructure

**EXAMPLE:** Latham Square - Oakland, CA
## Public Life

### Opportunity Sites

<table>
<thead>
<tr>
<th>Opportunity</th>
<th>Existing Conditions</th>
<th>Potential Enhancements / Example</th>
</tr>
</thead>
</table>
| **PAVEMENT TO PARKS** | • Unnecessarily wide roadway  
• Low amount of vehicle traffic  
• Lack of open space in vicinity  
• Potential for new adjacent development | • Painted pavement  
• Pedestrian amenities: tables and chairs  
• Landscaping in planters or removed asphalt  
EXAMPLE: Sunset Triangle Plaza - Los Angeles, CA |
| **LINKS ACROSS FREEWAYS** | • Poor and potentially unsafe pedestrian environment under freeway  
• Need for disabled access improvements  
• Crosswalks have low visibility  
• Connects Lake Merritt BART to Amtrak Station | • Widen sidewalks and add pedestrian-scale lighting and other streetscape or public art elements under freeway  
• Improve crosswalk design across 5th Street  
EXAMPLE: 18th Street underpass - Birmingham, Alabama |
| **LINKS ACROSS FREEWAYS** | • High on/off ramp traffic speeds on Bush and Castro Streets  
• Poor pedestrian environment quality on overpass  
• Constrained sidewalk at ramp approaches  
• Gateway in to Downtown Oakland | • Motor vehicle traffic calming on Bush and Castro Streets  
• Widen sidewalks and buffering streetscape  
• Shorten crossing distances at intersections  
• Some in community are discussing potential to over the freeway  
EXAMPLE: Meade Avenue overpass - San Diego, CA |
Transportation and Public Health

Physical Activity

- 21% of all trips in Downtown are made by walking or biking.1
- Of the 27% of all trips made on transit, 70% of all transit trips begin by walking to a transit stop.1
- Of the study area is within ¼ mile of a major AC Transit bus route or of the three BART Stations.

38% of people who walk to work achieve the daily recommended aerobic activity during their commute.2,3

Air Quality

- 16.8% of people in the study area report having asthma, which is 23% higher than the statewide asthma rate.4
- For each hospital or emergency room visit for health issues related to air pollution, the cost of the medical visit, lost wages, and impact on family is 20% higher in the study area than in the Bay Area.

Roadway Safety

Percentage of Reported Collisions by Motorist Involved With (2011-2014):5

- Vehicle-Vehicle: 64%
- Bicycle-Vehicle: 8%
- Pedestrian-Vehicle: 10%
- Other Single-Vehicle: 18%

Data Sources and Notes:
1. California Household Travel Survey, 2012
2. American Community Survey, 2009-2013, percentage of commuters who walk more than 15 minutes to work each way
3. World Health Organization, recommended levels of physical activity for adults
4. California Health Interview Survey
5. SWITRS, 2011-2014