DOWNTOWN OAKLAND SPECIFIC PLAN APPENDICES

State Clearinghouse No. 2019012008

Prepared for:

City of Oakland

August 2019

URBAN PLANNING PARTNERS INC.

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State Clearinghouse No. 2019012008

Prepared for the City of Oakland

By:

Urban Planning Partners, Inc.
388 17th Street, Suite 230
Oakland, CA 94612

With:

Architecture + History
BASELINE Environmental Consulting
Environmental Collaborative
Fehr and Peers
PaleoWest

August 2019

URBAN PLANNING PARTNERS INC.

APPENDICES

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NOTICE OF PREPARATION

CITY OF OAKLAND

DALZIEL BUILDING • 250 FRANK H. OGAWA PLAZA • SUITE 3315 • OAKLAND, CALIFORNIA 94612

Planning and Building Department (510) 238-3941
Bureau of Planning FAX (510) 238-6538
TDD (510) 238-3254

NOTICE OF PREPARATION (NOP) OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE DOWNTOWN OAKLAND SPECIFIC PLAN

The City of Oakland's Planning and Building Department, Bureau of Planning, is preparing an Environmental Impact Report (EIR) on the Downtown Oakland Specific Plan concurrently with the development of the Draft Downtown Oakland Specific Plan (the Project) as identified below, and is requesting comments on the scope and content of the EIR. The EIR will address the potential physical and environmental effects that the project may have on each of the environmental topics outlined in the California Environmental Quality Act (CEQA). The City has **not** prepared an Initial Study. Under CEQA, a Lead Agency may proceed directly with EIR preparation without an Initial Study if it is clear that an EIR will be required. The City has made such determination for the Project.

The City of Oakland is the Lead Agency for the Project and is the public agency with the greatest responsibility for approving the Project or carrying it out. This notice is being sent to Responsible Agencies and other interested parties. Responsible Agencies are those public agencies, besides the City of Oakland, that also have a role in approving or carrying out the Project. When the EIR is published, it will be sent to all Responsible Agencies and to others who respond to this NOP or who otherwise indicate that they would like to receive a copy.

Responses to this NOP and any questions or comments should be directed in writing or via email to: Alicia Parker, City of Oakland, Bureau of Planning, 250 Frank H. Ogawa, Suite 3315 Oakland, CA 94612; (510) 238-3362 (phone); or by e-mail at aparker@oaklandca.gov. Written comments on the NOP must be received at the above mailing or e-mail address **by 4:00 p.m. on February 11th, 2019**. Please reference case number **SP16-001**and **ER18020** in all correspondence.

In addition, comments may be provided at the EIR Scoping Session Public Hearings to be held before the Landmarks Preservation Advisory Board and the City Planning Commission.

All comments should focus on potential impacts on the physical environment, ways in which potential adverse effects might be minimized, and alternatives to the project in light of the EIR's purpose to provide useful and accurate information about such factors.

EIR SCOPING SESSION PUBLIC HEARINGS:

(1) The Landmarks Preservation Advisory Board
Monday February 4, 2019 at 6:00pm
Oakland City Hall, Hearing Room 1
1 Frank H. Ogawa Plaza

2605603

2) City Planning Commission
Wednesday, February 6, 2019 at 6:00pm
Oakland City Hall, Hearing Room 1
1 Frank H. Ogawa Plaza

PROJECT TITLE: Downtown Oakland Specific Plan

PROJECT LOCATION: The Downtown Oakland Specific Plan Area encompasses approximately 850 acres in Downtown Oakland and is generally bounded by 27th Street to the north; I-980, Brush and Market Street to the west; the Jack London estuary waterfront and Embarcadero West to the south; and Lake Merritt and Channel to the east. The Plan Area's location is shown in Figure 1, and the Plan Area Boundary is shown in Figure 2.

PROJECT SPONSOR: City of Oakland

EXISTING CONDITIONS: The City of Oakland, with the assistance of grants from the Metropolitan Transportation Commission (MTC) and Bay Area Rapid Transit (BART), is preparing the Downtown Oakland Specific Plan. Downtown Oakland is the cultural, business, government, and entertainment hub of the East Bay. The Plan Area also includes several historic properties and districts including those designated by the City of Oakland as being Areas of Primary Importance (API); Areas of Secondary Importance (ASI); properties individually rated A, B, C, or D; and Landmark Properties. The Plan Area is serviced by two Bay Area Rapid Transit (BART) stations, multiple Alameda County (AC) Transit bus lines, Amtrak train service, and ferry service. There is potential soil and groundwater contamination associated with previous uses in the project area, including approximately 100 properties identified on the California Environmental Protection Agency's Cortese List.

PROJECT DESCRIPTION: The Downtown Oakland Specific Plan will provide a roadmap for how the area develops over the next 20 to 25 years through policy guidance on land use, transportation, housing, economic development, public spaces, cultural arts, and social equity.

The Plan aims to ensure that Downtown remains a place of continuing growth and revitalization, as well as a valuable resource for the larger Oakland community through increased employment, housing, arts, and cultural opportunities. Supporting existing residents by growing existing businesses and the creative economy are important to creating a plan that serves both current and future residents.

The Plan builds on extensive community feedback to meet its goals of:

1. Create opportunities for economic growth for all Oaklanders.
2. Ensure sufficient housing is built and retained to meet the varied needs of current and future residents.
3. Make downtown's streets comfortable, safe, and inviting, as well as improve connections to the city as a whole so that everyone has efficient and reliable access to downtown's jobs and services.
4. Allow diverse voices and forms of expression flourish.
5. Provide vibrant public spaces and a healthy environment that improve the quality of life downtown today and for generations to come.
6. Develop downtown in a way that contributes to community needs and preserves Oakland's unique character.

The components of the Specific Plan will include:

- The distribution, location, and extent of the uses of land, including open space, within the area covered by the plan;
- The proposed distribution location, and extent of the uses of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy, and other essential facilities proposed to be located within the area covered by the plan and need to support the land uses described in the plan;
- Standards and criteria by which development will proceed, and standards for the conservation, development, and utilization of natural resources, where applicable; and
- A program of implementation measures, including regulations, public works projects, and financing measures necessary to carry out the proposed improvements

For more information on the project, please visit the project website at: https://www.oaklandca.gov/topics/downtown-oakland-specific-plan.

PROBABLE ENVIRONMENTAL EFFECTS: It is anticipated that the project may have significant environmental impacts to the following: Aesthetics, Air Quality, Biological Resources, Cultural and Historic Architectural Resources, Flood Plain/Flooding, Energy, Geology and Soils, Greenhouse Gas Emissions and Global Climate Change, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Mineral Resources, Noise and Vibration, Population and Housing, Public Services, Recreation, Traffic and Transportation, and Utilities and Infrastructure, as well as cumulative effects. All of the noted environmental factors will be analyzed in the EIR.

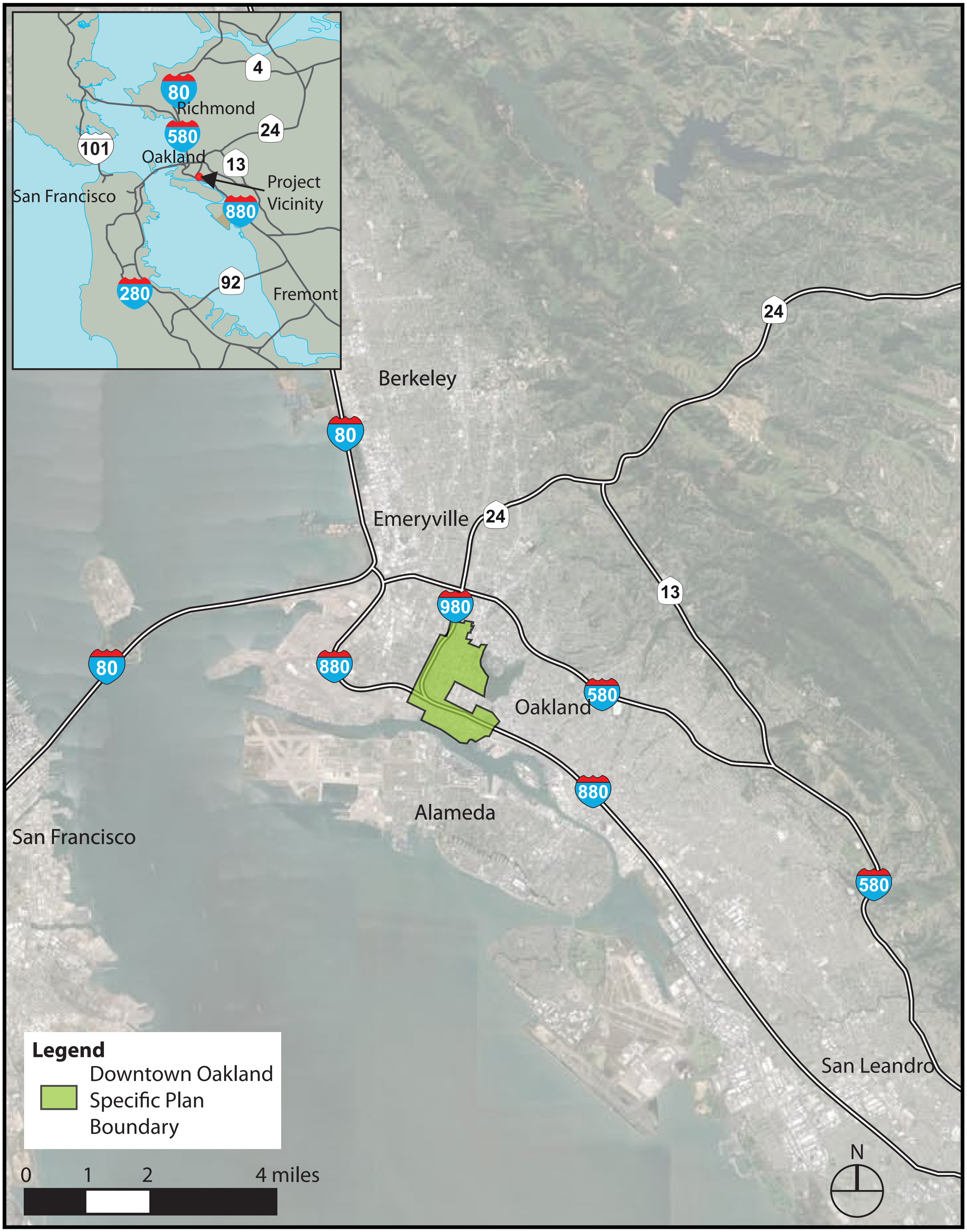
The Project does not have the potential for any impact on the following environmental factors, and, as a result, these environmental factors will not be the subject of study in this EIR: Agriculture and Forestry (there are no agricultural and forest land resources in the Planning Area), and Mineral Resources (there are no mineral resources in the Plan Area).

The Draft EIR will also examine a reasonable range of alternatives to the project, including the CEQA-mandated No Project Alternative and other potential alternatives that may be capable of reducing or avoiding potential environmental effects.

January 4, 2018
File Number ER18020

Catherine Payne
City of Oakland
Environmental Review Officer

Attachments:
Figure 1: Regional and Vicinity Map
Figure 2: Planning Boundary



Downtown Oakland Specific Plan Draft EIR
Notice of Preparation

Figure 1
Regional and Vicinity Map

Source: Google Earth, 2018.

Downtown Oakland Specific Plan
Notice of Preparation

Figure 2
Planning Boundary

Source: Google Earth, 2018.

ALAMEDA COUNTY
PUBLIC HEALTH DEPARTMENT

ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY
PUBLIC HEALTH DEPARTMENT

Colleen Chawla, Agency Director
Kimi Watkins-Tartt, Interim Director

Office of the Director

1000 Broadway, Ste. 5000
Oakland, California 94607

(510) 267-8000
(510) 267-3223

I am writing to share my comments on behalf of the Alameda County Public Health Department (ACPHD) regarding the scoping of the Environmental Impact Report (EIR) for the Downtown Oakland Specific Plan (Plan). As the Director for the agency responsible for monitoring health status of our communities and advising on the development of policies and practices that protect and promote health and well-being within our county, **I recommend that the scope of the EIR include comprehensive analysis of the public health impacts of the Plan, such as through a Health Impact Assessment.**

The Downtown Oakland Specific Plan will provide a roadmap for how the area develops over the next 20 to 25 years through policy guidance on land use, transportation, housing, economic development, public spaces, cultural arts, and social equity.

ACPHD believes that further analysis of the public health impacts of the Downtown Plan should be included in the scope of the EIR, such as through a Health Impact Assessment (HIA). Using a variety of methods and tools, HIAs allow a systematic evaluation of how a policy or project can impact the health of a population and the distribution of those effects within the population. HIAs can then provide evidence-based recommendations to enhance predicted positive health impacts and minimize or mitigate negative ones.

The preliminary draft plan includes a chapter on Community Health that commendably sets a goal of providing "vibrant public spaces and a healthy environment that improve the quality of life downtown today and for generations to come." Ideas included in this chapter—such as improving streetscape and open spaces, increasing pedestrian access, urban greening, and community safety initiatives—are important contributions to greater health and well-being among residents, workers and visitors to Downtown. However, a comprehensive Health Impact Assessment could examine the health impacts related to each of the Plan's six overarching goals and preliminary recommendations.

<u>An area of particular concern is the potential impacts of gentrification and displacement related to Housing Development, Economic Development and Land Use policies in the Downtown Plan Area, which pose significant risk for vulnerable populations:</u>

There is extensive research and evidence that displacement can have serious health consequences for displaced residents, vulnerable populations, and our broader region. A previous assessment found that gentrification and displacement have significant, negative health impacts on individuals and families who are displaced, including: increased likelihood of exposure to overcrowded and substandard housing conditions; loss of community services and institutions; financial distress and relocation costs; disruptions to health care and prescription medications; fragmentation of community support networks; loss of social support and cohesion; and direct impacts on mental and physiological wellbeing.[1] Furthermore, we found that displacement may harm health for the whole region by increasing the likelihood that residents who are forced into more affordable areas of the region will need to drive to reach jobs, social activities, and essential services. Research has suggested that when residents are displaced out of central city areas due to unaffordable housing conditions, they are likely to end up in neighborhoods that have lower levels of public transit access and fewer social and community support services than their previous neighborhoods.[2] On the other hand, new residents moving into transit-oriented development projects are more likely to drive than previous residents, decreasing the potential public transit ridership benefits of these projects.[3] Thus, it is crucial for the city to prioritize strong anti-displacement measures in all new development as part of its broader commitment to increasing public transit use, reducing vehicle miles traveled and associated greenhouse gas emissions, and mitigating the impacts of climate change.

ACPHD is dedicated to improving the health of all Alameda County residents and to preventing avoidable health risks. In our efforts to do so, we are committed to partnering with the City of Oakland on ensuring healthy planning. Please feel free to contact me with any questions or concerns.

Sincerely,

Kimi Watkins-Tartt
Interim Director
Alameda County Public Health Department

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[1] Causa Justa::Just Cause. 2014. *Development Without Displacement: Resisting Gentrification in the Bay Area.* Available at: http://www.acphd.org/media/343952/cjjc2014.pdf

[2] Garr, E. & Kneebone, E. (2010). *The Suburbanization of Poverty: Trends in Metropolitan America, 2000 to 2008.* Metropolitan Policy Program at Brookings; Raphael, S. & Stoll, M.A. (2010). *Job Sprawl and the Suburbanization of Poverty.* Metropolitan Policy Program at Brookings; Soursourian, M. (2012). *Community Development Research Brief: Suburbanization of Poverty in the Bay Area.* Federal Reserve Bank of San Francisco; International City/County Management Association. (2005). *Active Living and Social Equity: Creating Healthy Communities for All Residents: A Guide for Local Governments.* Available at: http://65.181.142.130/images/stories/rpt_icma_jan2005.pdf.

[3] Pollack S, Bluestone B, Billingham C. (2010). Maintaining Diversity in America's Transit-Rich Neighborhoods: Tools for Equitable Change. Dukakis Center for Urban and Regional Policy. Available at: www.northeastern.edu/dukakiscenter/wp-content/uploads/2011/12/TRN_Equity_final.pdf; Dominie W. (2012). Is Just Growth Smarter Growth: The Effects of Gentrification on Transit Ridership and Driving in Los Angeles' Transit Station Area Neighborhoods. Prepared for the Bus Riders' Union. Available at: www.thestrategycenter.org/sites/www.thestrategycenter.org/files/Dominie_Is_Just_Growth_Smarter_Growth_6-2-2012.pdf.

Mark Brustman
2122 Lakeshore Avenue
Apt. 111
Oakland, California 94606

February 21, 2019

Alicia Parker
Project Planner for Oakland Downtown Specific Plan
Department of Building and Planning
250 Frank H. Ogawa Plaza
Oakland, California 94612
Email: aparker@oaklandca.gov

Public comment regarding EIR Scoping for Downtown Oakland Specific Plan and regarding Downtown Oakland Preliminary Draft Plan

[Copy of spoken comments delivered to Planning Commission meeting on February 20, 2019]

The housing crisis is severe, and that makes it a great time politically to promote new construction and increase the taxable square footage in Oakland. This will lead to more revenue to fund needed city services.
But as we promote more construction, we must not ruin those things that give Oakland a unique sense of place and a visual signature.

The protection of views between Lake Merritt and the historic downtown highrises is called for in the environmental impact reports for the General Plan Land Use and Transportation Element and for the Amendments to the Central District Urban Renewal Plan. The Draft EIR for the Amendments promised that the views from the Lake would remain "substantially similar" to conditions existing in 2011, while the General Plan LUTE Draft EIR called for establishment of view corridors as a necessary mitigation measure to reduce the impact of new construction to a less than signficant level. This mitigation measure was never implemented, leaving the onus on individual projects to ensure that views between Lake Merritt and the historic downtown are not ruined.

This unfulfilled requirement has been largely ignored in practice over the past two years. As Commissioner Myres pointed out in this chamber at a September 2017, the Planning Department and Commission has taken a "backward" approach, in approving new construction that blocks views before the issue of view corridors has been resolved. The 1314 Franklin tower blocks the view of the Tribune Tower – Oakland's iconic symbol - from most of the Lake Merritt parklands. The whole stretch along Lakeshore Avenue where people picnic every summer weekend, where TV weather reporters go for a picturesque backdrop, will no longer see the red neon-lit tower after this summer. How did this obstructing building get approved? Here's how: Its CEQA analysis claimed that "it would not obstruct views of existing scenic vistas."

Another building that this Commission intended to approve a year ago tonight would have taken away the sole remaining view of the Tribune Tower from the northern two-thirds of the lake as well as the historic view of City Hall from the East 18th Street Pier. Fortunately, this body will have another chance to do the right thing and save *those* views, at least. The vote one year ago was invalid due to lack of a quorum because of a conflict of interest. The vote will have to be taken over again, if a petition I have filed with the Superior Court succeeds. But the new vote will have to be based on a CEQA Analysis that takes into account new information about historical and cultural importance of those views.

The view of the Tribune Tower from the northwest arm of the lake, the view of City Hall from the East 18th Street Pier, and the view of the Central Bank building from the park along Lakeshore Avenue south of Brooklyn Ave are all part of a grand solar monument realized during the Mott and Davie administrations, a monument to the sun and the seasons that rivals Stonehenge and the Pyramids, built right into the Oakland skyline, and honoring the Transcendentalist and Masonic spirituality of Oakland's pioneers. On the table I have a handout showing how pioneer Oaklanders accumulated land parcels along solstice and equinox lines in the 1860s and 1870s, and another handout showing the surviving features of the solar monument.

This monument has miraculously survived – unacknowledged – despite major construction projects in and around it over the past six decades. Some guardian angels must have been protecting it, perhaps the spirits of the pioneers buried in the cemetery up on the hill. The EIR for the Downtown Specific Plan, in assessing its impact on the aesthetic, cultural and historical resources of the downtown district, must take account of this marker of the seasons, this acknowledgement of the merciful design of the solar system, this monumental treasure, a gift to us in posterity from Oakland's first generations.

From: asyee@aol.com
To: echiu@ebaldc.org; Gilchrist, William; Manasse, Edward; Parker, Alicia; Winter, Joanna
Cc: mlok@ahschc.org; kdea4197@hotmail.com; jliou@ahschc.org; jmyres.oakplanningcommission@gmail.com
Subject: Re: DOSP - big picture feedback from Chinatown Coalition
Date: Thursday, February 21, 2019 10:56:47 AM
Attachments: image001.jpg

Bill, Ed, Alicia, Joanna:

For purposes of the EIR, the study should include the two-way conversion of Webster Street from 14th Street to 7th Street. It should also address the effects of the bike lanes and reduction of lanes on the Chinatown commercial area and its impact on loading and unloading for the commercial trucks.

Alan

Alan Yee
Siegel, Yee, Brunner & Mehta
475 14th Street, Suite 500
Oakland , CA 94612
(510) 839-1200
Fax: (510) 444-6698

-----Original Message-----
From: Ener Chiu <echiu@ebaldc.org>
To: Gilchrist William <wgilchrist@oaklandnet.com>; Manasse, Edward (EManasse@oaklandca.gov) <EManasse@oaklandca.gov>; Parker, Alicia (AParker@oaklandca.gov) <AParker@oaklandca.gov>; Winter, Joanna (JWinter@oaklandca.gov) <JWinter@oaklandca.gov>
Cc: mlok@ahschc.org <mlok@ahschc.org>; Karen Dea <kdea4197@hotmail.com>; Julia Liou (jliou@ahschc.org) <jliou@ahschc.org>; asyee@aol.com <asyee@aol.com>; jmyres.oakplanningcommission@gmail.com <jmyres.oakplanningcommission@gmail.com>
Sent: Thu, Feb 21, 2019 2:09 am
Subject: DOSP - big picture feedback from Chinatown Coalition

Bill, Ed, Alicia, Joanna:

Thank you so much for meeting with members of the Chinatown Coalition today. We will be sending you our detailed comments on the Preliminary Draft of the DOSP next week. FYI that I'm cc'ing Planning Commissioner Chair Jahmese Myres on this email.

I know that we will spend a lot of time in the weeds going back and forth on comments and responses, but I wanted to make sure to elevate a couple of the major themes that our feedback will revolve around.

1. We should integrate the outcomes of the LMBART Specific Plan into the DOSP.

a. City can do this by prioritizing the LMBART implementation plan desired community benefits into the DOSP implementation plan. City staff agreed this was a good idea.

b. Prioritize circulation improvements (esp two way street conversions) and improvements and program support for existing assets (like existing public parks/rec centers/cultural centers) over the creation of new things (especially new things that are going to take a lot of resources and maintenance over time) like reclaiming 980 or a "green loop".

2. Don't give away the City's zoning power for free. By creating areas of unlimited heights or heights that are well beyond the current market demand and by creating by-right FARs that are more than double even those in Downtown SF in some places, the City of Oakland would be taking a public action that would give away windfall value increases to private landowners, and would receive nothing in return for the public. Landowners get a windfall and developers have no incentives to use the incentive program that you're creating. It's wonderful that you have some nice aspirational goals in the plan, but there are very few mechanisms that have teeth that create resources for implementation. No one will buy the cow if you give away the milk for free. We have already proved it Downtown. We have a pipeline of residential projects coming online by 2020 of more than 5,000 units, and less than 4% of that is affordable. Does that achieve a "Downtown for Everyone"? See attached map and unit count (map created by a local broker, I based the unit count off of his data). There are no mechanisms to actually create affordable housing Downtown, especially because the zoning deregulation from 2010 has contributed to a massive run up in land prices.

3. We all support getting to a less auto dependent future. But please realize that Downtown neighborhoods are already severely impacted by parking reductions (all these new buildings are being built on parking lots). So taking away street parking on top of that without providing for parking lots elsewhere (like under the freeway overpasses) will negatively impact businesses and services in the short run. And the short run matters. The City would never dream of impacting other neighborhoods with so much new density while simultaneously reducing public parking.

As far as follow ups, here are the ones that I noted:

- Planning staff will connect us to the right bike planner in DOT (Lily Brown?)
- Is there a traffic study as part of DOSP? Coalition requests to review.
- If you are going to type up notes to our meeting today, can you send us a copy? If you weren't planning on typing up notes, please let us know, and we'll distribute our notes to our Coalition, but I find it's usually helpful to have a set of notes that we mostly agree on.
- Coalition will send City staff a prioritized list of the community benefits and desired changes listed in the LMBART SAP implementation plan. We'll include that as an attachment or something to our detailed letter next week.

Jahmese: I'd been hoping to chat with you about these larger themes yesterday at our EBHO meeting, but I was sorry to hear that you were in a car accident! I hope you're doing ok, and that nothing too dear was lost or damaged.

Mike: I don't have Susie from OACC and Doug from CACA's email addresses, who were at the meeting today. Can you forward this to them or loop them in?

Thanks!

Ener Chiu
Associate Director – Real Estate Development
East Bay Asian Local Development Corporation
1825 San Pablo Ave., Suite 200, Oakland, CA 94612
DIRECT (510) 287-5353 x338 EMAIL echiu@ebaldc.org WEB www.ebaldc.org

EBALDC
EAST BAY ASIAN LOCAL DEVELOPMENT CORPORATION
BUILDING HEALTHY, VIBRANT AND SAFE NEIGHBORHOODS

From:	Jeffrey Levin
To:	Parker, Alicia
Cc:	Amanda Monchamp; Clark Manus; Jonathan Fearn; Nischit Hegde; Shahar Shirazi; Tom Limon; Jahmese Myres; Hiroko Kurihara; Naomi Schiff; Margaretta Lin
Subject:	Comments on Notice of Preparation for Downtown Specific Plan
Date:	Thursday, February 21, 2019 5:00:08 PM

Dear Ms. Parker:

On behalf of East Bay Housing Organizations, I am submitting the following comments on the Notice of Preparation for the EIR for the Downtown Oakland Specific Plan project. These comments restate and expand on comments made verbally at the public hearings.

We note first that concerns about housing affordability, displacement, and homelessness have consistently been raised the community in various public meetings and comment. In addition, much work has gone into identifying racial and economic disparities in the Plan area and the need for plans, policies and strategies that explicitly take equity into account. The Draft EIR should analyze the extent to which the Plan might yield negative outcomes that disproportionately impact people of color, low income households, and other vulnerable groups, and identify steps to prevent or mitigate such disparate impacts. These are fair housing issues that have the potential for negative impacts on the environment as well as the health and safety of the area's vulnerable residents.

1. Regarding the Notice of Completion & Environmental Document Transmittal form, in the section for Project Issues Discussed in Document, the boxes for "Economic/Jobs" and "Growth Inducement" should be checked and these topics should be addressed in the EIR, as they are a major focus of the Specific Plan. Growth inducement issues should include the likelihood for displacement of existing residents (housed and unhoused) as a result of intensified development in the Plan area. This should include both direct displacement on future development sites and indirect displacement caused by rising rents in the Plan area arising from the intensified growth.

2. We urge the City to prepare a Socio-Economic Impact Analysis for both the Plan and any alternative scenarios studied, modeled after the Policy and Planning Framework that was included as Appendix C to the Final EIR for the Wood Street Project, dated February 7, 2005. Particularly because of the emphasis on racial and economic equity, and the disparate impact of housing costs and displacement on people of color, low income households, seniors, people with disabilities, and other classes, the City should explicitly analyze the potential impacts of the Specific Plan on these vulnerable populations, and identify measures that avoid negative impacts or provide mitigation measures where such impacts are unavoidable.

3. Similarly, we urge the City to prepare a Health Impact Analysis to look at potential impacts on the health of residents in the Plan area and the neighboring areas. It is well documented that displacement and housing insecurity have significant negative impacts on resident health. Displacement of households to areas outside of Oakland will also have negative consequences on the region's environmental conditions, particularly with respect to traffic congestion, air quality, and greenhouse gas emissions. These matters should be studied along with identification of alternatives that might lessen these impacts or mitigation measures.

Thank you for the opportunity to comment. We look forward to the preparation of the Draft EIR and remain available should you have any questions or need additional development while the Draft EIR is being prepared.

____

Jeff Levin, Policy Director
EAST BAY HOUSING ORGANIZATIONS (EBHO)
510-663-3830 ext. 316 | jeff@ebho.org
538 Ninth Street, Suite 200 | Oakland, CA 94607

NOTE: I am generally in the office only on Monday, Tuesday and Thursday, so I may not be able to reply to your e-mail right away.

Join EBHO or renew your membership today to keep building community power for affordable homes!

Visit us at www.EBHO.org and follow us on Facebook and Twitter

All residents of affordable housing are invited to apply for EBHO's 2019 Leadership Academy!!
You can download the application here. Please invite others.

HAUSRATH ECONOMICS GROUP

February 21, 2019

Alicia Parker
Bureau of Planning
250 Frank H. Ogawa Plaza, Suite 3315
Oakland, CA 94612

Re: **NOP Comments: EIR Should Analyze Higher Development Scenario for Downtown Office Development. As Is, Plan Development Program Underestimates Future Office Growth.**

Dear Ms. Parker:

The Plan needs to give more recognition to downtown as the economic engine of the City and include more growth of downtown office space in the development program illustrated in the Plan and analyzed in the EIR. While the Plan needs to accommodate both jobs and housing, the development program in the Preliminary Draft Plan shows many more opportunity sites with housing development and relatively few sites with office development.

Our analysis of the development program in the Preliminary Draft Plan shows the following:

- Beyond the current pipeline of approved/under construction projects, the future development program shows an 8:1 ratio of land area for housing development over land area for office development. Stated another way, future residential development is assumed on 63 percent of the land area on opportunity sites downtown and future office development is assumed on 8 percent of the land area.

- The future office development identified in the Plan's development program reflects a very high average FAR, includes redevelopment of existing buildings that is unlikely to occur for a long time into the future if at all, and includes office on at least one or more sites with development agreements for other uses. Thus, the amount of office development identified appears too high for the sites that are shown for office development.

- The future housing development program in the Plan reflects a low average FAR which will likely be higher as development occurs. Thus, the amount of housing identified appears low for the sites shown for its development.

As now presented, the development program in the Plan appears out of sync with the downtown's role as Oakland's Central Business District (CBD).

Our further analysis shows that it is possible to include office development on more sites and still retain the housing scenario shown by assuming an increase in the relatively low overall density assumed for housing development in the Plan. Thus, a more realistic development program can be assumed without trading off one type of development for another.

The attached table shows an alternative development program that provides a more realistic scenario for downtown office development from the perspectives of development densities, market parameters, and the role of downtown as the CBD of the City. The alternative scenario also includes some additional opportunity sites that are locations under consideration for development. The differences between scenarios focus on the office development. We did not revise the future retail, flex commercial, or institutional scenarios from those in the Plan, although the future retail amounts should be increased to reflect more ground floor space in office buildings.

We also have attached two images with aerials of potential future development within the Plan area. The different office development scenarios are highlighted by differences in the number and locations of office buildings colored blue in the diagrams.

We recommend that the Alternative Program be assumed for the EIR analysis of the Plan. It reflects a more realistic scenario for future office development in Oakland's CBD. It also provides more assurance that the EIR analysis does not underestimate office development potentials and impacts, and does not constrain future office growth.

More broadly, it is important to recognize that the role of office downtown has implications for what kind of city we want Oakland to be. Without support for downtown's role as THE CENTER of jobs and business activity in Oakland, the City will become more of a bedroom community for jobs elsewhere, particularly in San Francisco.

This analysis was prepared by our firm and JRDV Urban International and has been reviewed be real estate professionals and business leaders in the Chamber. It can be further refined as well. It would be useful to sit down with City staff to further discuss the assumptions and results as related to the Plan and EIR work.

Thank you for consideration of our comments. We are available to discuss the issues and analysis summarized herein.

Sincerely,

Linda Hausrath

President
Hausrath Economics Group

E. Fearn

Principal
JRDV Urban International

CC:
Jahmese Myres
Amanda Monchamp
Jonathan Fearn
Nischit Hegde
Tom Limon
Clark Manus
Sahar Shirazi
Bill Gilchrist
Ed Manasse
Joanna Winter
Daniel Findley
Barbara Leslie

Enclosures

Downtown Plan Development Program and Density Analysis

Current Program	Site Area (000,000)	FAR	Future Building SF	Pipeline Building SF	Total Building SF
Anticipated (Pipeline)	1.50				
Future Residential	4.00	6.82	27,260,000	9,840,000	37,100,000
Future Office	0.50	27.73	13,864,900	5,835,700	19,700,600
Future Retail			2,448,500	632,000	3,080,500
Future Flex Commercial	0.12	1.54	184,300		184,300
Future Institutional	0.25	5.19	1,298,000		1,298,000
Total	6.37				61,363,400

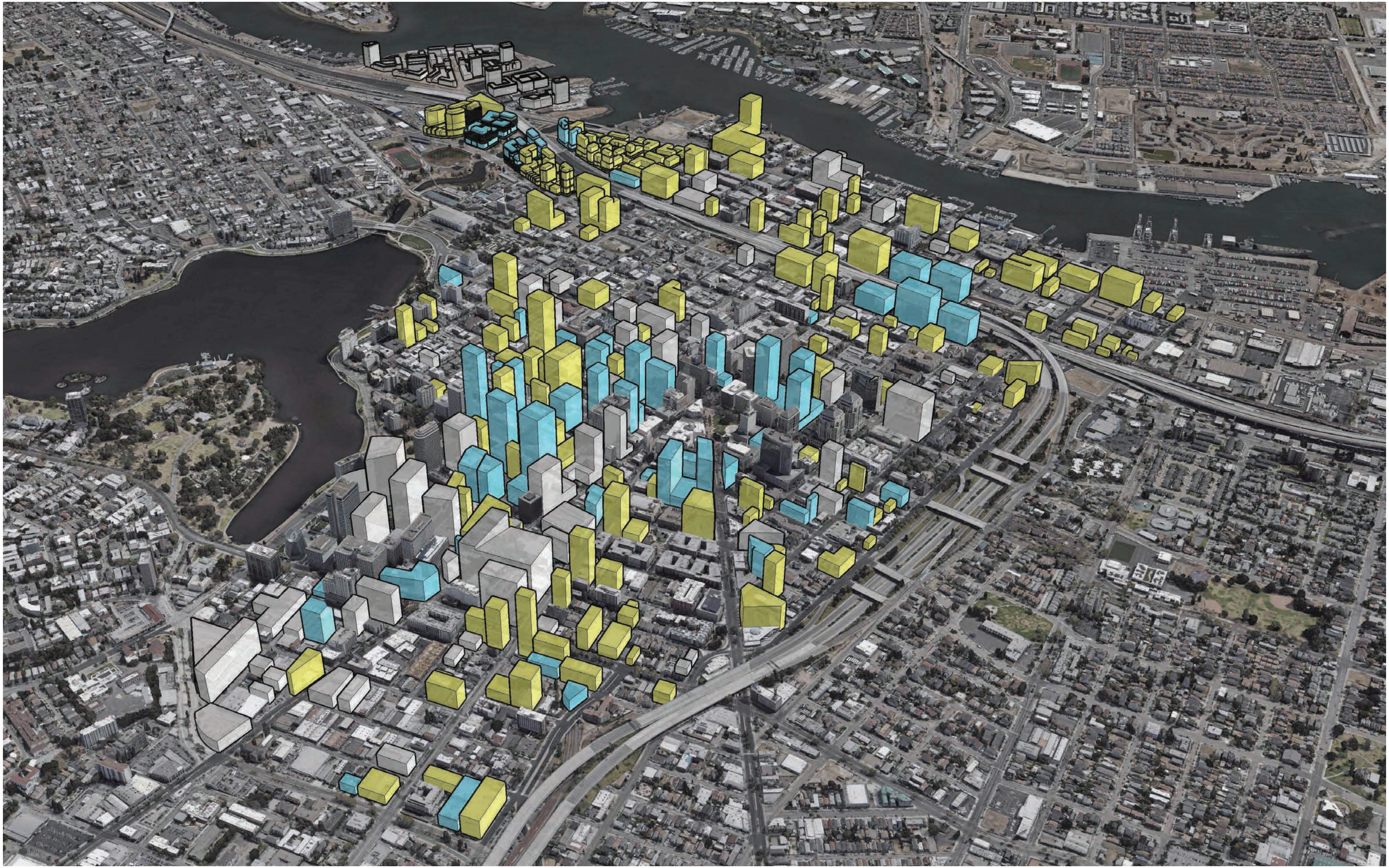
Alternative Program	Site Area (000,000)	FAR	Future Building SF	Pipeline Building SF	Total Building SF
Anticipated (Pipeline)	1.50				
Future Residential	3.50	7.79	27,260,000	9,840,000	37,100,000
Future Office	1.50	20.00	30,000,000	5,835,700	35,835,700
Future Retail			2,448,500	632,000	3,080,500
Future Flex Commercial	0.12	1.54	184,300		184,300
Future Institutional	0.25	5.19	1,298,000		1,298,000
Total	6.87				77,498,500

Source: Preliminary Draft Plan Development Program Table LU-4 and Figure LU-12 as modeled by JRDV.

PRELIMINARY DRAFT PLAN
DEVELOMENT PROGRAM

Preliminary Draft Plan Development Program

ALTERNATIVE DEVELOMENT PROGRAM FOR DOWNTOWN PLAN



Alternative Development Program for Downtown Plan

February 21, 2019

Ms. Alicia Parker
Planner III, City of Oakland
250 Frank H. Ogawa Plaza
Oakland, CA 94612

Dear Ms. Parker:

As the Director for Government and Public Affairs, West Region, for Schnitzer Steel Industries, Inc., I am writing to provide comments in response to the City's Notice of Preparation of an Environmental Impact Report ("EIR") for the Downtown Oakland Specific Plan ("Downtown Plan").

Schnitzer Steel is a global leader in metals recycling. We collect, process, and recycle raw scrap metal and provide processed scrap metal to mills and foundries around the world. In Oakland and throughout our operations, sustainability is at the core of what we do as a leader in the metals recycling industry. In 2018, we were recognized as one of the World's Most Ethical Companies for the fourth consecutive year by the Ethisphere Institute, a global leader in defining and advancing the standards of ethical business practices. We are the only metals recycling company worldwide, the only U.S. steel manufacturing company, and one of only two companies in the "Metals, Minerals and Mining" category worldwide to attain this recognition. Environmental sustainability is a key criterion in this rigorous selection progress, and this award underscores our commitment to acting ethically, safely, and sustainably every day.

Schnitzer Steel supports Oakland's effort to create a vibrant downtown. But we are deeply concerned about the Downtown Plan's call for significant new residential development at the periphery of the 3rd Street corridor.

Our approximately 34-acre Oakland facility is at 1101 Embarcadero West, located approximately 0.3 miles from the southwest corner boundary of the Downtown Plan at the Intersection of Market St & Embarcadero West. Significant new housing on this edge would eliminate the longstanding industrial buffer between downtown and Oakland's industrial waterfront. Residential development directly adjacent to the industrial corridor along the waterfront would undermine decades of careful collaboration to preserve our thriving industrial economic base.

Oakland's industrial, logistics, and maritime companies along the waterfront continue to flourish, providing a reliable source of family-wage jobs and tax revenue—even as heavy industry struggles elsewhere in the Bay Area. Recent data shows:

- Oakland's industrial waterfront sustains over 73,000 jobs.[1]
- Maritime activity at the Port of Oakland supports more than $500 million in direct wages and salary, over $500 million in local purchases, and approximately $250 million in state and local tax revenue.[2]
- The Port of Oakland set new container records in both 2017[3] and 2018[4] following decades of steady growth. The Port of Oakland is building on that success by pursuing technological innovations to draw business away from rival ports in Southern California.[5]

The Oakland Downtown Plan should support continued investment in the Port of Oakland and in other nearby industries. To that end, we request that the Environmental Impact Report (EIR) examine how the Downtown Plan may:

- Create land-use conflicts between existing industry and new residents, including conflicts created by noise, air pollution, odors, and hazardous substances;
- Create traffic safety hazards for heavy-duty vehicles, trains, long-haul truck traffic, motorists, bicyclists and pedestrians;
- Drive out existing industrial uses and potentially create urban blight; and

---

[1] Port of Oakland Website, *Powering Jobs, Empowering Communities*, available at https://www.portofoakland.com/community/economic-impact/powering-jobs/, last accessed on Feb. 20, 2019.

[2] Martin Associates, "The Positive Job Creation & Economic Impacts of the Port of Oakland," Sept. 8, 2011, available at https://www.portofoakland.com/files/PDF/about/kpo_jobCreation.pdf, last accessed on Feb. 20, 2019.

[3] Maria Theresa Dalagan, "Port of Oakland not resting on past success," Freightwaves, Feb.11, 2018, available at https://www.freightwaves.com/news/port-of-oakland-expanding, last accessed on Feb. 20, 2019.

[4] Shwanika Narayan, "Port of Oakland records best year in cargo movement," San Francisco Chronicle, Jan. 15, 2019, available at https://www.sfchronicle.com/business/article/Port-of-Oakland-records-best-year-in-cargo-13536429.php, last accessed on Feb. 20, 2019.

[5] Michael Angell, "Port Report: Port of Oakland opens kimono as it seeks more container volumes," Freightwaves, Jan. 31, 2019, available at https://www.freightwaves.com/news/maritime/port-report-oakland-touts-turn-times, last accessed on Feb. 20, 2019.

- Be inconsistent with several core guidelines and policies of the Oakland General Plan. In particular, the General Plan calls on Oakland to reduce land-use conflicts, promote an industrial tax base, and protect existing industrial, commercial, and residential areas from the intrusion of incompatible land uses. Specific policies that support these core goals that should be analyzed in the EIR include:
    - *Policy 1/C1.2, Retaining Existing Business*. Existing businesses and jobs within Oakland which are consistent with the long-range objectives of this Plan should, whenever possible, be retained.
    - *Policy I/C1.10, Coordinating City and Port Economic Development Plans*. The City and Port should mutually develop and implement a coordinated plan-of-action to support all airport and port related activities which expand the local or regional employment or revenue base.
    - *Policy I/C4.3, Protecting Existing Activities*. Existing industrial, residential, and commercial activities and areas which are consistent with long term land use plans for the City should be protected from the intrusion of potentially incompatible land uses.
    - *Policy I/C4.2, Minimizing Nuisances*. The potential for new or existing industrial or commercial uses, including seaport and airport activities, to create nuisance impacts on surrounding residential land uses should be minimized through appropriate siting and efficient implementation and enforcement of environmental and development controls.
    - *Policy W7.2, Encouraging Commercial and Industrial Uses*. Other commercial and industrial uses should be encouraged at appropriate locations (Port-owned or not) where they can provide economic opportunity to the community at large.

To prevent land use conflicts and General Plan inconsistencies we suggest studying the feasibility of mitigation measures such as the following:

- **Mitigation 1**: Revise Figure LU-9, Land Use Character Map, to designate areas located between Embarcadero and 3rd Street and Brush Street and Clay Street as Flex Industry.

- **Mitigation 2**: Revise Table LU-1, Proposed General Plan Amendments, and Figure LU-8, Proposed General Plan Amendments, to remove numbers 22, 23, and 24.

- **Mitigation 3**: Add Policy LU-1.5: Protect and enhance Oakland's industrial waterfront ensuring that there is a buffer zone to prevent land use conflicts that arise when residential uses encroach industrial uses.

Oakland has a long track record of balancing new development with protection of its critical industrial economic base. It must not stop balancing these interests now. Residential development directly adjacent to the industrial corridor along the waterfront would undermine decades of careful collaboration to preserve our thriving industrial economic base by providing an industrial buffer between downtown and Oakland's industrial waterfront.

We ask you to carefully study the potential impacts of encroaching upon Oakland's industrial jobs base in the EIR and reconsider authorizing residential development along the 3rd Street corridor.

Please feel free to reach out to me to discuss how the Downtown Plan can better protect and enhance Oakland's waterfront industries. I would be delighted to meet with you and discuss how Oakland can have a thriving downtown and a thriving industrial waterfront.

Very truly yours,

Adam J Simons

Adam Simons
Government & Public Affairs, West Region
Schnitzer Steel Industries, Inc.
1101 Embarcadero West Oakland, CA 94607
asimons@schn.com or by telephone (510) 219-7973

CC: Mayor Libby Schaaf
William Gilchrist, Planning Director, City of Oakland
Catherine Payne, Interim Deputy Planning Director, City of Oakland
Mark Sawicki, Director of Economic & Workforce Development, City of Oakland
Barbara Leslie, President & CEO, Oakland Metropolitan Chamber of Commerce
J. Christopher Lytle, Executive Director of the Port of Oakland

(By e-mail)

February 20, 2019

City Planning Commission and Downtown Plan Team
City of Oakland
250 Frank H. Ogawa Plaza, 2nd Floor
Oakland, California 94612

Re: Preliminary DRAFT Downtown Specific Plan (DSP) and the
Environmental Impact Review (EIR) Notice of Preparation (NOP) Scoping Comments

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Dear Oakland Planning Commissioners and Staff,

Please accept all our comments as pertaining to both the NOP and to the Draft Plan. Note that the Art+Garage District stakeholder meeting is scheduled for Monday, February 25th from 5:30PM to 7:30PM and that the comments for the EIR Notice of Preparation with comments regarding the scoping analysis are due February 21, 2019. Kindly accept all AGD comments through the 4th March rather than making the deadline March 1, so that we have the weekend to discuss and prepare remarks after our community meeting. We understood from staff's presentation at the last planning commission meeting, that this would not be a problem, and that our comments would be accepted, but kindly confirm this understanding in writing.

We would like to point out that Appendix B of the DTSP draft as well as the Preferred Options Report outline very different borders to the Art + Garage District area that were defined in previous versions of the draft plan. When did the revision occur and by whom? We believe a Cultural Zone Overlay can and should overlap the Broadway Valdez Plan, for housing density purposes, impacts, incentives, urban design and wayfinding mapping reasons. We should also be considering the full blocks and both sides of the major arterials of Grand Ave, Broadway, 27th Street and Telegraph. The more recent borders now extend further west of Telegraph Ave to Northgate.

For your convenience, we have attached our letters submitted to you regarding the Preliminary Draft Plan on 1.22.2019 and 2.6.2019 along with a presentation that the Art+Garage District (AGD) group developed in 2016 and presented to nearly 100 people at the New Parkway Theater.

The AGD group requests that the following items be incorporated into the EIR NOP scoping analysis:

> **DIVERSE, VIBRANT ART + CULTURAL ACTIVITIES ARE INDICATORS OF A HEALTHY CITY.** Urban planning norms follow the determinants of public health where art and culture are ubiquitously accepted as signs of an engaged, creative community with a diversity of cultural venues and contributors. The EIR scoping must include how the displacement of artists, artisan producers, cultural icons, galleries and long-time ethnic based business owners is an indicator of a declining public, community health.
>
> **WITHOUT AFFORDABLE HOUSING AND/OR CULTURAL SPACES, ART STUDIOS OR FABRICATION SPACES in OAKLAND WE PERMANENTLY AND NEGATIVELY IMPACT OAKLAND'S <u>ORIGINAL</u> CREATIVE ECONOMY.** As individuals and entities lose both housing and workspaces, there are no mechanisms or processes to track and determine the rate of permanent loss. If the displacement is affecting either housing or warehouse working spaces this forces longer commutes and impacts the air quality of the region while contributing to global warming if transit is not an option. We need anti-displacement measures so that we have replacement as well as no net loss occurs of our vital creative spaces. In other

parts of the country we have seen how SOHO or WYNEWOOD or DUMBO "replaced" the original artists and organizations. Please refer to the Economic and Workforce Development recommendations for more statistics on Creative Economy and impact of displacement. Include women-owned and ethnic-based small businesses that have added to the diversity of the area.

ALTERNATIVE ARTS and CULTURAL PRESERVATION MEASURES MUST BE IDENTIFIED AND THOROUGHLY STUDIED. Interim measures, prior to the adoption of the Downtown Plan will assist with speedy and informed implementation.

WITHOUT RETAINING A LIGHT INDUSTRIAL ZONE WE WILL FURTHER REDUCE THE 3%-4% OF INDUSTRIAL ZONING FOR "MAKER" SPACES that will support the activities of artisan producers and industrial fabricators, especially in the Art + Garage District area.

ARCHITECTURAL DESIGN IN ARTS DISTRICTS, IN PARTICULAR, SHOULD DEMONSTRATE EXEMPLARY DESIGN and not just false facades that represent the history of the vintage warehouses with irreverent stucco boxes on top. Cost-effective construction does not make upper stories "disappear". Higher density development should be situated along the main arterials, break out of the "box design". To preserve the truly unique historically relevant brick buildings, Transfer of Development Rights (TDRs) should occur on all industrially zoned streets within the borders of Grand Ave, Broadway, 27th Street, and Telegraph Ave.

Last but not least…

OAKLAND NOW HAS NEARLY 9,000 PEOPLE WHO ARE UNHOUSED and WHO NEED BASIC SERVICES. Deep personal and public community health challenges abound. As a result, our entire community is affected either through empathy or dismissal as a survival mechanism. The full and sometimes hidden societal and civic impacts of this housing crisis on our unhoused community members MUST be incorporated into the Downtown Environmental Impact Reports' NOP analysis.

Once the Art + Garage District stakeholder group meeting occurs on February 25, 2019, there will be additional comments to submit and receive.

Thank you for your time and efforts.

Sincerely,

Hiroko Kurihara and Peter Birkholz
Co-Founders and on behalf of the Art+Garage District

cc:

Partial List of AGD Members: Pam Dernham, Lonnie Lee, Ashara Ekundayo, Charlie Long, Katherin Canton, Monica Reskala, Chris Weiss, Dustin Page, Chelsea Wurms

Other Colleagues: Naomi Schiff, Christopher Buckley, Jeff Levin, Margaretta Lin, Steve King, Zach Murray, David Keenan, Elena Serrano, Ayodele Nzinga, Eric Arnold, Holly Million, Alvina Wong, Tiffany Eng, June Grant

City Staff: Robert Merkamp, Alicia Parker, Joanna Winters, Ed Manassee, William Gilchrist, Steve Lautze, Marisa Raya, Mercedes Gibson, Kelley Kahn

From: Randolph Belle
To: Jhamese Myers (Chair); Nischit Hegde; Tom Limon; Jonathan Fearn; Sahar Shirazi; Amanda Monchamp; Merkamp, Robert; Parker, Alicia; Manasse, Edward; Gilchrist, William; Kahn, Kelley; District 4; At Large; McElhaney, Lynette; District 2; Hiroko Kurihara
Subject: Please consider the importance of the arts in the Downtown Plan EIR
Date: Wednesday, February 20, 2019 10:29:26 AM

The arts, art communities and the larger creative economy are Oakland's greatest natural resource. Please consider this in the drafting of the Downtown Plan's EIR. The arts spur economic growth including business attraction and retention. Without specific and bold attention to the sector, Oakland may not fully realize the equitable vision that we all seek. Additionally, without intentional planning around ethnic and cultural preservation, based on proven precedents, displacement and historical erasure are certain. Please, assess your current position, then go two steps further.

RBA Creative- Design, Communications, Public Affairs
Office/Studio: 3718 MacArthur Blvd
Oakland, CA 94619
Mailing: 490 Lake Park Avenue, #16242
Oakland, CA 94610
Phone- 510.333.9175
www.rbacreative.com

From:	Gloria Fangon-Hitz
To:	Jhamese Myers (Chair); Nischit Hegde; Tom Limon; Jonathan Fearn; Sahar Shirazi; Amanda Monchamp; Merkamp, Robert; Parker, Alicia; Manasse, Edward; Gilchrist, William; Kahn, Kelley
Cc:	Hiroko Kurihara
Subject:	DOSP Culture Keepers
Date:	Wednesday, February 20, 2019 9:53:32 AM

Oakland must recognize that the prevalence of Art and Cultural are indicators of a healthy thriving community.

The Downtown Plan's EIR must include the analysis on the impact on Oakland's authentic culture.

Gloria Fangon-Hitz
Executive Director
gloriafangonhitz@oacc.cc
510.393.0330 mobile

Oakland Asian Cultural Center
388 Ninth Street, Suite 290
Oakland, CA 94607
510.637.0455 main
https://urldefense.proofpoint.com/v2/url?u=http-3A__www.oacc.cc&d=DwIFaQ&c=6ZboKdJzR8nZOqwBjhPnCw&r=BVtmMBxFV2E-xiQNXO-ZLxCCs1Q20Q_s3YKekfyEc8I&m=0qT1R33D-x_ZIci39ITtUZkqcuAZLc53WUkJZfgRs20&s=XJZICF2UQGe3PXB1OZFuWrUMNSNw_UnQRiy5JjYA5gc&e=

Sent from my iPhone

From: Lonnie L
To: ken Ehrhardt; Lonnie Lee
Subject: Fwd: Save the Art District
Date: Wednesday, February 20, 2019 1:45:20 PM

Friends,

This letter of support comes from a friend/client. A quick letter of support with your perspective(s) would be most appreciated (better late than never!).

Thanks for your continued support and perspectives! Your voice and position count.

Respectfully and in appreciation,

Lonnie

P.S. Please be sure to copy, add commas between each address:

Planning Commissioners: jmyres.oakplanningcommission@gmail.com, nhegdeopc@gmail.com tlimon.opc@gmail.com, jfearnopc@gmail.com, sshiraziopc@gmail.com, amandamonchamp@gmail.com

City Council: rmerkamp@oaklandca.gov, aparker@oaklandca.gov, emanasse@oaklandca.gov, wgilchrist@oaklandca.gov, kkahn@oaklandca.gov, district2@oaklandca.gov, LMcElhaney@oaklandnet.com, district4@oaklandca.gov, Ngallo@oaklandnet.com, ltaylor@oaklandca.gov, lreid@oaklandnet.com

Begin forwarded message:

From: Teresa Burns Gunther
Subject: Save the Art District
Date: February 20, 2019 at 9:26:38 AM PST
To: jmyres.oakplanningcommission@gmail.com

Dear Commissioner Myers,

I urge you to define the scope of the EIR to consider the impact of land use changes that will eliminate affordable business and art activities in Oakland.
I'm distressed by the lack of zoning to protect light industrial use and the threatened art community of our town. Revitalization of Oakland spells disaster for artists and diverse businesses who are being displaced at an alarming rate. Oakland's art community thrived due to affordable rates and a light industrial zone in the heart of the city. This art district put Oakland on the map and attracted young people, tourists and new businesses to the area. Please don't allow your Downtown Plan to steamroll this progress.
Fight to ensure that Oakland retains something unique and distinctive from other bay area communities that are pricing their makers, artists, and young people out

of the market.

thank you,
Teresa Burns Gunther
1160 Clarendon Crescent
Oakland CA 94610

OAKLAND
CHAMBER *of* COMMERCE

February 20, 2019

Members of the Oakland Planning Commission
City of Oakland
250 Frank H. Ogawa Plaza, Suite 3315
Oakland, CA94612

RE: Downtown Oakland Specific Plan EIR Scoping Session, Item 4 on Feb. 20 Agenda

Dear Chair Myres,

On behalf of the 1,000+ members of the Oakland Chamber of Commerce representing every size, sector, and type of business and nonprofit in Oakland, I write today to provide additional comments on the Preliminary Draft of the Downtown Oakland Specific Plan and the scoping of the Environmental Impact Report. The Chamber's position as outlined in the letter sent February 6, 2019 remains the same - the Preliminary Draft Plan falls short in its ability to shape a vision for a vibrant regional jobs and housing hub in Downtown Oakland.

The Downtown Plan should harness the economic potential of downtown to fund the services Oaklanders across our city need and deserve. **A robust tax base with consistent new investment is the fiscal foundation for a progressive and equitable city.** The Downtown Plan should create and foster a vision for a Downtown Oakland that is *the* regional hub for employment, transportation, and economic activity in Northern California.

We request that the EIR study a plan without height limits, far greater density as well as additional office priority sites. The public benefits that come with an expanded tax base and greater funds for affordable housing, capital improvements, and transportation are impactful and tangible outcomes this Plan can and should foster. Additionally, the Chamber recommends that the EIR should *not* examine creating protected view corridors for fear that you further limit projects that otherwise may find compromise through the traditional planning process. It is a dangerous time to start prioritizing views over creating housing or jobs.

A key ingredient to a vibrant inclusive Downtown Oakland are well-considered and activated ground floor uses. **Finding common agreement on below market rate uses for ground floor space is in the best interests of both developers and the community, provided the density permitted above and the flexibility on use are enough to pencil out a pro forma.** It's worth acknowledging however that previous attempts to "create certainty" in the development process through similar development incentives/fees such as impact fees and community benefits agreements have instead only served to become the new floor from which various groups negotiate upwards. It may be more productive to acknowledge that creativity is the key and limiting a developer's ability to curate and activate ground floor uses limits the plans overall success.

The basic question this Plan should set out to answer is - how do we use the finite resource that is a transit-rich downtown as efficiently as possible to generate the most public benefit and services across the city? **In its current form, the Plan puts too much energy into splitting up the pie and not enough into growing it.**

It should be acknowledged that increasing density and heights is – for some – a frightening and counterintuitive process. Some see a skyline dotted with cranes and a record-breaking rental market and conflate the two. But it’s the duty of community and city leaders as well as staff to make the case that correlation does not imply causation. Tall buildings do not push people out, they make room for more. The pain of the housing crisis in Oakland runs deep and real and until we as a city, region, and state begin to address the systemic causes that left us vulnerable to this crisis – years of underbuilding housing and commercial space while undertraining our workforce among them – we will continue repeating past mistakes. The Downtown Specific Plan is an important step on the road toward changing the old paradigm that has proven unsuccessful.

Sincerely,

Barbara Leslie

Barbara Leslie
President & CEO

CC:
Amanda Monchamp
Jonathan Fearn
Nischit Hegde
Tom Limon
Clark Manus
Sahar Shirazi
Bill Gilchrist

OAKLAND CHINATOWN CHAMBER OF COMMERCE

屋崙華埠商會

February 20, 2019 Reference Case numbers SP16-001 and ER18020

Dear Alicia Parker -

We appreciate the Notice of Preparation (NOP) for a draft Environmental Impact Report (EIR) to ensure a successful Downtown Oakland Specific Plan (DOSP) for the long-term future.

At the Oakland City Planning Commission Meeting on February 6, 2019, the commissioners asked for Oakland Chinatown to be included as part of the EIR since the DOSP includes and will impact Oakland Chinatown. We consider Oakland Chinatown to be included as a stakeholder contributing to the success of the EIR and DOSP.

Oakland Chinatown is considered one of the oldest neighborhoods in Oakland and goes way back to 1870 where the streets of 8th and Webster was considered the main artery of Oakland Chinatown. Statistical data show Oakland Chinatown population density occupies 22.94k and is ranked #11 out of #138 by neighborhood in Oakland. We are a culturally enriched neighborhood, business-trade motivated environment and a key historical US area with commercial and community diversity.

The DOSP plans to divert the traffic from Broadway Street to Webster Street leading to the Alameda Webster tube and changing the traffic pattern to have many streets changed from one way to two-way streets. Webster Street experiences bumper-to- bumper traffic congestion during commute hour and will be heavily impacted with the growth of anticipated developers' businesses and residences utilizing Webster Street along with the contributing factor of the diversion of Broadway traffic. This increase of Webster Street activity and one way to two-way traffic pattern changes will impact pedestrian safety, air quality, physical environment, residences, local businesses, commercial delivery, drop off & pickup at schools and medical facilities, parking availability, increase in noise levels and economic development.

The diversion of traffic to Webster Street and two-way traffic pattern changes will not support 3 of the 6 DOSP goals: #1-Create opportunities for economic growth for all Oaklanders; #3-Make downtown's streets comfortable, safe and inviting….; and #6- Develop downtown in a way that contributes to community needs and preserves Oakland's unique character.

The attached edited Boundary map reflects the impact of the DOSP Oakland Chinatown Broadway-Webster traffic patterns changes and clearly shows that an alternative plan is needed. An impact traffic study needs to be performed and also take into account future residential and commercial development in Alameda which will likely increase vehicle traffic through the Alameda Webster Tube.

Regards,

Karen Dea
OCCC Executive Director

Pacific Renaissance Plaza
388 Ninth Street, Suite 290, Oakland, CA 94607 (510) 893-8979 Fax (510) 893-8988 E-mail OaklandCTChamber@aol.com

Downtown Oakland Specific Plan
Notice of Preparation

Figure 2
Planning Boundary

Source: Google Earth, 2018.

From:	Anna Shneiderman
To:	Jhamese Myers (Chair); Nischit Hegde; Tom Limon; Jonathan Fearn; Sahar Shirazi; Amanda Monchamp; Merkamp, Robert; Parker, Alicia; Manasse, Edward; Gilchrist, William; Kahn, Kelley; District 4; At Large; McElhaney, Lynette; District 2; Hiroko Kurihara
Subject:	Please consider the importance of the arts in the Downtown Plan EIR
Date:	Wednesday, February 20, 2019 11:36:44 AM

Dear Oakland planning commissioners and staff,

I would like to echo some of my colleagues in the Oakland Arts & Culture community by asking you to consider the importance of arts and culture in the Downtown Plan EIR.

The arts, art communities and the larger creative economy are Oakland's greatest natural resource. Please consider this in the drafting of the Downtown Plan's EIR. The arts spur economic growth including business attraction and retention. Without specific and bold attention to the sector, Oakland may not fully realize the equitable vision that we all seek. Additionally, without intentional planning around ethnic and cultural preservation, based on proven precedents, displacement and historical erasure are certain. Please, assess your current position, then go two steps further.

Here are some specific items to consider:
·**DIVERSE, VIBRANT ART + CULTURAL ACTIVITIES ARE INDICATORS OF A HEALTHY CITY.** The EIR (Environmental Impact Review) scoping must include how the displacement of artists, artisan producers, cultural icons, galleries and long-time ethnic based business owners is an indicator of declining public, community health.

·**WITHOUT AFFORDABLE HOUSING AND/OR CULTURAL SPACES, ART STUDIOS OR FABRICATION SPACES in OAKLAND WE PERMANENTLY AND NEGATIVELY IMPACT OAKLAND'S ORIGINAL CREATIVE ECONOMY** as well as force longer commutes and impact the air quality of the region and contribute to global warming. We need anti-displacement measures so that we have replacement as well as no net loss of our vital creative spaces. In other parts of the country we have seen how SOHO or WYNEWOOD or DUMBO "replaced" the original artists and organizations.

·**WITHOUT RETAINING A LIGHT INDUSTRIAL ZONE WE WILL FURTHER REDUCE THE 3%-4% OF INDUSTRIAL ZONING FOR "MAKER" SPACES** that will support the activities of artisan producers and industrial fabricators, especially in the Art + Garage District area.

·**OAKLAND NOW HAS NEARLY 9,000 PEOPLE WHO ARE UNHOUSED WHO NEED SERVICES** and face deep personal and community health challenges. This MUST be incorporated into the Downtown Environmental Impact Analysis.

Thank you,
Anna Shneiderman
Executive Director
Ragged Wing Ensemble & The Flight Deck

510-858-7383

Please note: *I generally respond to emails on Tuesday and Thursday mornings. Please be patient with a response. If you need a quicker turnaround, feel free to call. Thank you!*

I'm using Inbox When Ready to protect my focus.

DREISBACH
2530 East Eleventh Street P.O. Box 7509 Oakland, CA 94601-0509
Voice 510.533.6600 Fax 510.534.2316 www.dreisbach.com info@dreisbach.com

February 19, 2019

Ms. Alicia Parker Planner III, City of Oakland
250 Frank H. Ogawa Plaza
Oakland, CA 94612

Dear Ms. Parker:

Dreisbach Enterprises is a family-owned logistics business that has been operating in Oakland since 1953. Among other services, we offer customized cold supply chain solutions throughout the West Coast, including fresh, chill and frozen food warehousing and distribution regionally, nationally and globally.

We are writing to request that the City reconsider the Downtown Oakland Specific Plan's ("DTSOP's") call for significant new residential development at the periphery of the 3rd Street corridor, closest to Oakland's flourishing industrial economic base. Most importantly, the 3rd Street corridor is the designated Heavy Weight Truck Route which provides for the transportation of manufactured and warehouse goods to and from East Oakland to the Port of Oakland. (Oakland City Council Ordinance No. 11568 allowing for the designations of roadways for the movement of heavy containers)

As long-time members of the Oakland community, we are proud to see Oakland continue the important work of revitalizing the downtown. But this progress doesn't need to come at the cost of Oakland's industrial economy – which has been a vital source of jobs and tax revenue for Oakland, and is well-positioned to build on its success in the years ahead.

Residential development directly adjacent to the industrial corridor along the waterfront would undermine decades of careful collaboration to preserve our thriving industrial economic base by providing an industrial buffer between downtown and Oakland's industrial waterfront.

We ask you to carefully study the potential impacts of encroaching upon Oakland's industrial jobs base in the EIR and reconsider authorizing residential development along the 3rd Street corridor.

Very truly yours,

Marianne Dreisbach

Marianne Dreisbach

From:	Ken Ehrhardt
To:	jmyres.oakplanningcommission@gmail.com; nhegdeopc@gmail.com; tlimon.opc@gmail.com; jfearnopc@gmail.com; sshiraziopc@gmail.com; amandamonchamp@gmail.com
Cc:	Merkamp, Robert; Parker, Alicia; Manasse, Edward; Gilchrist, William; Kahn, Kelley; District 2; McElhaney, Lynette; District 4; Gallo, Noel; Taylor, Loren; Reid, Larry
Subject:	Downtown Plan EIR - include the arts, affordability, and services
Date:	Tuesday, February 19, 2019 10:31:40 PM

Dear Oakland City Council Members, Planning Commission, and esteemed staff,

We understand the Environmental Impact Review for the Downtown Plan is underway. As an established Oakland gallery who recently lost our space, we have been involved in many efforts to support arts and prevent wanton displacement in Oakland.

We urge you all to ensure that the Downtown Plan's Environmental Impact Review analysis includes the following:

- **DIVERSE, VIBRANT ART + CULTURAL ACTIVITIES.** Artists, artisan producers, cultural icons, galleries and long-time ethnic-based business owners indicate a strong city and awareness and celebration of different voices.

- **AFFORDABLE HOUSING, CULTURAL SPACES, ART STUDIOS AND FABRICATION SPACES**. Without these, we deny and squelch Oakland’s creative economy and originality, force longer commutes, impact the air quality and congestion of the region, contribute to global warming, and erase Oakland’s proud artist-steeped history.

- **ANTI-DISPLACEMENT MEASURES.** To not only replace spaces lost, but maintain the number of vital creative spaces. (In other parts of the country we have seen how SOHO or WYNEWOOD or DUMBO "replaced" the original artists and organizations.) Show everyone that ALL social-economic levels have a place.

- **RETAIN A LIGHT INDUSTRIAL ZONE**. We can 1) preserve a little history, especially in the Art + Garage District area, and 2) support the activities of artisan producers and industrial fabricators by maintaining the 3%-4% of industrial zoning Oakland currently has.

- **OAKLAND NOW HAS NEARLY 9,000 PEOPLE WHO ARE UNHOUSED WHO NEED SERVICES** and face deep personal and community health challenges. This MUST be incorporated into the Downtown Environmental Impact Analysis.

In addition, we note that
the “preferred options” in the Downtown Specific plan’s Options Report should not

be listed as preferred (highlighted with arrows) until all stakeholders have had an opportunity to review and comment. We urge you to remove them until all can comment.

It's important that the city of Oakland incorporate the breadth and depth of its citizenry in all its plans for our futures.

Thank you for your support,

Lonnie Lee
Ken Ehrhardt

Vessel Gallery
PO Box 10022
Oakland, CA 94610
www.vessel-gallery.com

From: Holly Million
To: jmyres.oakplanningcommission@gmail.com; nhegdeopc@gmail.com; tlimon.opc@gmail.com; jfearnopc@gmail.com; sshiraziopc@gmail.com; amandamonchamp@gmail.com; Merkamp, Robert; Parker, Alicia; Manasse, Edward; Gilchrist, William; Kahn, Kelley; Office of the Mayor; Kalb, Dan
Cc: Hiroko Kurihara; Holly Million
Subject: Input on Downtown Environmental Impact Analysis
Date: Tuesday, February 19, 2019 6:45:53 PM

4200 Park Blvd., No. 544
Oakland, CA 94602
415-902-0558
holly@artistsunited.net

February 19, 2019

Dear Oakland City Councilmembers and staff:

I am submitting this letter of support for the Art + Garage District community organizing group. I am a professional documentary filmmaker and artist who has lived in Oakland since 2005, and I am the executive director of Artists United, a nonprofit organization headquartered in Oakland and working throughout the U.S. to empower individual artists to create excellent art and to unite all artists to create social change.

Artists United is rooted in the December 2, 2016 Ghost Ship fire. On December 7, 2016, the board of directors of Artists United held its first-ever meeting in a conference room in Downtown Oakland. The 37 people who had traveled far and wide to be in the room that morning were inspired by the idea that artists should unite to help each other and our world. We saw Ghost Ship as being directly connected to many issues affecting artists that we wanted to address. Without a thriving ecosystem of artists and art, our communities would be barren and chaotic places. We were not going to allow that to happen.

For the past several years the Art + Garage District community organizing group has been working to address the growing displacement of Oakland's independent art scenes. As robust real estate development moves forward, areas of cultural concentration are rapidly made unaffordable for current community members. Artists United believes it is imperative and essential to keep artists and cultural vibrancy in Oakland, so we are actively engaged in supporting this effort.

Artists United unites all artists, across all disciplines, demographic lines, and ages. We are especially strong in addressing the needs of women and youth artists as well as low-income artists. We are helping to build social cohesion by amplifying the collective voice and power of the entire Bay Area artistic community. We do this in part through our very diverse board and through the diverse partnerships we have created with over 70 arts organizations (and growing) that include organizations representing many different cultures and voices. We are publicizing this issue throughout our network and mobilizing our members to pay attention to the action the City of Oakland is taking on this and other matters related to creating economic empowerment and access to fair and affordable housing for artists in the city.

Artists United is writing to urge that the city's planning and policies, including the Downtown

Environmental Impact Analysis, reflect the following:

- DIVERSE, VIBRANT Art + Cultural activities are indicators of a HEALTHY CITY. The EIR (Environmental Impact Review) must include how the displacement of artists, artisan producers, cultural icons, galleries and long-time ethnic based business owners is an indicator of declining community health.
- WITHOUT AFFORDABLE housing and/or cultural spaces, art studios or fabrication, we not only force longer commutes and impact the air quality of the region and contribute to global warming, but without anti-displacement policies we permanently and negatively impact Oakland's original creative economy. In other parts of the country we have seen how SOHO or WYNWOOD or DUMBO "replaced" the original artists and organizations.
- WITHOUT RETAINING A LIGHT INDUSTRIAL ZONE in the Art + Garage District area defined above, we will further reduce the 3%-4% of industrial "Maker" space that will support the activities of artisan producers and industrial fabricators.
- Oakland has now nearly 9,000 people living outside. PEOPLE WHO ARE UNHOUSED NEED SERVICES and face deep personal and community health challenges. This MUST be incorporated into the Downtown Environmental Impact Analysis.

On behalf of Artists United and our over 33,000 members, including 6,000+ members in the SF Bay Area, I urge all city staff and councilmembers to address these issues in the current and proposed policies and plans.

Sincerely,

Holly Million

Holly Million
Founder and Executive Director
Artists United
Oakland resident, Oakland-based organization
cell: 415-902-0558
Skype i.d. HollyMillion (one word)

OAKLAND HERITAGE ALLIANCE

February 19, 2019

(By electronic transmission)

City Planning Commission and Downtown Plan Team
City of Oakland
250 Frank H. Ogawa Plaza, 2nd Floor
Oakland, California 94612

Subject: Preliminary Draft Downtown Plan Notice of Preparation of EIR

Dear Commissioners, staff, and consultants,

Please accept these comments, in addition to those in our letters of February 5 and January 22, both as related to the preliminary draft plan in general, and as specific comments to the Notice of Preparation.

Following are potential significant project impacts on historic resources that must be addressed in the Downtown Oakland Plan EIR, along with possible mitigation measures and project alternatives to minimize or avoid these impacts. Since much of the Preliminary Draft Oakland Downtown Plan consists of very general proposals that are not fleshed out, it is difficult to fully assess the Plan's potential impacts on historic properties. The following list of impacts, project alternatives and mitigation measures reflects this.

IMPACTS: Increased height limits, floor area ratios (FARs) and/or residential densities resulting from the Plan could have the following significant effects on historic properties:

1. Increased demolition and/or adverse alteration to historic properties.

2. Possible erosion of the integrity of Areas of Primary Importance (APIs) and possible disqualification of API eligibility due to demolition of API contributing properties and/or new construction that is out of scale and/or excessively contrasts with the architectural character of API contributors.

Project Alternative: Provide development intensities in areas with concentrations of historic properties that are no higher than the levels in place prior to the 2009 rezoning.

Mitigation Measures:

a. Apply height limits to APIs, areas in close proximity to APIs, and other areas with high concentrations of historic properties, that do not exceed the prevailing heights of contributing buildings (including the heights of any adjacent contributing building), when viewed from streets or other public areas. Take into account any building height increases above the height limit resulting from application of the state density bonus law.

b. Provide a transferable development rights (TDR) program similar to San Francisco's. To ensure that the TDR program is effective, reduce existing by-right height limits, FARs, and residential densities sufficiently to incentivize developers to acquire TDRs to obtain intensities above the by-right levels.

c. In APIs where contributing buildings are predominantly pitched roof (gable and/or hip), require pitched roofs with configurations and slopes consistent with those of the contributing buildings for new construction and additions within the API.

d. For new construction within areas with concentrations of historic buildings, (including but not limited to APIs and areas in close proximity to APIs) as well as additions to historic buildings, provide design guidelines that require the massing, composition, surface materials, fenestration, detailing and other architectural treatments to be consistent with, and subordinated and deferential to, those of the contributing API buildings and/or buildings receiving additions. See the design guidelines provisions in the Oakland General Plan's Historic Preservation Element.

e. Broaden the City's application of the California Historical Building Code to include, at a minimum, Potential Designated Historic Properties (PDHPs) as defined in the Historic Preservation Element and/or buildings over 50 years old to facilitate rehabilitation and/or compatible changes of use for these buildings.

In addition to the above, we request an early discussion with the team about the alternatives and mitigations to be studied in the draft EIR. We hope not to have to wait until the DEIR release to see the alternatives and mitigations. We would like to contribute to the choices of study alternatives and mitigations, as may other community groups.

For convenience, we attach our previous letters of January 22 and February 5. Oakland Heritage Alliance continues to review the Preliminary Draft Downtown Oakland Plan and may have further comment on the draft itself, but now submit these comments for inclusion during the NOP period. If possible, we would request being able to submit comments pertaining to both NOP and overall Draft Preliminary Plan until end of business on Monday, March 4, to allow volunteers to work on comments over that weekend.

Thank you for the opportunity to comment. Please contact Christopher Buckley at (510) 523–0411 or cbuckleyaicp@att.net or Naomi Schiff at (510) 835–1819 or Naomi@17th.com if you would like to discuss these comments.

Sincerely,

Tom Debley

Tom Debley, President

Attachments:
1. January 22, 2019 OHA letter
2. Emeryville system of bonus density in exchange for community benefits
3. February 5, 2019 OHA letter

By electronic transmission:
cc: Mayor and City Council
Landmarks Preservation Advisory Board
William Gilchrist, Ed Manasse, Robert Merkamp, Catherine Payne, Alicia Parker, Joanna Winter, Pete Vollmann, Betty Marvin, Bureau of Planning and Zoning
Victor Dover, Luiza Leite, Amy Groves, Dover-Kohl

OAKLAND HERITAGE ALLIANCE

(By Electronic Transmission)

January 22, 2019

Oakland City Planning Commission

Subject: Preliminary Draft Downtown Oakland Specific Plan

Dear City Planning Commissioners,

Because of the very short time provided for review following release of the Preliminary Draft on January 17, 2019, the following comments are preliminary and may therefore be expanded and/or modified prior to the City Planning Commission's February 6 meeting.

1. **Show proposed floor area ratios (FARs) as well as proposed height limits.** Although the draft intensity map (Figure LU-9 on page 284), shows proposed height limits, it does not show proposed FARs, which in many ways are more important than height limits. Among other things, floor area should be the primary unit of transfer for a transferable development rights (TDR) program. Including proposed FARs is critical to the evaluation of the Preliminary Draft's development intensity proposals.

2. **Reduce existing excessive by-right FARs, height limits and residential density to promote community benefits, including affordable housing and TDRs to preserve historic buildings.** The Specific Plan provides an opportunity to correct the mistakes of the 2009 rezoning that provided excessive by-right height limits and FARs, which eliminated any incentives for developers to provide community benefits, such as affordable housing and acquisition of TDRs from historic buildings in exchange for increased height, FAR and residential density on their development sites. For example, much of downtown Oakland was provided with a by-right 20.0 FAR and unlimited height in the 2009 rezoning, which, unfortunately, appears mostly retained in the Preliminary Draft (based on the areas designated for "unlimited" height on the draft intensity map), which, in the absence of FAR designations, will presumably retain the existing excessive by-right 20.0 FARs. This is especially disappointing, given such statements in the 2016 Plan Alternatives Report as the following on page 4.7: "Rezone areas with unnecessarily excessive height limits to allow for more flexibility with density bonuses and other

   By comparison, the maximum by-right FAR in San Francisco resulting from its 1985 Downtown Specific Plan was 9.0, which can be increased up to 18.0 with TDRs and other community benefits. "Overzoning", such as what exists in downtown Oakland, tends to artificially inflate land values and create more barriers to providing affordable housing and encourages owners to "land bank" their property while waiting for a major development project that will pay them top dollar. Ironically this can **discourage** development, rather than encourage it, as intended by overzoning. Land banking also tends to encourage a slumlord mentality, with building owners reluctant to spend money to properly maintain their buildings and refuse long-term leases that could include major tenant improvements, thereby discouraging high-quality tenants.

446 17th Street, Suite 301, Oakland, California 94612 • (510) 763-9218 • info@oaklandheritage.org
Web Site: www.oaklandheritage.org

3. **Ensure that new development within or in proximity to Areas of Primary and Secondary Importance (APIs and ASIs) do not exceed the scale of contributing historic buildings within the APIs and ASIs.**

   The Plan should require that new structures be visually subordinate to contributing buildings so as to not visually overwhelm the API/ASI and potentially compromise its API/ASI eligibility. In many cases, this means that the heights of new buildings need to be lower than the tallest adjacent contributing building and sometimes significantly lower, perhaps one or more stories. For example, a new building located between a one story and three story contributing building should probably be no more than two stories. This must be reflected on any height/FARS maps that come out of the plan. *This is especially important in Old Oakland*, where the current by-right height limit is 55' (increased by 5' in 2009) while the tallest contributing buildings are about 45'.

   Avoiding excessive architectural contrast with contributing buildings is a further requirement for achieving visual subordination and should be addressed in the Design Guidelines to be prepared as part of the Specific Plan.

   Although page 276 states that "the proposed intensity map (Figure LU-9) further reinforces the character for these areas, to ensure future development is consistent with the existing context", the draft intensity map on Page 284 actually **increases** the intensity of most of these areas, increasing the height limit for: (a) the Old Oakland API to 65 feet from the 55 feet adopted in 2009; (b) most of the Lakeside residential area API to 65 feet and 85 feet from 2009's 55 feet; (c) portions of the Cathedral Neighborhood API to 85 feet from 2009's 55 feet; (d) portions of the Telegraph Avenue/KONO ASI to 65 feet and 85 feet from the 2009's 45 feet; (e) the 17th Street API to 65 feet from 2009's 55 feet; and (f) portions of the 25th Street Garage API to 65 feet from 2009's 45 feet. In most of these APIs and ASIs, the height limits should actually be **reduced** to reflect the predominate heights of the contributing historic buildings and to anticipate potential height increases that must be granted to projects receiving residential density bonuses.

   Most of the Lower Broadway ASI, which contains Oakland's oldest documented buildings from the 1850s and 1860s, is proposed for an 85 foot height limit, greatly exceeding the existing approximately 20 foot to 30 foot heights of these very important one and two story buildings.

   Note: The draft intensity map is hard to read, because of insufficient contrast between the colors.

   At the Community Advisory Group meetings there was no discussion of specific height limits for specific areas. How were the height limits shown on the draft intensity map decided?

4. **Provide a robust Transferable Development Rights (TDR) program.** Although policy LU-2.2 on page 295 calls for a TDR program, an actual program mechanism has still not been provided, despite promises for such a program in previous downtown specific plan documents. We are disappointed that a more developed TDR proposal or options has not been provided, given the considerable elapsed time and resources that have now been dedicated to the Specific Plan. A TDR program was called for in the General Plan's 1994

Historic Preservation Element. Now 25 years have elapsed and the program still has not been implemented, despite the major resources dedicated to the Downtown Specific Plan and previous major land-use policy documents, including the 1998 land-Use and Transportation Element, the 2009 Downtown Rezoning and the 2014 Lake Merritt BART Station Specific Plan. TDRs have been very successful in preserving historic buildings in downtown San Francisco and elsewhere. The San Francisco model could be adopted almost verbatim in Oakland. See the Historic Preservation Element and the attached 2013 Seifel report on the San Francisco program for further discussion.

5. **Preserve important view corridors of iconic historic buildings, such as City Hall.** Although the Plan Alternatives Report called for preservation of views to "iconic buildings like City Hall" and the Tribune Tower, we could find no discussion of view corridors in the Preliminary Draft or any mechanism to implement them. The most important views of these buildings are shown on the attached January 28, 2009 diagram and include corridors from two locations on the east side of Lake Merritt and two locations on the I-880 and I-980 freeways. San Francisco preserves view corridors on their zoning height map using reduced heights within these corridors.
6. **Improve connectivity under I-880.** In our April 5, 2016 letter, we had urged that business activities be located along the I-880 freeway undercrossings, preferably in permanent structures, but this recommendation is not discussed in the Preliminary Draft. See the attached photos from Tokyo showing this kind of development. In addition, the critical need for improved lighting has been discussed only for some of the undercrossings rather than all of them.

We have been advocating some of the above recommendations for many years. See attached 10-12-15 Oakland Heritage Alliance Statement of Key Objectives for the Specific Plan.

Please contact Naomi Schiff at 510-893-1819 or Naomi@17th.com or Christopher Buckley at 510-523-0411 or cbuckleyAICP@att.net if you would like to discuss these comments.

Sincerely,

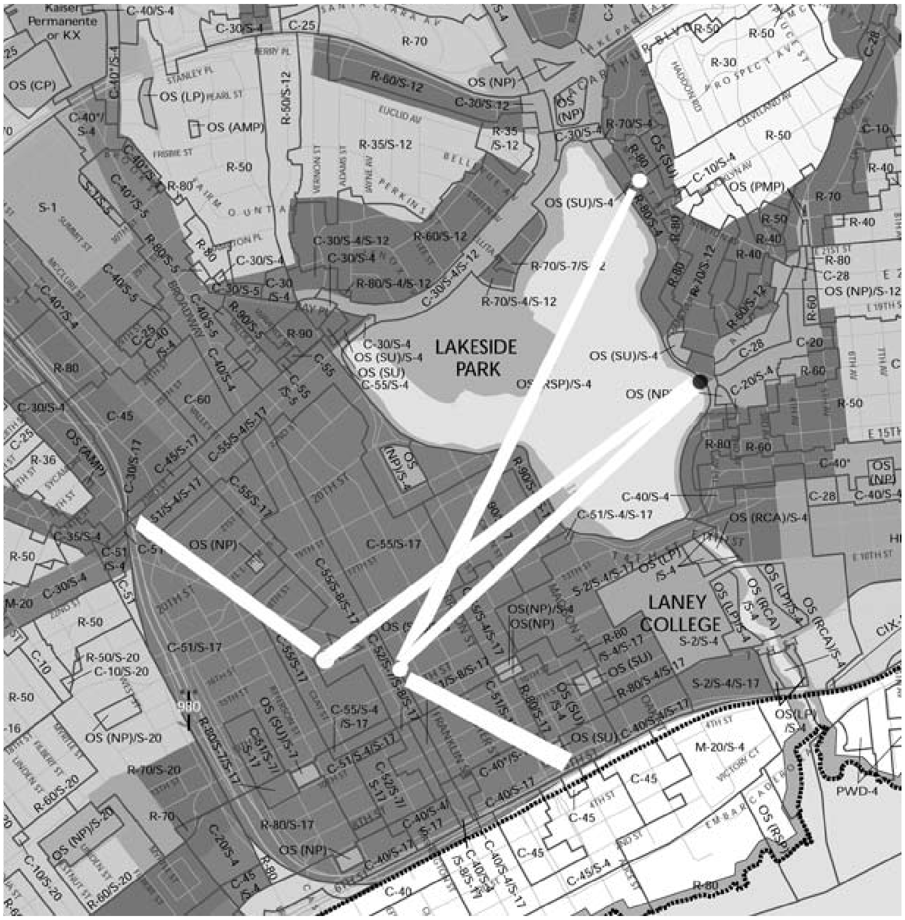
Tom Debley

Tom Debley
President

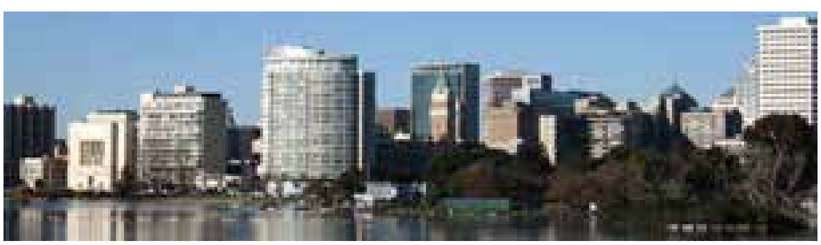
Attachments:
1. 2013 San Francisco TDR study by Seifel Consulting, Inc. - Please find at http://commissions.sfplanning.org/hpcpackets/HPC_TDR_Packet_2013_07_11.pdf
2. 1-28-09 view corridor diagram
3. Photograph of under viaduct development in Tokyo
4. 10-12-15 OHA Statement of Key Objectives for the Downtown Specific Plan (reduced size)

cc: Mayor and City Council
Landmarks Preservation Advisory Board
William Gilchrist, Ed Manasse, Robert Merkamp, Catherine Payne, Alicia Parker, Joanna Winter, Pete Vollmann, Betty Marvin, Bureau of Planning and Zoning
Victor Dover, Luiza Leite, Amy Groves, Dover-Kohl

VIEW CORRIDORS SHOULD BE STUDIED AND MAPPED: Examples of possible view corridors to be protected.
Oakland Heritage Alliance 1-28-09



Views from freeways should be studied



From Cleveland Cascade

From 18th Street Pier


atré


PASSAGE

October 12, 2015

(By electronic transmission)

Ms. Alicia Parker
City of Oakland Bureau of Planning
250 Frank H. Ogawa Plaza, Suite 3330
Oakland, Ca. 94612

Subject: Downtown Specific Plan - -Oakland Heritage Alliance Statement of Key Objectives and related past correspondence

Dear Ms. Parker:

Thank you again for arranging the meeting with the Downtown Specific Plan consultants several weeks ago. As per our discussion with you, the consultants and Darin Ranelletti, here is a list of Oakland heritage Alliance's key objectives for the plan. Most of these objectives we previously presented as part of the 2009 CBD rezoning and 2014 Lake Merritt BART Station Plan processes. We have also attached letters that we submitted during the 2009 and 2014 plan preparations and indicate for each objective which letter or other document contains further discussion of that objective.

KEY OBJECTIVES

1. Within and in close proximity to APIs and ASIs, provide floor area ratios (FARs), height limits, and other development provisions consistent with the height and configuration of contributing buildings, using a fine grain height and bulk map similar to Downtown San Francisco's, Oakland's 2009 downtown rezoning and 2014 Lake Merritt BART Station Specific Plan. (See Historic Preservation Element Policy 3.9 and 7-12-08, 4-15-09, 6-22-09, 8-27-14, and 10-5-14 OHA letters.)

2. Reduce further the FARs and height limits within APIs and ASIs resulting from the 2009 downtown rezoning and Lake Merritt BART Plan and Broadway Valdez Plan to improve consistency with contributing buildings, e.g. within the Downtown National Register District API, Uptown API, 13th Street (Webster – Harrison) ASI, 10th St. ASI, etc. (See 6-22-09, 4-15-09, 2-3-10, 8-27-14 and 10-5-14 OHA letters.)

3. For the South of Nimitz Area (SONA), provide FARs and height limits and other development provisions consistent with APIs and ASIs, especially within the lower Broadway ASI (consisting of some of Oakland's oldest buildings dating from the 1850s and 1860s and a potential thematic API), and the Produce Market API.

4. Provide a transferable development rights (TDR) program. (See San Francisco's very successful TDR program, the proposed TDR program in Oakland's Historic Preservation Element and OHA 4-15-09 and 8-27-14 letters.)

5. Reduce the amount of areas zoned for high-rise resulting from the 2009 Downtown rezoning and Lake Merritt BART Specific Plan to a more reasonable level. The current area zoned for high-rise exceeds that of Downtown San Francisco, promoting landbanking and slumlord mentalities among some property owners, resulting in disinvestment and blight, and eliminating any motivation for developers to use TDRs or provide community benefits. Current by-right FARs within much of the plan area are between 10.0 and 20.0. Maximum by-right FARs should be 9.0 (as in San Francisco) in targeted areas only, with greater FARs allowed with TDR's or community benefits. (See 6-22-09 OHA letter, including maps comparing high-rise zoned areas in Oakland vs. San Francisco vs. OHA's recommendations.)

6. Provide view corridors protecting the visibility of Oakland City Hall and the Tribune Tower and other important downtown historic skyscrapers from across Lake Merritt, westbound 880, southbound 980 and other important vantage points. (See OHA 1-28-09, 6-22-09 and 8-27-14 letters, including view photos.)

7. Provide high-rise design standards that preclude excessive bulk and overly close tower spacing. (See OHA 10-5-14 letter.)

8. Provide design guidelines for APIs and ASIs that (1) discourage out of scale or architecturally aggressive new construction that visually competes with contributing buildings or otherwise erodes the visual integrity of the API/ASI and (2) discourage overly bulky or visually aggressive high-rise designs. (See OHA 7-12-08 and 8-27-14 letters).

9. Include a historic preservation strategy within the plan document that promotes conservation and, where needed, restoration of historic buildings. See Historic Preservation Element for several outline examples. Include adaptive reuse options for key areas, such as the Produce Market and the 25th Street Auto Garage ASI.

Please confirm that you have forwarded this letter and the attachments to the consultants.

Sincerely,

Naomi Schiff (510-835-1717) and Christopher Buckley (510-523-0411)
Oakland Heritage Alliance

Attachments: OHA letters dated 7-12-08 (attached to 6-22-09 letter), 4-15-09, 1-28-09, 6-22-09, 2-3-10, 8-27-14, and 10-5-14.

Cc: Darin Ranelletti, Rachel Flynn, Betty Marvin

9-4.204 Development Bonuses.

(a) **State Density Bonus Not Available.** If a developer chooses to request development bonuses pursuant to the provisions of this Section, density bonuses pursuant to the State Density Bonus requirements in Article 5 of Chapter 5 are not available.

(b) **Procedure.** Bonus floor area ratio, height, and/or residential density, as specified in this Article, may be permitted upon the granting of a conditional use permit pursuant to Article 5 of Chapter 7 and the additional findings required by subsection (f) of this Section. Projects seeking bonus points for the Flexible Community Benefit pursuant to item (7) in Table 9-4.204(e) shall require approval of a conditional use permit by the City Council upon a recommendation of the Planning Commission. For Planned Unit Developments, development bonuses shall comply with the requirements of this Section, but shall not require a conditional use permit and shall be considered as part of the PUD approval process pursuant to Article 10 of Chapter 7.

(1) RM Medium Density Residential Zone.

a. Multi-Unit Residential projects of 10 units or more must provide affordable units and community benefits as specified in this Section. The findings in subsections (f)(1) and (f)(2) below must be made.

b. For all other projects, community benefits are not required. The findings in subsection (f)(1) below must be made.

(2) In all other zones affordable housing and other community benefits as specified in this Section must be provided sufficient to earn the number of points required for the bonus amount requested, pursuant to subsections (c), (d) and (e) below. The findings in subsection (f)(2) below must be made.

(3) For bonus height over 100 feet, affordable housing and other community benefits as specified in this Section must be provided sufficient to earn at least 100 points pursuant to subsections (d) and (e) below. The findings in subsections (f)(2) and (f)(3) below must be made.

To qualify for a bonus, a community benefit must be significant and clearly beyond what would otherwise be required for the project under applicable code provisions, conditions of approval, and/or environmental review mitigation measures.

(c) **Determination of Bonuses.** Bonus floor area ratio, height, and/or residential density shall be calculated in accordance with the following procedures.

(1) Points Required. The number of bonus points required, up to a maximum of 100, is calculated according to the following formula:

$$\frac{\text{Bonus Requested}}{\text{Bonus Increment}} \quad X \quad 100 \quad = \quad \text{Points Required}$$

Variables used in bonus point calculation:

a. Bonus Requested. The amount of FAR, height, or residential density requested for the project above the base level as specified in Tables 9-4.201(a), 9-4.202(a), and 9-4.203(a), respectively.

b. Bonus Increment. The difference between the maximum bonus amount and the maximum base amount for FAR, height, and residential density as specified in Tables 9-4.201(a), 9-4.202(a), and 9-4.203(a), respectively.

(2) Points Count Toward All Bonuses. The points awarded for the provision of affordable housing and other community benefits pursuant to subsections (d) and (e) of this Section may be counted towards FAR, height, and residential density. It is not necessary to earn separate points for each of these bonuses.

(3) Height Over 100 Feet. To qualify for bonus height over 100 feet in the 75/100+ height district, affordable housing and other community benefits worth at least 100 points must be provided pursuant to subsections (d) and (e) of this Section.

(4) Modifications.

a. Prior to Issuance of Building Permit. No community benefit for which a bonus has been granted may be eliminated or reduced in size without the approval of the Planning Commission or City Council, whichever approved the project. To grant such approval, the Commission or Council must find that there is a corresponding reduction in intensity, height, and/or density, a substitution of an equivalent community benefit, or a combination of the two.

b. Prior to Issuance of Certificate of Occupancy. Before a certificate of occupancy is issued for a project, the applicant shall certify to the Director that the bonus points upon which the project's floor area ratio, height, and/or residential density were based have, in fact, been achieved. If the number of bonus points achieved by the completed project is less than required, the applicant shall contribute 0.1% of construction valuation per point of shortfall to the Citywide Parks Fund. Such contribution shall be made before a certificate of occupancy is issued.

(d) **Affordable Housing.** No fewer than half of the bonus points required for the project, as calculated pursuant to subsection (c)(1) above, up to 50 points, shall be earned through the provision of affordable housing as specified below. If half of the bonus points required for the project is not a multiple of five, it shall be rounded up to the next multiple of five for the purposes of the provision of affordable housing.

(1) Residential Projects. Multi-Unit Residential developments of 10 units or more shall provide affordable units in the development in accordance with the applicable requirements of Article 4 of Chapter 5. The number of bonus points awarded shall be determined for providing affordable units at various income levels in accordance with Table 9-4.204(d)(1) below.

Table 9-4.204(d)(1): Bonus Points for Affordable Units in Project

Bonus Points Awarded	Rental Projects				Ownership Projects
	TOTAL	Very Low Income	Low Income	Moderate Income	Moderate Income
5	12.5%	2.8%	4.3%	5.3%	20.5%
10	13.0%	2.9%	4.5%	5.5%	21.0%
15	13.5%	3.1%	4.7%	5.8%	21.5%
20	14.0%	3.2%	4.9%	6.0%	22.0%
25	14.5%	3.3%	5.0%	6.2%	22.5%
30	15.0%	3.4%	5.2%	6.4%	23.0%
35	15.5%	3.5%	5.4%	6.6%	23.5%
40	16.0%	3.6%	5.6%	6.8%	24.0%
45	16.5%	3.7%	5.7%	7.0%	24.5%
50	17.0%	3.9%	5.9%	7.2%	25.0%

(2) Nonresidential Projects. Nonresidential developments shall pay an additional affordable housing impact fee in accordance with Table 9-4.204(d)(2) below. The increase shall be based on the applicable fee in effect when the fee is due. For use types that are normally exempt from the affordable housing impact fee, the increased fee shall be based on the fee for nonexempt uses.

Table 9-4.204(d)(2): Bonus Points for Non-Residential Uses

Bonus Points Awarded	Additional Fee
5	10%
10	20%
15	30%
20	40%
25	50%
30	60%
35	70%
40	80%
45	90%
50	100%

For example, if the current fee for nonexempt uses were $4.00 per square foot, to earn 30 points, an additional fee of $2.40 per square foot would be required (60% of $4.00) for a total of $6.40 per square foot. A use type that is normally exempt from the affordable housing impact fee would not pay the base fee of $4.00 per square foot, but would pay the fee increase of $2.40 per square foot.

(e) **Community Benefits.** No more than half of the bonuses points required for the project, as calculated pursuant to subsection (c)(1) above, may be earned through the provision of community benefits. The maximum number of points that may be awarded for each community benefit, the calculation method, and other requirements are as shown in Table 9-4.204(e):

Table 9-4.204(e): Community Benefits and Bonus Points

Community Benefit	Maximum Points	Point Calculation	Requirements
(1) Public Open Space	50	15% of site area or 2,000 square feet, whichever is greater: 50 points	Must be in addition to what is required by Article 3 of this Chapter. Design must comply with applicable provisions of the Emeryville Design Guidelines and be approved as part of Design Review for the project. Open space must be accessible to the general public at all times. Provision must be made for ongoing operation and maintenance in perpetuity.
		10% of site area or 1,500 square feet, whichever is greater: 35 points	
		5% of site area or 1,000 square feet, whichever is greater: 20 points.	
		Contribution to Citywide Parks Fund: 10 points for every 1% of project construction valuation up to 50 points.	Contribution must be made prior to issuance of building permit.
(2) Zero Net Energy	50	100% of energy load (zero net energy): 50 points	Percent of total building energy load measured as kilowatt per square foot provided by solar panels, wind turbines, or other renewable sources.
(3) Public Improvements	50	10 points for every 1% of project construction valuation up to 50 points	Does not include improvements along project frontage that are normally required. Examples include curb, gutter, and sidewalk; pedestrian and bicycle paths; sanitary and storm sewers; and street trees, beyond what would normally be required.
(4) Utility Undergrounding	50	Contribution to Citywide Underground Utility Fund: 10 points for every 1% of project construction valuation up to 50 points	Does not include utility undergrounding that is normally required.
(5) Additional Family Friendly Units	50	5 points for each additional 5 percent of total units that have two or more bedrooms, of which at least 1 percent of total units must have three or more bedrooms.	Two- and three-bedroom units are in addition to those required by Section 9-5.2003, and must comply with the applicable provisions of the Emeryville Design Guidelines pertaining to Family-Friendly Residential Unit Design.

Community Benefit	Maximum Points	Point Calculation	Requirements
(6) Small Businesses	50	Contribution to Citywide Fund to Support Small Local-Serving Businesses: 10 points for every 1% of project construction valuation up to 50 points.	Contribution must be made prior to issuance of building permit.
(7) Flexible Community Benefit	50	The City Council shall determine the number of points to grant for the proposed community benefit based on10 points for every 1% of project construction valuation.	Currently undefined community benefit proposed by the applicant that is significant and substantially beyond normal requirements. An example would be Universal Design features beyond those required by applicable building codes.

(f) **Findings.** To grant a conditional use permit for bonus floor area ratio, height, or residential density, as prescribed in this Article, the following findings must be made in addition to the findings required by Article 5 of Chapter 7:

(1) In the RM Medium Density Residential zone:

a. That the proposed project is compatible with the surrounding neighborhood with regard to building scale, form, and materials, and street orientation.

b. That the proposed project has been designed to minimize the appearance from the street of driveways, parking spaces, maneuvering aisles, and garage doors as much as possible given the size and shape of the lot, and that at least 70% of the street frontage is devoted to active non-parking related uses, except that a driveway of up to ten feet in width shall be allowed.

(2) In all other zones:

a. That the proposed project will provide community benefits sufficient to earn the number of points required for the bonus amount requested, pursuant to subsections (c), (d), and (e) of this Section.

b. That the proposed community benefits for the project are significant and clearly beyond what would otherwise be required for the project under applicable code provisions, conditions of approval, and/or environmental review mitigation measures.

c. That the proposed community benefits for the project are acceptable and appropriate in this case, and will provide tangible benefits to the community.

(3) Bonus height over 100 feet:

a. That the proposed project will provide community benefits sufficient to earn at least 100 points pursuant to subsections (d) and (e) of this Section.

b. That the proposed project will minimize impacts on public views, wind, and shadows at the street level.

c. That the proposed project will be separated by an adequate distance from any other building with a height greater than 100 feet as specified in Section 9-4.202(f).

OAKLAND HERITAGE ALLIANCE

February 5, 2019

(By electronic transmission)

City Planning Commission and Downtown Plan Team
City of Oakland
250 Frank H. Ogawa Plaza, 2nd Floor
Oakland, California 94612

Subject: Preliminary Draft Downtown Plan

Dear Commissioners, staff, and consultants,

Oakland Heritage Alliance is continuing to review the Preliminary Draft Downtown Oakland Plan. We have several additional comments that supplement the comments in our January 22, 2019 letter (attached).

1. **Include the California Historical Building Code (CHBC) in the list of historic preservation mechanisms in Pages 294-296.** The CHBC, among other things, provides performance-based criteria that substitutes and/or supplements the criteria in the "regular" building code that allows more cost-effective solutions to address code issues involving historic buildings while ensuring that the building is safe. Examples include eliminating "triggers," such as changes in use, which require a building to be brought up to modern code. Eliminating the change-of-use trigger would enhance the feasibility of converting non-residential buildings to residential uses, including affordable housing.

   The City currently applies the CHBC to only a relatively limited number of historic buildings, but OHA and the City have been advised by the State Historical Building Safety Board (which oversees and provides official interpretations of the CHBC) that all of Oakland's "Potentially Designated Historic Properties" (PDHPs) as defined in the General Plan's Historic Preservation Element, should be considered eligible for the CHBC. Expanding the interpretation can be accomplished administratively by staff and would increase the total number of CHBC-eligible buildings from about 3000 to about 20,000. Other communities use cut-off dates such as 50 years old or pre-1942 to define CHBC eligibility.

2. **Consider a points-based system, such as Emeryville's, to allow additional development intensity in exchange for community benefits.** Various communities allow increased or "bonus intensity"in terms of increased height limits, floor area ratio, residential density, etc. to supplement "base" or "by-right" intensity in exchange for any "community benefits" provided by the project. Examples of such community benefits include transferable development rights to help preserve historic properties, affordable

housing, public open space, job training programs and support programs for local businesses.

In our January 22, 2019 letter, we already mentioned San Francisco's highly successful transferable development rights program as well as San Francisco's allowance of additional intensity in exchange for affordable housing. Another example is Emeryville, which allows additional intensity in designated areas in exchange for "points" generated by community benefits. The portion of Emeryville's zoning ordinance setting forth this system is attached.

This kind of system could be used as a starting point for an Oakland system that could be modified as needed according to Oakland's community benefit priorities.

We are continuing to research Emeryville's system as well as similar methods used in other communities.

Note that to be effective, all of these approaches will require modification of the excessive "by-right" intensities currently in place within many parts of Downtown Oakland to a two-tiered set of intensities consisting of a relatively low by-right intensity that would be increased to a "bonus" intensity in exchange for community benefits. See Items 2 and 4 in our January 22, 2019 letter for further discussion.

Thank you for the opportunity to comment. Please contact Christopher Buckley at (510) 523–0411 or cbuckleyaicp@att.net or Naomi Schiff at (510) 835–1819 or Naomi@17th.com if you would like to discuss these comments.

Sincerely,

Tom Debley

Tom Debley, President

Attachments:

1. January 22, 2019 OHA letter
2. Emeryville system of bonus density in exchange for community benefits

By electronic transmission:

cc Mayor and City Council
Landmarks Preservation Advisory Board
William Gilchrist, Ed Manasse, Robert Merkamp, Catherine Payne, Alicia Parker, Joanna Winter, Pete Vollmann, Betty Marvin, Bureau of Planning and Zoning
Victor Dover, Luiza Leite, Amy Groves, Dover-Kohl

February 15, 2019

Alicia Parker
City of Oakland
Bureau of Planning
250 Frank H. Ogawa, Suite 3315
Oakland, CA 94612

RE: Downtown Oakland Specific Plan – Notice of Preparation of a Draft Environmental Impact Report

Dear Alicia Parker:

The Bay Area Air Quality Management District (Air District) staff has reviewed the Notice of Preparation (NOP) for the Downtown Oakland Specific Plan (Plan) Draft Environmental Impact Report (DEIR). The Plan will provide a roadmap for how the area develops over the next 20 to 25 years through policy guidance on land use, transportation, housing, economic development, public spaces, cultural arts, and social equity.

The NOP finds that the proposed Plan could result in significant regional & local air quality impacts in the San Francisco Bay Area Air Basin. In addition, the Plan area boundary is adjacent to the West Oakland Community, a community identified by the Air District's Community Air Risk Evaluation (CARE) program and our program to implement Assembly Bill (AB) 617 as disproportionally impacted by air pollution.

Air District staff recommends the DEIR include the following information and analysis:

1. As identified by the Air District's CARE program and our Community Health Protection Program, the West Oakland Community is currently cumulatively impacted with air pollution, which makes any additional air pollution a potentially significant localized impact. We recommend that the DEIR use a very conservative significance threshold to evaluate impacts and mitigation requirements for this Plan.
2. The DEIR should provide background information on the Bay Area Air Basin's attainment status for all criteria pollutants and the implications for the region if these standards are not attained or maintained by statutory deadlines. In addition, the DIER should provide background information regarding existing sources of air pollution and air pollution concentrations within the Plan area and the adjacent West Oakland Community. The DEIR should include a discussion of the health effects of exposure to air pollution in general and the existing health impacts occurring within the Plan area and the West Oakland community.

3. The DEIR should list the Air District as a responsible agency with permitting approval required for stationary sources of air pollution.
4. The GHG impact analysis should include an evaluation of the Plan's consistency with the California Air Resources Board 2017 Scoping Plan and State and Air District climate stabilization goals for 2030 and 2050. Please be advised that the Air District is in the process of updating the CEQA guidelines/thresholds and current thresholds for GHGs should not be used for this plan. Other elements of the Guidelines may still be useful, however. You may download a copy of the CEQA Guidelines from the Air District's website http://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines.
5. The DEIR should estimate and evaluate the potential health risk to existing and future sensitive populations within the Plan area and the West Oakland community from toxic air contaminants (TAC) and fine particulate matter ($PM_{2.5}$) as a result of the Plan's construction and operation. Air District staff recommends that the DEIR include a cumulative site-specific analysis that includes all stationary and mobile sources expected from this Plan and the existing sources that could potentially impact the West Oakland Community directly and indirectly, including the Port of Oakland.
6. The DEIR should evaluate all feasible mitigation measures, both onsite and offsite, for all potentially significant air quality and GHG impacts identified in the DEIR. The DEIR should prioritize onsite mitigation measures, followed by offsite mitigation measures within the proposed Plan area and immediately adjacent communities. Examples of potential emission reduction measures that should be evaluated and considered include, but are not limited to:
    - Prohibiting or minimizing the use of diesel fuel, consistent with the Air District's Diesel Free By '33 initiative (http://dieselfree33.baaqmd.gov/)
    - Implementing green infrastructure and fossil fuel alternatives in the development and operation of the Plan, such as solar photovoltaic (PV) panels, renewable diesel, electric heat pump water heaters, and solar PV back-up generators with battery storage capacity.
    - Requiring construction vehicles to operate with the highest tier engines commercially available.
    - Providing funding for zero emission transportation projects, including a neighborhood electric vehicle program, community shuttle/van services and car sharing, and enhancement of active transportation initiatives, among others.
    - Providing funding for expanding and improving bicycle and pedestrian infrastructure and projects that improve pedestrian access to transit, employment and major activity centers.
    - Implementing a zero-waste program consistent with SB 1383 organic waste disposal reduction targets including the recovery of edible food for human consumption.

7. The DEIR should evaluate the Plan's consistency with the Air District's 2017 Clean Air Plan (2017 CAP). The DEIR should provide a table that lists relevant 2017 CAP measures to the Plan in one column and the Plan's consistency with the measures in the second column. The 2017 CAP can be found on the Air District's website http://www.baaqmd.gov/plans-and-climate/air-quality-plans/current-plans.

8. The Air District's CEQA website contains several tools and resources to assist lead agencies in analyzing plan alone and cumulative air quality impacts. These tools include guidance on quantifying local emissions and exposure impacts. View and download tools at http://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/ceqa-tools. In addition, Air District staff have developed and continue to refine, detailed information on air pollution sources in West Oakland.

9. The DEIR should include all appendices or technical documents relating to the air quality, toxic air contaminant and GHG analysis, such as emissions assessment calculation and the health risk assessment files. Without all the supporting air quality documentation, Air District staff may be unable to review the air quality and GHG analyses.

If you have any questions regarding these comments, or would like to schedule a meeting, please contact Areana Flores, Environmental Planner, at (415) 749-4616, or aflores@baaqmd.gov.

Sincerely,

Greg Nudd
Deputy Air Pollution Control Officer

cc: BAAQMD Director John J. Bauters
BAAQMD Director Pauline Russo Cutter
BAAQMD Director Scott Haggerty
BAAQMD Director Nate Miley
WOEIP Ms. Margaret Gordon
WOEIP Brian Beveridge

SAN FRANCISCO BAY AREA RAPID TRANSIT DISTRICT
300 Lakeside Drive, P.O. Box 12688
Oakland, CA 94604-2688
(510) 464-6000

February 15, 2019

Alicia Parker
City of Oakland Bureau of Planning
250 Frank H. Ogawa Plaza, Suite 3315
Oakland, CA 94612

RE: Letter of Comment on Notice of Preparation (NOP) of a Draft Environmental Impact Report for the Downtown Oakland Specific Plan

Dear Ms. Parker,

The San Francisco Bay Area Rapid Transit District (BART) appreciates the opportunity to comment on the Notice of Preparation of a Draft Environmental Impact Report (DEIR) for the Downtown Oakland Specific Plan. It is vital that the DEIR fully study the impacts to the BART system that will result from the development, policies, and projects identified by this plan.

Transit Impacts

BART is the transit workhorse connecting residents of the Bay Area to Downtown Oakland. BART ridership to Downtown Oakland is rising rapidly – outpacing overall system growth. Daily exits at 19th Street Station grew an impressive 43% from 2009 to 2016, moving from our 10th busiest station to 6th. 12th Street/City Center grew slightly, moving from 6th to 5th busiest. The continued economic and social vitality of Oakland is inextricably tied to BART resiliency and reliability. Given that the Downtown Plan is based around an equity framework, the BART system is even more integral in that the rail transit system provides mobility to people with limited travel options – low income residents, youths, seniors, and people with disabilities.

The Downtown Specific Plan's Goal 3 is to "improve connections to the city as a whole so that everyone has efficient and reliable access to downtown's jobs and services." The Plan's Outcome M-2 states "communities that are more transit-dependent are well-served to travel to and from downtown with frequent, reliable, and safe transit service." Reliable BART service supports both this Goal and Outcome, but improvements to the BART system to provide for resilient transit are not discussed in the Plan's Mobility Section. Improvements to expand and enhance AC Transit bus service are a vital part of connecting Downtown, but the Plan and corresponding DEIR should make a point to recognize and study BART's role in Downtown Oakland alongside that of surface transit.

BART trains traveling through the Transbay Tube in the primary commute direction to San Francisco in the morning and to the East Bay in the afternoon are significantly over-capacity, carrying over 25,000 people under the Bay every hour in the peak. BART's capacity is approximately 22,000 per hour per direction, so peak hour trains are currently approximately 15% over-capacity. BART is making improvements to increase capacity, including purchasing new rail cars and upgrading our train control system to enable more frequent service and longer trains. Once BART's capacity improvements are fully implemented (expected by 2028), BART's train frequencies will increase by approximately 30%, and peak hour overall capacity will increase by approximately 45%. But peak-hour commute demand is expected to continue to climb. MTC, in its recent Core Capacity Transit Study (2014), estimated that BART's additional capacity would be fully used again by 2040, assuming moderate ridership growth.

This Plan arrives at a crucial moment in time where Oakland can position its Downtown as a strong employment hub, linked by BART to San Francisco across the Bay. BART supports an increase in residential density Downtown to respond to the regional housing crisis, however BART feels that the Plan is falling short of proposing the strong policies and zoning changes necessary to create a regional employment hub in Downtown Oakland. An increase in the number of jobs in Downtown Oakland means that more people can take advantage of excess train capacity in the reverse-commute direction. In addition to discussing the impacts to the core BART system from new ridership, BART also requests that the DEIR investigate the impact of employment growth, (or lack thereof), on air quality related to Transbay capacity and commute trip transit mode share

Impacts Related to Increases in Residential and Employment Density

The increase in residents and workers in the Downtown core will increase ridership and strain on the existing system. This increase needs to be quantified in the Transit Impact section of the Transportation Impact Study related to this DEIR. Following from this evaluation, the DEIR should discuss mitigation measures to ensure that BART can continue to serve current and future residents and visitors over the lifetime of the Plan.

Past BART planning efforts have identified the following future needs to ensure that BART continues to operate safely and efficiently. The DEIR should consider the following mitigation measures for capacity and reliability impacts associated with Plan recommendations, policies, and projects:

- 19th Street Station project needs:
    - New elevator connecting street and concourse, per 2013 Station Modernization Plan – for redundancy and connectivity between AC Transit and BART.
    - Escalator canopies with roll-down doors to protect escalators from overnight damage and reduce escalator outages.
    - New entrance at north end of station to expand pedestrian access to station and respond to new and upcoming development.
    - Additional ticket vending machines or faregates to accommodate additional riders.

- 12th Street/City Center Station project needs:
    - New elevator connecting platform and concourse – provides redundant service in the event of an elevator outage.
    - Escalator canopies with roll-down doors to protect escalators from overnight damage and reduce escalator outages.
    - Interior upgrades including lighting and security improvements.
    - Additional ticket vending machines or faregates to accommodate additional riders.

Impacts Related to Transbay Capacity and Employment Distribution/Growth

BART trains are currently above-capacity in the primary commute direction. As San Francisco creates more office space and jobs, this trend will continue, and transit commute mode share will eventually reach a saturation point. This could potentially shift people to less-environmentally-friendly methods of crossing the Bay. This Plan has the potential to grow the amount of jobs in the Downtown to allow for more reverse-commutes and take advantage of excess transit capacity. If the Plan's recommendations fall short of the optimum level of job creation, this could impact regional transit commute mode share and negatively affect air quality across the region. The DEIR should discuss the impacts to Downtown and the region in terms of emissions and air quality if the Downtown Plan fails to adequately increase the number of jobs in Downtown Oakland.

Sincerely,

Tim Chan
Group Manager, Station Area Planning
BART Planning, Development & Construction

ALAMEDA
County Transportation Commission
1111 Broadway, Suite 800, Oakland, CA 94607 • 510.208.7400 • www.AlamedaCTC.org

February 8, 2019

Alicia Parker
Bureau of Planning
City of Oakland
250 Frank H. Ogawa, Suite 3315
Oakland, CA 94612

SUBJECT: Response to the Notice of Preparation (NOP) of a Draft Environmental Impact Report for the Downtown Oakland Specific Plan

Dear Ms. Parker,

Thank you for the opportunity to comment on the Notice of Preparation (NOP) of the Draft Environmental Impact Report (DEIR) for the Downtown Oakland Specific Plan. The project site is located in the north central portion of Oakland. The site is approximately 850 acres in Downtown Oakland, bordered by 27th Street to the North; I-980, Brush and Market Street the West; the Jack London estuary waterfront and Embarcadero West to the South; and Lake Merritt and Channel to the East. The site is a cultural, business, government and entertainment hub of the East Bay and includes several historic properties and districts. The Downtown Oakland Specific Plan will provide a roadmap for how the area develops over the next 20-25 years through policy guidance on land use, transportation, housing, economic development, public spaces, cultural arts, and social equity. The Plan aims to ensure that Downtown Oakland remains a place of continuing growth and revitalization, as well as a valuable resource for the larger Oakland community through increased employment, housing, arts, and cultural opportunities.

The Alameda County Transportation Commission (Alameda CTC) respectfully submits the following comments:

Basis for Congestion Management Program (CMP) Review

- It appears that the proposed project will generate at least 100 p.m. peak hour trips over existing conditions, therefore the CMP Land Use Analysis Program requires the City to conduct a transportation impact analysis of the project. For information on the CMP, please visit: https://www.alamedactc.org/planning/congestion-management-program/.

Use of Countywide Travel Demand Model

- The Alameda Countywide Travel Demand Model should be used for CMP Land Use Analysis purposes. The CMP requires local jurisdictions to conduct travel model runs themselves or through a consultant. The City of Oakland and the Alameda CTC signed a Countywide Model Agreement on May 28, 2008. Before the model can be used for this project, a letter must be submitted to the Alameda CTC requesting use of the model and describing the project. A copy of a sample letter agreement is available upon request. The most current version of the Alameda

CTC Countywide Travel Demand Model was updated in June 2018 to be consistent with the assumptions of Plan Bay Area 2040.

<u>Impacts</u>

- The DEIR should address all potential impacts of the project on the Metropolitan Transportation System (MTS) roadway network.
  - MTS roadway facilities in the project area include:
    - In Oakland: I-980, I-880, Broadway, Harrison Street, Grand Avenue, 12th Street, 8th Street, 7th Street, Brush Street, Telegraph Avenue, San Pablo Avenue, and the Webster and Posey Tubes
    - In Alameda: Webster Street and Constitution Way
  - For the purposes of CMP Land Use Analysis, the Highway Capacity Manual 2010 freeway and urban streets methodologies are the preferred methodologies to study vehicle delay impacts.
  - The Alameda CTC has *not* adopted any policy for determining a threshold of significance for Level of Service for the Land Use Analysis Program of the CMP. Professional judgment should be applied to determine the significance of project impacts (Please see Chapter 6 of the 2017 CMP for more information).

- The DEIR should address potential impacts of the project on Metropolitan Transportation System (MTS) transit operators.
  - MTS transit operators potentially affected by the project include: AC Transit, BART, Capitol Corridor, and Amtrak
  - Transit impacts for consideration include the effects of project vehicle traffic on mixed flow transit operations, transit capacity, transit access/egress, need for future transit service, and consistency with adopted plans. See Appendix J of the 2017 CMP document for more details.

- The DEIR should address potential impacts of the project to cyclists on the Countywide Bicycle Network.
  - Countywide bicycle facilities in the project area include:
    - Planned extension of the East Bay Greenway and Bay Trail
  - Impacts to consider on conditions for cyclists include effects of vehicle traffic on cyclist safety and performance, site development and roadway improvements, and consistency with adopted plans. See Appendix J of the 2017 CMP document for more details.

- The DEIR should address potential impacts of the project to pedestrians in Pedestrian Plan Areas of Countywide Significance as defined by the Countywide Pedestrian Plan.
  - The Project overlaps with an Area of Countywide Pedestrian Significance:
    - The site is located within a ½ mile of a transit corridor
    - Proximity to the Oakland Central Business District
  - Impacts to consider on conditions for pedestrians include effects of vehicle traffic on pedestrian access and safety, site development and roadway improvements, and consistency with adopted plans. See Appendix J of the 2017 CMP document for more details.

- The DEIR should consider safety issues specific to active freight and passenger rail infrastructure located in the project area

<u>Mitigation Measures</u>

- Alameda CTC's policy regarding mitigation measures is that to be considered adequate they must be:
  - Adequate to sustain CMP roadway and transit service standards;
  - Fully funded; and
  - Consistent with project funding priorities established in the Capital Improvement Program of the CMP, the Countywide Transportation Plan (CTP), and the Regional Transportation Plan (RTP) or the Federal Transportation Improvement Program, if the agency relies on state or federal funds programmed by Alameda CTC.

- The DEIR should discuss the adequacy of proposed mitigation measure according to the criteria above. In particular, the DEIR should detail when proposed roadway or transit route improvements are expected to be completed, how they will be funded, and the effect on service standards if only the funded portions of these mitigation measures are built prior to Project completion. The DEIR should also address the issue of transit funding as a mitigation measure in the context of the Alameda CTC mitigation measure criteria discussed above.

- Jurisdictions are encouraged to discuss multimodal tradeoffs associated with mitigation measures that involve changes in roadway geometry, intersection control, or other changes to the transportation network. This analysis should identify impacts to automobiles, transit, bicyclists, and pedestrians. The HCM 2010 MMLOS methodology is encouraged as a tool to evaluate these tradeoffs, but project sponsors may use other methodologies as appropriate for particular contexts or types of mitigations.

- The DEIR should consider the use of TDM measures, in conjunction with roadway and transit improvements, as a means of attaining acceptable levels of service. Whenever possible, mechanisms that encourage ridesharing, flextime, transit, bicycling, telecommuting and other means of reducing peak hour traffic trips should be considered. The Alameda CTC CMP Menu of TDM Measures and TDM Checklist may be useful during the review of the development proposal and analysis of TDM mitigation measures (See Appendices F and G of the 2017 CMP).

- Alameda CTC is in the Project Approval/Environmental Document phase of the Oakland Alameda Access Project. This project is within the Proposed Project area. The purpose of the Oakland Alameda Access Project includes: to improve mobility and reduce traffic congestion for travelers between Interstate 880, the City of Alameda and downtown Oakland neighborhoods; reduce freeway-bound regional traffic on local roadways and within the area neighborhoods; reduce conflicts between regional and local traffic; and improve connectivity for bicycle and pedestrian traffic within the project location. As such, please accept the following comments to the NOP.

  - Please continue to involve Alameda CTC in the development of the Proposed Project. Alameda CTC would appreciate the opportunity to provide input into the visions of the Proposed Project prior to the Lead Agency's approval.
  - Consider traffic to and from the City of Alameda through the Webster and Posey Tubes to and from Downtown Oakland in the Transportation/Traffic section of the Proposed Project Draft EIR.
  - Include the Oakland Alameda Access Project in your cumulative analysis.

Thank you for the opportunity to comment on this NOP. Please contact me at (510) 208-7426 or Chris G. Marks, Associate Transportation Planner at (510) 208-7453, or Susan Chang, Alameda CTC Project Manager at schang@alamedactc.org, if you have any questions.

Sincerely,

Carolyn Clevenger

for Saravana Suthanthira
Principal Transportation Planner

cc: Chris G. Marks, Associate Transportation Planner

DEPARTMENT OF TRANSPORTATION
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Making Conservation
a California Way of Life

February 8, 2019

SCH # 2019012008
GTS # 04-ALA-2019-00386
GTS I.D. 14053
ALA - VAR - VAR

Alicia Parker
Bureau of Planning
City of Oakland
250 Frank H. Ogawa Plaza, Suite 2214
Oakland, CA 94612

Downtown Oakland Specific Plan– Notice of Preparation

Dear Alicia Parker:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above referenced project. In tandem with the Metropolitan Transportation Commission's (MTC) Sustainable Communities Strategy (SCS), Caltrans' mission signals a modernization of our approach to evaluate and mitigate impacts to the State Transportation Network (STN). Caltrans' Strategic Management Plan 2015-2020 aims to reduce Vehicle Miles Traveled (VMT) by tripling bicycle and doubling both pedestrian and transit travel by 2020. Our comments are based on the Notice of Preparation (NOP).

Project Understanding
The Downtown Oakland Specific Plan will provide a roadmap for how the area develops over the next 20 to 25 years through policy guidance on land use, transportation, housing, economic development, public spaces, cultural arts, and social equity. The Plan aims to ensure that Downtown remains a place of continuing growth and revitalization, as well as a valuable resource for the larger Oakland community through increased employment, housing, arts, and cultural opportunities. Supporting existing residents by growing existing business and the creative economy are important to creating a plan that serves both current and future residents. Interstate (I)-880 and I-980 bisect the project area.

Specific Plan and Capital Improvement Plan
Due to the magnitude and pace of development in the region, Caltrans suggests that the lead agency adopt Oakland Waterfront Ballpark District into the Downtown Oakland Specific Plan. The specific plan will engage the public in the CEQA process, address the project's environmental and VMT impacts, and reassess economic conditions before the project is operating to create an updated development strategy.

Transportation Impact Fees
Caltrans commends the Lead Agency for its Transportation and Capital Improvement Impact Fee Program. Please identify project-generated travel demand and estimate the costs of transit and active transportation improvements necessitated by the proposed Specific Plan; viable funding sources such as development and/or transportation impact fees should also be identified. We encourage a sufficient allocation of fair share contributions toward multimodal and regional transit improvements to fully mitigate cumulative impacts to regional transportation.

The Lead Agency should also ensure that the cost of needed improvements, funding sources, and a scheduled plan for implementation is incorporated into the capital improvement plan as part of the environmental process. Transportation Impact Fees should be obtained on pace with the project's phases, so that mitigation of each phase is aligned with the development as it occurs. Caltrans welcomes the opportunity to work with the Lead Agency and local partners to secure the funding for needed mitigation. Traffic mitigation and cooperative agreements are examples of such collaborative measures.

Multimodal Planning
A bicycle connection between the City of Alameda and Downtown Oakland should be explored as mitigation in the VMT analysis; specifically, the plan's impact on the Posey Tube. For example, providing an overcrossing that would connect Alameda and Oakland– see Caltrans District 4 Bike Plan's Appendix A – would improve connectivity in the proposed project area and encourage active transportation. We also strongly support measures to increase sustainable mode shares, thereby reducing VMT.
http://www.dot.ca.gov/d4/bikeplan/docs/D4BikePlan_ProjectList.pdf

The DEIR should analyze optimization of the Amtrak/Capital Corridor service, including analysis of the proposed Adeline Street overpass impacts on current and future rail operations. Considering the district's potential to significantly increase rail passenger demand, the DEIR should explore the potential for a transportation hub at the Jack London Square Station or a second Amtrak platform west of the tracks to accommodate passengers traveling to the project site.

Vehicle Trip Reduction
Given the project's intensification of use, all the measures listed below should be considered in the project's Transportation Demand Management (TDM) Program to reduce VMT and greenhouse gas emissions. Such measures will be critical to facilitate efficient transportation access to and from the project location, reduce transportation impacts associated with the project, and promote smart mobility. The measures listed below will promote smart mobility and reduce regional VMT.

- Project design to encourage walking, bicycling and transit access;
- Extending the San Francisco Bay Trail through the project site along the harbor;
- Transit fare incentives such as such as free or discounted transit passes on a continuing

basis;
- Free transit service to Amtrak and BART;
- Real-time transit information system;
- Bus stop furniture improvements such as shelters, trees and porticos;
- Conveniently located bus stops near building entrances;
- Transit, bicycle and trip planning resources such as a commute information kiosk;
- Secured bicycle storage facilities located conveniently near entrances to minimize determent of bicycle use due to weather conditions;
- Fix-it bicycle repair station(s);
- Showers, changing rooms and clothing lockers for employees that commute via active transportation;
- Ten percent vehicle parking reductions;
- Parking cash out programs for the commercial uses;
- Unbundled parking for the residential uses;
- Charging stations and designated parking spaces for electric vehicles;
- Carpool and clean-fuel parking spaces;
- Designated parking spaces for a car share program;
- Incorporate affordable housing into the project;
- Outdoor areas with patios, furniture, pedestrian pathways, picnic and recreational areas;
- Emergency Ride Home program;
- Transportation Demand Management coordinator;
- Participation/Formation in/of a Transportation Management Association (TMA) in partnership with other developments in the area, such as the Brooklyn Basin Project; and
- Aggressive trip reduction targets with Lead Agency monitoring and enforcement.

Transportation Demand Management programs should be documented with annual monitoring reports by an onsite TDM coordinator to demonstrate effectiveness. If the project does not achieve the VMT reduction goals, the reports should also include next steps to take in order to achieve those targets. We strongly suggest reducing parking supply to encourage active forms of transportation, reduce regional VMT, and lessen future transportation impacts on the nearby State facilities. These smart growth approaches are consistent with the MTC's Regional Transportation Plan/SCS goals and would meet Caltrans Strategic Management Plan sustainability goals.

For additional TDM options, please refer to the Federal Highway Administration's *Integrating Demand Management into the Transportation Planning Process: A Desk Reference* (Chapter 8). The reference is available online at:
http://www.ops.fhwa.dot.gov/publications/fhwahop12035/fhwahop12035.pdf.

Encroachment Permit
Please be advised that any work such as tree removal or traffic control that encroaches onto the State right-of-way requires an encroachment permit that is issued by Caltrans. To apply, a completed encroachment permit application, the adopted environmental document, and six (6)

sets of plans clearly indicating State right-of-way must be submitted to: Office of Permits, California DOT, District 4, P.O. Box 23660, Oakland, CA 94623-0660. Traffic-related mitigation measures should be incorporated into the construction plans prior to the encroachment permit process. See the website link below for more information.
http://www.dot.ca.gov/hq/traffops/developserv/permits/

Lead Agency
As the Lead Agency, the City of Oakland is responsible for all project mitigation, including any needed improvements to the State Transportation Network. The project's fair share contribution, financing, scheduling, implementation responsibilities and Lead Agency monitoring should be fully discussed for all proposed mitigation measures. Furthermore, since this project meets the criteria to be deemed of statewide, regional, or areawide significance per CEQA Guidelines Section 15206, the DEIR should be submitted to MTC, the Association of Bay Area Governments and the Alameda County Transportation Commission for review and comment.

Thank you again for including Caltrans in the environmental review process. Please contact us for coordination on the project. We look forward to working with the City of Oakland. Should you have any questions regarding this letter, please contact Jannette Ramirez at (510) 286-5535 or jannette.ramirez@dot.ca.gov.

Sincerely,

PATRICIA MAURICE
District Branch Chief
Local Development - Intergovernmental Review

c: State Clearinghouse

ALAMEDA
County Transportation Commission
1111 Broadway, Suite 800, Oakland, CA 94607 • 510.208.7400 • www.AlamedaCTC.org

February 8, 2019

Alicia Parker
Bureau of Planning
City of Oakland
250 Frank H. Ogawa, Suite 3315
Oakland, CA 94612

SUBJECT: Response to the Notice of Preparation (NOP) of a Draft Environmental Impact Report for the Downtown Oakland Specific Plan

Dear Ms. Parker,

Thank you for the opportunity to comment on the Notice of Preparation (NOP) of the Draft Environmental Impact Report (DEIR) for the Downtown Oakland Specific Plan. The project site is located in the north central portion of Oakland. The site is approximately 850 acres in Downtown Oakland, bordered by 27th Street to the North; I-980, Brush and Market Street the West; the Jack London estuary waterfront and Embarcadero West to the South; and Lake Merritt and Channel to the East. The site is a cultural, business, government and entertainment hub of the East Bay and includes several historic properties and districts. The Downtown Oakland Specific Plan will provide a roadmap for how the area develops over the next 20-25 years through policy guidance on land use, transportation, housing, economic development, public spaces, cultural arts, and social equity. The Plan aims to ensure that Downtown Oakland remains a place of continuing growth and revitalization, as well as a valuable resource for the larger Oakland community through increased employment, housing, arts, and cultural opportunities.

The Alameda County Transportation Commission (Alameda CTC) respectfully submits the following comments:

Basis for Congestion Management Program (CMP) Review

- It appears that the proposed project will generate at least 100 p.m. peak hour trips over existing conditions, therefore the CMP Land Use Analysis Program requires the City to conduct a transportation impact analysis of the project. For information on the CMP, please visit: https://www.alamedactc.org/planning/congestion-management-program/.

Use of Countywide Travel Demand Model

- The Alameda Countywide Travel Demand Model should be used for CMP Land Use Analysis purposes. The CMP requires local jurisdictions to conduct travel model runs themselves or through a consultant. The City of Oakland and the Alameda CTC signed a Countywide Model Agreement on May 28, 2008. Before the model can be used for this project, a letter must be submitted to the Alameda CTC requesting use of the model and describing the project. A copy of a sample letter agreement is available upon request. The most current version of the Alameda

CTC Countywide Travel Demand Model was updated in June 2018 to be consistent with the assumptions of Plan Bay Area 2040.

Impacts

- The DEIR should address all potential impacts of the project on the Metropolitan Transportation System (MTS) roadway network.
  - MTS roadway facilities in the project area include:
    - In Oakland: I-980, I-880, Broadway, Harrison Street, Grand Avenue, 12th Street, 8th Street, 7th Street, Brush Street, Telegraph Avenue, San Pablo Avenue, and the Webster and Posey Tubes
    - In Alameda: Webster Street and Constitution Way
  - For the purposes of CMP Land Use Analysis, the Highway Capacity Manual 2010 freeway and urban streets methodologies are the preferred methodologies to study vehicle delay impacts.
  - The Alameda CTC has *not* adopted any policy for determining a threshold of significance for Level of Service for the Land Use Analysis Program of the CMP. Professional judgment should be applied to determine the significance of project impacts (Please see Chapter 6 of the 2017 CMP for more information).

- The DEIR should address potential impacts of the project on Metropolitan Transportation System (MTS) transit operators.
  - MTS transit operators potentially affected by the project include: AC Transit, BART, Capitol Corridor, and Amtrak
  - Transit impacts for consideration include the effects of project vehicle traffic on mixed flow transit operations, transit capacity, transit access/egress, need for future transit service, and consistency with adopted plans. See Appendix J of the 2017 CMP document for more details.

- The DEIR should address potential impacts of the project to cyclists on the Countywide Bicycle Network.
  - Countywide bicycle facilities in the project area include:
    - Planned extension of the East Bay Greenway and Bay Trail
  - Impacts to consider on conditions for cyclists include effects of vehicle traffic on cyclist safety and performance, site development and roadway improvements, and consistency with adopted plans. See Appendix J of the 2017 CMP document for more details.

- The DEIR should address potential impacts of the project to pedestrians in Pedestrian Plan Areas of Countywide Significance as defined by the Countywide Pedestrian Plan.
  - The Project overlaps with an Area of Countywide Pedestrian Significance:
    - The site is located within a ½ mile of a transit corridor
    - Proximity to the Oakland Central Business District
  - Impacts to consider on conditions for pedestrians include effects of vehicle traffic on pedestrian access and safety, site development and roadway improvements, and consistency with adopted plans. See Appendix J of the 2017 CMP document for more details.

- The DEIR should consider safety issues specific to active freight and passenger rail infrastructure located in the project area

Mitigation Measures

- Alameda CTC's policy regarding mitigation measures is that to be considered adequate they must be:
  - Adequate to sustain CMP roadway and transit service standards;
  - Fully funded; and
  - Consistent with project funding priorities established in the Capital Improvement Program of the CMP, the Countywide Transportation Plan (CTP), and the Regional Transportation Plan (RTP) or the Federal Transportation Improvement Program, if the agency relies on state or federal funds programmed by Alameda CTC.

- The DEIR should discuss the adequacy of proposed mitigation measure according to the criteria above. In particular, the DEIR should detail when proposed roadway or transit route improvements are expected to be completed, how they will be funded, and the effect on service standards if only the funded portions of these mitigation measures are built prior to Project completion. The DEIR should also address the issue of transit funding as a mitigation measure in the context of the Alameda CTC mitigation measure criteria discussed above.

- Jurisdictions are encouraged to discuss multimodal tradeoffs associated with mitigation measures that involve changes in roadway geometry, intersection control, or other changes to the transportation network. This analysis should identify impacts to automobiles, transit, bicyclists, and pedestrians. The HCM 2010 MMLOS methodology is encouraged as a tool to evaluate these tradeoffs, but project sponsors may use other methodologies as appropriate for particular contexts or types of mitigations.

- The DEIR should consider the use of TDM measures, in conjunction with roadway and transit improvements, as a means of attaining acceptable levels of service. Whenever possible, mechanisms that encourage ridesharing, flextime, transit, bicycling, telecommuting and other means of reducing peak hour traffic trips should be considered. The Alameda CTC CMP Menu of TDM Measures and TDM Checklist may be useful during the review of the development proposal and analysis of TDM mitigation measures (See Appendices F and G of the 2017 CMP).

- Alameda CTC is in the Project Approval/Environmental Document phase of the Oakland Alameda Access Project. This project is within the Proposed Project area. The purpose of the Oakland Alameda Access Project includes: to improve mobility and reduce traffic congestion for travelers between Interstate 880, the City of Alameda and downtown Oakland neighborhoods; reduce freeway-bound regional traffic on local roadways and within the area neighborhoods; reduce conflicts between regional and local traffic; and improve connectivity for bicycle and pedestrian traffic within the project location. As such, please accept the following comments to the NOP.

  - Please continue to involve Alameda CTC in the development of the Proposed Project. Alameda CTC would appreciate the opportunity to provide input into the visions of the Proposed Project prior to the Lead Agency's approval.
  - Consider traffic to and from the City of Alameda through the Webster and Posey Tubes to and from Downtown Oakland in the Transportation/Traffic section of the Proposed Project Draft EIR.
  - Include the Oakland Alameda Access Project in your cumulative analysis.

Thank you for the opportunity to comment on this NOP. Please contact me at (510) 208-7426 or Chris G. Marks, Associate Transportation Planner at (510) 208-7453, or Susan Chang, Alameda CTC Project Manager at schang@alamedactc.org, if you have any questions.

Sincerely,

Carolyn Clevenger

for Saravana Suthanthira
Principal Transportation Planner

cc: Chris G. Marks, Associate Transportation Planner

From:	Parker, Alicia
To:	Emilie Wolfson; Lynette Dias
Cc:	Winter, Joanna
Subject:	FW: Save-the-date: Thurs. Feb. 7 @ 5:30pm, CAG #7 Meeting
Date:	Thursday, February 7, 2019 2:28:01 PM

Here is an EIR comment

Alicia Parker, AICP, Planner III | City of Oakland | Bureau of Planning | 250 Frank H. Ogawa Plaza, Suite 3315, Oakland, CA 94612 | Phone: (510) 238-3362 | Fax: (510) 238-6538 |Email: aparker@oaklandnet.com | Website: www.oaklandnet.com/planning

-----Original Message-----
From: Vivian Kahn [mailto:vivian@dyettandbhatia.com]
Sent: Thursday, February 7, 2019 1:16 PM
To: Parker, Alicia <AParker@oaklandca.gov>
Cc: Manasse, Edward <EManasse@oaklandca.gov>
Subject: Re: Save-the-date: Thurs. Feb. 7 @ 5:30pm, CAG #7 Meeting

Alicia,

Please confirm location for this evening"s CAG meeting.

I wasn't able to attend the scoping meetings for either the Specific Plan or the Howard Terminal project but have some serious concerns about the scope of the environmental review for both.
While I firmly believe that environmental review needs to be integrated with the planning process, environmental review is not a substitute for planning and in the case of Howard Terminal, there isn't any public planning process whatsoever!

The proposed Howard Terminal project will obviously have a significant impact on the Specific Plan area and, in particular, the Jack London District. While the previous drafts of planning docs for the Specific Plan went on at length about the potential benefits the stadium and associated development would bring to the Jack London District, this version states that Howard Terminal is "outside the plan boundary." that project is separate despite the fact that the As continue to talk about the proposed gondola from 12th Street BART down Washington Street to the Estuary. The NOP for Howard Terminal states that the project "could include" an "aerial tram or gondola above Washington Street extending from downtown Oakland near 12th Street BART to Jack London Square", a new network of public streets, etc. The NOP doesn't say anything about providing parking facilities on the site and, in fact, when asked about on-site parking the architect said that parking would be accommodated in "existing garages". Clearly, any of these features would have a very significant environmental impact on the Jack London district and other parts of the Downtown. Nevertheless, there has been no public planning process to consider these alternatives.

I seem to recall seeing an NOP for the Downtown Specific Plan but wasn't able to find a link or any information on the City website. Has an NOP been issued?

Vivian

Vivian Kahn, FAICP/Associate Principal
DYETT & BHATIA | Urban and Regional Planners
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> On Jan 31, 2019, at 4:34 PM, Parker, Alicia <AParker@oaklandca.gov> wrote:
>
> Dear CAG Members and Valued Members of the Community,
>
> Please hold Thursday, February 7, 2019, from 5:30-7:30pm open for a meeting of the Downtown Oakland Specific Plan Community Advisory Group. We will follow up with meeting details soon.
>
> At this meeting, we will take a deeper dive into the topics of greatest interest at the last CAG meeting including: (1) affordable housing options, (2) potential for a TDR program & zoning incentive program, (3) height/intensity proposal, and (4) streets/mobility (including discussion about plans for Broadway and accommodating innovative ride sourcing).
>
> It was great to see those of you who came out to the Planning Commission meeting last week. Please join us at the following events next week:
>
> Monday, 2/4
> Landmarks Board (Scoping Session)
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> 6pm, Council Chambers, City Hall
> Wednesday, 2/6
> Planning Commission (Scoping Session)
> 6pm, Council Chambers, City Hall
> Thursday, 2/7
> CAG #7 Meeting
> 5:30pm, Location TBD
> Sunday, 2/10
> Lunar New Year Festival
> 10:00am to 5:00pm
> Oakland Asian Cultural Center
> 388 9th St. Suite 290, Oakland, CA 94607
>
> Please submit all comments on the Preliminary Draft Plan by February 27, 2019 at 12 noon. The comments will inform the next phase, implementation planning and development of the Draft Specific Plan. We will discuss key themes from the comments at our February 28, 2019 CAG #8 meeting.
>
> Thank you,
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> Bureau of Planning Staff
> City of Oakland
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>
> Alicia Parker, AICP, Planner III | City of Oakland | Bureau of Planning | 250 Frank H. Ogawa Plaza, Suite 3315, Oakland, CA 94612 | Phone: (510) 238-3362 | Fax: (510) 238-6538 |Email: aparker@oaklandnet.com | Website: www.oaklandnet.com/planning

From:	DowntownSpecificPlan
To:	Emilie Wolfson; Lynette Dias
Cc:	Luiza Leite; Amy Groves (agroves@doverkohl.com); Winter, Joanna
Subject:	FW: Downtown Specific Plan
Date:	Friday, February 8, 2019 3:29:39 PM

Comments.

Alicia Parker, AICP, Planner III | City of Oakland | Bureau of Planning | 250 Frank H. Ogawa Plaza, Suite 3315, Oakland, CA 94612 | Phone: (510) 238-3362 | Fax: (510) 238-6538 | Email: aparker@oaklandnet.com | Website: www.oaklandnet.com/planning

From: Margaretta Lin [mailto:margaretta@justcities.work]
Sent: Wednesday, February 6, 2019 5:14 PM
To: jmyres.oakplanningcommission@gmail.com; amandamonchamp@gmail.com; tlimon.opc@gmail.com; jfearnopc@gmail.com; cmanusopc@gmail.com; SShiraziOPC@gmail.com; NHegdeOPC@gmail.com; Gilchrist, William <WGilchrist@oaklandca.gov>; Manasse, Edward <EManasse@oaklandca.gov>; DowntownSpecificPlan <PlanDowntownOakland@oaklandca.gov>
Cc: Naomi Schiff <naomi@17th.com>; Hiroko Kurihara <h2oakland@sbcglobal.net>; James Vann <JamesEVann@aol.com>; Jeff Levin <jeff@ebho.org>; escribe68@gmail.com
Subject: Downtown Specific Plan

Dear Oakland Planning Leaders,

Thank you for taking up discussion of the Downtown Specific Plan at tonight's Planning Commission meeting. Unfortunately I will not be able to join you for this critical meeting. However, I wanted to provide you with my thoughts and recommendations based upon my experiences as a former City of Oakland official including as Deputy City Administrator, resident activist and lawyer, and now as a downtown business owner.

First and foremost, the Draft Downtown Specific Plan contains beautiful aspirational language that speaks to the best of Oakland. Our downtown is the central and neutral place for all of Oakland to gather, mix, and nurture a collective identity as One Oakland. However, our Downtown has rapidly become unaffordable, exclusionary, and unwelcoming to Oakland's working class people and youth as rents have skyrocketed and community artists, organizations, and businesses have been displaced. The Downtown Specific Plan is an important document that can serve as a guidestar for authentically living our values of inclusion and equity. However, the current Plan lacks the bold and specific strategies needed to help us achieve our collective vision. Here are our recommendations on advancing inclusion and equity in the Downtown Plan.

1. **Direct staff to extend the NOP and Plan comment deadlines to allow for meaningful community input.** Some City scheduled community meetings are occurring after the comment deadlines, which fosters a perception of tokenized community engagement.

2. **For the EIR, require a social and economic impact analysis to be conducted so that we can all better understand the consequences of the proposed Downtown Specific Plan.** For example, in 2005, I worked with then Planning Director Claudia Cappio to commission a social economic impact

analysis of the West Oakland Wood Street project to more accurately assess the community impacts of a mega market rate project. The analysis resulted in informed policymaking including the City's requirement of affordable housing set-asides. Here's a link to the Wood Street analysis: http://www2.oaklandnet.com/oakca1/groups/ceda/documents/report/oak046596.pdf

3. **For the EIR and the Plan, require specific anti-displacement measures to be included** such as rent stabilization, eviction protections, and connecting tenants to available anti-displacement resources. CEQA requires an analysis of human health impacts, which includes displacement impacts given the direct correlation between displacement and health.

4. **Require the staff to propose specific incentive packages and updated FARs** to achieve equity.

5. **Require that incentive programs include arts activities, historic preservation, affordable housing, support for small independent businesses, and open space by proposing specific actions** that have been recommended by stakeholder groups.

Thank you for your consideration of our recommendations to advance a Downtown Plan that works for us all. Please do not hesitate to contact me should you like to discuss these recommendations further.

Sincerely yours,

Margaretta Lin

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Margaretta Lin
Executive Director
Just Cities/Dellums Institute for Social Justice
www.dellumsinstitute.org

Another world is not only possible, she is on her way. On a quiet day, I can hear her breathing.
Arundhati Roy

EAST BAY
MUNICIPAL UTILITY DISTRICT

February 5, 2019

Alicia Parker, Planner III
City of Oakland, Bureau of Planning
250 Frank H. Ogawa, Suite 3315
Oakland, CA 94612

Re: Notice of Preparation of a Draft Environmental Impact Report for the Downtown Oakland Specific Plan (Case Number SP16-001, File Number ER18020)

Dear Ms. Parker:

East Bay Municipal Utility District (EBMUD) appreciates the opportunity to comment on the Notice of Preparation (NOP) of a Draft Environmental Impact Report (EIR) for the Downtown Oakland Specific Plan (Specific Plan) located in the City of Oakland (City). EBMUD has the following comments.

General

Pursuant to Section 15155 of the California Environmental Quality Act Guidelines and Sections 10910-10915 of the California Water Code, a Water Supply Assessment (WSA) will be required as the Specific Plan area will include potential development that exceeds the threshold requirement for an assessment of water supply availability. Please submit a written request to EBMUD to prepare a WSA. EBMUD requires the project sponsor to provide future water demand data and estimates for the Specific Plan area for the analysis of the WSA. Please be aware that the WSA can take up to 90 days to complete from the day on which the request is received.

EBMUD owns several rights-of-way (R/Ws) within the Specific Plan boundaries, including R/Ws 4321, 4322, 4323A, and 2731 that are located south of Embarcadero and serve EBMUD's wastewater facilities. Any proposed construction activity in EBMUD rights-of-way would be subject to the terms and conditions determined by EBMUD including relocation of the water mains and/or rights-of-way at the project sponsor's expense.

In order for EBMUD to better assess the infrastructure within the Specific Plan area, please include a figure that clearly details the street lines, street names, and parcels within and along the planning boundary in the Draft EIR.

WATER SERVICE

EBMUD's Central Pressure Zone, with a service elevation range between 0 and 100 feet, will serve proposed projects within the Specific Plan area. Any project within the Specific Plan area will be subject to the following general requirements.

Main extensions that may be required to serve individual projects to provide adequate domestic water supply, fire flows, and system redundancy will be at the project sponsor's expense. Pipeline and fire hydrant relocations and replacements, due to modifications of existing streets, and off-site pipeline improvements, also at the project sponsor's expense, may be required depending on EBMUD metering requirements and fire flow requirements set by the local fire department. When the development plans are finalized, the project sponsor should contact EBMUD's New Business Office and request a water service estimate to determine costs and conditions of providing water service to individual projects within the Specific Plan area. Engineering and installation of new and relocated pipelines and services require substantial lead time, which should be provided for in the project sponsor's development schedule.

Under *Existing Conditions*, the NOP indicates the potential for contaminated soils and groundwater to be present within the project site boundaries. The project sponsor should be aware that EBMUD will not install piping or services in contaminated soil or groundwater (if groundwater is present at any time during the year at the depth piping is to be installed) that must be handled as a hazardous waste or that may be hazardous to the health and safety of construction and maintenance personnel wearing Level D personal protective equipment. Nor will EBMUD install piping or services in areas where groundwater contaminant concentrations exceed specified limits for discharge to the sanitary sewer system and sewage treatment plants. The project sponsor must submit copies to EBMUD of all known information regarding soil and groundwater quality within or adjacent to the project boundary and a legally sufficient, complete, and specific written remediation plan establishing the methodology, planning, and design of all necessary systems for the removal, treatment, and disposal of contaminated soil and groundwater.

EBMUD will not design piping or services until soil and groundwater quality data and remediation plans have been received and reviewed and will not start underground work until remediation has been carried out and documentation of the effectiveness of the remediation has been received and reviewed. If no soil or groundwater quality data exists, or the information supplied by the project sponsor is insufficient, EBMUD may require the project sponsor to perform sampling and analysis to characterize the soil and groundwater that may be encountered during excavation, or EBMUD may perform such sampling and analysis at the project sponsor's expense. If evidence of contamination is discovered during EBMUD work on the project site, work may be suspended until such contamination is adequately characterized and remediated to EBMUD standards.

WATER RECYCLING

The Specific Plan area is within the boundaries of EBMUD's East Bayshore Recycled Water Project. EBMUD's Policy 9.05 requires " . . . that customers . . . use non-potable water for non-domestic purposes when it is of adequate quality and quantity, available at reasonable cost, not detrimental to public health and not injurious to plant life, fish and wildlife" to offset demand on EBMUD's limited potable water supply. The individual projects within the Specific Plan area may have a potential for significant recycled water demand, and the project sponsor would be responsible for any recycled water main extensions and on-site recycled water system. EBMUD requests all plumbing for feasible recycled water uses be plumbed separately from the on-site potable system in order to accept recycled water when it becomes available. Feasible recycled water uses may include, but are not limited to, landscape irrigation, commercial and industrial process use, and toilet and urinal flushing in non-residential buildings. EBMUD also requests that an estimate of expected water demand for feasible recycled water uses be provided in the EIR and that the project sponsor coordinate closely with EBMUD regarding specifications for the recycled water system.

WASTEWATER SERVICE

EBMUD's Main Wastewater Treatment Plant (MWWTP) and interceptor system are anticipated to have adequate dry weather capacity to accommodate the proposed wastewater flows from the planned projects within this Specific Plan and to treat such flows provided that the wastewater generated by the project meets the requirements of the EBMUD Wastewater Control Ordinance. However, wet weather flows are a concern. The East Bay regional wastewater collection system experiences exceptionally high peak flows during storms due to excessive infiltration and inflow (I/I) that enters the system through cracks and misconnections in both public and private sewer lines. EBMUD has historically operated three Wet Weather Facilities (WWFs) to provide primary treatment and disinfection for peak wet weather flows that exceed the treatment capacity of the MWWTP. Due to reinterpretation of applicable law, EBMUD's National Pollutant Discharge Elimination System (NPDES) permit now prohibits discharges from EBMUD's WWFs. Additionally, the seven wastewater collection system agencies that discharge to the EBMUD wastewater interceptor system ("Satellite Agencies") hold NPDES permits that prohibit them from causing or contributing to WWF discharges. These NPDES permits have removed the regulatory coverage the East Bay wastewater agencies once relied upon to manage peak wet weather flows.

A federal consent decree, negotiated among EBMUD, the Satellite Agencies, the Environmental Protection Agency (EPA), the State Water Resources Control Board (SWRCB), and the Regional Water Quality Control Board (RWQCB), requires EBMUD and the Satellite Agencies to eliminate WWF discharges by 2036. To meet this requirement, actions will need to be taken over time to reduce I/I in the system. The consent decree requires EBMUD to continue implementation of its Regional Private Sewer Lateral Ordinance (www.eastbaypsl.com), construct various improvements to its interceptor system, and identify key areas of inflow and rapid infiltration over a 22-year period. Over the same time period, the consent decree requires the Satellite Agencies to perform I/I reduction work including sewer main rehabilitation and specified intervals that this work has resulted in a sufficient, pre-determined level of reduction in WWF discharges. If sufficient I/I reductions are not achieved, additional investment into the region's wastewater infrastructure would be required, which may result in significant financial implications for East Bay residents.

To ensure that the projects within the Specific Plan contribute to these legally required I/I reductions, the lead agency should require the project applicant to comply with EBMUD's Regional Private Sewer Lateral Ordinance. Additionally, it would be prudent for the lead agency to require the following mitigation measures for the proposed projects: (1) replace or rehabilitate any existing sanitary sewer collection systems, including sewer lateral lines to ensure that such systems and lines are free from defects or, alternatively, disconnected from the sanitary sewer system, and (2) ensure any new wastewater collection systems, including sewer lateral lines, for the project are constructed to prevent I/I to the maximum extent feasible while meeting all requirements contained in the Regional Private Sewer Lateral Ordinance and applicable municipal codes or Satellite Agency ordinances.

WATER CONSERVATION

Individual projects within the Specific Plan area may present an opportunity to incorporate water conservation measures. EBMUD requests that the City include in its conditions of approval a requirement that the project sponsor comply with Assembly Bill 325, "Model Water Efficient Landscape Ordinance," (Division 2, Title 23, California Code of Regulations, Chapter 2.7, Sections 490 through 495). The project sponsor should be aware that Section 31 of EBMUD's Water Service Regulations requires that water service shall not be furnished for new or expanded service unless all the applicable water-efficiency measures described in the regulation are installed at the project sponsor's expense.

If you have any questions concerning this response, please contact Timothy R. McGowan, Senior Civil Engineer, Major Facilities Planning Section at (510) 287-1981.

Sincerely,

David J. Rehnstrom

David J. Rehnstrom
Manager of Water Distribution Planning

DJR:CC:dks
sb19_015.doc

cc: Lynette Dias
Urban Planning Partners
388 17th Street, Suite 230
Oakland, CA 94612

2/4/19 LPAB comments

Naomi Shiff

- NOP—publicize extension further
- Request that this board make a motion to make specific mitigation measures in the plan, as something real
- Use California building code to reuse buildings
- Take a look at FAR, and heights
- The plan should provide incentives for affordable housing, arts and activities and historic preservation
- By right intensity will desensitize community benefits
- Community benefits are not significant enough in the plan---
- All the maps should show FAR and height limits
- No development near API shout not exceed height limits
- Study view corridors from 980 freeways from historic views
- Improve connectivity under i-880
- 17th street api
- Lower Broadway—Pge building; by Howard terminal

David Warford

- Community process was great

Up-zoning?

How many projects will community benefits apply?

--list of community benefits---available.

How are you picking what are viable community benefits for the bonus program

--From based zoning? What happened to that

--failed to bring up comprehensive historic survey

---have a discussion for the original landstealers---Ohlone, peralta's

Produce district an impossible problem—give more TDR---more preservation opportunities

Don't think housing to 25 street is not a good idea

-graphics and maps needs to be improved upon

Height an scale in Kono is important

--historic resources will small development have more meaningful impacts

--keep small footprint of historic buildings

--greyhound terminal include in program

--showinng up significant photogprahy throughout the plan to show historic districts

PC hearing 2/6/19

March 1—have all comments in for the Specific Plan

What are reasonable range of alternatives

Karen---Webster street improvements on safety of pedestrian; anticipated developed growth include pedestrian improvements

Asarai Okadio: representing member of arts district on draft plan; extend deadline past march 1; march 1 is not enough time for stakeholders to meet; preserve cultural identifies, arts and culture must be included in every except of plan

Zac; land trust: who is their equity consultant is? Not bringing into physical form, the city has been ineffective as addressing equity, not a lot of mention about homelessness, better merger between housing and community development department and planning;

Art and Garage District: stakeholder meeting scheduled for February 25; hard to provide comments by March 1, extend deadline by 2 to 3 weeks. Request; baseline information, more comprehensive list of community benefits; look at anti-displacement measures; what does it take to fund and manage cultural districts so that by the time the plan is done hit the ground running; cultural and art are public health indicators, and displacement. Let's put community health first, but mobility and assets last

Why draft wants to increase height limit in old Oakland, addressed as an important resource, increasing height would destroy the character. Wants to extend comment period—isn't this a rush to judgement, we don't want it to be like montomergy street in san Francisco

Barbara leslie—create robust tax base, encourgage you to think bigger, growing revenues becomes the only way to address budget deficit, apply feasible approach for community benefits, plan must prioritize job growth as downtown as job center, the plan must maximum density and capacity for density---address housing at a local level---rare opportunity for unlocking downtown potential—benefits the whole city, create a vibrant city that creates thousands of jobs

East bay housing organization---contains few specific plans and actions of address homeliness and displacement, no equity lense to plan itself, to what extent does this move us forwards or set us back in issues of cost burden, displacement and homelessness. Extend deadline---stakeholder meetings should clarify plan, and should have enough time to go forward with that

--NOP: economic and jobs, and growth inducement, not checked; should be addressed in the EIR.

Christe buckely—Oakland heritage alliance; include California building code; clear mechanism for community benefits---look to Emeryville as an example; does not include TDR

Commissioners:

- what are the equity measures—measure those over life over plan
- What policies will implementation chapter discuss
- Wants to see more explicit language in the plan;
- Points based system for community benefits---has that been assigned yet, or identified yet?
- How growth coming from plan will impact intersections, especially around broadway
- Make sure we plan for a dense downtown, plan for growth, make sure we are planning for enough office space; perhaps a denser alternative would be a good idea
- Social and economic impact as part of an EIR; or a separate analysis; we need to be able to quantify and qualify our goals
- EIR should include chinatown as part of the setting for the environmental impacts
- Alternative; incentives, affordability and community benefits—baseline intensity, and bonus for height
- Health impact analysis—could get at indicators
- Be explicit about intensity---FAR and height
- Wood street studied social and economic and social justice
- March 11th deadline request for Plan and NOP
- Community health assessment include---broad definition of health, and loss of culture
- Need more detail and vetting on plan—see 109;
- Needs more displacement count, who is vulnerable to displacement—some more baseline analysis is needed

Via Electronic Mail

February 1, 2019

Alicia Parker
Senior Planner
City of Oakland
Email: aparker@oaklandca.gov

Re: Earthjustice and Sierra Club Comments on the Notice of Preparation of a Draft Environmental Impact Report for the Downtown Oakland Specific Plan

Earthjustice and Sierra Club appreciate the opportunity to comment on the Notice of Preparation of a Draft Environmental Impact Report ("DEIR") for the Downtown Oakland Specific Plan ("the Plan"). Our initial comments focus on the importance of incorporating building electrification requirements into the Plan. The transition from gas to electric homes is critical to reaching a zero emissions future and will not occur at the scale or timing needed absent decisive City leadership. Consistent with the City's own stated commitment to urgently reduce greenhouse gas ("GHG") emissions and California Environmental Quality Act ("CEQA") requirements to adopt all feasible mitigation to reduce significant GHG and energy impacts, building change electrification is an essential component of a defensible strategy to reduce the Plan's impacts and take meaningful action to address climate change. Building electrification will also provide economic, safety, and air quality benefits for the City of Oakland. We therefore urge the City to require all-electric construction as feasible mitigation in the DEIR for the Plan.

I. The Plan Will Have Significant GHG and Energy Impacts.

CEQA requires a DEIR identify all the significant impacts of a proposed project, including from the project's GHG emissions and energy use.[1] To determine the significance of the Plan's GHG impacts, the City should apply a net-zero emissions threshold. This threshold is consistent with a recent City resolution unanimously declaring a climate emergency and calling on the City "to act urgently to reduce citywide greenhouse gas emissions as quickly as possible towards zero net emissions."[2] A net-zero threshold is also consistent with the severity of the

[1] CEQA Guidelines § 15126.2; Appendix F; Appendix G § VII.
[2] Councilmembers Rebecca Kaplan and Dan Kalb, Mayor Libby Schaaf, and City Attorney Barbara Parker, Letter to City Council (Oct. 11, 2018); City Council, Resolution No. 87397 C.M.S., *Resolution Endorsing the Declaration of a Climate Emergency and Requesting Regional Collaboration on an Immediate Just Transition and Emergency Mobilization Effort to Restore a Safe Climate* (Oct. 2018), https://oakland.legistar.com/LegislationDetail.aspx?ID=3698634&GUID=57944819-DC72-49A9-A963-A178613E5721&Options=&Search.

climate crisis and the recognition that any increase in GHG emissions exacerbates the cumulative impacts of climate.

Earthjustice and Sierra Club caution against use of the 1,100 MT GHG significance threshold proposed by the Bay Area Air Quality Management District ("BAAQMD") in 2009. In determining the significance of project impacts, the City "must ensure that CEQA analysis stays in step with evolving scientific knowledge and state regulatory schemes." *Cleveland National Forest Foundation v. San Diego Assn. of Gov'ts* (2017) 3 Cal.5th 497, 519. The BAAQMD numeric threshold was derived from Assembly Bill ("AB") 32's 2020 GHG reduction targets and does not reflect Senate Bill 32's requirement to reduce GHGs to 40 percent below 1990 levels by 2030 or our increased understanding of the severity of climate impacts California is and will experience.[3] While useful when first recommended ten years ago, it has not kept in step with scientific knowledge and regulatory developments and is no longer supported by substantial evidence.

Alternative approaches to determining the significance of the Plan's GHG impacts, such as using a comparison against "business-as-usual" emissions or a per capita emissions metric, may not withstand legal scrutiny and should not be used to evaluate the Plan's emissions in the DEIR. In *Center for Biological Diversity v. Cal. Dept of Fish & Wildlife* (2015) 62 Cal.4th 204, the California Supreme Court held that determining the significance of project GHG impacts by comparing project emissions with emissions under a business-as-usual scenario derived from statewide emissions reduction goals under AB 32 lacked substantial evidence. For similar reasons, use of statewide per capita emissions metrics to determine the significance of project emissions has also been rejected for the purpose of determining project GHG impacts under CEQA. As the court held in *Golden Door Properties LLC*, because "using a statewide criterion requires substantial evidence and reasoned explanation to close the analytical gap left by the assumption that the 'level of effort required in one [statewide] context . . . will suffice in the other, a specific land use development.'" *Golden Door Properties LLC v. County of San Diego* (2018) 27 Cal.App.5th 892, 904 (quoting *Center for Biological Diversity*, 62 Cal.4th at 227). While use of a statewide per capita metric to determine the significance of GHG impacts may be useful for a General Plan, which examines collective community emissions of existing and proposed new development, it is not appropriate for projects that only govern new development. Accordingly, the City should apply a net-zero emissions GHG threshold to ensure a legally defensible EIR. Because the Plan will result in an increase in GHG emissions, the City should consider its GHG impacts significant.

In addition to GHG emissions, a key purpose of the evaluation of project energy impacts under CEQA is "decreasing reliance on fossil fuels, such as coal, natural gas and oil."[4] Addressing energy impacts of proposed projects requires more than mere compliance with Title 24 Building Energy Efficiency Standards.[5] Including gas hook-ups in new projects, and thereby

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[3] *See* BAAQMD, *CEQA Guidelines Update, Proposed Thresholds of Significance* at 10-22 (Dec 7, 2009), http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/proposed-thresholds-of-significance-dec-7-09.pdf?la=en (explaining methodology for project-level GHG threshold).
[4] CEQA Guidelines, Appendix F, Sec. I.
[5] *See California Clean Energy Committee v. City of Woodland* (2014) 225 Cal.App.4th 173, 211.

perpetuating reliance on fossil fuels, is contrary to California's energy objectives and should be considered a significant impact under CEQA. As noted by BAAQMD in its 2017 Clean Air Plan, "[b]ecause buildings are very long-lasting, failure to require best available measures today will mean a missed opportunity for years to come. One of the key strategies to achieve the 2050 GHG reduction targets recommended in the final report for the Bay Area consumption-based GHG emissions inventory is that all new buildings should be required to use electricity (or other non-carbon-based power) for space heating and water heating."[6] The California Energy Commission ("CEC") has reached a similar conclusion, stating in its recent Integrated Energy Policy Report ("IEPR") that:

> New construction projects, retrofitting existing buildings, and replacing appliances and other energy-consuming equipment essentially lock in energy system infrastructure for many years. As a result, each new opportunity for truly impactful investment in energy efficiency and fuel choice is precious. If the decisions made for new buildings result in new and continued fossil fuel use, it will be that much more difficult for California to meet its GHG emission reduction goals. Parties planning new construction have the opportunity instead to lock in a zero- or low-carbon emission outcome that will persist for decades[7]

Including gas hook-ups in new projects, and thereby perpetuating reliance on fossil fuels, is contrary to California's energy objectives and decarbonization trajectory and must be considered a significant impact.

Notably, the Office of Planning of Research opined in a recent draft Technical Advisory of CEQA and Climate Change that "a building designed to use electricity as its sole energy source (e.g., is not powered by natural gas), follows applicable Title 24 building standards codes, and uses only Energy Star-rated appliances for appliance types that are offered Energy Star ratings, may have a less-than-significant greenhouse gas impact with respect to energy use during building operations."[8] Accordingly, inclusion of building electrification and appliance efficiency requirements would allow the City to mitigate the Plan's energy impacts to a less-than-significant level.

II. Building Electrification is Feasible and Effective Mitigation to Reduce Project GHG and Energy Impacts and Meet the City's GHG Reduction Objectives.

The City may not lawfully approve the Plan where "there are feasible alternatives or feasible mitigation measures available which would substantially lessen [its] significant environmental effects."[9] Eliminating natural gas use in new buildings is feasible mitigation that will substantially lessen the Plan's GHG and energy impacts. Indeed, building electrification is

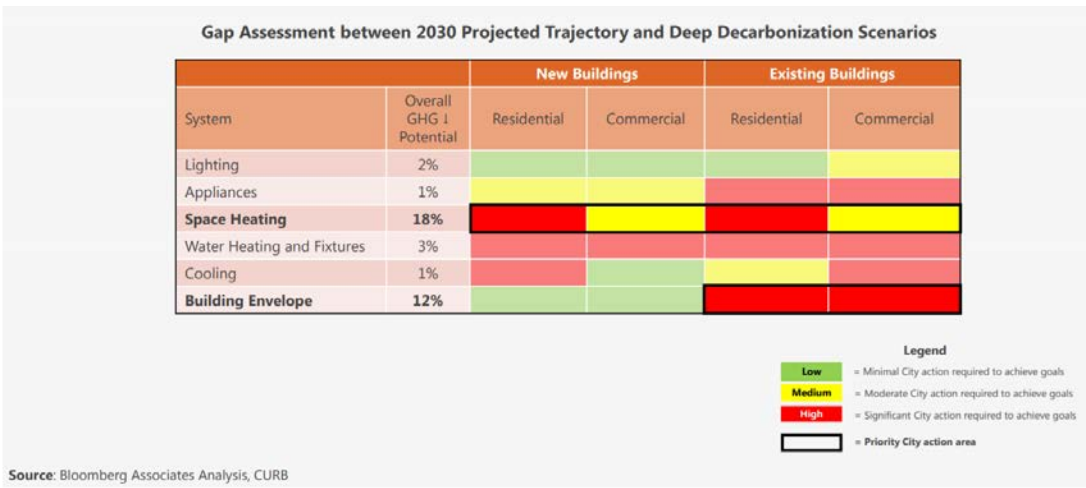
[6] BAAQMD, *Final 2017 Clean Air Plan* at 5/17 (Apr. 19, 2017), http://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en.

[7] CEC, *2018 Integrated Energy Policy Report Update, Vol. II* at 18 (Jan. 2019), https://efiling.energy.ca.gov/getdocument.aspx?tn=226392

[8] Office of Planning and Research, *CEQA and Climate Change Advisory, Discussion Draft* at 23 (Dec. 2018), http://opr.ca.gov/docs/20181228-Discussion_Draft_Climate_Change_Adivsory.pdf.

[9] Pub. Res. Code § 21002.

one of the fastest and most cost-effective ways to achieve the transition to net-zero emissions that the City has urgently called for. In the 2018 IEPR Update, the CEC recognized the "growing consensus that building electrification is the most viable and predictable path to zero-emission buildings . . . due to the availability of off-the-shelf, highly efficient electric technologies (such as heat pumps) and the continued reduction of emission intensities in the electricity sector."[10] In their report, *Pathways to Deep GHG Reductions in Oakland*, Bloomberg Associates identified the update of codes for new buildings to eliminate gas heating by 2030 and acceleration of electric space heating as key near-term actions the City could take.[11] As Oakland's Energy and Climate Action Plan points out, "[n]atural gas consumption is the largest source of GHG emissions related to buildings."[12] As shown in the figure below, space heating, which accounts for the highest portion of the City's building emissions, requires significant City action to achieve reduction goals.[13]



The Bloomberg Associates report stresses that to achieve these goals, "[d]epartment plans, such as neighborhood-specific plans, should incorporate policies that align with the changes identified by this analysis."[14] Oakland's Energy and Climate Action Plan further acknowledges that land use plans allow the City to play an important role in reducing citywide energy use and GHG emissions.[15] Given that the Plan will include standards and criteria by which development will proceed on the 20 to 25 year horizon, the Plan is the appropriate venue for the City to initiate a bold response to climate change and prevent the lock-in of gas infrastructure that will threaten local communities and the planet.

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[10] CEC, *2018 Integrated Energy Policy Report Update, Vol. II* at 20 (Jan. 2019), https://efiling.energy.ca.gov/getdocument.aspx?tn=226392.

[11] Bloomberg Associates, *Pathways to Deep GHG Reductions in Oakland: Final Report* at 46 (Mar. 2018), https://infiniteearthradio.com/wp-content/uploads/2018/11/City-of-Oakland-CURB-Climate-Model-Final-Report.pdf.

[12] City of Oakland, *Energy and Climate Action Plan* at 31 (Mar. 18, 2018), https://cao-94612.s3.amazonaws.com/documents/oak069942.pdf.

[13] Bloomberg Associates, *supra* note 10, at 22.

[14] *Id.* at 47.

[15] City of Oakland, *supra* note 11, at 22.

All-electric homes are being constructed for a range of building types pursuing low or zero emissions objectives and are a feasible mitigation requirement for new development under the Plan. Sacramento's Municipal Utility District has partnered with homebuilders to construct entire neighborhoods that are all-electric, with 400 all-electric homes planned in the next two years alone.[16] Some California developers now exclusively build all-electric homes, and have already deployed a range of affordable, luxury, single- and multi-family housing units all across the state.[17] Oakland is already home to several such developments, either completed or under construction.

From left to right: Three-story townhomes at Station House in West Oakland, rendering of a 26-story mixed-use apartment building at 1700 Webster St., and 99 affordable solar condos at the Ironhorse development in West Oakland.

Indeed, given that other state entities are now requiring all-electric construction, there is no reason for the City of Oakland not to also do so. For example, the University of California announced in August of 2018 that "[n]o new UC buildings or major renovations after June 2019, except in special circumstances, will use on-site fossil fuel combustion, such as natural gas, for space and water heating."[18] University of California, Riverside's DEIR for large new dormitories and student facilities got a head start: "All space and water heating would operate on electricity. To minimize greenhouse gas emissions, no natural gas would be utilized on the project site except as fuel in emergency generators."[19]

Similarly, in its Downtown Specific Plan, the City of Hayward required for multifamily residential developments that "[a]ll buildings will be all electric, meaning that electricity is the only permanent source of energy for water-heating, mechanical and heating, ventilation, and air conditioning (HVAC) (i.e., space-heating and space cooling), cooking, and clothes-drying and

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[16] Justin Gerdes, *All-Electric Homes Are Becoming the Default for New Residential Construction in Sacramento*, Greentech Media (Nov. 13, 2018), https://www.greentechmedia.com/articles/read/all-electric-homes-are-becoming-the-default-for-new-residential-constructio#gs.VYzCCMQ.

[17] *See* Redwood Energy, *Development Projects (A Small Sample)*, https://www.redwoodenergy.tech/development-projects/.

[18] University of California, *UC sets higher standards, greater goals for sustainability* (Sept. 4, 2018), https://www.universityofcalifornia.edu/press-room/uc-sets-higher-standards-greater-goals-sustainability.

[19] University of California, Riverside, *North District Development Plan DEIR* at 4.3-39 (Dec. 2018), https://cpp.ucr.edu/environmental/combined_draft_eir.pdf.

there is no gas meter connection."[20] Oakland can and should go further and apply the same requirement to commercial developments, which can also be feasibly electrified.[21]

III. There Are Multiple Co-Benefits to Achieving Zero Emission Buildings through Electrification.

Beyond achieving the energy and GHG emissions reductions essential for preventing climate breakdown, electrification of new buildings in Downtown Oakland will produce a range of important co-benefits for the economic well-being, safety, and health of the community. Building electrification offers the potential to lower energy bills, reduce the cost of new construction, improve air quality, public safety, and climate resiliency, as well as create new jobs. Far from being a barrier to new housing, all-electric new construction can enable greater opportunities for affordable housing construction by reducing costs and streamlining mitigation requirements. For disadvantaged populations that pay a disproportionate amount of their income to energy costs, and who are more likely to suffer from asthma due to poor indoor air quality, zero emission homes are an important opportunity to deliver social equity.[22]

A. Lowering Energy Bills and Cost of New Construction

All-electric buildings can lower utility bills for tenants, reduce the cost of construction of new housing in the City, and shield customers from the volatile and increasing costs of gas. A recent report, *Decarbonization of Heating Energy Use in California Buildings*, by Synapse Energy Economics found that electrification could lower utility bills by up to $800 annually and lower the cost of new construction in Los Angeles by roughly $1,500 to $6,000.[23] Other analysis has found that new homes and apartment buildings can cost between $1,000 and $18,000 less to build if they are not connected to gas distribution pipelines.[24]

Another study by Rocky Mountain Institute similarly found new all-electric homes provided cost savings.[25] In fact, this study examines Oakland as one of its four geographic case studies. The results are clear: "[f]or newly constructed buildings, heat pumps are universally more cost-effective, even without optimizing for demand flexibility, primarily because the heat pump provides both heating and air conditioning, avoiding the need to purchase both a furnace and an air conditioner."[26] The report's recommendations for Oakland include:

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[20] City of Hayward, *Hayward Downtown Specific Plan DEIR, Greenhouse Gas Emissions Chapter* at 4.6-40 (Jan. 7, 2019), https://www.hayward-ca.gov/sites/default/files/documents/dtsp-eir-greenhouse-gas-emissions.pdf.

[21] *See, e.g.*, Redwood Energy, *Zero Carbon Commercial Construction: An Electrification Guide for Large Commercial Buildings and Campuses* (2018), https://drive.google.com/file/d/1J-DHuP5SfY1FUQr2o1ov2cqsgt_arWle/view.

[22] Kelly Vaugh, *Social Equity, Affordable Housing, and the Net-Zero Energy Opportunity*, Rocky Mountain Institute (May 9, 2018), https://rmi.org/social-equity-affordable-housing-and-the-net-zero-energy-opportunity/.

[23] Synapse Energy Economics, *Decarbonization of Heating Energy Use in California Buildings* at 2, 39 (Oct. 2018), http://www.synapse-energy.com/sites/default/files/Decarbonization-Heating-CA-Buildings-17-092-1.pdf.

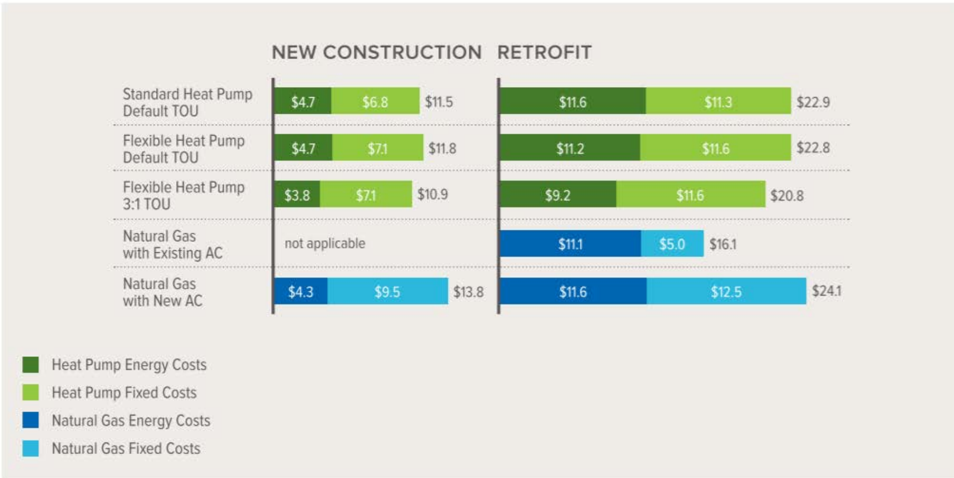
[24] Stone Energy Associates, *Accounting for Cost of Gas Infrastructure*, CEC Docket 17-BTSD-01 (May 4, 2017), https://efiling.energy.ca.gov/GetDocument.aspx?tn=217420&DocumentContentId=26959.

[25] Rocky Mountain Institute, *The Economics of Electrifying Buildings* (June 2018), https://rmi.org/insight/the-economics-of-electrifying-buildings/.

[26] *Id.* at 29-30.

- Recognize and encourage all-electric new construction buildings as both a cost-reducing and carbon-reducing measure through new building codes and incentive programs.
- Limit or stop further expansion of the natural gas distribution system to service more homes. Electric space and water heating is likely to provide the same service to customers for less cost and carbon emissions, and avoid the risk of stranded gas distribution assets.[27]

Net Present Cost of Water and Space Conditioning in Oakland ($ Thousands)[28]



B. A Safer Downtown Oakland

Recent events from Aliso Canyon, San Bruno, and the state of Massachusetts add to the devastating record of hazardous natural gas infrastructure. Between 2015 and 2017, natural gas pipeline explosions and incidents in the country claimed on average 15 fatalities, 57 injuries, and $316,647,907 in property damage *annually*.[29] As climate impacts intensify, the escalating risks of aging natural gas infrastructure will outpace the industry's rate of pipeline replacement. Sea level rise, which promises to be one of the many significant climate impacts affecting the region, especially amplifies the risks of natural gas.[30]

Methane leakage, a pervasive problem with natural gas infrastructure, can be particularly hazardous for families living in earthquake and fire-prone areas since leaking gas exacerbates fires after earthquakes. The California Seismic Safety Commission estimates that 20 to 50

[27] *Id.* at 31.
[28] Rocky Mountain Institute, *The Economics of Electrifying Buildings* (June 2018), at 29 https://rmi.org/insight/the-economics-of-electrifying-buildings/.
[29] Pipeline and Hazardous Materials Safety Administration, *Pipeline Incident 20 Year Trends* (Nov. 2018), https://www.phmsa.dot.gov/data-and-statistics/pipeline/pipeline-incident-20-year-trends.
[30] Radke *et al.*, *Assessment of California's Natural Gas Pipeline Vulnerability to Climate Change*, University of California, Berkeley (2016), https://www.energy.ca.gov/2017publications/CEC-500-2017-008/CEC-500-2017-008.pdf.

percent of total post-earthquake fires are fires related to gas leaks.[31] Beginning to electrify entire communities is a key precautionary strategy to mitigate the growing risks of the City's massive gas system.

Map of Sea Level Rise Vulnerability[32]

C. Improved Air Quality

Gas appliances in buildings make up a quarter of California's nitrogen oxide (NO_x) emissions from natural gas. NO_x is a precursor to ozone and a key pollutant to curb in order to comply with state and federal ambient air quality standards. Electrifying buildings will help the City to reduce NO_x and ground level ozone, improving *outdoor* air quality and benefiting public health. Electrification of fossil fuel appliances will also immediately improve *indoor* air quality and health. On average, Californians spend 68 percent of their time indoors, making indoor air quality a key determinant of human health.[33] The combustion of gas in household appliances produces harmful indoor air pollution, specifically nitrogen dioxide, carbon monoxide, nitric oxide, formaldehyde, acetaldehyde, and ultrafine particles.[34] The California Air Resources Board warns that "cooking emissions, especially from gas stoves, have been associated with

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[31] California Seismic Safety Commission, *Improving Natural Gas Safety in Earthquakes* at 1 (adopted July 11, 2002), http://ssc.ca.gov/forms_pubs/cssc_2002-03_natural_gas_safety.pdf.
[32] City of Oakland, *Energy and Climate Action Plan* at 8 (Mar. 18, 2018), https://cao-94612.s3.amazonaws.com/documents/oak069942.pdf.
[33] Klepeis *et al.*, *The National Human Activity Pattern Survey (NHAPS): A Resource for Assessing Exposure to Environmental Pollutants*, J. EXPO. ANAL. ENVIRON. EPIDEMIOL., Vol. 11(3), 231-52 (2001).
[34] *See, e.g.*, Logue *et al.*, *Pollutant Exposures from Natural Gas Cooking Burners: A Simulation-Based Assessment for Southern California*, ENVIRON. HEALTH PERSP., Vol. 122(1), 43-50 (2014); Victoria Klug & Brett Singer, *Cooking Appliance Use in California Homes—Data Collected from a Web-based Survey*, LAWRENCE BERKELEY NATIONAL LABORATORY (Aug. 2011); John Manuel, *A Healthy Home Environment?* ENVIRON. HEALTH PERSP., Vol. 107(7), 352-57 (1999); Mullen *et al.*, *Impact of Natural Gas Appliances on Pollutant Levels in California Homes*, LAWRENCE BERKELEY NATIONAL LABORATORY (2012).

increased respiratory disease."[35] Young children and people with asthma are especially vulnerable to indoor air pollution.

D. Pathways to Good, Green Jobs

Electrification of buildings will also allow Oakland to develop its local workforce for jobs that will be critical in California's broader energy transition. Partnering with local organizations and community colleges, Oakland can foster training and pipeline programs for new jobs in construction, HVAC installation, electrical work, energy efficiency and load management services, as well as manufacturing.

These jobs will rapidly grow in demand as local governments across the state look to rapidly address the emissions from their building sector. In Sacramento Municipal Utility District territory, where all-electric buildings are quickly becoming the default for new developments, demand for specialized plumbers and HVAC technicians is expected to grow enormously. The region expects to install more than 300,000 heat pump space heaters in the next 15 to 20 years.[36]

The next one to five years will be a critical window of opportunity for the City to jump-start this transition away from gas to clean energy buildings. Land use plans present an essential platform for the City to take action on its GHG emissions reduction goals, and eliminating natural gas from buildings is indispensable to the City's hope of reaching those goals. In the process, the Plan will create a pathway to a more prosperous, safe, and healthy Downtown Oakland. Earthjustice and Sierra Club look forward to continuing to work with the City to ensure a robust and CEQA-compliant Downtown Specific Plan.

Please contact Matt Vespa at mvespa@earthjustice.org, Sasan Saadat at ssaadat@earthjustice.org, and Rachel Golden at rachel.golden@sierraclub.org with any questions or concerns, and please include each of us in future notifications on the Plan's development.

Sincerely,

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Sasan Saadat
Research and Policy Analyst

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35 California Air Resources Board, *Combustion Pollutants* (last reviewed Jan. 19, 2017), https://www.arb.ca.gov/research/indoor/combustion.htm.

36 Justin Gerdes, *Experts Discuss the Biggest Barriers Holding Back Building Electrification*, Greentech Media (Sept. 19. 2018), https://www.greentechmedia.com/articles/read/here-are-some-of-the-biggest-barriers-holding-back-building-electrification#gs.fBEBKJy2.

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January 25, 2019

Alicia Parker
City of Oakland
250 Frank H. Ogawa Plaza, Suite 3315
Oakland, CA 94612

RE: SCH# 2019012008 Downtown Oakland Specific Plan, Alameda County

Dear Ms. Parker:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:
   a. A brief description of the project.
   b. The lead agency contact information.
   c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
   d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).
   a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:
   a. Alternatives to the project.
   b. Recommended mitigation measures.
   c. Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:
   a. Type of environmental review necessary.
   b. Significance of the tribal cultural resources.
   c. Significance of the project's impacts on tribal cultural resources.
   d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:
   a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
   b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:
   a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
   b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:
    a. Avoidance and preservation of the resources in place, including, but not limited to:
       i. Planning and construction to avoid the resources and protect the cultural and natural context.
       ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
    b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
       i. Protecting the cultural character and integrity of the resource.
       ii. Protecting the traditional use of the resource.
       iii. Protecting the confidentiality of the resource.
    c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
    d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).
    e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).
    f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
    a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.
    b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
    c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
    b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
   a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
   b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
   a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
   b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
   c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Gayle.Totton@nahc.ca.gov.

Sincerely,

for Nancy Gonzalez

Gayle Totton
Associate Governmental Program Analyst

cc: State Clearinghouse

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
COLLEEN CHAWA, Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
LOCAL OVERSIGHT PROGRAM (LOP)
For Hazardous Materials Releases
1131 HARBOR BAY PARKWAY
ALAMEDA, CA 94502
(510) 567-6700
FAX (510) 337-9335

January 22, 2019

Alicia Parker (*Sent via Email to: aparker@oaklandca.gov*)
City of Oakland Bureau of Planning
250 Frank H. Ogawa Plaza, Suite 3315
Oakland, CA 94612

Subject: Notice of Preparation (NOP) of a Draft Environmental Impact Report for the Downtown Oakland Specific Plan

Dear Ms. Parker:

Alameda County Department of Environmental Health's (ACDEH) Local Oversight Program is respectfully providing comments in response to the subject notice. There are several known open and closed environmental cleanup sites within the Oakland Specific Plan Area (see Figure 1). As such, residual contamination remains in the soil, soil vapor, and groundwater at the environmental cleanup sites. Therefore, impacted soil, soil vapor, and/or groundwater may be encountered during construction activities at or in the vicinity of the environmental cleanup sites. Consequently, it is recommended that precautions are taken to ensure construction worker safety with the preparation of a construction soil and groundwater management plan. It is also recommended that a regulatory oversight agency be involved if contamination is suspected or encountered at the site.

Thank you for the opportunity to provide comment. Please feel free to contact me at (510) 777-2478 or paresh.khatri@acgov.org should you like additional information or have any comments or concerns regarding this letter.

Sincerely,

Paresh C. Khatri
Local Oversight & Site Cleanup Program Manager
Alameda County Department of Environmental Health

ENCLOSURES:
Figure 1 Active and Closed Cleanup Sites

DISTRIBUTION LIST:
Ronald Browder, ACDEH, (*Sent via electronic mail to: ronald.browder@acgov.org*)
Dilan Roe, ACDEH, (*Sent via electronic mail to: dilan.roe@acgov.org*)
Paresh Khatri, ACDEH; (*Sent via electronic mail to: paresh.khatri@acgov.org*)
Electronic File

Figure 1: Active & Closed Cleanup Sites

APPENDIX B
IMPROVEMENT PROJECT LISTS

APPENDIX a

Appendix A includes the Improvement Project Lists referenced for Mobility (Chapter 3) and Streetscapes (Chapter 6) .

Table M-1: Pedestrian Safety Project List

CORRIDORS AND INTERSECTIONS: SOUTH TO NORTH			
Project Name (Street)	**Cross Street A**	**Cross Street B**	**Project Improvement Type**
7th St	Washington St	7th St Bridge	Corridor
7th St	Harrison St	N/A	Intersection
8th St	Franklin St	N/A	Intersection
8th St	Webster St	N/A	Intersection
8th St	Harrison St	N/A	Intersection
8th St	Jackson St	N/A	Intersection
8th St	Madison St	N/A	Intersection
8th St	Oak St	N/A	Intersection

Description	
Short-term improvements: • Install directional curb ramps and accessible pedestrian signals	Long-term improvements: • Install pedestrian countdown timers at each crossing • Install pedestrian activation buttons at each crossing • Implement Leading Pedestrian Interval (LPI) at each crossing • Integrate protected northbound right turn phase
Short-term improvements: • Set pedestrian countdown timers within the CA MUTCD recommended time of 3.5 feet per second • Implement Leading Pedestrian Interval (LPI) • Convert permissive phase to protected phase • Restrict on-street parking within 20-feet of the intersection and marked crosswalks • Install directional curb ramps and accessible pedestrian signals	Long-term improvements: • Implement road diet to manage vehicle speeds and shorten crossing distance
Short-term improvements: • Set pedestrian countdown timers within the CA MUTCD recommended time of 3.5 feet per second • Implement Leading Pedestrian Interval (LPI) • Restrict on-street parking within 20 feet of the intersection and marked crosswalks • Install directional curb ramps and accessible pedestrian signals	Long-term improvements: • Implement road diet to manage vehicle speeds and shorten crossing distance
Short-term improvements: • Set pedestrian countdown timers within the CA MUTCD recommended time of 3.5 feet per second • Implement Leading Pedestrian Interval (LPI) • Convert permissive phase to protected phase • At each intersection, restrict on-street parking within 20-feet of the intersection and marked crosswalks • Implement pedestrian safety zones extending from the curb • Install directional curb ramps and accessible pedestrian signals	Long-term improvements: • Install curb extensions on each corner • Implement road diet to manage vehicle speeds and shorten crossing distance
Short-term improvements: • Set pedestrian countdown timers within the CA MUTCD recommended time of 3.5 feet per second • Implement Leading Pedestrian Interval (LPI) • Convert permissive phase to protected phase • Restrict on-street parking within 20-feet of the intersection and marked crosswalks • Install directional curb ramps and accessible pedestrian signals	Long-term improvements: • Implement road diet to manage vehicle speeds and shorten crossing distance
Short-term improvements: • Set pedestrian countdown timers within the CA MUTCD recommended time of 3.5 feet per second • Implement Leading Pedestrian Interval (LPI) • Convert permissive phase to protected phase • Restrict on-street parking within 20-feet of the intersection and marked crosswalks • Install directional curb ramps and accessible pedestrian signals	Long-term improvements: • Implement road diet to manage vehicle speeds and shorten crossing distance
Short-term improvements: • Set pedestrian countdown timers within the CA MUTCD recommended time of 3.5 feet per second • Implement Leading Pedestrian Interval (LPI) • Restrict on-street parking within 20-feet of the intersection and marked crosswalks • Install directional curb ramps and accessible pedestrian signals	Long-term improvements: • Implement road diet to manage vehicle speeds and shorten crossing distance

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Table M-1: Pedestrian Safety Project List (continued)

Project Name (Street)	Cross Street A	Cross Street B	Project Improvement Type
8th St	Fallon St	N/A	Intersection
9th St	Franklin St	N/A	Intersection
9th St	Webster St	N/A	Intersection
9th St	Harrison St	N/A	Intersection
9th St	Alice St	N/A	Intersection
CORRIDORS AND INTERSECTIONS: WEST TO EAST			
Brush St	12th St	14th St	Corridor

	Description	
	Short-term improvements: • Add a high visibility crosswalk on the north leg and re-stripe marked crosswalk with high visibility markings • Install advanced yield signage at each crossing • At each intersection, restrict on-street parking within 20-feet of the intersection and marked crosswalks • Implement pedestrian safety zones extending from the curb • Install directional curb ramps and accessible pedestrian signals	Long-term improvements: • Install curb extensions on each corner • Implement road diet to manage vehicle speeds and shorten crossing distance
	Short-term improvements: • Set pedestrian countdown timers within the CA MUTCD recommended time of 3.5 feet per second • Shorten signal cycle length • Restrict on-street parking within 20-feet of the intersection and marked crosswalks • Implement near-term road diet with signing and pavement markings only; consider moving on-street parking away from curb to create separated bike facility • Install directional curb ramps and accessible pedestrian signals	Long-term improvements: • Convert near-term road diet to more permanent installation by providing hardscape sidewalk improvements
	Short-term improvements: • Set pedestrian countdown timers within the CA MUTCD recommended time of 3.5 feet per second • Shorten signal cycle length • Restrict on-street parking within 20-feet of the intersection and marked crosswalks • Implement near-term road diet with signing and pavement markings only; consider moving on-street parking away from curb to create separated bike facility • Install directional curb ramps and accessible pedestrian signals	Long-term improvements: • Convert near-term road diet to more permanent installation by providing hardscape sidewalk improvements
	Short-term improvements: • Set pedestrian countdown timers within the CA MUTCD recommended time of 3.5 feet per second • Shorten signal cycle length • Restrict on-street parking within 20-feet of the intersection and marked crosswalks • Implement near-term road diet with signing and pavement markings only; consider moving on-street parking away from curb to create separated bike facility • Install directional curb ramps and accessible pedestrian signals	Long-term improvements: • Convert near-term road diet to more permanent installation by providing hardscape sidewalk improvements
	Short-term improvements: • Install advanced yield signage at marked crosswalks • Restrict on-street parking within 20-feet of the intersection and marked crosswalks • Implement near-term road diet with signing and pavement markings only; consider moving on-street parking away from curb to create separated bike facility • Install directional curb ramps and accessible pedestrian signals	Long-term improvements: • Install rectangular rapid flashing beacons on each crossing • Convert near-term road diet to more permanent installation by providing hardscape sidewalk improvements
	Short-term improvement: • At signalized intersections, re-stripe marked crosswalks for general maintenance • At each intersection, restrict on-street parking within 20-feet of intersection and marked crosswalks • Implement pedestrian safety zones extending from the curb along Brush Street	Long-term improvement: • Implement road diet along Brush Street; would need to extend beyond the limits of 12th and 14th Streets

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Table M-1: Pedestrian Safety Project List (continued)

Project Name (Street)	Cross Street A	Cross Street B	Project Improvement Type
Brush St	12th St	N/A	Intersection
Telegraph Ave	Broadway	William St	Corridor
Telegraph Ave	William St	27th St	Corridor
Broadway	9th St	11th St	Corridor
Broadway	9th St	N/A	Intersection
Broadway	10th St	N/A	Intersection
Broadway	11th St	N/A	Intersection
Broadway	11th St	16th St	Corridor
Broadway	16th St	19th St	Corridor
Broadway	16th St	N/A	Intersection

	Description	
	Short-term improvement: • Add "Pedestrian Crossing Prohibited" (R49) signage at the north side of Brush Street • Re-stripe marked crosswalks for general maintenance • Implement Leading Pedestrian Interval (LPI) • Restrict on-street parking within 20-feet of intersection and marked crosswalks • Install directional curb ramps and accessible pedestrian signals	Long-term improvement: • Install curb extensions on each corner
	Incorporate streetscape improvements	
	Incorporate streetscape improvements	
	Short-term improvement: • Incorporate streetscape improvements such as street furniture and street trees.	Long-term improvement: • Implement road diet on low volume cross streets to shorten pedestrian crossing distances
	Short-term improvement: • Convert intersection to fixed pedestrian recall • Set pedestrian countdown timers within the CA MUTCD recommended time of 3.5 feet per second • Shorten signal cycle length • Implement Leading Pedestrian Interval (LPI) • Implement pedestrian safety zones extending from the curb • Install directional curb ramps and accessible pedestrian signals	Long-term improvement: • Adjust signal timing to separate turning movements from pedestrian crossing phase "
	Short-term improvement: • Convert intersection to fixed pedestrian recall • Set pedestrian countdown timers within the CA MUTCD recommended time of 3.5 feet per second • Shorten signal cycle length • Implement Leading Pedestrian Interval (LPI) • Implement pedestrian safety zones extending from the curb • Install directional curb ramps and accessible pedestrian signals	Long-term improvement: • Adjust signal timing to separate turning movements from pedestrian crossing phase "
	Short-term improvement: • Convert intersection to fixed pedestrian recall • Set pedestrian countdown timers within the CA MUTCD recommended time of 3.5 feet per second • Shorten signal cycle length • Implement Leading Pedestrian Interval (LPI) • Implement pedestrian safety zones extending from the curb • Install directional curb ramps and accessible pedestrian signals	Long-term improvement: • Adjust signal timing to separate turning movements from pedestrian crossing phase • Extend median to provide refuge island on the south side of the Broadway and 11th Street intersection
	Short-term improvement: • Incorporate streetscape improvements such as street furniture and street trees.	Long-term improvement: • Implement road diet on low volume cross streets to shorten pedestrian crossing distances
	Short-term improvement: • Convert the intersection to fixed pedestrian recall • Set pedestrian countdown timers within the CA MUTCD recommended time of 3.5 feet per second • Shorten signal cycle length • Implement Leading Pedestrian Interval (LPI) • Implement pedestrian safety zones extending from the curb • Install directional curb ramps and accessible pedestrian signals	Long-term improvement: • Adjust signal timing to separate turning movements from pedestrian crossing phase

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Table M-1: Pedestrian Safety Project List (continued)

Project Name (Street)	Cross Street A	Cross Street B	Project Improvement Type
Broadway	17th St	N/A	Intersection
Broadway	18th St	N/A	Intersection
Broadway	19th St	N/A	Intersection
Broadway	27th St	N/A	Intersection

	Description	
	Short-term improvement: • Convert the intersection to fixed pedestrian recall • Set pedestrian countdown timers within the CA MUTCD recommended time of 3.5 feet per second • Shorten signal cycle length • Implement Leading Pedestrian Interval (LPI) • Implement pedestrian safety zones extending from the curb • Install directional curb ramps and accessible pedestrian signals	Long-term improvement: • Adjust signal timing to separate turning movements from pedestrian crossing phase
	Short-term improvement: • Convert the intersection to fixed pedestrian recall • Set pedestrian countdown timers within the CA MUTCD recommended time of 3.5 feet per second • Shorten signal cycle length • Implement Leading Pedestrian Interval (LPI) • Implement pedestrian safety zones extending from the curb • Install directional curb ramps and accessible pedestrian signals	Long-term improvement: • Adjust signal timing to separate turning movements from pedestrian crossing phase
	Short-term improvement: • Convert the intersection to fixed pedestrian recall • Set pedestrian countdown timers within the CA MUTCD recommended time of 3.5 feet per second • Shorten signal cycle length • Implement Leading Pedestrian Interval (LPI) • Implement pedestrian safety zones extending from the curb • Install directional curb ramps and accessible pedestrian signals	Long-term improvement: • Adjust signal timing to separate turning movements from pedestrian crossing phase “

Table M-2: Connectivity and Access Improvement Project List

CORRIDORS AND INTERSECTIONS: SOUTH TO NORTH			
Project Name (Street)	**Cross Street A**	**Cross Street B**	**Project Improvement Type**
Jack London District	Chinatown	N/A	Corridor
Embarcadero West	Clay Street	Market St	Corridor
Embarcadero West	Oak St	N/A	Intersection
Embarcadero West	Oak St	Market St	Corridor
Water St	Martin Luther King Jr Way	Clay St	Corridor
Oak St	2nd St	N/A	Intersection
2nd St	Martin Luther King Jr Way	Jefferson St	Sidewalk Gap Closure
3rd St	Brush St	Clay St	Corridor
3rd St	Webster St	Posey Tube	Sidewalk Gap Closure
3rd St	Oak St	Near the channel	Corridor
4th St	Jackson St	Madison St	Sidewalk Gap Closure
6th St	Franklin St	Webster St	Sidewalk Gap Closure
7th St	Brush St	N/A	Intersection
7th St	Alice St	N/A	Intersection
7th St	Jackson St	N/A	Intersection
7th St	Fallon St	N/A	Intersection
7th St	Laney College entrance	N/A	Intersection
8th St	Broadway	Fallon St	Corridor
9th St	Broadway	Fallon St	Corridor
10th St	Webster St	N/A	Intersection
10th St	Fallon St	N/A	Intersection
10th St	Kaiser Auditorium entrances (two)	N/A	Intersection
10th St	Kaiser Auditorium entrances (two)	N/A	Intersection
11th St	Alice St	N/A	Intersection
17th St	Broadway	Harrison St	Corridor
19th St	Martin Luther King Jr Way	Castro	Sidewalk Gap Closure

Description
Connect the Lake Merritt BART Station and Chinatown to the Jack London District. Install distinctive lighting; enhance pedestrian crossings; encourage active uses; and install attractive parking area screen walls if parking remains in place (on map, Oak St from 8th to 4th St)
Continue pedestrian, bicycle, and public realm improvements from the Jack London Waterfront to serve the proposed A's stadium
Realign Embarcadero West through Port-owned parking lot. Install directional curb ramps and accessible pedestrian signals.
Rail Safety Project on Embarcadero West from Oak St to Market St. Project to facilitate an application for a "Quiet Zone" and provide pedestrian safety improvements, including quad gates at each crossing and fencing on both sides of the railroad tracks between each intersection. Embarcadero West would become a pedestrian corridor through much of its length except where property access is needed.
Intersection improvements needed for pedestrians and bicyclists, such as installing/repainting the crosswalks, improving/constructing refuge medians, installing directional curb ramps and accessible pedestrian signals. Complete sidewalk gap on west side of street
Complete sidewalk gap on south side of street
Complete sidewalk gap along corridor
Complete sidewalk gap on south side of street
Connect Oak Street to Victory Court; will require additional study and coordination with property owners
Complete sidewalk gap on north side of street
Complete sidewalk gap on south side of street
Safety improvements needed for pedestrians and bicyclists, such as repainting the crosswalks, installing directional curb ramps and accessible pedestrian signals, and constructing refuge medians.
Install bulbouts, directional curb ramps, and accessible flashing pedestrian signals
Install bulbouts, directional curb ramps, and accessible flashing pedestrian signals
Install bulbouts, directional curb ramps, accessible pedestrian signals, lane changes, or sidewalk widening
Install bulbouts, directional curb ramps, and accessible pedestrian signals
Implement streetscape amenities, lighting, street crossing improvements, and other traffic calming measures. Extend Chinatown's character east along 8th and 9th Streets to Lake Merritt BART and Laney College. Establish an active, pedestrian-oriented, well-lit connection between Chinatown and the Lake Merritt BART Station/Laney College.
Implement streetscape amenities, lighting, street crossing improvements, and other traffic calming measures. Extend Chinatown's character east along 8th and 9th Streets to Lake Merritt BART and Laney College. Establish an active, pedestrian-oriented, well-lit connection between Chinatown and the Lake Merritt BART Station/Laney College.
Phase I: Install bulbouts, directional curb ramps, and accessible pedestrian signals; Phase II: Install a pedestrian scramble
Install bulbouts, directional curb ramps, and accessible pedestrian signals
Install bulbouts, directional curb ramps, accessible pedestrian signals, and flashing pedestrian signals
Install bulbouts, directional curb ramps, accessible pedestrian signals, and flashing pedestrian signals
Install bulbouts, directional curb ramps, accessible pedestrian signals, lane changes, or sidewalk widening
Widen sidewalks
Complete sidewalk gap on the north side of the street

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Table M-2: Connectivity and Access Improvement Project List (continued)

CORRIDORS AND INTERSECTIONS: WEST TO EAST			
Project Name (Street)	**Cross Street A**	**Cross Street B**	**Project Improvement Type**
San Pablo Ave	17th St	N/A	Intersection
San Pablo Ave	18th St	N/A	Intersection
San Pablo Ave	20th St / Thomas L Berkley Way	N/A	Intersection
Brush St	End of Brush Street	Embarcadero West	Corridor
Jefferson St	End of Jefferson St	Embarcadero West	Corridor
Washington Ave	6th St	7th St	Corridor
Webster St	5th St	14th St	Corridor
Lake Merritt Channel	7th St	N/A	Intersection

Description
Implement pedestrian improvements such as repainting crosswalks, installing directional curb ramps, bulbouts, accessible pedestrian signals, and leading pedestrian intervals.
Implement pedestrian improvements such as repainting crosswalks, installing bulbouts, directional curb ramps, accessible pedestrian siangls, and leading pedestrian intervals. Also repaint crosswalk at 19th Street.
Implement pedestrian improvements such as repainting crosswalks, installing bulbouts, directional curb ramps, accessible pedestrian signals, crosswalk on north leg of intersection, and leading pedestrian intervals.
Provide pedestrian connectivity across the railroad tracks between Brush St and Embarcadero West
Provide pedestrian connectivity across the railroad tracks between Jefferson St and Embarcadero West
Long-term: Remove the pedestrian bridge if buildings are redeveloped
From 5th St to 14th St: Implement streetscape amenities, lighting, street crossing improvements, and other traffic calming measures. Extend design elements that promote Chinatown's character east along 8th and 9th Streets to Lake Merritt BART and Laney College. Establish an active, pedestrian-oriented, well-lit connection between Chinatown and the Lake Merritt BART Station/Laney College. From 7th St to 13th St: Explore options for sidewalk widening.
Install bulbouts, directional curb ramps, accessible pedestrian signals, and flashing pedestrian signals

Table M-3: Freeway Crossing Improvements Project List

FREEWAY CROSSING PROJECTS: SOUTH TO NORTH			
Project Name (Street)	**Cross Street A**	**Cross Street B**	**Project Improvement Type**
6th St	6th St south of Jefferson Square Park	6th St east of Castro St	Freeway crossing
7th St	West of John B Williams Fwy	Gerry Adams Way	Freeway crossing
11th St	Castro St	Brush St	Freeway crossing
12th St	Castro St	Brush St	"Freeway crossing "
14th St	Castro St	Brush St	Freeway crossing
17th St	Castro St	Brush St	Freeway crossing
18th St	Castro St	Brush St	Freeway crossing
San Pablo Ave	Castro St	W Grand Ave	Freeway crossing
W Grand Ave	San Pablo Ave	Martin Luther King Jr Way	Freeway crossing
23rd St	West of Martin Luther King Jr Way	East of John B Williams Fwy	Freeway crossing
Sycamore St	Martin Luther King Jr Way	Northgate Ave	Freeway crossing
27th St	Martin Luther King Jr Way	Northgate Ave	Freeway crossing
FREEWAY CROSSING PROJECTS: WEST TO EAST			
Market St	5th St	6th St	Freeway crossing
Brush St	5th St	6th	Freeway crossing
I-980 on ramp	12th St	N/A	Intersection
Castro St	North of 6th St	Gerry Adams Way	Freeway crossing
Martin Luther King Jr Way	6th St	5th St	Freeway crossing
Jefferson St	6th St	5th St	Freeway crossing
Washington St	6th St	5th St	Freeway crossing
Broadway	4th St	7th St	Freeway crossing
Franklin St	5th St	6th St	Freeway crossing
Webster St	4th St	7th St	Freeway crossing
Jackson St	6th St	5th St	Freeway crossing
Madison St	5th St	6th St	Freeway crossing
Oak St	6th St	5th St	Freeway crossing

	Description
	Potential treatments include: safety enhancements and speed reduction measures at ramps and intersections, widening sidewalks, improving pedestrian-level lighting, public art, and installing directional curb ramps
	Potential treatments include: safety enhancements and speed reduction measures at ramps and intersections, widening sidewalks, improving pedestrian-level lighting, public art, and installing directional curb ramps
	Widen sidewalks, add buffering streetscape, and shorten crossing distances at intersections. Implement traffic calming on Bush and Castro Streets.
	Potential treatments include: safety enhancements and speed reduction measures at ramps and intersections, widening sidewalks, improving pedestrian-level lighting, public art, and installing directional curb ramps
	Potential treatments include: safety enhancements and speed reduction measures at ramps and intersections, widening sidewalks, improving pedestrian-level lighting, public art, and installing directional curb ramps
	Complete sidewalk gap under I-880 overpass
	Pedestrian Plan recommendation
	Potential treatments include: safety enhancements and speed reduction measures at ramps and intersections, widening sidewalks, improving pedestrian-level lighting, public art, and installing directional curb ramps
	Transform the areas around, under and through the Broadway and Webster Street underpasses of the I-880 Freeway, into a beautiful, safe, walkable, inviting, green and iconic passageway connecting Downtown Oakland and the Waterfront. Project description to be revised as Walk This Way study recommendations are drafted.
	Create a new pedestrian connection under I-880 on Franklin St
	Transform the areas around, under and through the Broadway and Webster Street underpasses of the I-880 Freeway, into a beautiful, safe, walkable, inviting, green and iconic passageway connecting Downtown Oakland and the Waterfront. Project description to be revised as Walk This Way study recommendations are drafted.
	Potential treatments include: safety enhancements and speed reduction measures at ramps and intersections, widening sidewalks, improving pedestrian-level lighting, public art, and installing directional curb ramps
	Widen sidewalks; improve ADA access and crosswalk design across 5th St; install pedestrian-scale lighting and other streetscape or public art elements in underpass
	Potential treatments include: safety enhancements and speed reduction measures at ramps and intersections, widening sidewalks, improving pedestrian-level lighting, public art, and installing directional curb ramps

Table M-4: Bicycle Project List

LOW-STRESS CORE NETWORK CORRIDORS: SOUTH TO NORTH				
Project Name (Street)	**Cross Street A**	**Cross Street B**	**Existing Facility**	**Proposed Facility**
Waterfront Trail Embarcadero Bridge Connection	SF Bay Trail Terminus	Embarcadero	None	Class I Shared Use Path
Waterfront Trail A's Stadium Connector	Clay St	Market St	None	Class I Shared Use Path
Water St	Martin Luther King Jr. Way	Clay St	None	Class I Shared Use Path
3rd St	Market St	Lake Merritt Channel	Class II from Market St to Brush St	Class IV Separated Bikeway
2nd St / Oak St	Broadway	Embarcadero Bridge	Class II from Broadway to Oak St Class II Buffered from Oak St to Embarcadero Bridge	
6th St / 5th St Posey Tube Access	Broadway	Lake Merritt Channel	Class III from Oak St to Lake Merritt Channel	Class IV Separated Bikeway
7th St	Castro St	Washington St	None	Class IV Separated Bikeway
7th St / E. 8th St	Fallon St	5th Ave	Class II Buffered Bike Lanes	Class IV Separated Bikeway
9th St	Martin Luther King Jr. Way	Fallon St	Class II from Harrison St to Fallon St Class III from Clay St to Washington St	Class IV Separated Bikeway
10th St	Madison St	5th Ave	Class II from Oak St to Lake Merritt Channel	Class II Buffered Bike Lane
14th St	Market St	Internation Blvd	Class II from Market St to Castro St	Class IV Separated Bikeway
15th St / 16th St Westbound Access	Clay St	Harrison St	Class II from Telegraph Ave to San Pablo Ave	Class II Bike Lane
20th St	San Pablo Ave	Lakeside Dr	Class II from Franklin St to Harrison St Class III from San Pablo Ave to Franklin St	Class IV Separated Bikeway
Grand Ave	San Pablo Ave	Bay Pl	Class II from Market St to Telegraph Ave, Webster St to Bay Pl Class III from Telegraph Ave to Webster	Class IV Separated Bikeway

Notes
Include a trail connection around the Howard Terminal site should this be developed.
Option 1: One-way Class IV Separated Bikeways - Install a parking protected Class IV Separated Bikeway (westbound) along the north side of the roadway with curb stops for the angled parking and delineator posts or concrete medians. Diagonal parking and 11-foot travel lanes for buses would be maintained. On the south side of the roadway, install a Class IV Separated Bikeway Lane (eastbound) and remove parallel parking. **Option 2**: Two-way Class IV Separated Bikeway - Install a two-way Class IV Separated Bikeway on the south side of the roadway. Remove parallel parking on the south side and maintain diagonal parking throughout the corridor on the north side. Maintain 11-foot travel lanes for buses.
Intersection improvements such as bike boxes or wayfinding to facilitate turning movements to other Low-Stress Core Corridors
Project may require the removal of one travel lane or one lane of parking. A Class III Bike Boulevard may be acceptable on 4th St with improvement wayfinding and directional signage. **Option 1:** Class IV Separated Bikeway (two-way) **Option 2:** Class III Bike Boulevard depending on volumes **Option 3:** Class I Shared Use Path Connection Coordinate with Oakland Alameda Access Project
Project may require the removal of one travel lane. Project should address 8th St connection from Martin Luther King Jr Way
Project should focus on connectivity at the Fallon St/7th St intersection with the possibility of a protected intersection.
One-way facilities on both sides of the street that will require conversion to a two-way street. Project may require the removal of one travel lane.
Project may require the potential conversion of angled parking to parallel parking.
Project may require the removal of one travel or one lane of parking.
Project may require the removal of one travel lane in portions of the corridor to implement a westbound bike lane to compliment eastbound connectivity on 17th St.
Project may require parking removal to install transit-only lanes and separated bicycle facilities.
Project may require parking removal or removal of travel lanes to install transit-only lanes and separated bicycle facilities.

Table M-4: Bicycle Project List (continued)

Project Name (Street)	Cross Street A	Cross Street B	Existing Facility	Proposed Facility
LOW STRESS CORE NETWORK CORRIDORS: WEST TO EAST				
Martin Luther King Jr Way	Embarcadero	San Pablo Ave	Class III from Embarcadero to San Pablo Ave	Class II Buffered Bike Lanes
San Pablo Ave	17th St	27th St	Class II from 20th St to Grand Ave Class III from 17th St to 20th St, Grand Ave to 27th St	Class IV Separated Bikeway
Telegraph Ave	Broadway	27th St	Class II from 16th St to 20th St Class IV from 20th St to 29th St	Class II from 16th St to 20th St Class IV Separated Bikeway 20th St to 29th St
Clay St	7th St	17th St	Class II Buffered Bike Lanes from 7th St to 17th St	Class II Buffered Bike Lanes
Broadway	Franklin St	27th St	Class II from 27th St to Webster St Class III from Franklin St to Webster St	Class IV Separated Bikeway
Franklin St	6th St	22nd St / Broadway	Class II from 14th St to Broadway	Class IV Separated Bikeway
Harrison St	Grand Ave	27th St	Class II from Grand Ave to 27th St	Class IV Separated Bikeway
Fallon St	7th St	10th St	Class III from 7th St to 8th St	Class IV
Oak St	Embarcadero	14th St	Class II from Embarcadero to 14th St	None
Lake Front Connectivity - Lakeside Dr /Oak St / Lake Merritt Blvd	12th St	Grand Ave	Class II from 12th St to 19th St	Class IV Separated Bikeway
LOW-STRESS CORE NETWORK INTERSECTIONS				
Project Name (Street)	**Cross Street A**	**Cross Street B**	**Existing Facility**	**Proposed Facility**
Broadway / Franklin St Intersection Improvements	Broadway	Franklin St	None	Intersection Improvement
Castro St / 7th St Intersection Improvements	Castro St	7th St	None	Intersection Improvement
Embarcadero / Webster Intersection Improvements	Embarcadero	Webster St	None	Intersection Improvement
Lakeside Dr / Madison St Intersection Improvements	Lakeside Dr	Madison St	None	Intersection Improvement
Oak St / Embarcadero Intersection Improvements	Oak St	Embarcadero	None	Intersection Improvement

Notes
Project may require the removal of a travel lane in each direction.
Project may require parking removal or removal of travel lanes to install transit-only lanes and separated bicycle facilities.
Class IV segment full buildout streetscape improvements.
Wayfinding and intersection improvements to facilitate turning movements to other low-stress core network.
Project may require the removal of travel lanes or parking.
Project may require the removal of travel lanes and conversion to a two-way street to install one-way separated bikeways on both sides of the street.
Project may require the removal of travel lanes or parking.
Two-way Class IV connection between future East Bay Greenway/ and 7th St Bikeway to BART connection
No new bicycle facilities.
Project may require the removal of travel lanes or parking.

Notes

Table M-4: Bicycle Project List (continued)

Project Name (Street)	Cross Street A	Cross Street B	Existing Facility	Proposed Facility
LOW-STRESS VISION NETWORK CORRIDORS: SOUTH TO NORTH				
2nd St	Broadway	Brush St	Class III Bike Route	Class II Bike Lans
6th St / 7th Wiggle	Broadway	Washington	None	Class IV Separated Bikeway
11th St	Market St	Oak St	None	Class IV Separated Bikeway
12th St	Market St	Lake Merritt Blvd	None	Class IV Separated Bikeway
13th St	Broadway	Lake Merritt Blvd	None	Class II Buffered Bike Lane
17th St	Castro St	Lakeside Dr	Class II Buffered Bike Lane from MLK Blvd to Telegraph Ave	Class II Buffered Bike Lane
18th St	Market St	Martin Luther King Jr Way	None	Class II Buffered Bike Lane
24th St	Telegraph Ave	Harrison St	None	Class III Bike Boulevard
Waterfront Trail Lake Merritt Channel Path West Connector	Embarcadero Bridge	Peralta College	None	Class I Shared Use Path
LOW-STRESS VISION NETWORK CORRIDORS: WEST TO EAST				
Project Name (Street)	**Cross Street A**	**Cross Street B**	**Existing Facility**	**Proposed Facility**
Market St	Embarcadero West	3rd St	None	Class IV Separated Bikeway
Brush St	Embarcadero West	2nd St	None	Class I Shared Use Path
Brush St	2nd St	3rd St	Class III Bike Route	Class III Bike Boulevard
Jefferson St	6th St	San Pablo Ave	None	Class II Buffered Bike Lanes
Clay St Connector (Jack London Square)	Embarcadero	3rd St	Class II from Embarcadero to 2nd St	Class II Bike Lanes
Washington St	Embarcadero	7th St	Class II from 2nd St to 7th St	Class II Bike Lanes
Webster St	Bay Trail	6th St	None	Class II Bike Lanes
Webster St	14th St	Broadway	Class II from 14th St to Grand Ave	
Class III from Grand Ave to Broadway"		Class II Buffered Bike Lanes	Project may require the removal of a one lane of parking in certain segments.	
Jackson St	2nd St	Lakeside Dr	Class II from 8th St to 14th St	Class II Bike Lanes
LOW-STRESS VISION NETWORK INTERSECTIONS				
Project Name (Street)	**Cross Street A**	**Cross Street B**	**Existing Facility**	**Proposed Facility**
8th St / MLK Way Intersection Improvements	8th St	Martin Luther King Jr Way	None	Intersection Improvement

Notes
Project may require the removal of one parking lane.
Project may require the removal of one travel lane or one lane of parking. Implement in coordination with Washington St to connect with Clay Street.
Plan in coordination with 12th St, Consider Two-way on 12th St to avoid 11th St tunnel. Project may require the removal of one travel lane.
Consider Two-way on 12th St to avoid 11th St tunnel. Project may require the removal of one travel lane.
Class IV One-way facility could be accommodated with a parking protected bike lane. Project may require the removal of one travel lane.
Consider Class IV One-way facility depending on the amount of bicycle lane blockages. Project may require the removal of one travel lane or one lane of parking.
Traffic calming and contra flow bike lane between Valdez St and Harrison Street.

Notes
Consider Class IV facility options to reduce conflicts with heavy truck traffic.
Study a grade-separated crossing of Embarcadero West with the implementation of a future stadium site.
Project should include traffic calming and wayfinding.
Project may require the removal of a travel lane in each direction.
Extend existing Class II Bike Lanes on Clay St to connect with 3rd Street bikeway.
Project may require removal of parallel parking on one side of the street to provide back-in diagonal parking on the opposite side.
Class II Bike Lanes from 2nd St to 5th St, Two-way Class IV from 5th St to 8th St, and Class II Bike Lanes from 8th St to Lakeside Drive. Project may require the removal of a one lane of parking in certain segments

Notes
TBD - Based on facility type and transit assessment

Table M-5: Transit Project List

Project / Recommendation	Limits	Notes
Dedicated transit lanes on 11th, 12th Streets	Downtown	In progress east of Broadway. Extension west of Broadway would serve layover areas and potential extension to Howard Terminal via MLK
Dedicated transit lanes or vehicle access restrictions on Broadway	20th Street to 11th Street	Corridor design study is needed to resolve interface with protected bikeway
Bus stop enhancements - larger shelters permeable with sidewalk, improved wayfinding (specifically designed to celebrate the cultural district the bus stop is located in or near), real time arrival information	Downtown	
Dedicated two-way transit lanes on 7th	Broadway to Oak	Needs to be evaluated in conjunction with multimodal options/alternatives on 7th/8th/9th
Dedicated transit lanes on 20th	Telegraph to Franklin	
New transit street on Oak		Assumes two-way conversion.
Lake Merritt BART transit center - Bus priority improvements	8th to 9th	Assumes two-way conversion.
New transit street on 10th	Oak to E 8th St	
Bus layover priority areas (Lafayette Square, Lake Merritt BART, Oakland Convention Center, Jack London Amtrak, and Washington/Embarcadero parking garage, and Greyhound terminal)		
New traffic signals	Broadway/2nd & Broadway/3rd	
New transit street on Jefferson	11th to San Pablo	Serves potential extension of service from Lafayette Square to Greyhound Terminal/Uptown to serve potential growth
Broadway Shuttle service enhancements or fare-free zone		Either increase service frequency on Broadway Shuttle and extend to 27th during daytime hours or enact fare-free zone within downtown area
Potential Capitol Corridor Vision Plan improvements to enable greater capacity and faster operating speeds through Downtown Oakland		
Potential addition of second transbay tube connection. Possible alignments run under Alameda and propose Oakland connections to: 1. MacArthur, Downtown Oakland, Lake Merritt and Jack London Square 2. MacArthur and Jack London Square		
Planned expansion of ferry service and terminal facilities; improve first-/last-mile connections to ferry terminal		Long-term Transit Improvement
Rail Safety Project on Embarcadero West from Oak St to Market St. Project to facilitate an application for a "Quiet Zone" and provide pedestrian safety improvements.	Embarcadero West (Oak St to Market St)	

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Table M-6: One-Way to Two-Way Conversions List

Project Name (Street)	Cross Street A	Cross Street B	Category	Recommendation
STREETS: SOUTH TO NORTH				
7th St	Castro St	Fallon St	Priority two-way street conversion	Convert from one-way to two-way street
8th St	Castro St	Fallon St	Priority two-way street conversion	Convert from one-way to two-way street
9th St	Castro St	Fallon St	Priority two-way street conversion	Convert from one-way to two-way street
10th St	Webster St	Madison St	Vision Network	Convert from one-way to two-way street
13th St	Broadway	Oak St	Vision Network	Convert from one-way to two-way street
15th St	Broadway	Harrison St	Vision Network	Convert from one-way to two-way street
17th St	Martin Luther King Jr Way	Lakeside Dr	Vision Network	Convert from one-way to two-way street
18th St (westbound)	Martin Luther King Jr Way	San Pablo Ave	Vision Network	Convert from one-way to two-way street
18th St (eastbound)	Martin Luther King Jr Way	Telegraph Ave	Vision Network	Convert from one-way to two-way street
19th St	San Pablo Ave	Madison St	Vision Network	Convert from one-way to two-way street
21st St	San Pablo Ave	Broadway	Vision Network	Convert from one-way to two-way street
22nd St	Martin Luther King Jr Way	Telegraph Ave	Vision Network	Convert from one-way to two-way street
22nd St	Franklin St	Broadway	Priority two-way street conversion	Convert from one-way to two-way street
STREETS: WEST TO EAST				
Project Name (Street)	**Cross Street A**	**Cross Street B**	**Category**	**Recommendation**
Castro St	5th St	7th St	Priority two-way street conversion	Convert from one-way to two-way street
Franklin St	7th St	22nd St	Priority two-way street conversion	Convert from one-way to two-way street; one travel lane and one parking lane in each direction.
Webster St	14th St	Grand Ave	Vision Network	Convert from one-way to two-way street
Harrison St	8th St	10th St	Vision Network	Convert from one-way to two-way street
Madison St	2nd St	Lakeside Dr	Vision Network	Convert from one-way to two-way street
Oak St	2nd St	Madison St	Vision Network	Convert from one-way to two-way street

	Project Notes / Considerations
	Overlaps with the Core Bicycle Network from Castro St to Clay St, and with the Vision Bicycle Network from Clay St to Washington St Overlaps with the bus transit network from Castro St to Broadway, and with the Bus Transit Priority Treatments from Broadway to Oak St"
	Overlaps with the Core Bicycle Network from Madison St to Fallon St
	Overlaps with the Core Bicycle Network from Martin Luther King Jr Way to Fallon St
	Overlaps with the Vision Bicycle Network from Broadway to Oak St
	Overlaps with the Core Bicycle Network from Broadway to Franklin St, and with the Vision Bicycle Network from Franklin St to Webster St
	Overlaps with the Vision Bicycle Network from Castro St to Clay St and from Franklin St to Lakeside Dr, and with the Core Bicycle Network from Clay St to Franklin St
	Overlaps with the Core Bicycle Network from Franklin St to Broadway

	Project Notes / Considerations
	Overlaps with the Core Bicycle Network from 7th St to 22nd St
	Overlaps with the Vision Bicycle Network from 14th St to Grand Ave
	Overlaps with the Bus Transit Network from 8th St to 10th St
	Overlaps with the Core Bicycle Network from 2nd St to Lakeside Dr
	Overlaps with the Core Bicycle Network from 14th St to Madison St Overlaps with the Bus Transit Network from 2nd St to 7th St and from 10th St to 14th St, and with the Bus Transit Priority Treatments from 7th St to 10th St The segment from 14th St to Madison St is on Lakeside Drive.

Table LU-1: Streetscape Improvements Project List

STREETSCAPE IMPROVEMENTS: SOUTH TO NORTH			
Project Name (Street)	**Cross Street A**	**Cross Street B**	**Project Improvement Type**
Jack London Waterfront	West of Washington St	Embarcadero West	Corridor
Water St	Clay St	Broadway	Corridor
9th St	Clay St	Broadway	Corridor
9th St	Castro	Oak St	Corridor
10th St	Webster St	Harrison St	Public Realm
10th St	Alice St	N/A	Public Realm
13th St	Broadway	Webster St	Public Realm
13th St	Webster St	Harrison St	Corridor
14th St	Myrtle St	Oak St	Corridor
14th St	Broadway	Oak St	Corridor
15th St	Castro St	East of Jefferson St	Public Realm
15th St	Broadway	Harrison St	Corridor
17th St	Castro St	San Pablo Ave	Corridor
18th St	19th St	N/A	Public Realm
20th St	Castro St	San Pablo Ave	Corridor
22nd St	Broadway	Kaiser Plaza/Valdez St. extension	Public Realm
New paseo	20th St	21st St	Public Realm
New paseo	24th St	25th St	Public Realm
STREETSCAPE IMPROVEMENTS: WEST TO EAST			
Green Loop	Throughout Downtown		Corridor
West Oakland Walk	Throughout Downtown		Corridor
Clay Street	Water Street	Embarcadero West	Corridor
Bishop Floyd L. Begin Plaza	Castro St	San Pablo Ave	Public Realm
Gerry Adams Way	7th St/Castro St	8th St/Martin Luther King Jr Way	Public Realm
Washington St	8th St	10th St	Public Realm
Washington St	10th St	11th St	Public Realm
Plaza	22nd St	Telegraph Ave	Public Realm
Franklin St - Plaza St	21st St	22nd St/Broadway	Public Realm
Webster Green	Embarcadero	4th St	Public Realm
Harrison St	7th St	N/A	Public Realm
Alice St	6th St	10th St	Corridor
Madison St	5th St	17th St	Corridor
Kaiser Rooftop Gardens	Harrison St	Thomas L Berkley Way	Public Realm
Fallon St	8th St	10th	Public Realm

Project Description
Improve the Jack London waterfront with better lighting, pedestrian and bicycle paths, and open space amenities; Identified as part of the "Green Loop" Path.
Continue pedestrian, bicycle, and public realm improvements from the Jack London Waterfront along Water Street
Convert 9th into a plaza street.
Transform 9th Street to include context sensitive infill and safer street design. The street can be transformed from one-way into two-way, as well as reconfigured with head-in diagonal parking converted into back-in diagonal parking. The addition of physical or visual texture on the street surface increases safety for bicyclists because it signals to motorists to drive slower and more cautiously
Transform 10th Street into a shared street
Create a linear park on 10th and Alice Street as a public space.
Convert into a plaza street/pedestrian mall, include no left turn from Broadway onto 13th St
Sidewalk and parking enhancement; improvements include widening sidewalks; adding street trees, bulbouts, and parklets, and incorporating green infrastructure.
Integrate locally-created public art work (in wayfinding, transit signs, bus shelters, benches along the street, trash cans, street lights, banners, etc.) that celebrates the BAMBD and integrate plaques and signage into the streetscape to reinforce the Black Arts District.
Extend Lake Merritt's "Necklace of Lights" along 14th Street from Oak Street to Broadway
Transform 15th Street into a shared street
Improvements include widening sidewalks; improving streetscape, lighting, and wayfinding; and incorporating outdoor seating.
Implement streetscape improvements and traffic calming.
Improve the connection/intersection on 18th Street as it transitions to 19th Street. A mid-block plaza would add connectivity and open space.
Implement streetscape improvements and traffic calming.
Transform 22nd Street into a shared space.
Construct a new pedestrian paseo
Construct a new pedestrian paseo
See description in Chapter 5.
See description in Chapter 5.
Continue pedestrian, bicycle, and public realm improvements from the Jack London Waterfront along Clay Street
Enhance Bishop Begin Plaza by adding additional streetscape, green infrastructure, and landscaping; providing lighting for better visibility; improving connection between plazas on either side of 21st Street.
Convert into a plaza street
Convert into a plaza street
Long-term: Provide pedestrian access through the Convention Center if renovated/redeveloped
Opportunity for a pavement-to-parks conversion
Convert into a plaza street
Create a linear park that is central to the Jack London District and keeping with the urban/industrial character of the District.
Opportunity for pavement to plaza conversion at the 7th and Harrison Slip Lane (SE corner)
Enhance as a pedestrian and bicycle connection between Lincoln Square Park and Chinese Garden Park
Enhance pedestrian connection through Chinatown to connect to Lake Merritt Office District
Improve pedestrian connection to Kaiser Rooftop Gardens
Implement "Festival Street" (shared street concept from Lake Merritt Station Area Plan)

APPENDIX C
CALEEMOD

Dowtown Oakland Specific Plan - No Traffic or Construction

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	16,840.00	1000sqft	386.59	16,840,000.00	0
Junior College (2Yr)	1,310.00	1000sqft	0.00	1,310,000.00	0
General Light Industry	260.00	1000sqft	0.00	260,000.00	0
Unenclosed Parking with Elevator	16,000.00	Space	0.00	6,400,000.00	0
Apartments Mid Rise	29,100.00	Dwelling Unit	0.00	29,100,000.00	52600
Regional Shopping Center	3,220.00	1000sqft	0.00	3,220,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	294	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Dowtown Oakland Specific Plan - No Traffic or Construction - Alameda County, Annual

Project Characteristics - PG&E's most recent CO2 Intensity Factor value from 2016.

Land Use - Lot acreage set to zero to exclude construction emissions. Population based on Project Description.

Construction Phase - Construction emissions excluded.

Vehicle Trips - Trip rates set to zero to exclude traffic emissions.

Woodstoves - No woodstoves or wood fireplaces. Gas and propane fireplaces scaled up to replace wood fireplaces.

Area Coating -

Energy Use - Default is based on 2016 Titel 24

Water And Wastewater - EBMUD would service the Plan Area and applies 100 percent aerobic process and 100 percent cogeneration.

Solid Waste - Reduced default rates to account for 68% waste diversion in the City of Oakland.

Water Mitigation - CALGreen Code mandatory requirement. These emission reductions are considered unmitigated emissions.

Table Name	Column Name	Default Value	New Value
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tblArchitecturalCoating	ConstArea_Nonresidential_Interior	32,445,000.00	28,077,000.00
tblArchitecturalCoating	ConstArea_Parking	384,000.00	337,680.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	19,642,500.00	19,629,000.00
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tblConstructionPhase	NumDays	240.00	0.00
tblConstructionPhase	NumDays	620.00	0.00
tblConstructionPhase	NumDays	6,200.00	0.00
tblConstructionPhase	NumDays	440.00	0.00
tblConstructionPhase	NumDays	440.00	0.00
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tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
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tblSolidWaste	SolidWasteGenerationRate	322.40	214.93
tblSolidWaste	SolidWasteGenerationRate	15,661.20	10,440.80
tblSolidWaste	SolidWasteGenerationRate	1,703.00	1,068.67
tblSolidWaste	SolidWasteGenerationRate	3,381.00	2,254.00
tblTripsAndVMT	VendorTripNumber	7,705.00	7,099.00
tblTripsAndVMT	WorkerTripNumber	30,719.00	29,439.00

tblTripsAndVMT	WorkerTripNumber	6,144.00	5,888.00
tblVehicleTrips	ST_TR	6.39	0.00
tblVehicleTrips	ST_TR	1.32	0.00
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tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	582.00	0.00
tblWoodstoves	NumberNoncatalytic	582.00	0.00

2.0 Emissions Summary

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	1,386.1661	1,386.1661	0.3575	0.0189	1,400.7440
Energy											0.0000	87,066.9726	87,066.9726	5.8502	1.7054	87,721.4341
Mobile											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste											4,217.6732	0.0000	4,217.6732	249.2573	0.0000	10,449.1067
Water											1,858.1344	4,965.9967	6,824.1311	6.8854	4.1422	8,230.6350
Total											**6,075.8076**	**93,419.1353**	**99,494.9429**	**262.3503**	**5.8665**	**107,801.9199**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	1,386.166 1	1,386.166 1	0.3575	0.0189	1,400.744 0
Energy											0.0000	87,066.97 26	87,066.97 26	5.8502	1.7054	87,721.43 41
Mobile											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste											4,217.673 2	0.0000	4,217.673 2	249.2573	0.0000	10,449.10 67
Water											1,486.507 5	4,278.648 9	5,765.156 5	5.5385	3.3200	6,892.973 9
Total											**5,704.180 7**	**92,731.78 76**	**98,435.96 83**	**261.0034**	**5.0443**	**106,464.2 588**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**6.12**	**0.74**	**1.06**	**0.51**	**14.02**	**1.24**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2020	12/31/2019	5	0	
2	Site Preparation	Site Preparation	1/1/2020	12/31/2019	5	0	
3	Grading	Grading	1/1/2020	12/31/2019	5	0	
4	Building Construction	Building Construction	1/1/2020	12/31/2019	5	0	
5	Paving	Paving	1/1/2020	12/31/2019	5	0	
6	Architectural Coating	Architectural Coating	1/1/2020	12/31/2019	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 58,887,000; Residential Outdoor: 19,629,000; Non-Residential Indoor: 28,077,000; Non-Residential Outdoor: 9,359,000; Striped Parking Area: 337,680 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	29,439.00	7,099.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5,888.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	0.00	0.00	0.00		
General Light Industry	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Junior College (2Yr)	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Junior College (2Yr)	9.50	7.30	7.30	6.40	88.60	5.00	92	7	1
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Unenclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
General Light Industry	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
General Office Building	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Junior College (2Yr)	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Regional Shopping Center	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Unenclosed Parking with Elevator	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated											0.0000	52,614.1393	52,614.1393	5.1898	1.0738	53,063.8649
Electricity Unmitigated											0.0000	52,614.1393	52,614.1393	5.1898	1.0738	53,063.8649
NaturalGas Mitigated											0.0000	34,452.8333	34,452.8333	0.6604	0.6316	34,657.5693
NaturalGas Unmitigated											0.0000	34,452.8333	34,452.8333	0.6604	0.6316	34,657.5693

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.54056e +008											0.0000	13,557.3697	13,557.3697	0.2599	0.2486	13,637.9344
General Light Industry	6.435e +006											0.0000	343.3961	343.3961	6.5800e-003	6.3000e-003	345.4367
General Office Building	3.25517e +008											0.0000	17,370.8374	17,370.8374	0.3329	0.3185	17,474.0636
Junior College (2Yr)	4.4802e +007											0.0000	2,390.8053	2,390.8053	0.0458	0.0438	2,405.0127
Regional Shopping Center	1.4812e +007											0.0000	790.4247	790.4247	0.0152	0.0145	795.1218
Unenclosed Parking with Elevator	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total												**0.0000**	**34,452.8333**	**34,452.8333**	**0.6603**	**0.6316**	**34,657.5693**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.54056e +008											0.0000	13,557.36 97	13,557.36 97	0.2599	0.2486	13,637.93 44
General Light Industry	6.435e +006											0.0000	343.3961	343.3961	6.5800e-003	6.3000e-003	345.4367
General Office Building	3.25517e +008											0.0000	17,370.83 74	17,370.83 74	0.3329	0.3185	17,474.06 36
Junior College (2Yr)	4.4802e +007											0.0000	2,390.805 3	2,390.805 3	0.0458	0.0438	2,405.012 7
Regional Shopping Center	1.4812e +007											0.0000	790.4247	790.4247	0.0152	0.0145	795.1218
Unenclosed Parking with Elevator	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total												**0.0000**	**34,452.83 33**	**34,452.83 33**	**0.6603**	**0.6316**	**34,657.56 93**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.2286e +008	16,384.12 53	1.6161	0.3344	16,524.17 06
General Light Industry	1.9656e +006	262.1249	0.0259	5.3500e-003	264.3654
General Office Building	2.10163e +008	28,026.55 67	2.7645	0.5720	28,266.11 70
Junior College (2Yr)	1.33882e +007	1,785.398 9	0.1761	0.0364	1,800.659 8
Regional Shopping Center	3.37456e +007	4,500.183 5	0.4439	0.0918	4,538.649 4
Unenclosed Parking with Elevator	1.2416e +007	1,655.750 0	0.1633	0.0338	1,669.902 8
Total		**52,614.13 93**	**5.1898**	**1.0738**	**53,063.86 49**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.2286e +008	16,384.12 53	1.6161	0.3344	16,524.17 06
General Light Industry	1.9656e +006	262.1249	0.0259	5.3500e-003	264.3654
General Office Building	2.10163e +008	28,026.55 67	2.7645	0.5720	28,266.11 70
Junior College (2Yr)	1.33882e +007	1,785.398 9	0.1761	0.0364	1,800.659 8
Regional Shopping Center	3.37456e +007	4,500.183 5	0.4439	0.0918	4,538.649 4
Unenclosed Parking with Elevator	1.2416e +007	1,655.750 0	0.1633	0.0338	1,669.902 8
Total		**52,614.13 93**	**5.1898**	**1.0738**	**53,063.86 49**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	1,386.166 1	1,386.166 1	0.3575	0.0189	1,400.744 0
Unmitigated											0.0000	1,386.166 1	1,386.166 1	0.3575	0.0189	1,400.744 0

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth											0.0000	1,032.545 8	1,032.545 8	0.0198	0.0189	1,038.681 7
Landscaping											0.0000	353.6203	353.6203	0.3377	0.0000	362.0623
Total											**0.0000**	**1,386.166 1**	**1,386.166 1**	**0.3575**	**0.0189**	**1,400.744 0**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth											0.0000	1,032.545 8	1,032.545 8	0.0198	0.0189	1,038.681 7
Landscaping											0.0000	353.6203	353.6203	0.3377	0.0000	362.0623
Total											**0.0000**	**1,386.166 1**	**1,386.166 1**	**0.3575**	**0.0189**	**1,400.744 0**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	5,765.156 5	5.5385	3.3200	6,892.973 9
Unmitigated	6,824.131 1	6.8854	4.1422	8,230.635 0

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	1895.98 / 1195.29	2,469.3906	2.4862	1.4955	2,977.1997
General Light Industry	60.125 / 0	60.6168	0.0771	0.0471	76.5692
General Office Building	2993.04 / 1834.44	3,873.7393	3.9224	2.3603	4,675.1677
Junior College (2Yr)	64.2542 / 100.5	111.6880	0.0870	0.0513	129.1368
Regional Shopping Center	238.514 / 146.186	308.6963	0.3126	0.1881	372.5617
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**6,824.1311**	**6.8854**	**4.1422**	**8,230.6350**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	1516.79 / 1195.29	2,087.0923	2.0000	1.1987	2,494.2932
General Light Industry	48.1 / 0	48.4935	0.0617	0.0377	61.2553
General Office Building	2394.43 / 1834.44	3,270.2353	3.1548	1.8917	3,912.8418
Junior College (2Yr)	51.4034 / 100.5	98.7320	0.0705	0.0412	112.7713
Regional Shopping Center	190.811 / 146.186	260.6034	0.2514	0.1508	311.8123
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**5,765.1565**	**5.5385**	**3.3200**	**6,892.9739**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	4,217.673 2	249.2573	0.0000	10,449.10 67
Unmitigated	4,217.673 2	249.2573	0.0000	10,449.10 67

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	6799.24	1,380.184 3	81.5666	0.0000	3,419.348 1
General Light Industry	214.93	43.6289	2.5784	0.0000	108.0886
General Office Building	10440.8	2,119.388 0	125.2523	0.0000	5,250.694 2
Junior College (2Yr)	1068.67	216.9304	12.8202	0.0000	537.4358
Regional Shopping Center	2254	457.5416	27.0399	0.0000	1,133.540 0
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**4,217.673 1**	**249.2574**	**0.0000**	**10,449.10 67**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	6799.24	1,380.184 3	81.5666	0.0000	3,419.348 1
General Light Industry	214.93	43.6289	2.5784	0.0000	108.0886
General Office Building	10440.8	2,119.388 0	125.2523	0.0000	5,250.694 2
Junior College (2Yr)	1068.67	216.9304	12.8202	0.0000	537.4358
Regional Shopping Center	2254	457.5416	27.0399	0.0000	1,133.540 0
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**4,217.673 1**	**249.2574**	**0.0000**	**10,449.10 67**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Dowtown Oakland Specific Plan - 1/10 Total Construction Emissions

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1,684.00	1000sqft	38.66	1,684,000.00	0
Junior College (2Yr)	131.00	1000sqft	3.01	131,000.00	0
General Light Industry	26.00	1000sqft	0.60	26,000.00	0
Unenclosed Parking with Elevator	1,600.00	Space	14.40	640,000.00	0
Apartments Mid Rise	2,910.00	Dwelling Unit	76.58	2,910,000.00	8323
Regional Shopping Center	322.00	1000sqft	7.39	322,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	294	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E's most recent CO2 Intensity Factor value from 2016.

Land Use - 1/10 of total construction

Construction Phase -

Trips and VMT -

Vehicle Trips -

Woodstoves -

Energy Use -

Water And Wastewater -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Off-road Equipment -

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	CO2IntensityFactor	641.35	294

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

Dowtown Oakland Specific Plan - 1/10 Total Construction Emissions - Alameda County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020											0.0000	458.0859	458.0859	0.1299	0.0000	461.3326
2021											0.0000	667.4023	667.4023	0.2107	0.0000	672.6689
2022											0.0000	3,540.430 6	3,540.430 6	0.2521	0.0000	3,546.733 0
2023											0.0000	5,335.107 0	5,335.107 0	0.2335	0.0000	5,340.943 3
2024											0.0000	5,258.308 9	5,258.308 9	0.2282	0.0000	5,264.013 5
2025											0.0000	5,122.998 5	5,122.998 5	0.2209	0.0000	5,128.521 5
2026											0.0000	5,021.865 5	5,021.865 5	0.2157	0.0000	5,027.258 4
2027											0.0000	4,931.654 1	4,931.654 1	0.2112	0.0000	4,936.933 3
2028											0.0000	4,834.337 3	4,834.337 3	0.2062	0.0000	4,839.492 3
2029											0.0000	4,779.871 0	4,779.871 0	0.2036	0.0000	4,784.961 1
2030											0.0000	4,757.787 7	4,757.787 7	0.1430	0.0000	4,761.363 2
2031											0.0000	4,704.442 9	4,704.442 9	0.1402	0.0000	4,707.946 6
2032											0.0000	4,677.274 1	4,677.274 1	0.1383	0.0000	4,680.731 0
2033											0.0000	4,603.372 2	4,603.372 2	0.1353	0.0000	4,606.754 0
2034											0.0000	1,580.478 2	1,580.478 2	0.0500	0.0000	1,581.726 9
2035											0.0000	377.3619	377.3619	5.8400e-003	0.0000	377.5078
Maximum											**0.0000**	**5,335.107 0**	**5,335.107 0**	**0.2521**	**0.0000**	**5,340.943 3**

2.1 Overall Construction

Mitigated Construction

Dowtown Oakland Specific Plan - 1/10 Total Construction Emissions - Alameda County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020											0.0000	458.0854	458.0854	0.1299	0.0000	461.3321
2021											0.0000	667.4015	667.4015	0.2107	0.0000	672.6681
2022											0.0000	3,540.4300	3,540.4300	0.2521	0.0000	3,546.7324
2023											0.0000	5,335.1066	5,335.1066	0.2335	0.0000	5,340.9430
2024											0.0000	5,258.3085	5,258.3085	0.2282	0.0000	5,264.0132
2025											0.0000	5,122.9981	5,122.9981	0.2209	0.0000	5,128.5211
2026											0.0000	5,021.8652	5,021.8652	0.2157	0.0000	5,027.2580
2027											0.0000	4,931.6538	4,931.6538	0.2112	0.0000	4,936.9330
2028											0.0000	4,834.3369	4,834.3369	0.2062	0.0000	4,839.4919
2029											0.0000	4,779.8706	4,779.8706	0.2036	0.0000	4,784.9607
2030											0.0000	4,757.7873	4,757.7873	0.1430	0.0000	4,761.3628
2031											0.0000	4,704.4425	4,704.4425	0.1402	0.0000	4,707.9462
2032											0.0000	4,677.2737	4,677.2737	0.1383	0.0000	4,680.7306
2033											0.0000	4,603.3718	4,603.3718	0.1353	0.0000	4,606.7536
2034											0.0000	1,580.4778	1,580.4778	0.0500	0.0000	1,581.7265
2035											0.0000	377.3618	377.3618	5.8400e-003	0.0000	377.5077
Maximum											**0.0000**	**5,335.1066**	**5,335.1066**	**0.2521**	**0.0000**	**5,340.9430**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											132.6660	89.8544	222.5204	0.2470	8.7000e-003	231.2877
Energy											0.0000	8,706.6973	8,706.6973	0.5850	0.1705	8,772.1434
Mobile											0.0000	38,825.4153	38,825.4153	1.4315	0.0000	38,861.2017
Waste											699.3769	0.0000	699.3769	41.3320	0.0000	1,732.6768
Water											166.6189	531.8986	698.5175	17.1658	0.4149	1,251.3148
Total											**998.6619**	**48,153.8654**	**49,152.5273**	**60.7613**	**0.5942**	**50,848.6244**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											132.6660	89.8544	222.5204	0.2470	8.7000e-003	231.2877
Energy											0.0000	8,706.6973	8,706.6973	0.5850	0.1705	8,772.1434
Mobile											0.0000	38,825.4153	38,825.4153	1.4315	0.0000	38,861.2017
Waste											699.3769	0.0000	699.3769	41.3320	0.0000	1,732.6768
Water											166.6189	531.8986	698.5175	17.1658	0.4149	1,251.3148
Total											**998.6619**	**48,153.8654**	**49,152.5273**	**60.7613**	**0.5942**	**50,848.6244**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Dowtown Oakland Specific Plan - 1/10 Total Construction Emissions - Alameda County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2020	10/6/2020	5	200	
2	Site Preparation	Site Preparation	10/7/2020	3/23/2021	5	120	
3	Grading	Grading	3/24/2021	5/31/2022	5	310	
4	Building Construction	Building Construction	6/1/2022	4/18/2034	5	3100	
5	Paving	Paving	4/19/2034	2/20/2035	5	220	
6	Architectural Coating	Architectural Coating	2/21/2035	12/25/2035	5	220	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 775

Acres of Paving: 14.4

Residential Indoor: 5,892,750; Residential Outdoor: 1,964,250; Non-Residential Indoor: 3,244,500; Non-Residential Outdoor: 1,081,500; Striped Parking Area: 38,400 (Architectural Coating – sqft)

<u>OffRoad Equipment</u>

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	3,072.00	770.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	614.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	339.9861	339.9861	0.0960	0.0000	342.3855
Total											**0.0000**	**339.9861**	**339.9861**	**0.0960**	**0.0000**	**342.3855**

3.2 Demolition - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	10.5428	10.5428	2.7000e-004	0.0000	10.5496
Total											**0.0000**	**10.5428**	**10.5428**	**2.7000e-004**	**0.0000**	**10.5496**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	339.9857	339.9857	0.0960	0.0000	342.3851
Total											**0.0000**	**339.9857**	**339.9857**	**0.0960**	**0.0000**	**342.3851**

3.2 Demolition - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	10.5428	10.5428	2.7000e-004	0.0000	10.5496
Total											**0.0000**	**10.5428**	**10.5428**	**2.7000e-004**	**0.0000**	**10.5496**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	103.6351	103.6351	0.0335	0.0000	104.4731
Total											**0.0000**	**103.6351**	**103.6351**	**0.0335**	**0.0000**	**104.4731**

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	3.9219	3.9219	1.0000e-004	0.0000	3.9245
Total											**0.0000**	**3.9219**	**3.9219**	**1.0000e-004**	**0.0000**	**3.9245**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	103.6350	103.6350	0.0335	0.0000	104.4729
Total											**0.0000**	**103.6350**	**103.6350**	**0.0335**	**0.0000**	**104.4729**

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	3.9219	3.9219	1.0000e-004	0.0000	3.9245
Total											**0.0000**	**3.9219**	**3.9219**	**1.0000e-004**	**0.0000**	**3.9245**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	96.9636	96.9636	0.0314	0.0000	97.7476
Total											**0.0000**	**96.9636**	**96.9636**	**0.0314**	**0.0000**	**97.7476**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	3.5416	3.5416	8.0000e-005	0.0000	3.5437
Total											**0.0000**	**3.5416**	**3.5416**	**8.0000e-005**	**0.0000**	**3.5437**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	96.9635	96.9635	0.0314	0.0000	97.7475
Total											**0.0000**	**96.9635**	**96.9635**	**0.0314**	**0.0000**	**97.7475**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	3.5416	3.5416	8.0000e-005	0.0000	3.5437
Total											**0.0000**	**3.5416**	**3.5416**	**8.0000e-005**	**0.0000**	**3.5437**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	553.1241	553.1241	0.1789	0.0000	557.5964
Total											**0.0000**	**553.1241**	**553.1241**	**0.1789**	**0.0000**	**557.5964**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	13.7730	13.7730	3.3000e-004	0.0000	13.7812
Total											**0.0000**	**13.7730**	**13.7730**	**3.3000e-004**	**0.0000**	**13.7812**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	553.1234	553.1234	0.1789	0.0000	557.5957
Total											**0.0000**	**553.1234**	**553.1234**	**0.1789**	**0.0000**	**557.5957**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	13.7730	13.7730	3.3000e-004	0.0000	13.7812
Total											**0.0000**	**13.7730**	**13.7730**	**3.3000e-004**	**0.0000**	**13.7812**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	291.7601	291.7601	0.0944	0.0000	294.1191
Total											**0.0000**	**291.7601**	**291.7601**	**0.0944**	**0.0000**	**294.1191**

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	6.9951	6.9951	1.6000e-004	0.0000	6.9990
Total											**0.0000**	**6.9951**	**6.9951**	**1.6000e-004**	**0.0000**	**6.9990**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	291.7598	291.7598	0.0944	0.0000	294.1188
Total											**0.0000**	**291.7598**	**291.7598**	**0.0944**	**0.0000**	**294.1188**

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	6.9951	6.9951	1.6000e-004	0.0000	6.9990
Total											**0.0000**	**6.9951**	**6.9951**	**1.6000e-004**	**0.0000**	**6.9990**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	177.2698	177.2698	0.0425	0.0000	178.3315
Total											**0.0000**	**177.2698**	**177.2698**	**0.0425**	**0.0000**	**178.3315**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,528.0486	1,528.0486	0.0810	0.0000	1,530.0737
Worker											0.0000	1,536.3569	1,536.3569	0.0341	0.0000	1,537.2097
Total											**0.0000**	**3,064.4056**	**3,064.4056**	**0.1151**	**0.0000**	**3,067.2834**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	177.2696	177.2696	0.0425	0.0000	178.3313
Total											**0.0000**	**177.2696**	**177.2696**	**0.0425**	**0.0000**	**178.3313**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	1,528.0486	1,528.0486	0.0810	0.0000	1,530.0737
Worker											0.0000	1,536.3569	1,536.3569	0.0341	0.0000	1,537.2097
Total											**0.0000**	**3,064.4056**	**3,064.4056**	**0.1151**	**0.0000**	**3,067.2834**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	301.3462	301.3462	0.0717	0.0000	303.1383
Total											**0.0000**	**301.3462**	**301.3462**	**0.0717**	**0.0000**	**303.1383**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	2,522.8095	2,522.8095	0.1099	0.0000	2,525.5576
Worker											0.0000	2,510.9513	2,510.9513	0.0519	0.0000	2,512.2475
Total											**0.0000**	**5,033.7608**	**5,033.7608**	**0.1618**	**0.0000**	**5,037.8050**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	301.3458	301.3458	0.0717	0.0000	303.1380
Total											**0.0000**	**301.3458**	**301.3458**	**0.0717**	**0.0000**	**303.1380**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	2,522.8095	2,522.8095	0.1099	0.0000	2,525.5576
Worker											0.0000	2,510.9513	2,510.9513	0.0519	0.0000	2,512.2475
Total											**0.0000**	**5,033.7608**	**5,033.7608**	**0.1618**	**0.0000**	**5,037.8050**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	303.7223	303.7223	0.0718	0.0000	305.5179
Total											**0.0000**	**303.7223**	**303.7223**	**0.0718**	**0.0000**	**305.5179**

3.5 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	2,524.6092	2,524.6092	0.1094	0.0000	2,527.3441
Worker											0.0000	2,429.9774	2,429.9774	0.0470	0.0000	2,431.1515
Total											**0.0000**	**4,954.5866**	**4,954.5866**	**0.1564**	**0.0000**	**4,958.4957**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	303.7220	303.7220	0.0718	0.0000	305.5175
Total											**0.0000**	**303.7220**	**303.7220**	**0.0718**	**0.0000**	**305.5175**

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	2,524.609 2	2,524.609 2	0.1094	0.0000	2,527.344 1
Worker											0.0000	2,429.977 4	2,429.977 4	0.0470	0.0000	2,431.151 5
Total											**0.0000**	**4,954.586 6**	**4,954.586 6**	**0.1564**	**0.0000**	**4,958.495 7**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total											**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

3.5 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	2,498.4686	2,498.4686	0.1074	0.0000	2,501.1545
Worker											0.0000	2,321.8750	2,321.8750	0.0423	0.0000	2,322.9335
Total											**0.0000**	**4,820.3436**	**4,820.3436**	**0.1498**	**0.0000**	**4,824.0880**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total											**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

3.5 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	2,498.4686	2,498.4686	0.1074	0.0000	2,501.1545
Worker											0.0000	2,321.8750	2,321.8750	0.0423	0.0000	2,322.9335
Total											**0.0000**	**4,820.3436**	**4,820.3436**	**0.1498**	**0.0000**	**4,824.0880**

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total											**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

3.5 Building Construction - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	2,483.7393	2,483.7393	0.1060	0.0000	2,486.3901
Worker											0.0000	2,235.4713	2,235.4713	0.0385	0.0000	2,236.4348
Total											**0.0000**	**4,719.2107**	**4,719.2107**	**0.1446**	**0.0000**	**4,722.8249**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total											**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

3.5 Building Construction - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	2,483.739 3	2,483.739 3	0.1060	0.0000	2,486.390 1
Worker											0.0000	2,235.471 3	2,235.471 3	0.0385	0.0000	2,236.434 8
Total											**0.0000**	**4,719.210 7**	**4,719.210 7**	**0.1446**	**0.0000**	**4,722.824 9**

3.5 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total											**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

3.5 Building Construction - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	2,470.3519	2,470.3519	0.1049	0.0000	2,472.9739
Worker											0.0000	2,158.6473	2,158.6473	0.0351	0.0000	2,159.5259
Total											**0.0000**	**4,628.9992**	**4,628.9992**	**0.1400**	**0.0000**	**4,632.4998**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total											**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

3.5 Building Construction - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	2,470.3519	2,470.3519	0.1049	0.0000	2,472.9739
Worker											0.0000	2,158.6473	2,158.6473	0.0351	0.0000	2,159.5259
Total											**0.0000**	**4,628.9992**	**4,628.9992**	**0.1400**	**0.0000**	**4,632.4998**

3.5 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	301.4953	301.4953	0.0709	0.0000	303.2671
Total											**0.0000**	**301.4953**	**301.4953**	**0.0709**	**0.0000**	**303.2671**

3.5 Building Construction - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	2,450.0808	2,450.0808	0.1033	0.0000	2,452.6623
Worker											0.0000	2,082.7612	2,082.7612	0.0321	0.0000	2,083.5629
Total											**0.0000**	**4,532.8420**	**4,532.8420**	**0.1353**	**0.0000**	**4,536.2252**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	301.4949	301.4949	0.0709	0.0000	303.2667
Total											**0.0000**	**301.4949**	**301.4949**	**0.0709**	**0.0000**	**303.2667**

3.5 Building Construction - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	2,450.0808	2,450.0808	0.1033	0.0000	2,452.6623
Worker											0.0000	2,082.7612	2,082.7612	0.0321	0.0000	2,083.5629
Total											**0.0000**	**4,532.8420**	**4,532.8420**	**0.1353**	**0.0000**	**4,536.2252**

3.5 Building Construction - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total											**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

3.5 Building Construction - 2029

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	2,446.3818	2,446.3818	0.1030	0.0000	2,448.9571
Worker											0.0000	2,030.8342	2,030.8342	0.0295	0.0000	2,031.5705
Total											**0.0000**	**4,477.2161**	**4,477.2161**	**0.1325**	**0.0000**	**4,480.5276**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total											**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

3.5 Building Construction - 2029

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	2,446.3818	2,446.3818	0.1030	0.0000	2,448.9571
Worker											0.0000	2,030.8342	2,030.8342	0.0295	0.0000	2,031.5705
Total											**0.0000**	**4,477.2161**	**4,477.2161**	**0.1325**	**0.0000**	**4,480.5276**

3.5 Building Construction - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	343.0336	343.0336	0.0138	0.0000	343.3777
Total											**0.0000**	**343.0336**	**343.0336**	**0.0138**	**0.0000**	**343.3777**

3.5 Building Construction - 2030

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	2,436.6724	2,436.6724	0.1023	0.0000	2,439.2286
Worker											0.0000	1,978.0818	1,978.0818	0.0270	0.0000	1,978.7569
Total											**0.0000**	**4,414.7541**	**4,414.7541**	**0.1293**	**0.0000**	**4,417.9855**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	343.0332	343.0332	0.0138	0.0000	343.3773
Total											**0.0000**	**343.0332**	**343.0332**	**0.0138**	**0.0000**	**343.3773**

3.5 Building Construction - 2030

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	2,436.672 4	2,436.672 4	0.1023	0.0000	2,439.228 6
Worker											0.0000	1,978.081 8	1,978.081 8	0.0270	0.0000	1,978.756 9
Total											**0.0000**	**4,414.754 1**	**4,414.754 1**	**0.1293**	**0.0000**	**4,417.985 5**

3.5 Building Construction - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	343.0336	343.0336	0.0138	0.0000	343.3777
Total											**0.0000**	**343.0336**	**343.0336**	**0.0138**	**0.0000**	**343.3777**

3.5 Building Construction - 2031

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	2,429.6094	2,429.6094	0.1017	0.0000	2,432.1512
Worker											0.0000	1,931.7999	1,931.7999	0.0247	0.0000	1,932.4178
Total											**0.0000**	**4,361.4092**	**4,361.4092**	**0.1264**	**0.0000**	**4,364.5689**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	343.0332	343.0332	0.0138	0.0000	343.3773
Total											**0.0000**	**343.0332**	**343.0332**	**0.0138**	**0.0000**	**343.3773**

3.5 Building Construction - 2031

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	2,429.609 4	2,429.609 4	0.1017	0.0000	2,432.151 2
Worker											0.0000	1,931.799 9	1,931.799 9	0.0247	0.0000	1,932.417 8
Total											**0.0000**	**4,361.409 2**	**4,361.409 2**	**0.1264**	**0.0000**	**4,364.568 9**

3.5 Building Construction - 2032

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	344.3479	344.3479	0.0138	0.0000	344.6933
Total											**0.0000**	**344.3479**	**344.3479**	**0.0138**	**0.0000**	**344.6933**

3.5 Building Construction - 2032

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	2,434.1373	2,434.1373	0.1016	0.0000	2,436.6778
Worker											0.0000	1,898.7888	1,898.7888	0.0228	0.0000	1,899.3599
Total											**0.0000**	**4,332.9261**	**4,332.9261**	**0.1245**	**0.0000**	**4,336.0377**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	344.3475	344.3475	0.0138	0.0000	344.6929
Total											**0.0000**	**344.3475**	**344.3475**	**0.0138**	**0.0000**	**344.6929**

3.5 Building Construction - 2032

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	2,434.1373	2,434.1373	0.1016	0.0000	2,436.6778
Worker											0.0000	1,898.7888	1,898.7888	0.0228	0.0000	1,899.3599
Total											**0.0000**	**4,332.9261**	**4,332.9261**	**0.1245**	**0.0000**	**4,336.0377**

3.5 Building Construction - 2033

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	341.7193	341.7193	0.0137	0.0000	342.0621
Total											**0.0000**	**341.7193**	**341.7193**	**0.0137**	**0.0000**	**342.0621**

3.5 Building Construction - 2033

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	2,412.0057	2,412.0057	0.1006	0.0000	2,414.5198
Worker											0.0000	1,849.6472	1,849.6472	0.0210	0.0000	1,850.1722
Total											**0.0000**	**4,261.6529**	**4,261.6529**	**0.1216**	**0.0000**	**4,264.6920**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	341.7189	341.7189	0.0137	0.0000	342.0617
Total											**0.0000**	**341.7189**	**341.7189**	**0.0137**	**0.0000**	**342.0617**

3.5 Building Construction - 2033

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	2,412.0057	2,412.0057	0.1006	0.0000	2,414.5198
Worker											0.0000	1,849.6472	1,849.6472	0.0210	0.0000	1,850.1722
Total											**0.0000**	**4,261.6529**	**4,261.6529**	**0.1216**	**0.0000**	**4,264.6920**

3.5 Building Construction - 2034

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	101.2015	101.2015	4.0600e-003	0.0000	101.3030
Total											**0.0000**	**101.2015**	**101.2015**	**4.0600e-003**	**0.0000**	**101.3030**

3.5 Building Construction - 2034

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	713.5919	713.5919	0.0297	0.0000	714.3348
Worker											0.0000	538.9203	538.9203	5.7600e-003	0.0000	539.0644
Total											**0.0000**	**1,252.5122**	**1,252.5122**	**0.0355**	**0.0000**	**1,253.3992**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	101.2014	101.2014	4.0600e-003	0.0000	101.3029
Total											**0.0000**	**101.2014**	**101.2014**	**4.0600e-003**	**0.0000**	**101.3029**

3.5 Building Construction - 2034

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	713.5919	713.5919	0.0297	0.0000	714.3348
Worker											0.0000	538.9203	538.9203	5.7600e-003	0.0000	539.0644
Total											**0.0000**	**1,252.5122**	**1,252.5122**	**0.0355**	**0.0000**	**1,253.3992**

3.6 Paving - 2034

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	220.5106	220.5106	0.0103	0.0000	220.7690
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total											**0.0000**	**220.5106**	**220.5106**	**0.0103**	**0.0000**	**220.7690**

3.6 Paving - 2034

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	6.2540	6.2540	7.0000e-005	0.0000	6.2556
Total											**0.0000**	**6.2540**	**6.2540**	**7.0000e-005**	**0.0000**	**6.2556**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	220.5103	220.5103	0.0103	0.0000	220.7687
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total											**0.0000**	**220.5103**	**220.5103**	**0.0103**	**0.0000**	**220.7687**

3.6 Paving - 2034

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	6.2540	6.2540	7.0000e-005	0.0000	6.2556
Total											**0.0000**	**6.2540**	**6.2540**	**7.0000e-005**	**0.0000**	**6.2556**

3.6 Paving - 2035

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	44.5841	44.5841	1.7200e-003	0.0000	44.6270
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total											**0.0000**	**44.5841**	**44.5841**	**1.7200e-003**	**0.0000**	**44.6270**

3.6 Paving - 2035

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	1.2468	1.2468	1.0000e-005	0.0000	1.2471
Total											**0.0000**	**1.2468**	**1.2468**	**1.0000e-005**	**0.0000**	**1.2471**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.0000	44.5841	44.5841	1.7200e-003	0.0000	44.6269
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total											**0.0000**	**44.5841**	**44.5841**	**1.7200e-003**	**0.0000**	**44.6269**

3.6 Paving - 2035

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	1.2468	1.2468	1.0000e-005	0.0000	1.2471
Total											**0.0000**	**1.2468**	**1.2468**	**1.0000e-005**	**0.0000**	**1.2471**

3.7 Architectural Coating - 2035

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	28.0858	28.0858	1.0400e-003	0.0000	28.1117
Total											**0.0000**	**28.0858**	**28.0858**	**1.0400e-003**	**0.0000**	**28.1117**

3.7 Architectural Coating - 2035

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	303.4452	303.4452	3.0700e-003	0.0000	303.5220
Total											**0.0000**	**303.4452**	**303.4452**	**3.0700e-003**	**0.0000**	**303.5220**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	28.0858	28.0858	1.0400e-003	0.0000	28.1117
Total											**0.0000**	**28.0858**	**28.0858**	**1.0400e-003**	**0.0000**	**28.1117**

3.7 Architectural Coating - 2035

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	303.4452	303.4452	3.0700e-003	0.0000	303.5220
Total											**0.0000**	**303.4452**	**303.4452**	**3.0700e-003**	**0.0000**	**303.5220**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	38,825.41 53	38,825.41 53	1.4315	0.0000	38,861.20 17
Unmitigated											0.0000	38,825.41 53	38,825.41 53	1.4315	0.0000	38,861.20 17

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	19,351.50	18,594.90	17052.60	43,686,222	43,686,222
General Light Industry	181.22	34.32	17.68	399,598	399,598
General Office Building	18,574.52	4,142.64	1768.20	33,724,001	33,724,001
Junior College (2Yr)	3,601.19	1,471.13	158.51	7,123,615	7,123,615
Regional Shopping Center	13,749.40	16,090.34	8127.28	23,285,045	23,285,045
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	55,457.83	40,333.33	27,124.27	108,218,481	108,218,481

4.3 Trip Type Information

Dowtown Oakland Specific Plan - 1/10 Total Construction Emissions - Alameda County, Annual

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Junior College (2Yr)	9.50	7.30	7.30	6.40	88.60	5.00	92	7	1
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Unenclosed Parking with	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
General Light Industry	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
General Office Building	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Junior College (2Yr)	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Regional Shopping Center	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Unenclosed Parking with Elevator	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated											0.0000	5,261.413 9	5,261.413 9	0.5190	0.1074	5,306.386 5
Electricity Unmitigated											0.0000	5,261.413 9	5,261.413 9	0.5190	0.1074	5,306.386 5
NaturalGas Mitigated											0.0000	3,445.283 3	3,445.283 3	0.0660	0.0632	3,465.756 9
NaturalGas Unmitigated											0.0000	3,445.283 3	3,445.283 3	0.0660	0.0632	3,465.756 9

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.54056e+007											0.0000	1,355.7370	1,355.7370	0.0260	0.0249	1,363.7934
General Light Industry	643500											0.0000	34.3396	34.3396	6.6000e-004	6.3000e-004	34.5437
General Office Building	3.25517e+007											0.0000	1,737.0837	1,737.0837	0.0333	0.0319	1,747.4064
Junior College (2Yr)	4.4802e+006											0.0000	239.0805	239.0805	4.5800e-003	4.3800e-003	240.5013
Regional Shopping Center	1.4812e+006											0.0000	79.0425	79.0425	1.5100e-003	1.4500e-003	79.5122
Unenclosed Parking with Elevator	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total												**0.0000**	**3,445.2833**	**3,445.2833**	**0.0660**	**0.0632**	**3,465.7569**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.54056e+007											0.0000	1,355.7370	1,355.7370	0.0260	0.0249	1,363.7934
General Light Industry	643500											0.0000	34.3396	34.3396	6.6000e-004	6.3000e-004	34.5437
General Office Building	3.25517e+007											0.0000	1,737.0837	1,737.0837	0.0333	0.0319	1,747.4064
Junior College (2Yr)	4.4802e+006											0.0000	239.0805	239.0805	4.5800e-003	4.3800e-003	240.5013
Regional Shopping Center	1.4812e+006											0.0000	79.0425	79.0425	1.5100e-003	1.4500e-003	79.5122
Unenclosed Parking with Elevator	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total												**0.0000**	**3,445.2833**	**3,445.2833**	**0.0660**	**0.0632**	**3,465.7569**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.2286e +007	1,638.412 5	0.1616	0.0334	1,652.417 1
General Light Industry	196560	26.2125	2.5900e-003	5.3000e-004	26.4365
General Office Building	2.10163e +007	2,802.655 7	0.2765	0.0572	2,826.611 7
Junior College (2Yr)	1.33882e +006	178.5399	0.0176	3.6400e-003	180.0660
Regional Shopping Center	3.37456e +006	450.0184	0.0444	9.1800e-003	453.8649
Unenclosed Parking with Elevator	1.2416e +006	165.5750	0.0163	3.3800e-003	166.9903
Total		**5,261.413 9**	**0.5190**	**0.1074**	**5,306.386 5**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.2286e +007	1,638.412 5	0.1616	0.0334	1,652.417 1
General Light Industry	196560	26.2125	2.5900e-003	5.3000e-004	26.4365
General Office Building	2.10163e +007	2,802.655 7	0.2765	0.0572	2,826.611 7
Junior College (2Yr)	1.33882e +006	178.5399	0.0176	3.6400e-003	180.0660
Regional Shopping Center	3.37456e +006	450.0184	0.0444	9.1800e-003	453.8649
Unenclosed Parking with Elevator	1.2416e +006	165.5750	0.0163	3.3800e-003	166.9903
Total		**5,261.413 9**	**0.5190**	**0.1074**	**5,306.386 5**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											132.6660	89.8544	222.5204	0.2470	8.7000e-003	231.2877
Unmitigated											132.6660	89.8544	222.5204	0.2470	8.7000e-003	231.2877

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth											132.6660	54.4924	187.1584	0.2132	8.7000e-003	195.0815
Landscaping											0.0000	35.3620	35.3620	0.0338	0.0000	36.2062
Total											**132.6660**	**89.8544**	**222.5204**	**0.2470**	**8.7000e-003**	**231.2877**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth											132.6660	54.4924	187.1584	0.2132	8.7000e-003	195.0815
Landscaping											0.0000	35.3620	35.3620	0.0338	0.0000	36.2062
Total											**132.6660**	**89.8544**	**222.5204**	**0.2470**	**8.7000e-003**	**231.2877**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	698.5175	17.1658	0.4149	1,251.3148
Unmitigated	698.5175	17.1658	0.4149	1,251.3148

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	189.598 / 119.529	252.7529	6.1971	0.1498	452.3221
General Light Industry	6.0125 / 0	6.2461	0.1964	4.7100e-003	12.5596
General Office Building	299.304 / 183.444	396.5517	9.7826	0.2364	711.5749
Junior College (2Yr)	6.42542 / 10.05	11.3658	0.2103	5.1300e-003	18.1531
Regional Shopping Center	23.8514 / 14.6186	31.6010	0.7796	0.0188	56.7050
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**698.5175**	**17.1658**	**0.4149**	**1,251.3148**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	189.598 / 119.529	252.7529	6.1971	0.1498	452.3221
General Light Industry	6.0125 / 0	6.2461	0.1964	4.7100e-003	12.5596
General Office Building	299.304 / 183.444	396.5517	9.7826	0.2364	711.5749
Junior College (2Yr)	6.42542 / 10.05	11.3658	0.2103	5.1300e-003	18.1531
Regional Shopping Center	23.8514 / 14.6186	31.6010	0.7796	0.0188	56.7050
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**698.5175**	**17.1658**	**0.4149**	**1,251.3148**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	699.3769	41.3320	0.0000	1,732.676 8
Unmitigated	699.3769	41.3320	0.0000	1,732.676 8

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	1338.6	271.7237	16.0584	0.0000	673.1840
General Light Industry	32.24	6.5444	0.3868	0.0000	16.2135
General Office Building	1566.12	317.9082	18.7878	0.0000	787.6041
Junior College (2Yr)	170.3	34.5694	2.0430	0.0000	85.6441
Regional Shopping Center	338.1	68.6312	4.0560	0.0000	170.0310
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**699.3769**	**41.3320**	**0.0000**	**1,732.6768**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	1338.6	271.7237	16.0584	0.0000	673.1840
General Light Industry	32.24	6.5444	0.3868	0.0000	16.2135
General Office Building	1566.12	317.9082	18.7878	0.0000	787.6041
Junior College (2Yr)	170.3	34.5694	2.0430	0.0000	85.6441
Regional Shopping Center	338.1	68.6312	4.0560	0.0000	170.0310
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**699.3769**	**41.3320**	**0.0000**	**1,732.676 8**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX D

HISTORIC RESOURCES

Downtown Oakland Specific Plan
Historic Building Typology Study

completed for:
dover kohl & partners
urban planning partners and
the city of oakland
community development department

august 2019

submitted by:
architecture + history, llc
with watson heritage consulting

Table of Contents

A. INTRODUCTION

The urban fabric of Downtown Oakland is a complex mix of old and new, large and small-scale, designed and vernacular properties imposed on a historic grid with modern overlays, representing a range of building types, styles and eras. The City of Oakland's longstanding commitment to understanding historic resources is manifest in the Oakland Cultural Heritage Survey (OCHS), which has extensively documented Downtown Oakland's historic and cultural resources. Further, an overview of the history and development of the City of Oakland is contained in the City of Oakland Historic Preservation Element (Oct 1993 pages 1.1-1.9), and is incorporated herein by reference. OCHS has prepared extensive neighborhood histories, context statements, and individual property and historic district documentation for resources within the Downtown Oakland Specific Plan boundaries. However, documentation of Downtown Oakland's properties of the recent past (1950-1980) is sparse, necessitating deeper research into the places that define that period.

As part of the environmental review effort for the Specific Plan, the consultant team worked with OCHS to develop the Downtown Oakland Historic Building Typology Study. This document is included as an Appendix of the Specific Plan DEIR. While a comprehensive re-inventory of the entire Downtown area was not feasible, the Historic Building Typology Study defines prominent building types found within the study area. Each building type includes sample photographs and information pertaining to character-defining features, general location, rarity, threat to the resources, and suggestions for further reading. The study also includes building types related to the recent past, as they developed in Downtown Oakland in the post-World War II era.

Building types are defined as buildings that have similarities or share characteristics in function or form or both. British Architectural Historian Nicholas Pevsner's groundbreaking 1976 publication *A History of Building Types*, was the first comprehensive comparison of a wide range of building types through time. Pevsner covers libraries, theaters, hospitals, prisons, factories, and hotels, among others. Since this publication, numerous additional studies of building types have broadened the understanding of the architectural and social influences of varying types and uses of properties.

Methodology

The project team canvased the area within the boundaries of the Specific Plan and met with OCHS staff to determine a preliminary set of building types. Additional fieldwork and research was conducted to inform a definition of each type, character-defining features, and general locational information.

For this study, building types are first placed in broad categories based on their use (e.g., residential, commercial, industrial, institutional). Those categories are further organized and refined by categories such as construction period, size, and use.

Each building type was assessed in terms of threat level (low, medium, high) and rarity (common, rare, very rare). The threat assessments were measured by aspects such location, density, and rarity.

For example, one-story, pre-World War II commercial buildings are somewhat common in Downtown Oakland, but their relative low-density means that the threat to them is high.

B. Residential Building Types

1. Victorian-Era Single-Family Residences (1880 - 1910)

Cluster of Victorian-era residences on 400 block of Martin Luther King Jr. Way.

Victorian-era residences on 600 block of 15th Street between Jefferson Street and Martin Luther King Jr. Way.

Examples of Victorian-era, wood-frame, single-family residences ring Oakland's downtown, specifically in clusters near Interstate 980, Bret Harte Boardwalk on 5th Street at Jefferson Street, and a collection of relocated houses in Preservation Park at 13th Street and Martin Luther King Jr. Way. With the exception of the buildings at Preservation Park, the clusters are remnants of once larger residential neighborhoods. The houses are predominantly one and two stories and display irregular massing with a vertical emphasis. Many have complex roof forms composed of hipped, gable and cross-gable sections, while others have the false fronts typical of Italianate row houses. Their front facades are usually asymmetrical and feature elements such dominant front-facing gables, bay windows, and prominent partial- or full-width one-story porches.[1]

Most are wood-framed structures clad in horizontal wood siding, with texture added through decorative patterned shingles. Common architectural ornament includes scroll-sawn brackets in singles or pairs, turned wood elements, cornice returns, paneled fascia boards, and Classical molding at eaves and window trim. The windows are typically wood-frame with double-hung sash. Windows with two-over-two divided lights and semicircular or segmentally arched tops are also present. Stylistically, the residences are examples of the Italianate, Stick, Vernacular Victorian, and Queen Anne styles.

Character-Defining Features:

- Wood-frame construction
- One to two stories, raised basement
- Irregular massing
- Vertical emphasis
- Complex roof forms
- Asymmetrical facade
- Dominant front-facing gables
- Bay windows
- Partial- or full-width porches
- Horizontal wood siding
- Decorative woodwork
- Double-hung wood windows

General Locations: ring around Oakland's downtown, specifically in clusters near Interstate 880, Bret Harte Boardwalk on 5th Street at Jefferson Street, along and near Martin Luther King Jr. Way, 22nd Street, 7th Street, and a collection of relocated houses in Preservation Park at 13th Street and Preservation Park Way.

Threat Level: high

Rarity: very rare

[1] City of Oakland Planning Department, "Rehab Right," 15.

Notes: The major concentrations have been identified by the City as Areas of Primary Importance (API) including 7th Street Residential, Grove Street Residential, 15th and Grove House Group, 18th and Grove House Group, Grove/Castro/19th Streets, and Cathedral or as Areas of Secondary Importance (ASI) including the Bret Harte Boardwalk and Minor Hilyard Group.

Victorian-era single-family residences are threatened by upzoning, lot accumulation for larger developments, and the cost of seismic upgrade. In some cases, remaining residences are in isolated pockets due to surrounding redevelopment. These pockets are at a greater threat for demolition. On a positive note, the use of the City of Oakland's "Rehab Right" has provided guidance for success preservation.

Further Reading: For a more detailed analysis of Oakland's Victorian-era residences, see the City of Oakland's "Historic Context: Residential Development in West Oakland, 1850-1945"; City of Oakland's "Rehab Right," 1978; and Virginia and Lee McAlester's *A Field Guide to American Houses*.

2. Apartment Buildings

a. Small-Scale Apartment Buildings and Flats (1900-1930)

Pair of flats on 900 block of Alice Street.

Apartment buildings, 500 block of 22nd Street.

Small-scale apartment buildings and flats were built in residential areas surrounding Oakland's downtown; some good examples are located southeast of downtown north of Interstate 880.

These buildings are typically two stories and house four to eight units. In contrast to single-family houses in the area, the small-scale apartment buildings and flats have larger footprints, occupy most of their lots, and are boxier in form. A common subtype of small-scale multi-family residences from this period is the "four-family flat," now known as a quadruplex or fourplex. The design of the principal façade is symmetrical. Floor plans are also symmetrical with two to four units on each floor.

In contrast to larger apartment buildings, which typically have flat roofs and parapets, these small-scale examples frequently employed forms typical of single-family residences, such as hipped roofs, some with dormers. The buildings were often wood-frame with horizontal wood siding or masonry veneer. Although their massing is larger, the small-scale apartment buildings and flats in Downtown Oakland often maintain architectural and stylistic elements typical of neighboring single-family houses. Through form and ornamentation, this property type has been described as an "apartment-in-disguise," a multi-family residence attempting to resemble a large private dwelling.[2] These buildings commonly employed popular residential styles of the 1900s and 1910s including Neoclassical, Edwardian, and Craftsman.

Character-Defining Features:

- Two-story form
- Box-like massing
- Symmetrical unified facade
- Exterior entrances to units or pairs of units
- Architectural ornament from a variety of styles
- Double-hung wood-frame windows
- Materials, form, and ornament typical of single-family residences

General Locations: residential areas surrounding Oakland's downtown. Some good examples are located southeast of downtown north of Interstate 980.

Threat Level: high

Rarity: very rare

Notes: some are in districts identified by the City as Areas of Primary Importance (API) including Lakeside Apartment.

[2] Todd Gish, "Building Los Angeles: Urban Housing in the Suburban Metropolis, 1900-1936," (PhD Diss., University of Southern California, 2007), no page number.

The intense need for housing makes these buildings a target for redevelopment, especially if they are located in areas upzoned for higher density than the current use. These buildings may be viewed as potential sites for uses that increase building height and mass. Some small-scale apartment buildings are also threatened by lack of maintenance.

Further Reading: For a more detailed analysis of Oakland's small-scale apartment buildings and flats, see the City of Oakland's "Historic Context: Residential Development in West Oakland, 1850-1945."

b. Larger-Scale Apartment Buildings (1910 – 1940)

Tudor Hall, 150 17th Street in Lakeside.

Larger-scale apartment building, 1425 Harrison Street in Lakeside.

By the 1910s, larger-scale apartment buildings were commonly built in Downtown Oakland near Lake Merritt.. These buildings range in size from three to roughly ten stories. They typically fill the entire lot and directly abut the public sidewalk. In massing, the larger-scale apartment buildings are box like overall but arranged around lightwells, and most have flat roofs. Their facades are usually symmetrical with a common entrance at the center of the first floor. The entrances lead to often elaborate common interior spaces such as lobbies, stairways, and elevators. Some buildings have additional common rooms like laundry facilities. Individual apartments are usually accessed from interior hallways that extend the length of each floor. Most larger-scale apartment buildings in Oakland's downtown are masonry, although some are wood or reinforced concrete. These buildings are designed in a wide range of styles including Art Deco, Classical Revival, Mission Revival, Tudor Revival, and Craftsman. Ornament is largely concentrated at the ground floor with focus on the entrance, intermediate cornice between the first and second floors, and the roofline cornice and/or top floor. Their windows are varied in configuration and materials, although the most common are wood frame with double-hung sash on the earlier examples and steel casements on the later.

Character-Defining Features:

- Three to ten stories
- Box-like massing with light wells
- Roof form, usually flat
- Symmetrical facade
- Common entrance
- Exterior materials such as masonry, stucco, or reinforced concrete
- Wood-frame double-hung sash and steel casement windows
- Architectural ornament from a variety of styles

General Locations: Predominantly Lakeside

Threat Level: medium

Rarity: rare

Notes: some are in districts identified by the City as Areas of Primary Importance (API) including Lakeside Apartment, 244 Lakeside Drive Group, and Coit Building Group.

The intense need for housing makes these buildings a target for redevelopment in some cases, especially if they are located in areas upzoned for higher density than the current use. These buildings may be viewed as potential sites for new development that increases building height.

Further Reading: For a more detailed analysis of Oakland's larger-scale apartment buildings, see the documentation in City of Oakland inventory forms for the Lakeside Apartment District as well as for the Bellevue Staten Apartment Historic District which, while located outside of Downtown, has a number of similar apartment buildings.

For buildings with apartment units above ground floor commercial storefronts, see Commercial: Pre-World War II Small-Scale Commercial and Pre-World War II Office Tower.

c. Mid-Century Apartment Buildings (1940 – 1980s)

Mid-century apartment building, 1880 Jackson Street in Lakeside.

Mid-century apartment building, 1551 Madison Street in Lakeside.

Mid-century apartment buildings are located in pockets around downtown Oakland. Many are near Lake Merritt, with a notable cluster on Lakeside Drive from 15th Street to Alice Street. These replaced earlier single-family houses that sat on large lots. The end of World War II triggered a housing boom that included the development of apartment buildings. Economical and versatile materials, such as stucco, and simplified rectangular building forms were combined to create an inexpensive building type termed the "stucco box." The simple massing housed efficient floor plans, and, at the exterior, cosmetic touches such as signage and textured materials were used in place of three-dimensional architectural features. Lightweight materials gave the walls a thin look, underscoring the building's appearance as a box. The type was widely adopted by developers because it allowed them to build revenue-generating multi-family housing quickly and economically.[3]

Typically the buildings cover most of their lots with any common space limited to a partially or fully paved central courtyard, which sometimes includes a swimming pool. The buildings are usually either not set back from the street or are slightly set back with long but relatively narrow planting beds providing a buffer between the facade and public sidewalks and streets.

The buildings are generally three-plus stories—often above a first floor or basement-level garage. The structures are typically wood frame. The building's front facades are often articulated with extended balconies and textural accent materials such as lava rock, pebble dash, flagstone, board siding, brick, or scored stucco. Units are usually accessed from a common entrance at the first floor. Generally, no ornament is applied to the sides or rear facades, unless the building occupies a corner lot. By the mid 1950s, aluminum-frame sliding windows and doors had become widely used in residential construction.[4] Many of Oakland's post-war apartment buildings were designed in the Vernacular Modern style, which included features such as overall horizontal massing and horizontal emphasis through details such as bands of windows, scored trim, siding, and coping. Others have tropical, period, or high-architecture style references.

Character-Defining Features:

- Box-like horizontal massing
- Flat roofs
- Narrow or no setback from public sidewalk
- Planting beds at façade
- Three-plus story form, often over a garage
- Courtyard
- Lightweight wall materials such as stucco
- Textural accent materials such as lava rock, pebble dash, flagstone, board siding, brick, or scored stucco

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[3] Architectural Resources Group, "City of West Hollywood: R2, R3, R4 Multi-Family Survey Report," (no date), 48.
[4] Ibid., 47.

- Common entrance, double-loaded or outside corridors
- Aluminum-frame sliding windows and doors
- Horizontal bands of windows or trim

General Locations: pockets around downtown Oakland, predominantly near Lake Merritt.

Threat Level: medium

Rarity: common

Notes: the intense need for housing makes these buildings a target for redevelopment, especially if they are located in areas upzoned for higher density than the current use. These buildings may be viewed as potential sites for redevelopment that increases building height and mass. In some cases, the materials used in constructing midcentury apartment buildings have not lasted, and maintenance or replacement is needed.

Further Reading: The California cities of West Hollywood and Santa Monica have both documented and studied their mid-century apartment buildings. For further reading see: Architectural Resource Group "City of West Hollywood: R2, R3, and R4 Multi-Family Survey Report, November 2008."

3. Hotels and Motels

a. Hotels (1880 - 1950)

Oakland Hotel, 260 13th Street.

Buildings such as inns have offered hospitality to travelers for centuries; beginning in the nineteenth century, hotels became a popular version of this type. Hotels can vary dramatically in size, function, form, amenities and cost. In downtown Oakland, hotels were focused on major commercial streets in the city center and were built in the late nineteenth and early twentieth centuries. These central city hotels typically followed the two-part form of commercial blocks, which was characterized by horizontal architectural features dividing the building into two zones between the first and upper floors. An intermediate cornice often emphasized the division, and the two zones frequently contained different uses. The street level commonly housed public spaces such as hotel lobbies, retail stores, and restaurants. The upper zone was more private and was used for hotel rooms. At the exterior, the upper zone displayed regularly spaced windows, reflective of the division of the interior into uniform hotel rooms. In Oakland's downtown, hotels are generally five to ten stories. Most feature Classical style ornament. In addition, these buildings typically have a Classical form, which consists of a two-part vertical block topped by a prominent Classical cornice or separately articulated top floor or floors. The composition creates a three-part vertical block representative of the parts of a Classical column: base, shaft, and capital.[5]

Character-Defining Features:

- Vertical massing
- Two-part or three-part form representing base, shaft, and capital
- Five to ten stories
- Flat roofs
- Public spaces, including hotel entrance and lobby, at first floor
- Regularly spaced windows on floors above the first floor
- Architectural ornament, typically Classical
- Guest rooms accessed off interior common hallways
- Common entrance

General Locations: city center

Threat Level: low

Rarity: rare

Notes:: some are in districts identified by the City as Areas of Primary Importance (API) including Downtown Historic and Leamington Hotel Group.

There is need for more hotels in the Downtown, and there is potential for these buildings to be upgraded and their use maintained.

Further Reading: For a more detailed analysis of the hotel, two-part commercial block, and three-part vertical block types, see Richard Longstreth, *The Buildings of Main Street: A Guide to Commercial Architecture*.

[5] Richard Longstreth, *The Buildings of Main Street: A Guide to American Commercial Architecture* (Washington D.C.: The Preservation Press, 1987), 93.

b. Single-Room Occupancy Hotels (1880 - 1930)

Cluster of SROs at the corner of Jefferson and 14th Streets.

Lake District Apartments, 1445 Harrison Street.

Single Room Occupancy hotels (SROs), also called residential hotels, can be found throughout Downtown and are essentially the evolution of the rooming house. The building type is unusual in that it includes a variety of building forms—structures such as former-house rooming houses, converted hotels, and purpose-built SROs. Those in Oakland are all converted hotels, and, as a result, they share architectural characteristics with the hotel building type (see Hotel above). The remaining SROs are located in the city center east of Broadway.

The SRO is distinguished principally by its interior configuration and by individual rooms available for short- and long-term rental. They differ from studio units in their lack of private kitchens and (sometimes) bathrooms. Residents typically use a common exterior entrance. Kitchen facilities, when available, and shared bathrooms are also accessible from common spaces. Residential hotels have historically housed male workers rather than women, couples, or families. They typically do not require a security deposit, credit references, proof of income, or a long-term lease agreement, and they often house more vulnerable residents with less stable finances or employment.[6]

Character-Defining Features:

- Vertical massing
- Two-part or three-part form representing base, shaft, capital
- Flat roofs
- Five to ten stories
- Architectural ornament, typically Classical
- Public spaces, including SRO entrance and lobby, at first floor
- Regularly spaced windows on floors above the first floor
- Short- and long-term rentable units
- Masonry construction
- Common entrance
- Common facilities such as bathrooms and kitchens

General Locations: city center east of Broadway

Threat Level: high

Rarity: rare

Notes: some are in districts identified by the City as Areas of Primary Importance (API) including Downtown Fringe and Coit Building Group.

Planning Code Chapter 17.153 Demolition, Conversion and Rehabilitation Regulations for Residential Hotels, was adopted in 2018 and provides some protections, additional incentives or

[6] The City of Oakland, California Housing and Community Development "Downtown Oakland's Residential Hotels."(September 2015), 4.

protections that further ensure the viability of these resources and mitigate further losses of both their historic use and character.

Further Reading: For a more detailed analysis of Oakland's SROs, see the City of Oakland Housing and Community Development Department's September 2015 report "Downtown Oakland's Residential Hotels." For a social and architectural history of this type, see Paul Groth, *Living Downtown: The History of Residential Hotels in the United States*.

c. Motels (1950 – 1970)

Jack London Inn, 444 Embarcadero West.

Civic Center Lodge Motel, 50 6th Street.

Motels, originally called motor hotels, became common in the United States in the 1950s and 1960s with the rise in popularity of automobile travel. In form, location, and cost, motels differed from traditional city center hotels. Motels were smaller in scale, often one or two stories, and were horizontal in orientation. They offered a sense of freedom and privacy not found in hotels with guest rooms accessed directly from the parking lot, and "extras" such as pools and playgrounds. Motels were built primarily to accommodate road travelers and were typically situated adjacent to major highways along the outskirts of cities. In downtown Oakland, motels were concentrated around the Jack London Square tourist attractions and along the Interstate 980 corridor. Motels also became popular because of their affordability; they were frequently a cheaper option than upscale city center hotels but offered conveniences like attached private bathrooms.

Character-Defining Features:

- Small-scale
- One- or two-story form
- Horizontal orientation
- Guest rooms directly accessed from parking lot
- Site features such as parking lots, pools, and playgrounds

General Locations: around Jack London square and along the Interstate 880 corridor

Threat Level: high

Rarity: very rare

Notes: because they are low-scale and often surrounded by parking, they may be threatened by redevelopment projects that seek to intensify use by filling the lot and maximizing building height and mass. An example of a successful motel rehabilitation project is the Z Motel Jack London Square at 233 Broadway.

Further Reading: For a more detailed analysis of motels, see Andrew Wood's Smithsonian.com article "The Rise and Fall of the Great American Motel," and John A. Jakle, Keith A. Sculle, and Jefferson Rodgers, *The Motel in America*, 1994.

4. High-Rise Residential Buildings (1960 – 1980)

Lake Park apartments, 1850 Alice Street.

Oakland Housing Authority, 1619 Harrison Street.

High-rise residential buildings offered economic advantages to landowners in populated urban areas by accommodating higher numbers of residents per unit of land area. Downtown Oakland's high-rise residential buildings are located primarily in the Lakeside neighborhood and Chinatown.

The type is principally characterized by the building's number of stories, usually ten or more. Like its commercial counterpart, the high-rise office building, the massing and footprint of the high-rise residential building is typically rectangular. The buildings usually fill their entire lot, and common spaces are located at the interior.

High-rise residential buildings were made possible by the adoption of structural systems such as steel or reinforced concrete and mechanical systems like elevators and water pumps. The facades are clad in curtain walls of stucco, exposed concrete, glass, metal panels, or stone. The façades are usually arranged in two-part vertical blocks; the lower zone frequently houses public and common spaces. The upper zone is notable for a rhythmic pattern of openings, reflective of the division of the interior into uniform residential units. High-rise residential buildings often have little architectural ornament and are articulated by the vertical and horizontal repetition of elements, such as windows and balconies, or textural accent materials. Although other downtown buildings are usually ornamented only at the primary façade (or two facades in the case of corner buildings), because of their height, at the upper floors high-rise residential buildings are visible from all sides, and, consequently, all elevations are treated part of the architectural composition. Often opposing facades of the buildings are identical or similar. Individual units are usually accessed from a common entrance at the first floor with circulation by common elevators, stairways, and hallways.

Character-Defining Features:

- Ten or more stories
- Rectangular footprint and massing
- Building occupies entire lot
- Steel or reinforced concrete structural system
- Mechanical systems like elevators and water pumps
- Curtain walls of stucco, exposed concrete, glass, metal panels, or stone
- Two-part vertical block form
- Little architectural ornament but textural accent materials
- Vertical and horizontal repetition of elements such as windows, balconies
- All elevations treated as part of the composition at the upper floors

General Locations: Lakeside neighborhood and Chinatown

Threat Level: low

Rarity: common

Notes: given the scale of the building type, the threat level is low.

C. Commercial Building Types

1. Victorian-era Commercial Buildings (1870 – 1910)

Victorian-era commercial buildings on 800 block of Broadway in Old Oakland.

Victorian-era commercial buildings on 400 block of 9th Street in Old Oakland.

Oakland's original city center was focused along its southern waterfront; however, after the Transcontinental Railroad developed its western terminus in Oakland in the late 1860s, the city's center shifted northward. By the late 1870s, the city's commercial district was focused at Ninth Street and Broadway. The Victorian-era commercial buildings that formed this district are now known as Old Oakland. The Victorian-era commercial building type typically followed the two-part commercial block form and was characterized by horizontal architectural features dividing the building into two zones between the first and upper floors. The separation was often highlighted by an intermediate cornice. The distinction between the two zones frequently marked a change in use; the first floor commonly housed public spaces such as retail stores and businesses. The upper floors were usually more private in nature and were used as offices, hotel rooms, or meeting halls.

In Old Oakland, Victorian-era commercial buildings are generally two to four stories in height with rectangular footprints, vertical massing, and flat roofs. They occupy most of the lot, directly abut neighboring buildings, and are not setback from the public sidewalk. The structures are often masonry or wood-frame clad in horizontal wood siding. Some feature cast-iron fronts, which were considered desirable because they were both highly ornate and perceived as fireproof.[7] The first floors are typically storefronts composed of entrances, bulkheads, display windows, and transoms. Square and canted bay windows often span the upper stories emphasizing verticality. Some buildings feature stringcourses, which divide the upper levels at each floor level. The projecting bays often include double-hung wood windows with semicircular, elliptical, or segmentally arched tops. Oakland's Victorian-era commercial buildings are characterized by a profusion of machine-made architectural ornament often focused at storefronts, intermediate cornices, window trim, window hoods, pediments, and roofline cornices. Ornament for these buildings is eclectic and elaborate and includes elements from a variety of styles, especially Classical.

Character-Defining Features:

- Two to four stories
- Rectangular footprint
- Vertical massing
- Flat roof
- No setback from public sidewalk
- Wood-frame clad in horizontal wood siding or masonry
- Cast-iron fronts
- Storefronts at first floor
- Intermediate cornices and stringcourses
- Projecting bays vertically spanning upper floors
- Double-hung wood windows in a variety of shapes
- Elaborate architectural ornament

[7] Ibid., 31.

General Locations: focused around Ninth Street and Broadway in Old Oakland

Threat Level: medium in the designated Old Oakland-Victorian Row Preservation District and high outside the district

Rarity: very rare

Notes: many of these buildings are in the Old Oakland Area of Primary Importance (API). Existing demolition findings for category 1 buildings provide protection.

Outside Old Oakland, Victorian-era commercial buildings are threatened by upzoning, lot accumulation for larger developments, and the cost of seismic upgrade. In some cases, remaining buildings are in isolated pockets due to surrounding redevelopment. These pockets are at a greater threat for demolition.

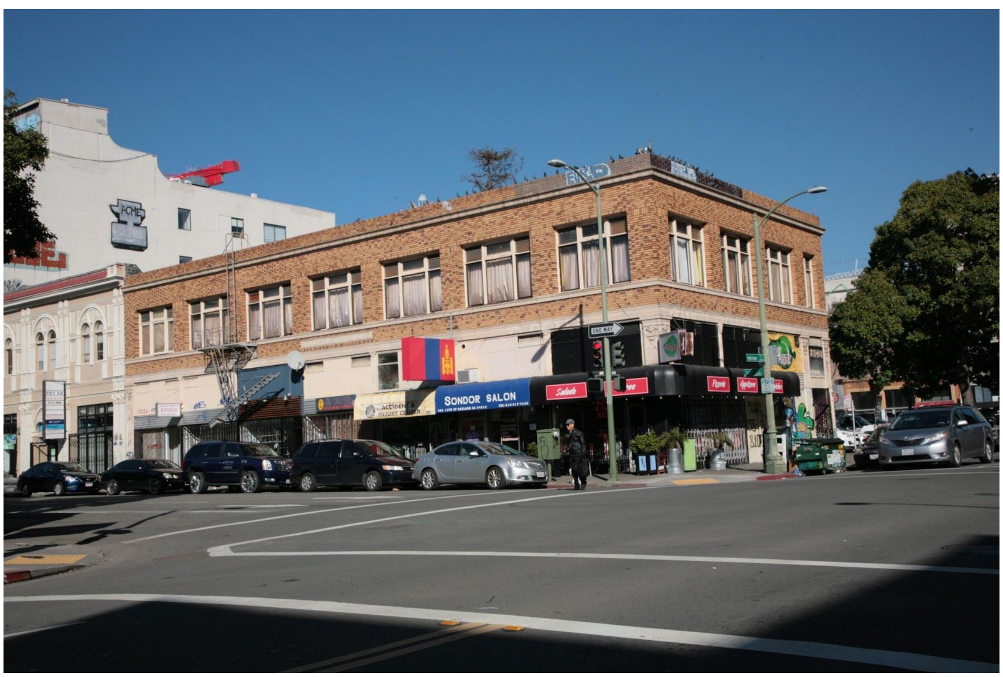
Further Reading: For a more detailed analysis of the two-part commercial block, see Richard Longstreth, *The Buildings of Main Street: A Guide to Commercial Architecture*, the City of Oakland's Victorian Row - Old Oakland Historic District documentation, and the City of Oakland Small Project Design Review Guidelines.

2. Pre-World War II Small-Scale Commercial Buildings (1910 – 1940)

Cluster of pre-World War II small-scale commercial buildings on 500 block of 7th Street between Clay and Washington Streets.

Multi-storefront pre-World War II commercial building at 1591 Madison Street.

Howden Building at 17th and Webster Streets.



Multi-storefront commercial block on 13th and Harrison Streets.

In the early twentieth century, Oakland's city center was focused around 14th Street and Broadway. Like their turn-of-the century predecessors, the Victorian-era commercial buildings, pre-World-War II small-scale commercial buildings were typically two-part commercial blocks and were distinguished by horizontal architectural features that created two zones between the first and upper floors. The zone change was often marked by an intermediate cornice. The lower, street-level zone frequently housed public uses such as retail stores, businesses, hotel lobbies, or restaurants. The upper zone housed uses that were more private in nature such as offices, hotel rooms, or meeting halls.[8] The one-part commercial block was similar in form and ornamentation to the lower zone of the two-part commercial block and was essentially a one-story subset of this type.[9]

In downtown Oakland, pre-World War II small-scale commercial buildings are generally one to four stories in height with rectangular footprints, horizontal massing, and flat roofs. They occupy most of their lots, directly abut their neighbors, and are not setback from the public sidewalk. The structures are often masonry or reinforced concrete. The first floors typically have storefronts composed of entrances, bulkheads, display windows, and transoms. Windows in the upper floors are often tripartite and fill the width and height of structural bays between columns and floor-level spandrels. The facades are generally flat, and projecting windows, like canted and rectangular bays, are rarely used. Pre-World War II small-scale commercial buildings display much simpler architectural details than earlier versions of the form; limited low-relief architectural ornament, when used, is likely to be found at piers, spandrels and cornices. Ornament can be in a variety of styles, but Classical is the most common.

Character-Defining Features:

- One or two-part commercial blocks
- One to four stories
- Rectangular footprint
- Horizontal massing
- Building occupies entire lot
- No setback from public sidewalk
- Masonry or reinforced concrete structure
- Masonry, brick, or terracotta cladding
- Storefronts at first floor
- Limited low-relief architectural ornament

General Locations: Oakland's city center around 14th Street and Broadway

Threat Level: high

[8] Ibid., 24.
[9] Ibid., 54.

Rarity: common

Notes: The major concentrations have been identified by the City as Areas of Primary Importance (API) including Old Oakland, Downtown Oakland, Uptown Commercial, and 17th Street Commercial and as Areas of Secondary Importance (ASI) including the Hotel Menlo Group.

Pre-World War II small-scale commercial buildings are threatened by upzoning, lot accumulation for larger developments, and the cost of seismic upgrade. In some cases, remaining small-scale commercial buildings are in isolated pockets due to surrounding redevelopment. These pockets are at a greater threat for demolition.

Further Reading: For a more detailed analysis of the two-part and one-part commercial blocks, see Richard Longstreth, *The Buildings of Main Street: A Guide to Commercial Architecture*.

3. Pre-World War II Office Tower (1900 – 1940)

Westlake Building, 350 Frank Ogawa Plaza.

Pre-World War II office towers were the tallest buildings of their period and were located on major commercial streets in Oakland's city center, which was focused around 14th Street and Broadway. Pre-World War II office towers were typically two-part vertical blocks, the evolution of their predecessor, the two-part commercial block. Two-part vertical blocks were divided into two sections: a lower zone of one to two stories, which acts as a base, and an upper zone of at least four stories, which functions as a shaft. The two-part vertical block is taller than the two-part commercial block; it requires at least four stories in the upper zone to create verticality. In addition, in the two-part vertical block, the architectural treatments of the lower section and upper zones are differentiated but are carefully related to each other to create a unified whole.[10]

In Oakland's downtown, most pre-World War II office towers are eight to twelve stories. As implied by their vertical-block form, their footprints are rectangular, massing is vertical, and flat roofs top the buildings. They typically occupy most of their lots, directly abut their neighbors, and are not setback from the public sidewalk. The structures are commonly masonry or reinforced concrete and are frequently clad in brick or terracotta. The first floors are typically storefronts composed of entrances, bulkheads, display windows, and transoms. Pre-World War II Office

[10] Ibid., 82.

Towers display different architectural ornament than Victorian commercial buildings; details are Classical in style, low-relief, and limited. When used, ornament is likely to be found at piers, spandrel panels, stringcourses and cornices. Buildings of this type begin to take on a slightly different form after the 1906 earthquake.

Character-Defining Features:

- Two-part vertical blocks
- Minimum of five stories, most are eight to twelve
- Architecturally unified upper and lower zones
- Rectangular footprint
- Flat roof
- Building occupies entire lot
- No setback from public sidewalk
- Masonry or reinforced concrete
- Brick or terracotta cladding
- Storefronts at first floor
- Intermediate cornices, stringcourses, and spandrel panels
- Limited low-relief architectural ornament

General Locations: City center around 14th Street and Broadway

Threat Level: medium

Rarity: rare

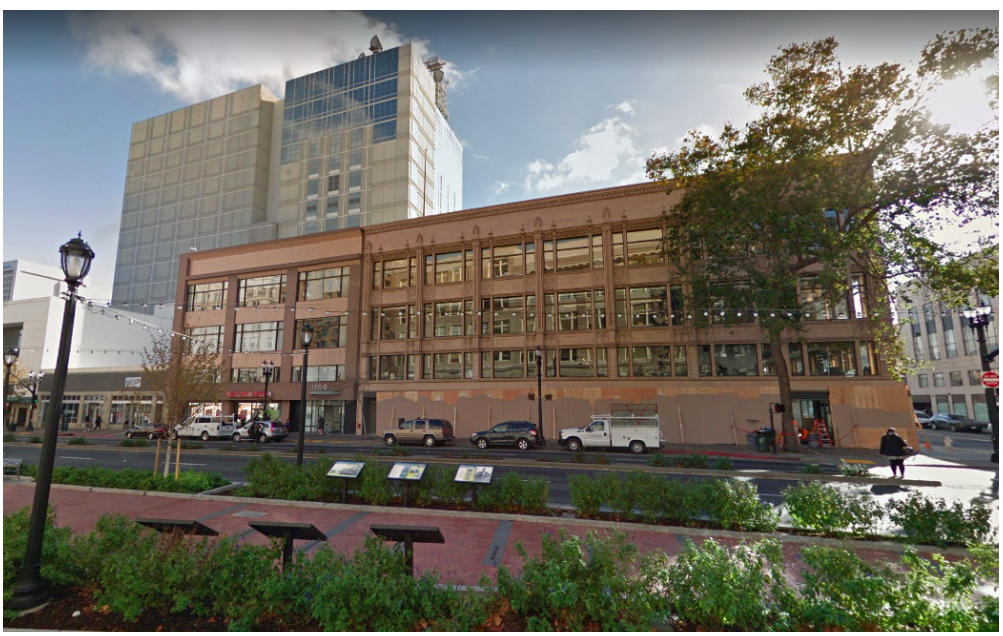
Notes: some are in a district identified by the City as an Areas of Primary Importance (API), Downtown Historic.

Renovation of pre-World War II office towers could trigger seismic standards. The use of the State Historic Building Code could mitigate these threats. Although these are taller buildings, increases in allowable height could intensify the threat level.

Further Reading: For a more detailed analysis of the two-part vertical block, see: Richard Longstreth, *The Buildings of Main Street: A Guide to Commercial Architecture*, and Architecture and Paul Goldberger, *The Skyscraper*, 1981; the Downtown Oakland Historic District National Register nomination; and the State of California Department of Parks and Recreation 523 forms.

4. Department Stores (1910-1930)

Kahn's department store, 1501 Broadway.



Roos Brothers department store, 1500 Broadway.

In the 1910s and 1920s, department stores were constructed in Oakland's uptown shopping district, which developed largely out of the desire to attract customers driving to downtown from the growing residential areas north and east of the city center. A few of these department stores remain including Kahn's, Roos Brothers, and H.C. Capwell Company. In many respects, the department store type shares characteristics with pre-World War II, small-scale commercial buildings. Most notably, the department stores were typically two-part blocks with an intermediate cornice dividing the building between the first and upper floors.[11] Other similarities include rectangular footprints, horizontal massing, and flat roofs. In addition, like small-scale commercial buildings, department stores occupy most of their lots, and are not setback from the public sidewalk. The walls are frequently clad in masonry, brick, or terracotta.

However, unlike small-scale commercial buildings, Oakland's downtown department stores were designed to house the same use on all floors, and, consequently, the first floor and upper floors maintained a more unified appearance. In addition, the department stores are generally much larger than small-scale commercial buildings. The stores are often taller, usually four stories, and have significantly bigger footprints. They are typically located on corner lots and have primary facades and entrances on two streets. First floors feature storefront or window displays composed of entrances, bulkheads, display windows, and transoms. Large, regularly spaced windows punctuate the upper floors. Architectural ornament is typically found at entrances, the intermediate cornice, piers, spandrels, and the roofline cornice. Ornament can be in a variety of styles, but Classical is the most common.

Character-Defining Features:

- Two-part blocks
- Unified design
- Intermediate cornice
- Large rectangular footprint
- Horizontal massing
- Flat roofs
- Building occupies entire lot
- Corner lot
- No setback from public sidewalk
- Masonry, brick, or terracotta cladding
- One to four stories
- Storefronts at first floor
- Regularly spaced windows at upper floors
- Architectural ornament in variety of styles including Classical

[11] Ibid., 82.

General Locations: uptown shopping district

Threat Level: high

Rarity: very rare

Notes: some are in districts identified by the City as Areas of Primary Importance (API) including Downtown Historic and Uptown Commercial.

Because of changes in shopping habits, there are few remaining examples of the department store building type. However, as illustrated by the Rotunda, these buildings can be adaptively reused.

Further Reading: See Meredith Clausen, "The Department Store – Development of the Type," *Journal of Architectural Education*, Fall 1985; Robert Hendrickson, *The Grand Emporiums: The Illustrated History of America's Great Department Stores*, 1979; Richard Longstreth, *The American Department Store Transformed, 1920-1960*, 2010; the Downtown Oakland Historic District National Register nomination; Uptown District State of California Department of Parks and Recreation 523 forms, and State of California Department of Parks and Recreation 523 forms for the Capwell, Roos Brothers, and Kahn's buildings.

5. Post-World War II Small-Scale Commercial Buildings (1940 – 1970)

California Furniture Company building, 1728 San Pablo Avenue.

Post-World War II small-scale commercial building, 678 14th Street.

Post-World War II small-scale commercial buildings were constructed in Downtown Oakland's retail districts and housed uses like stores, offices, banks, and restaurants. In form, these buildings are similar to their pre-war commercial predecessors and were one- to four-story rectangular blocks with flat roofs. The buildings usually occupied their entire lot and directly abutted the adjacent buildings and public sidewalks. In the middle of the twentieth century, new design vocabularies and advances in materials and structural systems allowed proprietors to construct buildings intended to impress customers with their modernity. In contrast to the Pre-World War II buildings, Post-World War II Small-Scale Commercial Buildings frequently employ distinctly modern materials such as steel curtain-wall systems, aluminum framing, porcelain enamel panels, and glass spandrel panels. Existing downtown commercial buildings were sometimes modernized with slipcover panels of aluminum, glass, or porcelain enamel. Façade ornament often featured oversized backlit neon signs in cursive or san-serifs script announcing the business to auto traffic as well as pedestrians. Horizontally angled storefronts funneled customers into the businesses' entrances, and vertically angled storefronts created a dramatic architectural element and reduced glare. Retail establishments enticed customers with open storefront views of well-lit interiors. Designs of both facades and storefronts were frequently asymmetrical.

By the midcentury, steel lintels could span entire storefronts allowing for dramatic "open fronts" with plate glass in larger sizes than was previously available.[12] Some utilized new types of glass like Herculite for a butt-glazed (frameless) appearance; while others employed sleek aluminum trim. In contrast to the opaquely backed display cases of the previous decades, midcentury retail establishments enticed customers with open storefront views of well-lit interiors, which were particularly dramatic at night. In addition to the ubiquitous plate glass and aluminum and steel-based panels described above, other common materials included vertically stacked Roman brick, tile, or glass block. In the 1950s, anodized aluminum and aluminum in champagne and gold colors also became popular. There are also many building remodels in this style including the California Furniture Company.

Character-Defining Features:

- One to four stories
- Rectangular footprints and massing
- Flat roofs
- Building occupies entire lot
- Directly abuts adjacent buildings and public sidewalks
- Asymmetrical facade and storefronts
- Horizontally or vertically angled storefronts
- Modern materials such as steel curtain wall systems, aluminum framing, porcelain enamel panels, and glass spandrel panels

[12] Carol Dyson, "Mid-Century Commercial Modernism: Design and Materials," National Center for Technology Preservation and Training, accessed March 1, 2019, www.ncptt.nps.gov/blog/mid-century-commercial-modernism-design-and-materials.

General Locations:

Threat Level: high

Rarity: rare

Notes: because post-World War II small-scale commercial buildings are low-scale and often include parking, they may be threatened by redevelopment projects that seek to intensify use by filling the lot and maximizing building height and mass. They are also threatened by upzoning and lot accumulation for larger developments. In some cases, remaining small-scale commercial buildings are in isolated pockets due to surrounding redevelopment. These pockets are at a greater threat for demolition.

Further Reading: For further reading on Post-World War II Small-Scale Commercial Buildings see Carol Dyson's "Mid-Century Commercial Modernism: Design and Materials" at www.ncptt.nps.gov/blog/mid-century-commercial-modernism-design-and-materials.

6. Post-World War II Freestanding/Car-Oriented Commercial Buildings (1940 – 1970)

Post-World War II dry-cleaners at 14th and Jackson Streets.

Former International House of Pancakes on West Grand Avenue near Telegraph Avenue.

Former Giant Burger on Telegraph Avenue and 22nd Street.

Mel's Drive-In, 1701 San Pablo Avenue.

Post-World War II freestanding commercial buildings were built around the periphery of Downtown Oakland where the availability of larger lots allowed for the construction of detached structures. Post-World War II freestanding commercial buildings were often surrounded, or partially surrounded, by landscaping and parking lots.

In the middle of the twentieth century, new design vocabularies and advances in materials and structural systems allowed proprietors to construct buildings intended to impress customers with their modernity or innovation. Post-World War II freestanding commercial buildings included new types like drive-in restaurants, which often employed novel forms designed to appeal to motorists and provided parking. The practice of combining building design with advertising took off in the 1940s and 1950s. Architects of drive-in restaurants "recognized that, for a commercial building, advertising is a legitimate function to be expressed in architectural form. To make a relatively small building visible to customers from far down the street, the entire building was conceived as a sign to attract customers."[13] The result was revolutionary, a panoply of hyper-modern, whimsical, eye-catching buildings that "fit the needs of the new California 'car culture' and the dreams of the even newer space age."[14] Popular design elements were bold angles, colorful neon signs, plate-glass windows, stainless steel, sweeping cantilevered roofs, and pop-culture imagery. The style became known as Googie, a term coined in 1949 by *House and Home* magazine editor Douglas Haskell to describe the design of Los Angeles coffee shop Googies, designed by California Modernist John Lautner.[15]

Character-Defining Features:

- Freestanding
- Car-oriented designs
- Surface parking lots on site
- Modern materials such as steel curtain wall systems, aluminum framing, porcelain enamel panels, and glass spandrel panels
- Unusual building shapes and massing
- Bold angles
- Colorful neon signs
- Plate-glass windows
- Sweeping cantilevered roofs
- Pop-culture imagery

[13] Alan Hess, *Googie Redux: Ultramodern Roadside Architecture* (San Francisco: Chronicle Books, 2004), 66-68.
[14] Alan Hess, "Broadway Valdez District Specific Plan – Biff's Coffee Shop," October 13, 2013, Letter to the Oakland Landmarks Preservation Board, filed with the Oakland Cultural Heritage Survey.
[15] Hess, *Googie Redux: Ultramodern Roadside Architecture,* 66-68.

General Locations: periphery of downtown

Threat Level: high

Rarity: very rare

Notes: because post-World War II freestanding car-oriented commercial buildings are low-scale and often include parking, they may be threatened by redevelopment projects that seek to intensify use by filling the lot and maximizing building height and mass. They are also threatened by upzoning and lot accumulation for larger developments. In some cases, remaining small-scale commercial buildings are in isolated pockets due to surrounding redevelopment. These pockets are at a greater threat for demolition.

Further Reading: For a more detailed analysis of Oakland's Post-World War II Freestanding Commercial Buildings see Carol Dyson's "Mid-Century Commercial Modernism: Design and Materials" at www.ncptt.nps.gov/blog/mid-century-commercial-modernism-design-and-materials.

7. High-Rise Office Building (1960 – 1980)

Post-World War II office tower on Broadway and 14th Street.

Post-World War II office tower in Lakeside.

High-rise office buildings were constructed in Oakland's city center. They offered landowners economic advantages by accommodating higher numbers of tenants per unit of land. The type is principally characterized by the building's number of stories, usually ten or more. The massing and footprint of the high-rise office building are typically rectangular. High-rise buildings were made possible by the adoption of structural systems such as steel or reinforced concrete and mechanical systems like elevators and water pumps.

The facades are clad in curtain walls of stucco, exposed concrete, glass, metal panels, or stone. In some buildings there is little or no differentiation between the lower and upper floors except at the entrance. Other buildings take the form of a multi-part vertical block, but the treatment of the zones varies from the traditional vertical block buildings of past decades: "For example, tall buildings from this era often still employ divisions reminiscent of two-part and even three-part vertical blocks, yet at street level the emphasis can be horizontal and open, with the bulk of the structure set in contrast as an upright slab, suggesting the limitless extension more than the compositional definition of its *parts*."[16] The upper floors are notable for regularly spaced openings. Although at street level the buildings may retain a front façade, at the upper levels, all elevations are treated part of the architectural composition. Often opposing facades are identical.

Character-Defining Features:

- Ten or more stories
- Rectangular footprint and massing
- Steel or reinforced concrete structural system
- Mechanical systems like elevators and water pumps
- Curtain walls of stucco, exposed concrete, glass, metal panels, or stone
- A variety of forms: buildings with no differentiation between lower and upper floors, two-part vertical blocks, or three-part vertical blocks
- Regularly spaced openings
- Identical treatment of opposing facades at the upper floors

General Locations: central core and near Lakeside

Threat Level: low

Rarity: rare

[16] Longstreth, 129.

Notes: some are in districts identified by the City as Areas of Primary Importance (API) including 244 Lakeside Drive Group and Downtown Historic.

The renovation of high-rise office buildings could trigger seismic standards. The use of the State Historic Building Code could mitigate these threats. The existence of hazardous materials, such as asbestos, can create difficulty in reusing these buildings.

Further Reading: For a more detailed analysis of high-rise buildings, see Richard Longstreth, *The Buildings of Main Street: A Guide to Commercial Architecture*.

8. Bank Branch Buildings and Regional Bank Offices with Bank Branches (1950 - 1980)

Bank building on Broadway at 21st Street.

Bank branch building in Lakeside.

The EIR for the project at 2100 Telegraph Avenue recently documented the development of mid-century bank buildings, both branch banks and smaller corporate offices, in Downtown Oakland clustered around 19th Street and Broadway.

After World War II, American commercial architecture departed from past expressions in scale, style, and building types. This is true of branch bank buildings, which no longer employed Classical motifs or a temple front. Banking design shifted to box forms with minimal decoration in a Modern expression. To convey a Modern aesthetic and new financial services, banks often turned to local or regional architects who had embraced Modernism to build new, more suburban in character structures. This is reflective in California in a series of bank headquarters and branches by Modernism's significant California architects and firms including: John Carl Warnecke, William Pereira, William Wurster (Wurster Bernardi and Emmons), Paul Revere Williams, Edward Durell Stone, Anshen & Allen, Skidmore Owings & Merrill, Welton Becket Associates, and others. The Modern branch bank included large expanses of glass, a sleek interior with shiny materials, drive-up and walk-up banking, parking (even in more urban settings), and large areas, usually of the grand-scale lobby, set aside for customers to meet individually with financial advisors.[17]

In Oakland, this transition in branch bank design also coincided with the development of BART. Envisioned and designed in the 1950s, construction on the BART system began in 1964, with the official first days of service occurring in September 1972 with the east bay service complete. The Transbay Tube went into full service in 1974. Two downtown BART stations were developed: one at 12th Street at what became known as "City Center," and one servicing 19th and Broadway. In the vicinity of the 19th Street BART station along both Broadway and Webster, at least thirteen bank-related buildings were constructed between 1960 and 1975.

Character-Defining Features:

- Box-like massing
- One to three stories
- Minimal decoration typical of Modernism
- Large expanses of glass
- High-quality materials
- Drive-up and walk-up facilities
- Freestanding
- Landscaping
- Surface parking lots on site

[17] Mary Brown. *San Francisco Modern Architecture and Landscape Design, Historic Context Statement, 1935-1970* (San Francisco Planning Department, 2010), section on modern banks; and Carol Dyson and Anthony Rubano, "Banking on the Future: Modernism and the Local Bank." *Preserving the Recent Past*, ed. by Deborah Slayton and William G. Foulks (Washington D.C.: National Park Service, 2000).

General Locations: downtown core.

Threat Level: high

Rarity: very rare

Notes: Bank Branch Buildings and Regional Bank Offices with Bank Branches are threatened by changing banking practices and the reduced need for bank offices and bank parking. As a result, they may be viewed as potential sites for uses that fill the lot and increase building height and mass.

Further Reading: For a more detailed analysis of Oakland's Banks see Carol Dyson and Anthony Rubano's "Banking on the Future: Modernism and the Local Bank." at www.ncptt.nps.gov/blog/mid-century-commercial-modernism-design-and-materials; and Charles Belfoure, *Monuments to Money: the Architecture of American Banks*, 2005.

D. Industrial Building Types

1. Pre-World War II Industrial Buildings (1900 – 1940)

Pacific Tool & Supply Company, 251 8th Street.

Pre-World War II industrial building near Jack London Square.

Pre-World War II industrial buildings were constructed in Oakland's southern waterfront to take advantage of the efficient transportation offered by the area's port and rail lines. Pockets of pre-World War II industrial buildings remain in the waterfront area including Jack London Square west of Webster Street and in the Acorn Industrial District. The type comprises warehouses for the storage of large quantities of raw materials and goods, light industrial buildings for the manufacture of merchandise, and structures that combine both storage and industrial uses.[18] These buildings have box-like massing, a form that was economical to construct and created the large open spaces needed to maximize storage and house production machinery and processes. The buildings are one to four stories in height. A variety of roof types may be found, including low-pitched gabled and low-pitched hipped, but the most common is flat. Parapets often surround and obscure the roofs.

In the design of this building type, materials such as masonry and reinforced concrete were preferred for fire-resistance and economy. Timber framing was often used for interior structural support. Iron and, later, steel beams created the longer structural spans needed for more open facades. These large openings were often fitted with windows for ventilation and natural light or the loading docks and garage doors necessary for moving materials and equipment.

Windows are typically wood double-hung or steel industrial sash. Transoms, clerestory, and ribbon windows are also used. Economy and functionality were usually primary considerations in the buildings' design, and architectural ornament is often limited. Frequently, the most prominent feature is the repetition of window and garage door openings. One of the most common architectural details is polychrome, corbelled, and decorative brickwork around windows and at the intermediate and roofline cornices. Additionally, the buildings often include vertical molding at structural piers, stringcourses, and shaped pediments at the roofline. Facades are usually symmetrical. Although the style of most can be described as Early Twentieth-century Industrial, some have Classical features and at least one is Art Deco.

Character-Defining Features:

- Box-like massing
- One to four stories
- Variety of roof forms, especially trust or flat
- Parapets surrounding the roof
- Large, open interior spaces
- Masonry and reinforced-concrete building materials
- Timber framing at interior
- Iron and steel beams
- Wood and steel window-sash materials

[18] Sarah Tappe, "Adaptive Reuse of Warehouses in Relation to Neighborhood Cohesion and Identity: a case study of New Orleans, Oklahoma City, and Minneapolis" (Architecture Undergraduate Honors Thesis, University of Arkansas, Fayetteville, Arkansas, 2017), 10.

- Double-hung, industrial-sash, transoms, clerestory, and ribbon window forms
- Loading docks and garage doors and openings
- Repetition of window and door openings
- Limited architectural ornament such as molding at structural piers, stringcourse, and shaped pediments
- Decorative brickwork
- Symmetrical facades

General Locations: predominantly in southern waterfront

Threat Level: high

Rarity: rare

Notes: some are in districts identified by the City as Areas of Primary Importance (API) including Wholesale Produce Market, Produce Market, and Waterfront Warehouse.

Industrial uses are being moved away from the study area as a result of increased land value and changes in zoning regulations.

Further Reading: For a detailed analysis of Pre-World War II industrial development in Oakland, see the City of Oakland's "Historic Context: Industry in West Oakland, 1840-1945." For additional information, see Betsy Hunter Bradley's *The Works: The Industrial Architecture of the United States 1st Edition*.

2. Automobile-Repair Buildings (1900 – 1960)

Former automobile-related building on Martin Luther King Jr. Way.

Cluster of automobile-related buildings on 25th Street west of Broadway.

Automobile-related buildings, such as repair shops, became common in downtown Oakland in the early 20th century. By 1915, dealerships were built on Broadway from 23rd Street stretching northward in what became known as Auto Row. Repair garages were constructed on adjacent side streets and sometimes between the dealerships on Broadway itself. A particularly intact pocket of the repair shop type remains on 25th Street between Broadway and Telegraph Avenue. The type combines both commercial and industrial characteristics since they provided consumer services using industrial equipment and materials.[19] The design of these buildings was dictated by multiple factors including the need for vehicular access to the interior, fire safety, and unobstructed interior space for automobiles and equipment.

The automobile repair shops have long, narrow rectangular footprints with the short side oriented toward the street. They are not setback from the public sidewalks and many directly abut neighboring buildings. The buildings are one to two stories in height. Truss roofs top the structures and are obscured at the street façades by stepped or shaped parapets. Most are unreinforced masonry, although some later buildings are terracotta, ceramic tile, concrete block, or are clad in corrugated metal panels.

Vehicular access is a defining feature of this type, and the façades include one to three vehicular openings. Although originally wood, most garage doors have been fitted with modern roll-down metal doors. Many facades also include pedestrian doors and large wood or industrial-sash windows, some with transoms. The more modest examples of the type have few or no windows while the more elaborate include sections with glazed storefronts. The repair shops are utilitarian in character, and ornament is limited to the street-facing façade. The early brick buildings feature patterned, corbeled, and polychrome brickwork often at piers, intermediate cornices, window lintels, and parapets.

Character-Defining Features:

- Long, narrow rectangular footprints
- No setbacks
- One to two stories
- Truss roofs
- Shaped or stepped parapets
- Walls of unreinforced masonry, terracotta, ceramic tile, concrete block, or corrugated metal panel cladding
- Vehicular openings at facade
- Wood and steel windows and transoms
- Pedestrian doors
- Limited architectural ornament
- Decorative brickwork

[19] Betty Marvin, "Historic Context: Unreinforced Masonry Buildings in Oakland, 1850-1948" (1995), 48.

General Locations: side streets off Broadway north of 23rd Street with a cluster focused on 25th Street and scattered throughout Chinatown

Threat Level: high

Rarity: very rare

Notes: some are in a district identified by the City as the 25th Street Garage Area of Primary Importance (API).

These buildings are under continued threat. Higher rents have pushed many automobile-related uses out of these buildings. However, due to increased rents, even the new uses may not be able to remain. Because the buildings are low-scale and often include parking, they may be threatened by redevelopment projects that seek to intensify use by filling the lot and maximizing building height and mass. They are also threatened by upzoning and lot accumulation for larger developments.

Further Reading: For a more detailed analysis of Automobile-Related Buildings see Betty Marvin's "Historic Context: Unreinforced Masonry Buildings in Oakland, 1850-1948."

E. Places of Worship, Fraternal Halls, and Community Centers

1. Churches, Temples, and Chinese Association Halls (1890 – 1930)

First Baptist Church, 534 22nd Street, portions of which were designed by Julia Morgan.

Church at Jefferson and 7th Streets.

Buddhist association hall, 2267 Telegraph Avenue.

Buddhist temple, 512 8th Street in Chinatown.

Historic churches are located throughout most areas of Downtown Oakland, with the exception of Jack London Square. Churches can be buildings designed as houses of worship or buildings converted from other uses to religious functions. Converted churches often maintain the characteristics of their original building type at the exterior. Those designed and constructed as churches differ in size, form, style, and ornamentation based on factors such as denomination, congregation size, funding, and date of construction. Despite the variation in form, many churches share common architectural characteristics. A hall large enough to house a congregation (often called a sanctuary) is typically one of the requirements of a church and results in a large central mass with a rectangular footprint, with or without cross wings or transept arms. Meeting halls are usually tall one-story spaces and frequently have regularly placed windows on side elevations. Auxiliary functions such as offices and smaller meeting rooms may be found in multistory sections or in basements.

Asymmetrical and symmetrical facades are both common. A variety of roof forms can be employed, but the most prevalent for the churches in the study area is a steeply pitched gabled roof with front-facing gable end oriented toward the street. Corner bell towers, either single or in pairs, are frequently used and, where present, are a dominant architectural feature at the facade. Pyramidal or flat roofs often top the bell towers. Entry to the main hall is typically through a prominent doorway at the façade, frequently below a rose window. Secondary entrances are located along the side elevations. Round, pointed, lancet and ogee arched window, door, arcade, and blind openings are common. Materials include rusticated stone, brick, stucco, wood shingle, and red tile.

A wide range of architectural styles have been employed in church design in the study area, such as the Gothic Revival First Unitarian Church, 1891; Richardsonian Romanesque First Church of Christ Scientist, 1902; and the Asian-inspired ornament on the Buddhist Church of Oakland, 1927. Romanesque, Early Christian/Byzantine, and Classical styles can also be found. Gothic Revival, a popular choice across the nation in the early twentieth century[20] is the most common in the study area. Ornamentation often includes wood trim, brick patterning, stonework, cast terracotta, and stained-glass windows and tracery.

Six of the churches are designated landmarks. Notable examples in the study area include:

- First Unitarian Church (685 14th Street, 1891, Walter J. Mathews)
- Chinese Presbyterian Church of Oakland (265 8th Street, 1929)
- Buddhist Church of Oakland (825 Jackson Street, 1927)
- New St. Paul's Missionary Baptist Church (1011 Martin Luther King Jr. Way, 1901)
- First Church of Christ, Scientist (1701 Franklin Street, 1902, Henry A. Schulze)
- First Baptist Church (534 22nd Street, 1903 and 1906 remodel by Julia Morgan)

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[20] Jeffery W. Howe, *Houses of Worship: An Identification Guide to the History and Styles of American Religious Architecture* (San Diego: Thunder Bay Press, 2003) 252.

Character-defining features:

- Large central mass
- Tall meeting space with regularly spaced windows on side elevations
- Roof forms such as steeply-pitched gables, often with gable end facing the street
- Corner bell towers
- Rose windows
- Arched openings
- Ornamental brick, stonework, and woodwork
- Materials such as rusticated stone, brick, stucco, wood shingle, and red tile
- Tracery and leaded stained glass

General Locations: all neighborhoods except Jack London Square

Threat Level: high

Rarity: very rare

Notes: some are in districts identified by the City as Areas of Primary Importance (API) including Cathedral and Grove Street.

Churches tend to be near residential areas. As the Downtown character has changed, church congregations have moved out of the area, and the church buildings have been sold. Their adaptability is low.

Further Reading: For detailed histories of the churches listed above, see the individual landmark nominations for the properties. For a more general analysis of the form and style of religious buildings see Jeffery W. Howe's *Houses of Worship: An Identification Guide to the History and Styles of American Religious Architecture.*

2. Social and Fraternal Halls (1900-1930)

Oakland's second Scottish Rite Cathedral, 1443 Madison Street.

Oakland Business and Professional Women's Club , 1550 Webster Street.

Social and Fraternal organizations were ubiquitous throughout the United States in the late nineteenth and early twentieth centuries. There are about a half dozen remaining historic fraternal and social halls located in Downtown Oakland. In size, style, and form, the buildings vary dramatically. The largest of these halls were monumental in size and style with elaborate architectural detailing and symbolic ornament. These larger halls typically housed uses such as large meeting rooms and/or auditoriums on the ground floor with smaller meeting rooms on floors above. As a result, it is common for the ground floor to be taller than those above and feature a prominent entrance or entrances. For example, the large Scottish Rite Temple at 1547 Lakeside Drive was designed in the Greek Revival style and was replete with symbolic ornamentation and artwork from the order. The large four-story building included space for a ballroom capable of banquet seating for 800 on the first floor and an auditorium that seated 1,400 people on the fourth floor. In addition, there were smaller meeting rooms, a member's lounge, and library on the third floor.

In contrast, the smaller halls could be unassuming in ornament and more residential or small-scale commercial in character. For example, the Oakland Business and Professional Women's Club is a two-and-a-half story Colonial Revival building that resembles a single-family residence.

Notable examples include the following:

- Oakland Scottish Rite Temple (15th and Madison Streets, 1909)
- Oakland Scottish Rite Temple (1547 Lakeside Drive, 1927)
- Oakland Business and Professional Women's Club (1608 Webster Street, 1924, Miller & Warnecke)
- Women's City Club (1418-40 Alice Street, 1927-28, Miller & Warnecke)

General Locations: east side of downtown

Threat Level: low (most of these properties are landmarked)

Rarity: very rare

Notes: some are in a district identified by the City as the Lakeside Apartment Area of Primary Importance (API).

Many fraternal halls have disbanded. Most of these buildings have found successor uses (for now). On the other hand, lodges, congregations, nonprofits, and arts organizations are all precarious.

Further Reading: William D. Moore, *Masonic Temples: Freemasonry, Ritual Architecture, and Masculine Archetypes*, 2006.

3. YWCAs and YMCAs (1909 - 1926)

YWCA, 1515 Webster Street.

YMCA, 2101 Telegraph Avenue.

The Young Men's Christian Association (YMCA) was founded in 1844 as an alternative to dismal urban conditions created by the Industrial Revolution. The first YMCAs provided temporary housing and clean, Christian living for single men working in major cities. YMCA buildings eventually evolved to include libraries, gymnasiums, and swimming pools. A little over a decade after the YMCA was created, the Young Women's Christian Association (YWCA) was founded in 1858. The City of Oakland YWCA was started in 1877 "to gather children together to teach them helpful things. To visit jails and hold prayer and Bible readings with the women."[21] Like YMCAs, YWCAs in Oakland housed a variety of uses. For example, the 1515 Webster Street YWCA included an auditorium, cafeteria, gymnasium, classrooms, and hotel facilities. The YMCA and YWCAs are located at the north end of downtown northwest of Lake Merritt.

Nationwide, YMCAs and YWCAs varied in size, form, and architectural style. However, from 1900 through the 1920s, the "brick box" became common for YMCA design[22] and the Renaissance Revival style was often used. The three in Oakland were built in the 1910s and 1920s and share many architectural characteristics. The footprints vary, but when viewed from the street-facing facades, all three have block-like massing with flat roofs. The buildings areur to six stories with the first, and sometimes second floor, taller in height than the other floors, likely because they housed larger spaces like gymnasiums and auditoriums. The walls are clad in brick veneer, stucco, and stucco scored to resemble smooth ashlar. Windows are wood double-hung, some with divided lights and some with arched tops. The facades are symmetrical (2332 is not symmetrical at the first floor but overall the fenestration pattern is). The buildings are Renaissance Revival or the closely related Classical Revival style. Ornament includes: first floors with scored stucco or brickwork designed to mimic rusticated stonework; quoins; ornamental brickwork; stringcourses; tilework along parapet; roof, intermediate, and window cornices; balustrades; dentil courses; modillions; colored cast terracotta; arches; and attached pilasters and columns.

There are three historic YM/WCAs in Downtown Oakland:

- YMCA (2109-19 Telegraph Avenue, 1909-10, William C. Hays)
- YWCA (1515 Webster Street, 1913-14, Julia Morgan)
- YWCA (2332 Harrison Street, 1925-26, McCall & Davis)

Another historic institutional residence in Downtown Oakland is the Salvation Army Evangeline Home for unwed mothers (now the Claridge), constructed in 1930 at 634 15th Street (designed by Douglas Dacre Stone).[23]

[21] National Register of Historic Places, Oakland YWCA, Oakland, Alameda County, California.
[22] Paula Lupkin, *Manhood Factories: YMCA Architecture and the Making of Modern Urban Culture* (Minneapolis: University of Minnesota Press) 101.
[23] Marvin, 48.

Character-defining features:

- Block-like massing at facade
- Flat roofs
- Four to six stories
- First, and sometimes second floor, are taller than other floors
- Brick veneer, stucco, and stucco scored to resemble ashlar
- Double-hung wood windows some with divided lights and arched tops
- Symmetrical facades
- Renaissance and Classical Revival styles

General Locations: central downtown core and periphery

Threat Level: medium

Rarity: very rare

Notes: some are in a district identified by the City as an Areas of Secondary Importance (ASI), 15th and Webster.

Some of these are landmarked, although that does not necessarily eliminate "threats." The real "protection" they have is that they are (so far) in continuing use. Renovation of YMCA and YWCAs could trigger seismic standards. The use of the State Historic Building Code could mitigate these threats. Increases in allowable height could intensify the threat level for these buildings.

Further Reading: For a detailed history of the YMCA as a building type, see Paula Lupkin, *Manhood Factories: YMCA Architecture and the Making of Modern Urban Culture*, 2010. For an early history of the YMCA, see Charles Howard Hopkins, *History of the Y.M.C.A. in North America*, 1951 (available online through Google Books).

F. Civic and Governmental Building Types

Alice Street Fire House, 817 Alice Street.

Charles S. Greene Library, 659 14th Street.

Alameda County Superior Courthouse, 1225 Fallon Street.

Alameda County Administration Building, 1221 Oak Street.

Main post office and federal building, 201 13th Street.

Oakland's civic and governmental buildings are located in three separate clusters throughout Downtown: Frank H. Ogawa Plaza in the central core, with the historic and contemporary City Halls; Civic Center, home to the historic post office, main library, convention center, Alameda County Courthouse, and other County buildings; and a third cluster on 7th Street just north of the I-880 corridor that includes the Alameda County jail and the Oakland Police Department headquarters. After World War II, the City of Oakland attempted to consolidate its governmental buildings into a traditional civic center near Lake Merritt, but the plan was never completed.

Although all of these buildings were constructed for governmental agencies, the uses vary dramatically—from municipal office buildings like Oakland City Hall, public meeting spaces like Oakland's Municipal Auditorium, to law enforcement functions such as the Glen E. Dyer Facility. As a result of the wide range of uses, the buildings are significantly different in form and size. In addition, the buildings were constructed over about eight decades spanning from early examples like the Carnegie Public Library (now the African American Museum & Library) in 1902 to the Glen E. Dyer Detention Facility c. 1976. Styles include Beaux Arts (City Hall, Carnegie Public Library, Alice Street Firehouse, and the U.S. Post Office), Classical Revival (Oakland's Municipal Auditorium), PWA Moderne (Alameda County Courthouse and Oakland Public Library), and Midcentury Modern (Oakland Police Department, Alameda County Administration Building, and Glen Dyer Detention Facility).

Notable examples of historic City of Oakland properties include:

- City Hall (1 Frank H. Ogawa Plaza, 1911-14, Palmer & Hornbostel)
- Oakland's Municipal Auditorium (10 10th Street, 1913-15, John Donovan et al.)
- Carnegie Public Library (now African American Museum & Library) (659 14th Street, 1902, Bliss & Faville)
- Oakland Police Department (455 7th Street, 1962-1963, Confer & Willis)
- Alice Street Firehouse (817 Alice Streets, 1909, Frederick Soderberg)
- Fire Alarm Building (1310 Oak Street, 1911, Walter J. Mathews)

Notable Alameda County buildings include:

- Alameda County Courthouse (1225 Fallon Street, 1936, William Corlett, Henry Minton, James Plachek, William Schirmer, and Carl Werner)
- Alameda County Administration Building (1221 Oak Street, 1961-1964, Ratcliff & Ratcliff, Van Bourg-Nakamura Associates)
- Glen E. Dyer Detention Facility (550 6th Street, c. 1976, architect unknown)

The most prominent historic federal building in Downtown Oakland is the U.S. Post Office (201 13th Street, 1932, James Wetmore and William A. Newman)

General Locations: around 14th Street and Broadway (city government), 12th Street and Oak Street (county government), and on 7th Street near Washington Street

Threat Level: varies by property

Rarity: rare

Notes: some are in districts identified by the City as Areas of Primary Importance (API) including Downtown Historic, Grove Street Residential, and Lake Merritt.

Although the threat of redevelopment is low, some Alameda County buildings have been identified as potential development sites.

Further Reading: For further reading see Beland Associates, et al., US Post Offices in California 1900-1941, Thematic Resources National Register of Historic Places Multiple Property Nomination, 1984; and Antoinette Lee, *Architects to the Nation: The Rise and Decline of the Supervising Architects Office*, 2000.

G. Institutional and Educational Building Types

Laney College near Lake Merritt.

Within the study area, the only educational buildings are at Laney College. Designed by Skidmore Owings and Merrill, the campus was constructed in the late 1960s and opened prior to the 1970-71 school year. The buildings of the original core are arranged in a grid around a central quad. Two layers of walkways connect the buildings: the lower level with walkways and tunnels and the upper with balustrade terraced walks, stairways, and ramps. "Laney Tower," the main administration building, and the lecture hall and dance studio opposite are both triangular in plan. Academic buildings ring the complex, each is square in plan arranged around an outdoor courtyard. The buildings feature running-bond and soldier course red brick, site-formed concrete, sharp corners, square and triangular shapes, black-framed windows, and heavy steel railings. A cursive neon "Laney College" sign dominates the school's highest parapet.

Character-defining features:

- Grid site plan
- Central quad
- Two layers of walkways
- Buildings with triangular plans
- Square buildings around outdoor courtyards
- Running-bond and soldier course red brick
- Site-formed concrete
- Sharp corners
- Square and triangular shapes
- Black-framed windows
- Heavy steel railings
- Neon "Laney College" sign

General Locations: Chinatown and Lakeside

Threat Level: low

Rarity: very rare

Notes: as part of any redevelopment or expansion of the Laney College Campus, require that a full historic resources evaluation be conducted as well as any properties slated for redevelopment around the College to fully understand the potential historic resources associated with this educational institution and to understand the significance of the campus within the body of work of Skidmore, Owings & Merrill.

Further Reading: For a more detailed analysis of the work of Skidmore, Owings & Merrill during the period of the design of Laney College, see Arthur Drexler and Axel Menges' *Architecture of Skidmore, Owings & Merrill, 1963-1973*.

H. Recreation and Entertainment Building Types

1. Movie Theaters (1910-1940)

Movie theater in Jack London Square, 100 Washington Street.

Fox Theater, 1807 Telegraph Avenue.

Betty Marvin notes in the 1995 Unreinforced Masonry Buildings historic context that theaters are commercial enterprises but have the character of a neighborhood focus or institution. The most prominent of Downtown Oakland's historic cinemas are the Paramount (2025 Broadway, 1930-31, Miller & Pflueger) and the Fox West Coast Oakland (1807-29 Telegraph Avenue, 1927-28, Weeks & Day and Maury Diggs).

Early storefront theaters, like 2520 Telegraph Avenue, have the appearance of commercial buildings, either one-story storefronts or storefront with office space on floors above (see Pre-War Small-Scale Commercial Buildings for a further description of this type). Other theaters like the Dufwin Theatre were designed for live performance but were converted to movie theater use.

Beginning in the 1910s, the theater building type evolved: the presence of the theater became more visible at the façade through the creation of a wide lobby spanning most or all of the first floor. In addition, prominent marquees and elaborate vertical blade signs, often with neon, were mounted above. In some designs, the auditorium extended to the upper floors of the façade, creating a large, highly ornamented, windowless, or near windowless, wall.[24] Elaborate lobbies and auditoriums matched the building exteriors' style. Large opulent versions of these theaters were called movie palaces. The Art Deco style was frequently employed for movie palaces: Oakland's Paramount is an excellent example. Eclectic exotic styles such as Baroque, Egyptian, Aztec, Mayan, Moroccan, Hindu, Spanish Gothic and others were also popular. The Middle Eastern/Indian-influenced Fox West Coast Theater is an elaborate example of an eclectic exotic movie palace.

Other cinemas and theaters that have changed uses include:[25]

- Dufwin Theatre (511-23 17th Street, 1928, Weeks & Day)
- 2520-32 Telegraph Avenue (1912, Sequoia. Theater now used as a commercial building)
- Pantages-Hippodrome (400-16 12th Street, 1912, O'Brien & Werner)

Character-defining features for purpose-built theaters:

- Large block-like massing
- Wide lobby space spanning most or all of the first floor
- Prominent marquees and blade signs, often with neon
- Highly ornamented windowless, or near windowless, walls above first floor
- Elaborately ornamented lobbies and auditoriums
- Ornate facades in Art Deco, Classical or eclectic exotic styles

[24] Richard W. Longstreth, *The Buildings of Main Street: A Guide to American Commercial Architecture* (Walnut Creek, CA: AltaMira Press, 2000) 51.
[25] Marvin, 61.

General Locations: central core and Jack London Square

Threat Level: varies by property

Rarity: very rare

Notes: some are in a district identified by the City as an Areas of Primary Importance (API), Downtown Historic.

Those that have found successful new uses are less threatened. In addition, the Fox West Coast Oakland is on the National Register of Historic Places and the Paramount is a National Historic Landmark.

Further Reading: David Naylor, *American Picture Palaces: The Architecture of Fantasy*, 1991; and David Naylor, *Great American Movie Theaters*, 1987.

I. Utilities, Infrastructure, and Transportation


Posey Tube near Jack London Square.

PG&E complex near Jack London Square.

Western Pacific Depot at 3rd and Washington Streets.

Parking garage at 13th and Madison Streets.

Utilities- and infrastructure-related buildings, including those associated with electricity and gas, water, telephone, transit, and the Port of Oakland, are generally located in the southern waterfront area. Although these buildings differ in use, they share some characteristics. In general, the buildings are block-like in massing, have flat roofs, and are monumental in character. The parking garage at 13th and Madison Streets is an exception.

For late nineteenth- and early twentieth-century examples of this type, facades are often symmetrical and formal. Stylistically the buildings vary and include the Art Deco Posey Tube, the Mission Revival Central Pacific Station, and the Classical Revival Western Pacific Depot. Despite the differences in overall style, all of the buildings from this period include some Classical elements: the most common are arched openings, arcades, blind arches, keystones, cornices, attached pilasters, modillions, dentil courses, and Classical molding. The buildings' walls are typically clad in stucco with cast terracotta ornament.

Notable examples include:

- PG&E Station C (600 block of Embarcadero West, 1888-1939, architect unknown)[26]
- Posey Tube (1928, Henry H. Meyers)
- Greyhound Bus Station (2103 San Pablo Avenue, 1926 altered in the 1950s)

The most prominent historic railroad-related properties in the study area are:

- Western Pacific Depot (470 3rd Street/300 Washington Street, 1910, W.H. Mohr)
- Central Pacific Station (464 7th Street, 1874, architect unknown)

Character-defining features for late nineteenth- and early twentieth-century examples:

- Block-like massing
- Monumental character
- Symmetrical facades
- Flat roofs
- Classical ornamentation, often cast terracotta
- Stucco cladding

General Locations: generally the southern waterfront

Threat Level: high

Rarity: very rare

Notes: some are in the West Waterfront Area of Secondary Importance (ASI).

[26] Marvin, 61.

Functional obsolescence and utility ownership create difficult circumstances for transfer and reuse. Some are in districts identified by the City as Areas of Primary Importance (API) including SP Railroad Industrial, PG&E Station "C," and Central Pacific.

Further Reading: City of Oakland, "Historic Context: Railroads and Shipping in West Oakland, 1850-1945"; and City of Oakland, "Historic Context: Industry in West Oakland, 1840-1945."

PALEO WEST archaeology

Archaeological Desktop Review in Support of the Downtown Oakland Specific Plan Project, Alameda County, California

Submitted to:

Urban Planning Partners
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Oakland CA, 94512

Technical Report 19-44

May 17, 2019

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May 17, 2019

Keywords: CEQA; Alameda County; Downtown Oakland Specific Plan; 850 acres

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MANAGEMENT SUMMARY

The City of Oakland (City) is proposing the Downtown Oakland Specific Plan Project (Project) to guide policy on the development of the City's Downtown area, with the goal of linking land use, transportation, economic development, open space, landscape design, historic preservation, cultural arts, and social equity in Oakland, Alameda County, California. PaleoWest Archaeology (PaleoWest) was contracted by Urban Planning Partners to conduct an archaeological desktop review of the 850-acre Project area in compliance with the California Environmental Quality Act (CEQA). The City is the Lead Agency for the purposes of the CEQA.

This report summarizes the methods and results of the cultural resource investigation of the Project area. This investigation included a cultural resource literature search, communication with the Native American Heritage Commission (NAHC) and interested Native American tribal groups and assisting the City with Senate Bill (SB) 18 consultation. No fieldwork was conducted for this cultural resource assessment; the entire Specific Plan area is fully developed and hardscaped. The purpose of the investigation was to determine the potential for the Project to impact historic resources for the purposes of CEQA.

A cultural resource records search and literature review was conducted on November 26, 2018, at the Northwestern Information Center of the California Historical Resource Information System housed at Sonoma State University, Rohnert Park. The records search indicated that no fewer than 74 previous studies have been conducted within ¼-mile of the Project area. In addition, 24 cultural resources, 15 historic-era resources (including two built resources), 6 prehistoric resources, and 3 resources of unknown age, have been recorded within the Project area. The historic-era resources include railroads, isolated manholes and fire hydrants, and historic era blocks. The prehistoric resources include a midden site with human remains, a single burial site, and four isolated artifacts (a mortar, two separate shells, and charmstone). The remaining resources of unknown age are all isolated shell scatters.

As part of the cultural resource assessment of the Project area, PaleoWest also requested a search of the Sacred Lands File (SLF) from the NAHC. Results of the SLF search indicate that there are no known Native American cultural resources within the immediate Project area but suggested contacting seven individuals/representatives of seven Native American tribal groups to find out if they have additional information about the Project area. All seven individuals were contacted. Three responses were received as a result of the outreach efforts. Mr. Valentin Lopez, Chairperson of the Amah Mutsun Tribal Band, indicated that the Project area is outside of their tribal ancestral territory. Irene Zwierlein, of the Amah Mutsun Tribal Band of Mission San Juan Bautista, requested to be notified of any ground disturbing activities. She has no additional information about sites in the area. Edward Ketchum of the Amah Mutsun Tribal Band stated that this is outside of their tribal territory.

In order to reduce potential impacts of the Project on known or potentially significant cultural resources, PaleoWest provides a set of five management recommendations including the survey and evaluation of all sites that could be potentially impacted by Project activities, and procedures for inadvertent discovery of human remains.

1.0 INTRODUCTION

The City of Oakland's Planning and Building Department, Bureau of Planning, is proposing the Downtown Oakland Specific Plan Project (Project) to guide policy on the development of the City's Downtown area, with the goal of linking land use, transportation, economic development, open space, landscape design, historic preservation, cultural arts, and social equity in Oakland, Alameda County, California. PaleoWest Archaeology (PaleoWest) was contracted by Urban Planning Partners to conduct an archaeological desktop review of the 850-acre Project area in compliance with the California Environmental Quality Act (CEQA). The City of Oakland (City) is the Lead Agency for the purposes of the CEQA.

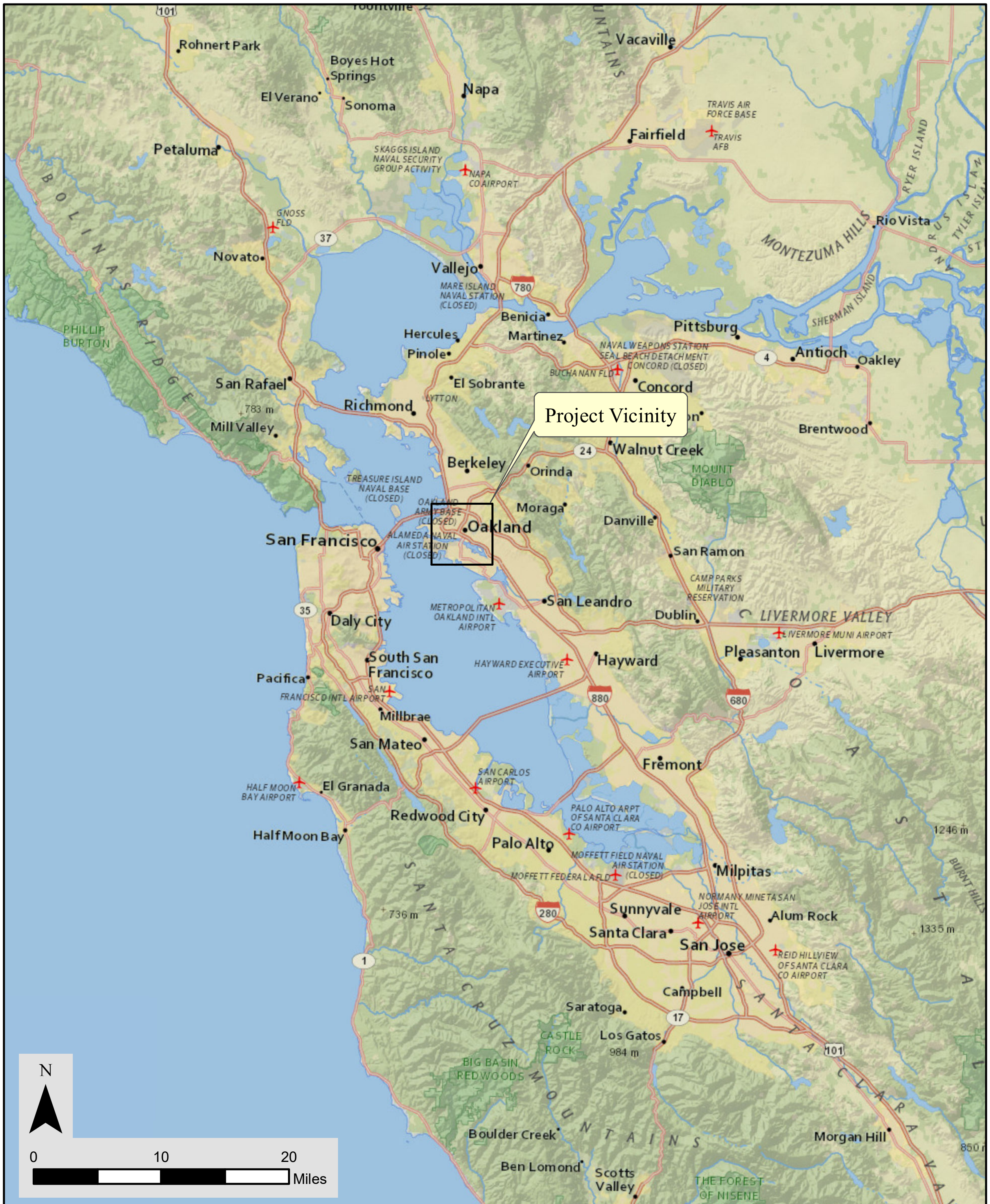
1.1 PROJECT LOCATION AND DESCRIPTION

The Downtown Oakland Specific Plan Area (Project area) encompasses approximately 850 acres and is generally bounded by 27th Street to the north; Interstate-980, Brush and Market Street to the west; the Jack London estuary waterfront and Embarcadero West to the south; and Lake Merritt and Channel to the east. (Figure 1-1). The Project area is located within unsectioned land in a developed section of Downtown Oakland, with no Township or Range, on the 1997 Oakland West, California 7.5' United States Geological Survey (USGS) topographic quadrangle (Figure 1-2).

The Downtown Oakland Specific Plan will provide a roadmap for how the area develops over the next 20 to 25 years through policy guidance on land use, transportation, housing, economic development, public spaces, cultural arts, and social equity. The Plan aims to ensure that Downtown remains a place of continuing growth and revitalization, as well as a valuable resource for the larger Oakland community through increased employment, housing, arts, and cultural opportunities. Supporting existing residents by growing existing businesses and the creative economy are important to creating a plan that serves both current and future residents.

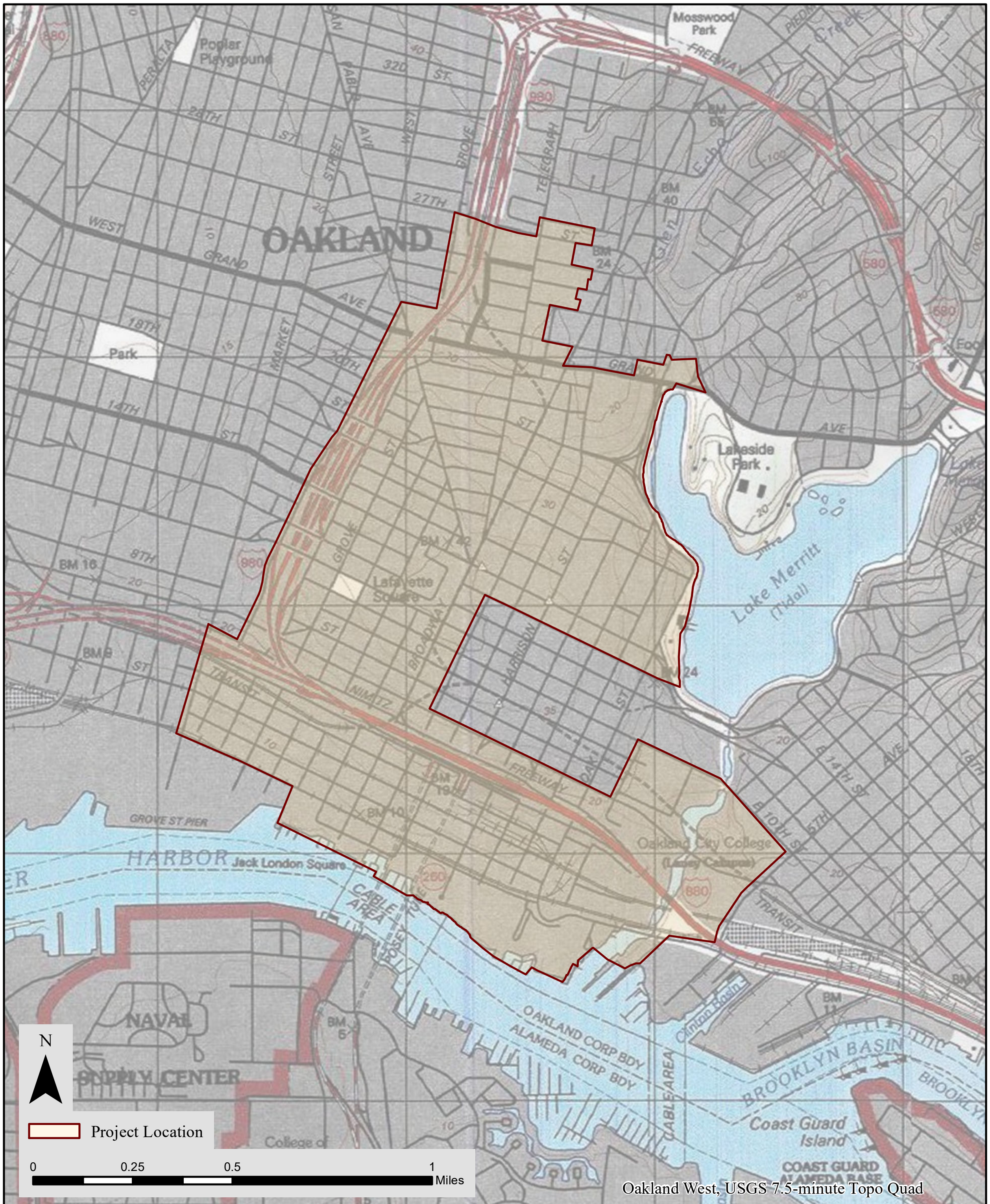
1.2 REPORT ORGANIZATION

This report documents the results of a cultural resource investigation conducted for the proposed Project. Chapter 1 has introduced the project location and description. Chapter 2 states the regulatory context that should be considered for the Project. Chapter 3 synthesizes the natural and cultural setting of the Project area and surrounding region. The results of the cultural resource literature and records search conducted at the Northwest Information Center (NWIC) and the Sacred Lands File (SLF) search, and a summary of the Native American communications is presented in Chapter 4. The management recommendations are provided in Chapter 5. This is followed by bibliographic references and appendices.



Project Vicinity Map

Figure 1
Downtown Oakland Specific Plan
Alameda County, CA



PALEO WEST archaeology

Project Location Map

Figure 2
Downtown Oakland Specific Plan
Alameda County, CA

2.0 REGULATORY CONTEXT

2.1 CALIFORNIA ENVIRONMENTAL QUALITY ACT

The proposed Project is subject to compliance with CEQA, as amended. Compliance with CEQA statutes and guidelines requires both public and private projects with financing or approval from a public agency to assess the project's impact on cultural resources (Public Resources Code Section 21082, 21083.2 and 21084 and California Code of Regulations 10564.5). The first step in the process is to identify cultural resources that may be impacted by the project and then determine whether the resources are "historically significant" resources.

CEQA defines historically significant resources as "resources listed or eligible for listing in the California Register of Historical Resources (CRHR)" (Public Resources Code Section 5024.1). A cultural resource may be considered historically significant if the resource is 45 years old or older, possesses integrity of location, design, setting, materials, workmanship, feeling, and association, and meets any of the following criteria for listing on the CRHR:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or,
4. Has yielded, or may be likely to yield, information important in prehistory or history (Public Resources Code Section 5024.1).

Cultural resources are buildings, sites, humanly modified landscapes, traditional cultural properties, structures, or objects that may have historical, architectural, cultural, or scientific importance. CEQA states that if a project will have a significant impact on important cultural resources, deemed "historically significant," then project alternatives and mitigation measures must be considered. Additionally, any proposed project that may affect historically significant cultural resources must be submitted to the State Historic Preservation Officer (SHPO) for review and comment prior to project approval by the responsible agency and prior to construction.

2.2 CALIFORNIA ASSEMBLY BILL 52

Signed into law in September 2014, California Assembly Bill 52 (AB 52) created a new class of resources – tribal cultural resources – for consideration under CEQA. Tribal cultural resources may include sites, features, places, cultural landscapes, sacred places, or objects with cultural value to a California Native American tribe that are listed or determined to be eligible for listing in the CRHR, included in a local register of historical resources, or a resource determined by the lead CEQA agency, in its discretion and supported by substantial evidence, to be significant and eligible for listing on the CRHR. AB 52 requires that the lead CEQA agency consult with California Native American tribes that have requested consultation for projects that may affect tribal cultural resources. The lead CEQA agency shall begin consultation with participating Native American tribes prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report. Under AB 52, a project that has potential to cause a substantial adverse change to a tribal cultural resource constitutes a significant effect on the environment unless mitigation reduces such effects to a less than significant level.

2.3 SENATE BILL 18 (SB 18)

As this project will consist of the drafting of a Specific Plan, the City is required to implement Government Code §65352.3, which requires local governments to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of protecting, and/or mitigating impacts to cultural places. In accordance with statutory requirements stipulated in Senate Bill 18 (SB 18):

> Prior to the adoption or any amendment of a general or specific plan, a local government must notify the appropriate tribes (on the contact list maintained by the NAHC) of the opportunity to conduct consultations for the purposes of preserving, or mitigating, impacts to cultural places located on land within the local government's jurisdiction that is affected by the proposed plan adoption or amendment . . . . [Supplement to General Plan Guidelines-2005].

3.0 SETTING

This section of the report summarizes information regarding the physical and cultural setting of the Project area, including the prehistoric, ethnographic, and historic contexts of the general area. Several factors, including topography, available water sources, and biological resources, affect the nature and distribution of prehistoric, ethnographic, and historic-period human activities in an area. This background provides a context for understanding the nature of the cultural resources that may be identified within the region.

3.1 ENVIRONMENTAL SETTING

The San Francisco Bay region is defined by the San Francisco Peninsula on the southwest, the Marin Peninsula on the northwest, and the Berkeley Hills and the Diablo Range on the east. The heart of the region is the San Francisco Bay system, which occupies a late Pliocene trough that flooded repeatedly during the Pleistocene interglacials, the last flooding occurring approximately 10,000 years ago. This trough extends to the south where it forms the Santa Clara and San Benito valleys and to the north where it forms the Petaluma, Napa, and Sonoma valleys (Moratto 1984:219). About 15,000 years ago the coastal shoreline extended more than 15 miles west of today's coastline. The California River flowed through the gorge that is now the Golden Gate and across what is today's submerged continental shelf, finally reaching the ocean far west of today's coastline (Moratto 1984:219).

Approximately 8,000 years ago, with the rising sea levels associated with the melting of continental glaciers, marine waters began to invade the San Francisco trough, creating a lush and bountiful marshland environment on the shores surrounding a newly-created bay. Elk, deer, and waterfowl inhabited the marshlands and surrounding environs. The waters of the bay and ocean produced abalone, oyster, mussels, clams, salmon, sturgeon, seabass, shark, perch, and many other fish species. Tule and marsh grasses provided raw material for a variety of implements fashioned by the earliest inhabitants.

The flanks of the coastal mountain ranges provide the biotic zone of the coastal grasslands. These mountain ranges are the product of tectonic activity caused by the collision of the Pacific continental plate and the continent of North America. A variety of geological composition and soil variability are the result of this activity. The geologic foundation underlying the coastal grasslands is largely granite bedrock intermixed with large areas of sedimentary shales, sandstones and composites of igneous rock (Brown 1997:86). Mineral resources for both tool manufacture and trade were abundant. Obsidian, prized for projectile points and blades, was available to the north at Anadel and Napa's Glass Mountain. Franciscan chert was found locally in streambeds and rock outcroppings while banded Monterey chert could be found in coastal deposits to the south (Moratto 1984:221).

Native grasses covered the middle-elevation hillsides in the coastal areas prior to the late 18th century. The grasses now covering the coastal grassland region are not the same as those that would have been found in the area 250 years ago. Although the types of animals inhabiting the coastal regions before the influx of humans are largely known, the type of plants that may have occupied the coastal grassland is not as well defined.

Annual precipitation in the San Francisco Bay region varies from 20 to 40 in. with precipitation concentrated in the fall, winter, and spring months. This climate is much like that found in the Mediterranean: mild, rainy winters, and warm, dry summers. After the first rain at the end of October or early November, the vegetation becomes and remains green, but not growing, until late February, when it begins to grow rapidly. By early May, grasses have usually changed to dry golden-colored and remain that way until fall (Brown 1985:86). Due to the cooling effects of the local Bay environment, temperatures in the Project area are mild in the summer, usually averaging 55-65°F (Moratto 1984:223).

3.2 PREHISTORIC SETTING

Research into local prehistoric cultures began in the early 1900s with the work of N. C. Nelson of the University of California at Berkeley. Nelson documented 425 shellmounds along the Bay shore and adjacent coast when the Bay was still ringed by salt marshes three to five miles wide (Nelson 1909:322-331). He maintained that the intensive use of shellfish, a subsistence strategy reflected in both coastal and bay shoreline middens, indicated a general economic unity in the region during prehistoric times, and he introduced the idea of a distinct San Francisco Bay archaeological region (Moratto 1984:227). Three sites, in particular, provided the basis for the first model of cultural succession in Central California, the Emeryville Shellmound (CA-ALA-309), the Ellis Landing Site (CA-CCO-295), and the Fernandez Site (CA-CCO-259) (Moratto 1984:227).

Investigations into the prehistory of the Central Valley of California, presaged by early amateur excavations in the 1890s, began in earnest in the 1920s. In the early 20th century, Stockton-area amateur archaeologists J. A. Barr and E. J. Dawson separately excavated a number of sites in the Central Valley and made substantial collections. On the basis of artifact comparisons, Barr identified what he believed were two distinct cultural traditions, an early and a late. Dawson later refined his work and classified the Central Valley sites into three "age-groups" (Schenck and Dawson 1929:402).

Professional or academic-sponsored archaeological investigations in central California began in the 1930s, when J. Lillard and W. Purves of Sacramento Junior College formed a field school and conducted excavations throughout the Sacramento Delta area. By seriating artifacts and mortuary traditions, they identified a three-phase sequence similar to Dawson's, including Early, Intermediate, and Recent cultures (Lillard and Purves 1936). This scheme went through several permutations (see Lillard et al. 1939; Heizer and Fenenga 1939). In 1948 and again in 1954, Richard Beardsley refined this system and extended it to include the region of San Francisco Bay (Beardsley 1948, 1954). The resulting scheme came to be known as the Central California Taxonomic System (CCTS) (Fredrickson 1973; Hughes 1994:1). Subsequently, the CCTS system of Early, Middle, and Late Horizons was applied widely to site dating and taxonomy throughout central California.

As more data were acquired through continued fieldwork, local exceptions to the CCTS were discovered. The accumulation of these exceptions, coupled with the development of radiocarbon dating in the 1950s and obsidian hydration analysis in the 1970s, opened up the possibility of dating deposits more accurately. Much of the subsequent archaeological investigation in central California focused on the creation and refinement of local versions of the CCTS.

In the 1960s and 1970s, archaeologists including Ragir (1972) and Fredrickson (1973) revised existing classificatory schemes and suggested alternative ways of classifying the prehistory of California. Fredrickson (1973:113-114) proposed four "major chronological periods" in prehistoric California: the Early Lithic Period (described as hypothetical), a Paleoindian Period, an Archaic Period, and an Emergent Period. The Archaic and Emergent Periods were further divided into Upper and Lower periods. Subsequently, Fredrickson (1974, 1994) subdivided the Archaic into Lower, Middle, and Upper. Milliken et al. (2007) have recently updated and further refined this scheme.

A series of "patterns," emphasizing culture rather than temporal periods, can be identified throughout California prehistory. Following Ragir, Fredrickson (1973:123) proposed that the nomenclature for each pattern relates to the location at which it was first identified, such as the Windmiller, Berkeley, and Augustine Patterns.

Various modifications of the CCTS (e.g., Bennyhoff and Hughes 1987; Fredrickson 1973, 1974; Milliken and Bennyhoff 1993) sustain and extend the system's usefulness for organizing our understanding of local and regional prehistory in terms of time and space. The cultural patterns identified in the Bay Area that in a general way correspond to the CCTS scheme are the Berkeley and Augustine patterns (for information on the Berkeley and Augustine Patterns see Fredrickson 1973, Milliken et al. 2007, Moratto 1984 and Wiberg 1997). Dating techniques such as obsidian hydration analysis or radiometric measurements can further increase the accuracy of these assignments.

Most recently, Milliken et al. (2007:99-123) developed what they term a "hybrid system" for the San Francisco Bay Area, combining the Early-Middle-Late Period temporal sequence with the pattern-aspect-phase cultural sequence. Dating of the cultural patterns, aspects, and phases was based on Dating Scheme D of the CCTS, developed by Groza (2002). Groza directly dated over 100 Olivella shell beads, obtaining a series of AMS radiocarbon dates representing shell bead horizons. The new chronology she developed has moved several shell bead horizons as much as 200 years forward in time.

Milliken et al.'s (2007) San Francisco Bay Area Cultural Sequence includes:

Early Holocene (Lower Archaic) from 8000 to 3500 B.C.
Early Period (Middle Archaic) from 3500 to 500 B.C.
Lower Middle Period (Initial Upper Archaic) from 500 B.C. to A.D. 430
Upper Middle Period (Late Upper Archaic) from A.D. 430 to 1050
Initial Late Period (Lower Emergent) from A.D. 1050 to 1550
Terminal Late Period, post-A.D. 1550

No archaeological evidence dating to pre-8000 B.C. has been located in the Bay Area. Milliken et al. (2007) posit that this dearth of archaeological material may be related to subsequent environmental changes that submerged sites, buried sites beneath alluvial deposits, or destroyed sites through stream erosion. A brief summary of the approach presented by Milliken et al. (2007) follows.

A "generalized mobile forager" pattern marked by the use of milling slabs and handstones and the manufacture of large, wide-stemmed and leaf-shaped projectile points emerged around the periphery of the Bay Area during the Early Holocene Period (8000 to 3500 B.C.). Beginning around 3500 B.C., evidence of sedentism, interpreted to signify a regional symbolic integration of peoples, and increased regional trade emerged. This Early Period lasted until ca. 500 B.C. (Milliken et al. 2007:114, 115).

Milliken et al. (2007:115) identify "a major disruption in symbolic integration systems" circa 500 B.C., marking the beginning of the Lower Middle Period (500 B.C. to A.D. 430). Bead Horizon M1, dating from 200 B.C. to A.D. 430, is described by Milliken et al. (2007:115) as marking a 'cultural climax' within the San Francisco Bay Area.

The Upper Middle Period (A.D. 430 to 1050) is marked by the collapse of the Olivella saucer bead trade in central California, abandonment of many Bead Horizon M1 sites, an increase in the occurrence of sea otter bones in those sites that were not abandoned, and the spread of the extended burial mortuary pattern characteristic of the Meganos complex into the interior East Bay. Bead Horizons M2 (A.D. 430 to 600), M3 (A.D. 600 to 800), and M4 (A.D. 800 to 1050) were identified within this period (Milliken et al. 2007:116).

The Initial Late Period, dating from A.D. 1050 to 1550, is characterized by increased manufacture of status objects. In lowland central California during this period, Fredrickson (1973, 1994) noted evidence for increased sedentism, the development of ceremonial integration, and status ascription. The beginning of the Late Period (ca. A.D. 1000) is marked by the Middle/Late Transition bead horizon. The Terminal Late Period began circa A.D. 1550 and continued until European settlement of the area.

3.3 ETHNOGRAHIC SETTING

This section provides a brief summary of the ethnography of the Project vicinity and is intended to provide a general background only. More extensive reviews of Ohlone ethnography are presented in Bocek (1986), Cambra et al. (1996), Kroeber (1970), Levy (1978), Milliken (1995), and Shoup et al. (1995).

The Project area lies within the region occupied by the Ohlone or Costanoan group of Native Americans at the time of historic contact with Europeans (Kroeber 1970:462-473). Although the term Costanoan is derived from the Spanish word Costaños, or "coast people," its application as a means of identifying this population is based in linguistics. The Costanoans spoke a language now considered one of the major subdivisions of the Miwok-Costanoan, which belonged to the Utian family within the Penutian language stock (Shipley 1978:82-84). Costanoan actually designates a family of eight languages.

Tribal groups occupying the area from the Pacific Coast to the Diablo Range and from San Francisco to Point Sur spoke the other seven languages of the Costanoan family. Modern descendants of the Costanoan prefer to be known as Ohlone. The name Ohlone is derived from the Oljon group, which occupied the San Gregorio watershed in San Mateo County (Bocek 1986:8). The two terms (Costanoan and Ohlone) are used interchangeably in much of the ethnographic literature.

On the basis of linguistic evidence, it has been suggested that the ancestors of the Ohlone arrived in the San Francisco Bay area about A.D. 500, having moved south and west from the Sacramento-San Joaquin Delta. The ancestral Ohlone displaced speakers of a Hokan language and were probably the producers of the artifact assemblages that constitute the Augustine Pattern previously described (Levy 1978:486).

Although linguistically linked as a family, the eight Costanoan languages actually comprised a continuum in which neighboring groups could probably understand each other. However, beyond neighborhood boundaries, each group's language was reportedly unrecognizable to the other. Each of the eight language groups was subdivided into smaller village complexes or tribal groups. These groups were independent political entities, each occupying specific territories defined by physiographic features. Each group controlled access to the natural resources of its territory, which also included one or more permanent villages and numerous smaller campsites used as needed during a seasonal round of resource exploitation. Chochenyo or East Bay Costanoan was the language spoken by the estimated 2,000 people who occupied the "east shore of San Francisco Bay between Richmond and Mission San Jose, and probably also in the Livermore Valley" (Levy 1978:485).

A chief, who inherited the position patrilineally and could be either a woman or man, provided leadership. The chief and a council of elders served mainly as community advisers. Specific responsibility for feeding visitors, providing for the impoverished and directing ceremonies, hunting, fishing, and gathering fell to the chief. Only during warfare was the chief's role as absolute leader recognized by group members (Levy 1978:487).

Extended families lived in domed structures thatched with tule, grass, wild alfalfa, or ferns (Levy 1978:492). Semisubterranean sweathouses were built into pits excavated in stream banks and covered with a structure against the bank. The tule raft, propelled by double-bladed paddles, was used to navigate across San Francisco Bay (Kroeber 1970:468).

Mussels were an important staple in the Ohlone diet, as were acorns of the coast live oak, valley oak, tanbark oak, and California black oak. Seeds and berries, roots and grasses, and the meat of deer, elk, grizzly, rabbit, and squirrel formed the Ohlone diet. Careful management of the land through controlled burning served to ensure a plentiful, reliable source of all these foods (Levy 1978:491).

The Ohlone usually cremated a corpse immediately upon death but, if there were no relatives to gather wood for the funeral pyre, interment occurred. Mortuary goods comprised most of the personal belongings of the deceased (Levy 1978:490).

The arrival of the Spanish in 1775 led to a rapid and major reduction in native California populations. Diseases, declining birth rates, and the effects of the mission system served to largely eradicate the aboriginal life ways. Brought into the missions, the surviving Ohlone, along with the Esselen, Yokuts, and Miwok, were transformed from hunters and gatherers into agricultural laborers (Levy 1978; Shoup et al. 1995). Following secularization of the mission system in the 1830s, numerous ranchos were established in the 1840s. Generally, the few Indians who remained were then forced, by necessity, to work on the ranchos.

In the 1990s, some Ohlone groups (e.g., the Muwekma, Amah, and Esselen further south) submitted petitions for federal recognition (Esselen Nation 2007; Muwekma Ohlone Tribe 2007). Many Ohlone are active in preserving and reviving elements of their traditional culture and are active participants in the monitoring and excavation of archaeological sites.

3.4 HISTORICAL SETTING

The historic period in the eastern San Francisco Bay region began with the Fages-Crespi expedition of 1770. The Fages party explored the eastern shore of San Francisco Bay, eventually reaching the location of modern Fremont, where they traded with the local Costanoans. Members of the expedition eventually sighted the entrance to San Francisco Bay from the Oakland Hills. In 1772, a second Fages expedition traveled from Monterey through what are now Milpitas, San Lorenzo, Oakland, and Berkeley, finally reaching Pinole on March 28, 1772 (Cook 1957:131). From there they traveled through the locations of today's Rodeo and Crockett to Martinez, made a brief foray into the delta region of the Central Valley, and then camped somewhere near Pittsburg or Antioch. On March 31, the Fages party began the return journey to Monterey. They traveled to the vicinity of today's Walnut Creek, turned south, and then made their way to the Danville area, where they spent the night. On April 1st, they passed through today's San Ramon, Dublin, and Pleasanton, finally arriving back in the area of Milpitas on the following day.

In 1776, the Anza-Font expedition traveled through the same area and also traded with residents of native villages encountered along the way. The most significant impact of the European presence on the local California natives, however, was not felt until the Spanish missions were established in the region (Cook 1957:132).

In 1775, Captain Juan Manuel Ayala's expedition studied the San Francisco Bay and ventured up the Sacramento and San Joaquin rivers. The first mission in the region was established the following year with the completion of Mission San Francisco de Asis (Mission Dolores) in San Francisco. Mission Santa Clara followed in 1777, and Mission San Jose in 1797. The Mission era lasted approximately 60 years and proved to be the downfall of the native inhabitants of the region, who were brought to the missions to be assimilated into a new culture as well as to provide labor for the missionaries. Diseases introduced by the early explorers and missionaries, and the contagions associated with the forced communal life at the missions killed a large number of local peoples, while changes in land use made traditional hunting and gathering practices increasingly difficult. Cook (1976) estimates that by 1832, the Costanoan population had been reduced from a high of over 10,000 in 1770 to less than 2,000.

In 1820, Sergeant Luis Maria Peralta received a grant of "10 square leagues" of land in the East Bay in recognition of his long, faithful military service in California. Peralta named his grant Rancho San Antonio. It comprised the land that lay from the water's edge to the crest of the Oakland hills between San Leandro Creek to the south and El Cerrito Creek to the north (Hendry and Bowman 1940), completely encompassing modern-day Oakland, Berkeley, Emeryville, Piedmont, Albany, Alameda, and a portion of San Leandro (Sher 1994:9).

Following the U.S. takeover of Alta California from Mexico in 1848, rancho lands began to be divided up and generally overrun by Anglo immigration to the area that was coincident with the land boom following the Gold Rush of 1849. Rancho San Antonio suffered the fate of most Mexican land grants in northern California, with squatters taking quasi-legal title to lands, and the courts denying title to the original grantees (Hendry and Bowman 1940).

Early surveyors mapped parts of Oakland just after the time that Peralta's dominance began to give way to recently-settled American interests. The 1856 Survey of the Coast of the United States depicts the area that would become known as downtown and West Oakland. Although streets had been laid out near Broadway, much of the dry land remained covered in groves of oaks and was relatively unpopulated. Marshland extended as far north as modern-day Fifth Street in several locations, and Gibbons Pier, located at the end of Seventh Street, was the only sign of the industry to come. Oakland's early growth was concentrated near the wharves and rail lines that eventually transformed the rural outpost into a transportation center for both passengers and goods.

The first growth period followed the completion of the San Francisco & Oakland Railroad (SF&ORR) along Seventh Street in 1863, connecting Oakland to San Francisco by way of San Jose and enticing real estate speculators who saw the area as ideal for development. Only six years after the local rail connection was completed, the Big Four (Collis Huntington, Leland Stanford, Charles Crocker and Mark Hopkins) made a decision that would shape Oakland's future. The Central Pacific Railroad would locate the western terminus of its transcontinental route at Oakland Point (Scott 1959:48). Buildings were clustered at the foot of Broadway as well as at the end of the alignment of Seventh Street, where wharves extended into the bay. The businesses and residents that would soon fill the area, however, did not yet surround the local and transcontinental rail lines. City streets had been surveyed, although many blocks remained wooded or had become home to only small numbers of people. The large lots characteristic of a more rural settlement pattern were still present, and the northeastern portions of the city were growing far slower than downtown and West Oakland.

By the turn-of-the-century, electric railways connected the most densely populated areas of Oakland to the outlying suburbs. Some previously urban middle-class families now chose a suburban life in the relatively open spaces of the East Bay, and the 1906 earthquake further encouraged some urban residents to relocate to outlying areas.

The Oakland, Antioch & Eastern Railroad (OA&E) was also depicted on the 1915 USGS map along an alignment that ran southeast to northwest, ½-mile east of the Project area. The OA&E, an interurban line, shared the Key system ferry terminal in Oakland and made travel between San Francisco and emerging suburbs and recreation areas easier and more cost efficient. Lines between Oakland and Sacramento were operational by 1913 and eventually became part of the Sacramento Northern Railroad (Groff 2011; Western Railway Museum 2014).

World War I was a catalyst for the shipyards on the Oakland waterfront, as new workers were enticed to the area by increased economic activity. Beth Bagwell summarized the growth of Oakland's hillside neighborhoods.

After the earthquake, Oakland experienced a housing construction boom; bungalows replaced the remaining hayfields in Rockridge, Claremont, and the district north to the Berkeley border. In the 1920s, the demand continued, spurred by the post-war prosperity and by the opening of new real estate tracts made easily reachable by the automobile. Piedmont, Montclair, Trestle Glen, and the Lakeshore district were among neighborhoods that experienced their greatest growth at this time. In 1923, a graph in the *Oakland Tribune Yearbook* showed a 900 percent increase in the number of dwellings built over the previous five years (Bagwell 1982:200).

Oakland did not escape the consequences of the Great Depression. Although the Southern Pacific Railroad (which merged with the Central Pacific Railroad in 1885) remained solvent, large numbers of jobs were lost. The San Francisco Bay Bridge was constructed between 1933 and 1936 in the midst of the Great Depression, and although it may not have been evident at the time, the bridge would significantly change a community that had built itself around its transportation terminals.

World War II brought a degree of economic relief through another round of increased shipbuilding, and it also saw the construction of the Oakland Army Base and the Naval Supply Center. As the outlying areas of Oakland continued to fill with new immigrants and residents who had left the city center, the oldest areas of downtown struggled, as automobiles and trucks began to dominate the transportation market that had defined Oakland's early growth.

4.0 CULTURAL RESOURCE INVENTORY

An archaeological literature review and records search was conducted at the NWIC, housed at Sonoma State University, Rohnert Park, on November 26, 2018. This inventory effort included the Project area and a $^{1}/_{4}$-mile radius around the Project area, collectively termed the Project study area. The objective of this records search was to identify prehistoric or historic archaeological resources that have been previously recorded within the Project study area during prior cultural resource investigations. No built environment resource files or information were requested as part of this search.

4.1 PREVIOUS CULTURAL RESOURCE INVESTIGATIONS

The records search results indicate that no less than 74 previous investigations have been conducted and documented within the Project study area since 1977. At least 55 of the previous studies encompass portions or all of the Project area, the remaining 19 resource investigations cover the Project study area. (Appendix A, Table 1 and Table 2). While numerous studies include portions of Downtown Oakland, only approximately 40 percent of the Plan Area has been surveyed.

4.2 CULTURAL RESOURCES REPORTED WITHIN THE STUDY AREA

The records search results indicated that 24 cultural resources have been previously recorded within the Project area (Table 4-1, Figure 3). These resources include 15 historic-era sites (including two built resources), 6 prehistoric sites, and 3 prehistoric sites of an unknown age. Each resource is briefly described in the table below. As a result of the previous cultural resource surveys, approximately 40 percent of the Project area has been surveyed.

Resource P-01-002190 is a Rail Bridge that is eligible for the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR) as part of the larger historic entity, the Western Pacific Railroad, which was evaluated in 2014 by Dean Duryea Jr. Resource P-01-003218 is Todd Shipyard, which includes a building (Main Shop Building) that is eligible for listing in the NRHP as a separate property. The building is a large concrete and steel frame structure that is arranged in three parallel bays separated by fire walls with a sawtooth roof on steel trusses. The resource was evaluated by M. Corbett and M. Hardy in 1988. Both of these resources are considered built resources and therefore will not be discussed further in this report. They are called out in Table 4-1 below.

Table 4-1: Cultural Resources within the Project Area

Primary Number/Trinomial	Resource Name/description	Age	Recorder	Eligibility Recommendation
P-01-000016*	Block 1 Cypress I-880 Replacement Project (historic city block dated between 1850 and 1910)	Historic	1994 (Jack Mc Ilroy, Anthropological Studies Center, Sonoma State University)	7R (not evaluated)
P-01-000243*	Block 3, Cypress I-880 Replacement Project (historic city block dated between 1860 and 1910)	Historic	1995 (Michael Meyer, Anthropological Studies Center, Sonoma State University)	7R (not evaluated)

P-01-000244*	Block 2, Cypress I-880 Replacement Project (historic city block dated between 1860 and 1910)	Historic	1994 (Jack Mc Ilroy, Anthropological Studies Center, Sonoma State University)	7R (not evaluated)
P-01-001783/CA-ALA-000623H	Segments of the Southern Pacific Railroad	Historic	1990 (G. Davis, Dames & Moore); 1994 (Brian Hatoff, Woodward-Clyde Consultants); 1996 (John W. Snyder, P.S. Preservation Services); 1997 (E. McKee, Caltrans District 4); 1998 (Elizabeth McKee, Caltrans District 4); 1999 (William Kostura, Caltrans District 4); 2001 (Tracy Bakic, Cindy Baker, PAR Environmental Services, Inc.); 2001 (K. Van Citters, K. Bisson, Van Citters: Historic Preservation LLC); 2002 (C. McMorris, A. Blosser, JRP); 2003 (Ward Hill, [none]); 2006 (Christopher Canzonieri, [none]); 2008 (David Buckley, William Self Associates); 2009 (J. Dougherty, J. P. Glover, PAR Environmental Services); 2009 (T. Martin, K. Frank, GANDA); 2010 (Lisa Holm, Lee Panich, Pacific Legacy, Inc.); 2015 (Kruger Frank, Erica Schultz, GANDA); 2015 (Daniel Shoup, A/HC); 2017 (Nicholas Radtkey, InContext)	6c (not eligible)
P-01-002190	Western Pacific Railroad (railway bridge)	Historic Built Resource	1994 ([none], Woodward-Clyde Consultants); 1997 (Celia McCarthy, Port of Oakland); 1998 (Elizabeth McKee, Caltrans District 4); 1999 (William Kostura, Caltrans District 4); 2002 (Sara Palmer, Judith Marvin, LSA Associates, Inc.); 2002 (Madeline Lanz, Jones & Stokes); 2002 (Madeline R. Lanz, Jones & Stokes); 2002 (C. McMorris, A. Blosser, JRP Historical Consulting); 2005 (B. Larson, JRP Historical Consulting); 2005 (B. Larson, JRP); 2006 (Christopher Canzonieri, [none]); 2009 (T. Martin, K. Frank, GANDA); 2014 (Dean M. Duryea, Jr., Statistical Research, Inc.)	3B (eligible)
P-01-010520*	Oakland Block 55 (6 features)	Historic	2002 (Thad M. Van Bueren, Caltrans District 4)	6C (not eligible)
P-01-010529*	ESA-OAK-011a (isolate railroad construction materials)	Historic	2000 (Dean Martorana, K. Ross Way, Environmental Science Associates)	7R (not evaluated)
P-01-010531*	ESA-OAK-001c (isolate railroad construction materials)	Historic	2001 (K. Ross Way, Christine O'Rourke, Environmental Science Associates)	7R (not evaluated)
P-01-010532	ESA-Oak-002 (artifact scatter)	Historic	2000 (K. Ross Way, Environmental Science Associates); 2014 (Ross Way, Robert Ramirez, Kevin Hunt, Rincon Consultants)	6C (not eligible)
P-01-010533*	ESA-Oak-003 (isolate fire hydrant)	Historic	2000 (K. Ross Way, Environmental Science Associates)	7R (not evaluated)

P-01-010534*	ESA-Oak-004 (isolate manhole)	Historic	2001 (K. Ross Way, Christine K. O'Rourke, Environmental Science Associates)	7R (not evaluated)
P-01-010535*	ESA-Oak-005 (isolate manhole)	Historic	2001 (K. Ross Way, Environmental Science Associates)	7R (not evaluated)
P-01-010861*	JLS-Site C (wharf planks)	Historic	2007 (Tom Young, William Self Associates)	6C (not eligible)
P-01-010919/CA-ALA-000631H*	Block 42 (Historic block)	Historic	2008 (Janet Pape, Caltrans District 4)	6C (not eligible)
P-01-000042/CA-ALA-000022*	Easton Building (isolate mortar)	Prehistoric	1928 ([none], San Francisco Chronicle); 1967 (Richard Schwartz, [none]); 2006 (Richard Schwartz, [none])	7R (not evaluated)
P-01-000091/CA-ALA-000314*	Nelson's 314 (Mortar & burial)	Prehistoric	1910 (Nelson, Pilling, [none]); 1952 (Meighan, Baumhoff, [none]); 1999 (J. Nelson, Far Western Anthropological Research Group)	7R (not evaluated)
P-01-010690*	AC-149 (Isolate clam & oyster shells)	Prehistoric	2012 (Suzanne Baker, Michael Smith, Archaeological/Historical Consultants)	7R (not evaluated)
P-01-010691*	AC-150 (isolate shell)	Prehistoric	2012 (Suzanne Baker, Michael Smith, Archaeological/Historical Consultants)	7R (not evaluated)
P-01-010796*	Fallon & 7th Street (burial & mortar)	Prehistoric	2006 (Richard Schwartz, [none])	7R (not evaluated)
P-01-010994*	Indian Charmstone	Prehistoric	2008 (Richard Schwartz, [none])	7R (not evaluated)
P-01-010693*	AC-152 (shell scatter)	Unknown	2004 (Suzanne Baker, Michael Smith, Archaeological/Historical Consultants)	7R (not evaluated)
P-01-010695*	AC-154 (shell fragments)	Unknown	2004 (Suzanne Baker, Michael Smith, Archaeological/Historical Consultants)	7R (not evaluated)
P-01-010696*	AC-155 (shell fragments)	Unknown	2004 (Suzanne Baker, Michael Smith, Archaeological/Historical Consultants)	7R (not evaluated)

***Indicates that the resource has been evaluated more than 10 years ago and will need to be reevaluated.**

Table 4-2
Cultural Resources Recorded within the Project Study Area

Primary/Trinomial	Resource Name	Age	Recording Events
P-01-000256	Block 4, Cypress I-880 Replacement Project (historic city block dated between 1870 and 1951)	Historic	1995 (Anmarie Medin, ASC SSU)
P-01-000257	Block 6, Cypress I-880 Replacement Project (historic city block dated between 1870 and 1951)	Historic	1995 (Anmarie Medin, Anthropological Studies Center, Sonoma State University)
P-01-000258	Block 7, Cypress I-880 Replacement Project (historic city block dated between 1900 and 1951)	Historic	1995 (Anmarie Medin, Anthropological Studies Center (SSU))
P-01-001783/CA-ALA-000623H	Segments of the Southern Pacific Railroad	Historic	1990 (G. Davis, Dames & Moore); 1994 (Brian Hatoff, Woodward-Clyde Consultants); 1994 (Brian Hatoff, Woodward-Clyde Consultants); 1994 (Brian Hatoff, Woodward-Clyde Consultants); 1994 (Brian Hatoff, Woodward-Clyde Consultants); 1994 (Brian Hatoff, Woodward-Clyde Consultants); 1994 (Brian Hatoff, Woodward-Clyde Consultants); 1994 (Brian Hatoff, Woodward-Clyde Consultants); 1994 (Brian Hatoff, Woodward-Clyde Consultants); 1996 (John W. Snyder, P.S. Preservation Services); 1996 (John W. Snyder, P.S. Preservation Services); 1996 (John W. Snyder, P.S. Preservation Services); 1997 (E. McKee, Caltrans District 4); 1998 (Elizabeth McKee, Caltrans District 4); 1999 (Elizabeth McKee, Caltrans District 4); 1999 (William Kostura, Caltrans District 4); 1999 (William Kostura, Caltrans District 4); 2001 (Tracy Bakic, Cindy Baker, PAR Environmental Services, Inc.); 2001 (K. Van Citters, K. Bisson, Van Citters: Historic Preservation LLC); 2002 (C. McMorris, A. Blosser, JRP); 2003 (Ward Hill, [none]); 2006 (Christopher Canzonieri, [none]); 2008 (David Buckley, William Self Associates); 2008 (David Buckley, William Self Associates); 2009 (J. Dougherty, J. P. Glover, PAR Environmental Services); 2009 (T. Martin, K. Frank, GANDA); 2009 (T. Martin, K. Frank, GANDA); 2010 (Lisa Holm, Lee Panich, Pacific Legacy, Inc.); 2015 (Kruger Frank, Erica Schultz, GANDA); 2015 (Daniel Shoup, A/HC); 2017 (Nicholas Radtkey, InContext)
P-01-001788	Block 5, Cypress I-880 Replacement Project (historic city block dated between 1870 and 1951)	Historic	1996 (Anmarie Medin, ASC, SSU)
P-01-003142	Bethlehem Shipbuilding Plant, Craneway No 1	Historic	1988 (Michael Crobett, Mary Hardy, Alameda City Planning Department)
P-01-003143	Bethlehem Shipbuilding Plant, Craneway No 2	Historic	1988 (Michael Crobett, Mary Hardy, Alameda City Planning Department)
P-01-003144	Bethlehem Shipbuilding Plant, Craneway No 3	Historic	1988 (Michael Crobett, Mary Hardy, Alameda City Planning Department)
P-01-003145	Bethlehem Shipbuilding Plant, Craneway No 4	Historic	1988 (Michael Crobett, Mary Hardy, Alameda City Planning Department)
P-01-003146	Bethlehem Shipbuilding Plant, Craneway No 5	Historic	1988 (Michael Crobett, Mary Hardy, Alameda City Planning Department)
P-01-003147	Bethlehem Shipbuilding Plant, Craneway No 6	Historic	1988 (Michael Crobett, Mary Hardy, Alameda City Planning Department)

P-01-003148	Bethlehem Shipbuilding Plant, Shipway 1	Historic	1988 (Michael Crobett, Mary Hardy, Alameda City Planning Department)
P-01-003149	Bethlehem Shipbuilding Plant, Shipway 2	Historic	1988 (Michael Crobett, Mary Hardy, Alameda City Planning Department)
P-01-003150	Bethlehem Shipbuilding Plant, Shipway 3	Historic	1988 (Michael Crobett, Mary Hardy, Alameda City Planning Department)
P-01-003151	Bethlehem Shipbuilding Plant, Shipway 4	Historic	1988 (Michael Crobett, Mary Hardy, Alameda City Planning Department)
P-01-003152	Bethlehem Shipbuilding Plant, Welding Platform	Historic	1988 (Michael Crobett, Mary Hardy, Alameda City Planning Department)
P-01-003157	Head Houses and Ways	Historic	1988 (Michael Corbett; Mary Hardy, Alameda City Planning Department); 2017 ([none], Carey and Co., Inc.)
P-01-003170	Associated Oil Co Wharf, Boat Marina	Historic	1988 (Michael Corbett, Mary Hardy, Alameda County Planning Department)
P-01-003171	Associated Oil Co Wharf, West End of Wharf; Rusty Pelican	Historic	1988 (Michael Corbett, Mary Hardy, Alameda County Planning Department)
P-01-003218	Todd Shipyard, Alameda	Historic	1988 (Michael Corbett, Mary Hardy, Alameda City Planning Department); 1998 (Michael Corbett, Mary Hardy, Basin Research Associates)
P-01-010530	ESA-OAK-001b (Railroad grade)	Historic	2000 (K. Ross Way, Environmental Science Associates)
P-01-010533	ESA-Oak-003 (saltwater fire suppression system feature)	Historic	2000 (K. Ross Way, Environmental Science Associates)
P-01-010534	ESA-Oak-004 (abandon manhole)	Historic	2001 (K. Ross Way, Christine K. O'Rourke, Environmental Science Associates)
P-01-000026/CA-ALA-000005	Nelson's 314a (prehistoric site)	Prehistoric	1910 (N. Nelson, A. Pilling, University of California, Berkeley); 2005 (Suzanne Baker, Archaeological/Historical Consultants); 2008 (Christian Gerike, Neal Kaptain, LSA Associates, Inc.)
P-01-010692	AC-151 (shell scatter)	Prehistoric	2012 (Suzanne Baker, Michael Smith, Archaeological/Historical Consultants)
P-01-010694	AC-153 (shell scatter)	Prehistoric	2004 (Suzanne Baker, Michael Smith, Archeological/Historical Consultants); 2008 (Christian Gerike, Neal Kaptain, LSA Associates, Inc.)
P-01-010695	AC-154 (shell scatter)	Unknown	2004 (Suzanne Baker, Michael Smith, Archaeological/Historical Consultants)
P-01-010696	AC-155 (shell scatter)	Unknown	2004 (Suzanne Baker, Michael Smith, Archaeological/Historical Consultants)

4.3 ADDITIONAL SOURCES

Additional sources consulted during the cultural resource literature review and records search include the National Register of Historic Places, the Office of Historic Preservation Archaeological Determinations of Eligibility, and the Office of Historic Preservation Directory of Properties in the Historic Property Data File. There are no listed historic properties, historical resources, or historic landmarks recorded within the Project study area.

4.4 NATIVE AMERICAN COORDINATION

PaleoWest contacted the NAHC, as part of the cultural resource assessment, on November 30, 2018, for a review of the SLF. The objective of the SLF search was to determine if the NAHC had any knowledge of Native American cultural resources (e.g., traditional use or gathering area, place of religious or sacred activity, etc.) within the immediate vicinity of the Project area. The NAHC responded with a letter dated December 4, 2018, stating The NAHC responded with a letter dated December 4, 2018, stating “a records search of the Native American Heritage Commission (NAHC) *Sacred Lands File* was completed for the area of potential project effect (APE) referenced above with negative results. Please note that the absence of specific site information in the *Sacred Lands File* does not indicate the absence of Native American cultural resources in any APE"; however, the NAHC requested that seven Native American tribal groups be contacted to elicit information regarding cultural resource related to the proposed Project (Appendix B). Seven tribal groups were contacted by email or standard mail on December 10, 2018.

As of January 14, three responses have been received. Irene Zwierlein, of the Amah Mutsun Tribal Band of Mission San Juan Bautista, requested to be notified of any ground disturbing activities in the Project area. She has no additional information regarding cultural resources in the area. Edward Ketchum of the Amah Mutsun Tribal Band stated that the Project is outside of their tribal territory. PaleoWest conducted follow up phone calls on January 14, 2019 to the remaining individuals that had not yet responded to the scoping letter: Katherine Perez of the Northern Valley Yokuts, Valentin Lopez of the Amah Mutsun Tribal Band, Anne Marie Sayers of the Indian Canyon Mutsun Band of Costanoan, and Charlene Nijmeh of the Muwekma Ohlone Indian Tribe of the SF Bay Area One response was received as a result of this follow up outreach attempt by Valentin Lopez of the Amah Mutsun Tribal Band; he stated the Project area is outside of his territory and therefore has no comments. An example of the SLF search request letter, the list of contacts, a sample scoping letter, and a contact/response matrix are included in Appendix B.

In addition to standard scoping and Native American outreach as a best management practice, PaleoWest assisted the City with SB 18 consultation. To facilitate this government-to-government consultation and on behalf of the City, PaleoWest contacted the NAHC by email on December 10, 2018 with a request for the SB 18 Tribal Consultation List. The NAHC provided a list of tribes that would be interested in consulting with the City during the planning stages leading to the development of the Downtown Oakland Specific Plan. SB 18 letters were sent out on behalf of the City. All formal SB 18 consultation is now handled directly with the City. In addition, the City is handling all AB 52 consultation.

5.0 MANAGEMENT RECOMMENDATIONS

As a result of the archaeological review effort, 24 cultural resources and isolates were identified with the Project area. These 24 resources include 15 historic-era archaeological resources (including two built resources), 6 prehistoric archaeological resources and 3 prehistoric resources of an unknown age.

In order to reduce the impacts of the Project on known or potentially significant archaeological resources, the following set of management recommendations are proposed. All management recommendations below apply to the 22 archaeological resources only, built resource management recommendations will not be discussed in this report.

5.1 DOCUMENTATION OF RESOURCES WITHIN THE PROJECT AREA

Impact 1. A significant impact would occur if complete and updated CEQA documentation (DPR 523 forms and eligibility recommendations) are not completed for any of the resources within the Project area that could be potentially impacted by Project activities.

Management Recommendation 1. A total of 22 historic and prehistoric archaeological sites and isolates were found to be present within the Project area. Any of these resources identified within the Specific Plan area that could potentially be impacted by Project activities should be revisited and evaluated/reevaluated. All resources that were evaluated more than 10 years ago shall be revisited and reevaluated, any resources that were not previously evaluated should be revisited and evaluated.

The appropriate DPR 523 forms (including the primary form, building, structure, object (BSO) form, sketch map, project location map, and continuation form as needed) should be completed for any resource that may be impacted by Project activities. Recommendations on the eligibility of the resource should also be provided and noted on the DPR forms. As required, these forms shall then be submitted to the Northwest Information Center (NWIC).

Resources determined to be ineligible for listing in the CRHR shall not require any additional resource management. For resources that are determined to be eligible for listing in the CRHR, impacts/adverse effects must be avoided, or such impacts must be mitigated. Mitigation of impacts to significant archaeological resources can include, but are not limited to, data recovery excavations, archaeological monitoring, detailed analytical studies, and archival research. All treatment and evaluation of resources should be conducted in consultation with the Lead Agency.

5.2 UNANTICIPATED DISCOVERY TREATMENT

Impact 2. A significant impact would occur if ground-disturbing activities (e.g., grading, excavation, drilling, etc.) associated with project construction disturb, damage, or destroy previously unknown buried historic or prehistoric features and deposits that could be considered significant historical resources.

Management Recommendation 2. In accordance with CEQA Guideline §15064.5 (f), should any previously unknown historic-period resources, including but not limited to glass, metal, ceramics, wood, privies, trash deposits or similar debris, be discovered in any of the Project areas during grading, trenching, or other on-site excavation(s), earthwork within 25 feet of these materials shall be stopped until a qualified professional archaeologist has an opportunity to evaluate the potential significance of the find and suggest appropriate mitigation(s), as determined necessary to protect the resource.

Should any previously unknown prehistoric resources in any of the Project areas, including but not limited to charcoal, obsidian or chert flakes, grinding bowls, shell fragments, bone, or pockets of dark, friable soils be discovered during grading, trenching, or other on-site excavation(s), earthwork within 25 feet of these materials shall be stopped until a qualified professional archaeologist have an opportunity to evaluate the potential significance of the find and suggest the appropriate steps to protect the resource.

According to CEQA Section 15126.4, avoidance is the preferred mitigation. Since CEQA provisions regarding the preservation of historic resources direct that adverse effects to historic resources shall be avoided, if feasible, the resource shall be protected from damaging effects through avoidance.

If avoidance of any previously undiscovered archaeological site is not feasible, data recovery shall be conducted in accordance with an approved Archaeological Data Recovery Plan (ADRP) to mitigate adverse effects to the significance of the site – the area of data recovery being limited to the area of adverse effect. This would fulfill CEQA requirements that the mitigation measure must be “roughly proportional” to the impacts of the project. A professional, qualified archaeologist shall conduct data recovery in compliance with CEQA Guideline Section §15064.5. Once the site has been properly tested, subject to data recovery, or preserved to the satisfaction of the professional archaeologist in compliance with CEQA Guideline §15064.5, the site can be further developed.

5.3 INADVERTENT DISCOVERY OF HUMAN REMAINS

Impact 3. Ground disturbing activities associated with construction activities in the Specific Plan area could disturb previously unknown human remains, including those interred outside of formal cemeteries. The potential to uncover Native American human remains exists in locations throughout California. Although not anticipated, human remains may be identified during site-preparation and grading activities.

Management Recommendation 3. Section 7050.5(b) of the California Health and Safety code will be implemented in the event that human remains, or possible human remains, are located during Project-related construction excavation. Section 7050.5(b) states:

> In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27492 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code.

The County Coroner, upon recognizing the remains as being of Native American origin, is responsible to contact the NAHC within 24 hours. The Commission has various powers and duties, including the appointment of a Most Likely Descendant (MLD) to the Project. The MLD, or in lieu of the MLD, the NAHC, has the responsibility to provide guidance as to the ultimate disposition of any Native American remains.

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Appendix A.
Cultural Resource Studies

Table 1: Cultural Resource Studies Within the Project Area

Report Number	Authors	Year	Title	Publisher
S-000549	Peter Banks and David A. Fredrickson	1977	An Archaeological Survey of the "Oakland Courts Building" Site, Oakland, Alameda County, California	California State College, Sonoma
S-002468	Adrian Praetzellis	1981	Preliminary Testing and Evaluation of Historic Archaeological Resources, Proposed Jefferson Street Parking Facility, Oakland, California.	Cultural Resources Facility, Sonoma State University
S-009190	Rebecca L. Anastasio, Donna M. Garaventa, Stuart A. Guedon, and Robert M. Harmon	1987	Cultural Resources Assessment of Flood Control FC-12-136 Line B, Glen Echo Creek, Located Near Grand Avenue and Harrison Street, City of Oakland, Alameda	Basin Research Associates, Inc.
S-011154		1989	Prehistoric Cultural Resource Evaluation for the Proposed Caltrans Headquarters Building in the City of Oakland, County of Alameda	Archaeological Resource Management
S-012289	Donna M. Garaventa, Michael R. Fong, Sondra A. Jarvis, and Angela M. Banet	1990	Archaeological Survey Report, I-880/Cypress Replacement Project, 04-ALA-880 P.M. 32.4/34.3, E.A. #04195-190271 MEQ 85001, Cities of Oakland and Emeryville, Alameda County, California	Basin Research Associates, Inc.
S-037362		1990	Historic Property Survey Report for the Proposed I-880 Reconstruction Project in the Cities of Oakland and Emeryville, Alameda County, ALA-880 32.12/34.31; ALA-580 45.99/46.95; ALA-80 1.99/3.39; 04195-190271 MEQ85001	California Department of Transportation, District 4
S-037362	Donna M. Garaventa, Michael R. Fong, Sondra A. Jarvis, and Angela M. Banet	1990	Archaeological Survey Report, I-880/Cypress Replacement Project, 04-ALA-880 32.12/34.31, 04-ALA-580 45.99/46.95, 04-ALA-80 1.99/3.39, E.A. #04195-190271 MEQ 85001, Cities of Oakland and Emeryville, Alameda County, California	Basin Research Associates, Inc.
S-037362		1990	Historic Architecture Survey Report for the Proposed Reconstruction of Interstate 880 Within the City Limits of Oakland and Emeryville, Alameda County, 04-ALA-880 32.12/34.31, 04-ALA-580 45.99/46.95, 04-ALA-80 1.99/3.79, 4195-190271 MEQ85001	California Department of Transportation
S-037362	Gary Knecht, Alex G. Chiappetta, Michael R. Corbett, Miriam Liskin, Gail G. Lombardi, Betty Marvin, Woodruff C. Minor, Donnalyn Polito, Christine Winans, and Aicha S. Woods	1990	Historic Architecture Survey Report, Part VII. A, Subarea A: City of Oakland	Oakland Cultural Heritage Survey
S-037362	Bonnie W. Parks, Denise O'Connor, and Stephen D. Mikesell	1990	Historic Architecture Survey Report Part VII. B, Subarea B: Emeryville and San Francisco-Oakland Bay Bridge Vicinity	California Departmetn of Transportation
S-037362	John W. Snyder	1990	Historic Architecture Survey Report Part VII. C, Subarea C: Southern Pacific Railroad Property and Interurban Railway Structures	Caltrans, District 4
S-037362	Kathryn Gualtieri	1990	FHWA900927X; I-880 Cypress structure, ER-1404 (1)	Office of Historic Preservation
S-037362		1990	First Addendum Historic Property Survey Report for the Proposed I-880 Reconstruction Project in the Cities of Oakland and Emeryville, Alameda County ALA-880 32.12/34.31; ALA-580 45.99/46.95; ALA-80 1.99/3.39 04195-190271 MEQ85001	California Department of Transportation
S-037362	Donna M. Garaventa and Sondra A. Jarvis	1990	First Addendum Archaeological Survey Report, I-880/Cypress Replacement Project 04-ALA-880 32.12/34.31, 04-ALA-580 45.99/46.95, 04-ALA-80 1.99/3.39, E.A.#04195-190271 MEQ 85001, Cities of Oakland and Emeryville, Alameda County, California	Basin Research Associates, Inc.
S-037362		1990	First Addendum Historic Architecture Survey Report for the Proposed Reconstruction of Interstate 880 within the City Limits of Oakland and Emeryville, Alameda County 04-ALA-880 32.12/34.31, 04-ALA-580 45.99/46.95, 04-ALA-80 1.99/3.79, 4195-19027 MEQ85001	California Department of Transportation
S-037362	Gary Knecht, Alex G. Chiappetta, Michael R. Corbett, Miriam Liskin, Gail G. Lombardi, Betty Marvin, Woodruff C. Minor, Donnalynn Polito, Christine Winans, and Aicha S. Woods	1990	First Addendum Historic Architecture Survey Report Part VII, Subarea F: City of Oakland	California Department of Transportation
S-012585	Suzanne Baker	1991	Archaeological Inspection, Oakland Federal Building Project, Oakland, California	Archaeological/Historical Consultants

S-037362		1991	Second Addendum Historic Property Survey Report for the Proposed Reconstruction of Interstate 880 within the City Limits of Oakland and Emeryville, Alameda County 04-ALA-880 32.12/34.31, 04-ALA-580 45.99/46.95, 04-ALA-80 1.99/3.79 4195-190270	California Department of Transportation
S-037362	Gary Knecht, Miriam Liskin, Gail G. Lombardi, Betty Marvin, and Christine Winans	1991	Second Addendum Historic Architecture Survey Report Part VII Subarea G: City of Oakland	California Department of Transportation
S-014853	David Chavez and Jan M. Hupman	1992	Archaeological Investigations for the City of Oakland Sewer Rehabilitation Projects, Alameda County, California: East 10th Street to East 18th Street / East 10th Street at 2nd Avenue to the Embarcadero	David Chavez and Associates
S-014854	David Chavez	1993	Archaeological Resources Investigations for the San Antonio Wet Weather Treatment Plant Project, Oakland, California	David Chavez & Associates
S-018536	Colin I. Busby	1996	Archaeology Services, City Administration Building - Project L74021, Final Monitoring Report (letter report)	Basin Research Associates, Inc.
S-019714	Rob Wurl	1996	UCB Presidents Office Development (letter report)	Lankford & Associates, Inc.
S-019714	Rob Wurl	1997	UCB Presidents Office Development (follow-up field visit) (letter report)	Lankford & Associates, Inc.
S-022820	Wendy J. Nelson, Tammara Norton, Larry Chiea, and Eugenia Mitsanis	2000	Cultural Resources Survey for the Level (3) Communications Long Haul Fiber Optics Project, Segment WS07: Oakland to San Jose	Far Western Anthropological Research Group, Inc.
S-023778	David Chavez and Jan M. Hupman	2000	Archaeological Resources Investigations for the EBMUD East Bayshore Recycled Water Project, Alameda County, California	David Chavez & Associates
S-025259		2000	Report of Archaeological Monitoring at the Oakland Telecom Project, Oakland, California	Holman & Associates
S-025648	Michael Meyer, Suzanne Stewart, Erica Gibson, Sherri Gust, Virginia Hellman, Madeline Hirn, Jack Mc Ilroy, Grace Ziesing, Adrian Praetzellis, Sunshine Psota, Maria Ribeiro, Peter Schulz, Margo Schur, and Elaine-Maryse Solari	2000	Block Technical Report: Historical Archaeology, I-880 Cypress Replacement Project, Block 3	Anthropological Studies Center, Sonoma State University
S-026045	Richard Carrico, Theodore Cooley, and William Eckhardt	2000	Cultural Resources Reconnaissance Survey and Inventory Report for the Metromedia Fiberoptic Cable Project, San Francisco Bay Area and Los Angeles Basin Networks	Mooney & Associates
S-032513	Glenn J. Gmoser	2000	Historic Property Survey Report for the Proposed Seismic Retrofit of the Interstate 880, "Fifth Avenue Overhead" in Oakland, Alameda County, 04-ALA-880 KP 47.9/49.9 (PM 30.3/30.9), EA 04-247-170601	California Department of Transportation, District 4
S-032513	William Kostura	2000	Historic Architecture Survey Report for The Proposed Seismic Retrofitting of Interstate Highway 880 in Oakland, Alameda County, 04-ALA-880, KP 47.9/49.9, PM 30.3/30.9, 04-175 EA 170601	California Department of Transportation
S-032513	Jack McIlroy, Jack Meyer, Annita Waghorn, and Maria Ribeiro	2000	Fifth Avenue Overhead Seismic Retrofit Project: Archaeological Survey Report and Sensitivity Study, 04-Ala-880-KP 47.9/49.9 in the City of Oakland, California, Alameda County, EA No. 17060K, Contract No. 04A0538	Anthropological Studies Center, Sonoma State University
S-024996		2001	Historic Property Survey Report, The 14th Street & Broadway Transit Center Streetscape Improvements Project	Caltrans
S-024996		2001	Historic Architectural Survey Report, The 14th Street & Broadway Transit Center Streetscape Improvement Project	Caltrans
S-024996	Knox Mellon and Michael G. Ritchie	2001	FHWA010521C; Broadway Transit Center Streetscape Improvements Project, Oakland, Alameda County	Office of Historic Preservation; Federal Highway Administration
S-025244	Heidi Koenig, Jack Mc Ilroy, and Jack Meyer	2001	Broadway/Jackson Street Interchange Improvement Project: Archaeological Survey Report, 04-Ala-880, KP 49.9/52.1 (PM 31.0/32.4) in the Cities of Oakland and Alameda, Alameda County, California	Anthropological Studies Center, Sonoma State University
S-025244	William Kostura	2001	Historic Architecture Survey Report for the Proposed Broadway-Jackson Street Interchange Improvements, Interstate 880, in Oakland, Alameda County, 04-ALA-880, KP 49.9/ 52.1 PM 31/32.4, 04-ALA-250/61, KP 0.0/3.2, PM 0.0/2.2, 04-219, EA 260000	California Department of Transportation

S-025646	Mary Praetzellis, Erica S. Gibson, Sherri Gust, Virginia Hellman, Madeline Hirn, Jack Mc Ilroy, Michael Meyer, Adrian Praetzellis, Sunshine Psota, Maria Ribeiro, Peter D. Schulz, Margo Schur, Elaine-Maryse Solari, Suzanne B. Stewart, Michael Stoyka, and Rosa White	2001	Block Technical Report: Historical Archaeology, I-880 Cypress Replacement Project, Block 1	Anthropological Studies Center, Sonoma State University
S-025647	Grace H. Ziesing, Mary Praetzellis, Erica S. Gibson, Sherri Gust, Virginia Hellman, Madeline Hirn, Jack Mc Ilroy, Michael D. Meyer, Adrian Praetzellis, Sunshine Psota, Maria Ribeiro, Peter Schulz, Margo Schur, Elaine-Maryse Solari, Suzanne B. Stewart, and Michael Stoyka	2001	Block Technical Report: Historical Archaeology, I-880 Cypress Replacement Project, Block 2	Anthropological Studies Center, Sonoma State University
S-027444		2001	Nextel Communications CA-2402B/Harrison-3rd Street (letter report)	Earth Touch, LLC
S-029474	Lorna Billat	2001	Nextel Cell Site No. CA-1119A, Webster/Posey Tube, Bridge #33-106R, Alameda County, California	Earth Touch, Inc
S-029536		2001	Nextel Communications (On-Air), CA-0850A Headquarters, 475 14th Street, Oakland, California.	Earth Touch, LLC
S-029539		2001	Nextel Communications, CA-1190A/ Highway 880-Embarcadero, 200 Fallon Street, Oakland, California.	Earth Touch, LLC
S-023778	David Chavez	2002	Archaeological Resources Investigations for the EBMUD East Bayshore Recycled Water Project, Alameda County, California: Supplemental Report	David Chavez & Associates
S-023778	Daivd Chavez and Jan M. Hupman	2002	Archaeological Resources Investigations for the EBMUD East Bayshore Recycled Water Project, Alameda County, California: Additional Pipeline Alignments	David Chavez & Associates
S-025244		2002	Historic Property Survey Report and Finding of No Historic Properties Affected for the Broadway-Jackson Street Interchange Improvement Project, Interstate 880 in the City of Oakland, Alameda County, 04-ALA-880 KP 49.9/52.1 (PM 31/32.4) and 04-ALA-260/61 KP 0.0/3.2 (PM 0.0/2.2), EA 04-219-260000	California Department of Transportation
S-025244	Thad M. Van Bueren, Jack Meyer, Brian A. Ramos, Jack McIlroy, and Heidi Kenig	2002	Report on Archaeological Testing for the Broadway-Jackson Interchange Improvement Project in the City of Oakland, California, 04-ALA-880, P.M. 31.0/32.4 (K.P. 49.9/52.1) - EA 04-260000	
S-028610	Michelle St. Clair	2003	Archaeological Survey and Record Search for the NSR MCI 1624 Franklin Street Fiber Optic Tie-In Project, Oakland, Alameda County (1303-01) (letter report)	Pacific Legacy, Inc.
S-028235	Adrian Praetzellis and Elaine-Maryse Solari	2004	Archaeological Sensitivity of the Thomas L. Berkeley Square Project Area, Oakland, California	Anthropological Studies Center, Sonoma State University
S-028235	Adrian Praetzellis	2004	Archaeological Research Design and Investigation Plan for the Thomas L. Berkeley Square Project Area, Oakland, California	Anthropological Studies Center, Sonoma State University
S-028235	Adrian Praetzellis	2004	Archaeological Test Excavations at Thomas L. Berkeley Square (QA544 33/04) (letter report)	Anthropological Studies Center, Sonoma State University
S-029306	Andrew Pulcheon	2004	A Cultural and Paleontological Resources Study for the Thomas L. Berkeley Square Project.	LSA Associates, Inc.
S-046249	Mary Praetzellis, Adrian Praetzellis, Marta Gutman, Paul R. Mullins, Adrian Praetzellis, Mary Praetzellis, and Mark Walker	2004	Putting the "There" there: Historical Archaeologies of West Oakland, Cypress Replacement Project Interpretive Report No. 2, I-880 Cypress Freeway Replacement Project, Alameda County, California	Anthropological Studies Center, Sonoma State University
S-046249	Adrian Praetzellis and Mary Praetzellis	2004	Chapter 1: The Loma Prieta Earthquake and its Aftermath	Anthropological Studies Center

S-046249	Robert Douglass	2004	Chapter 2: A Brief History of West Oakland	Anthropological Studies Center
S-046249	Adrian Praetzellis	2004	Chapter 3: Consumerism, Living Conditions, and Material Well-Being	Anthropological Studies Center
S-046249	Paul R. Mullins	2004	Chapter 4: Consuming Aspirations: Bric-A-Brac and the Politics of Victorian Materialism in West Oakland	Anthropological Studies Center
S-031175	Allen G. Pastron, Allison Vanderslice, Anna Engberg, Emily Wick, and Andrew Gottsfield	2005	Archaeological Sensitivity Study and Testing Program for the Uptown Oakland Project, City of Oakland, Alameda County, California.	Archeo-Tec
S-031997	David Stone and Karen Foster	2005	Historic Property Survey Report, BART Seismic Retrofit Project, Berkeley Hills Tunnel to Montgomery Street Station, Caltrans District 4, Alameda and San Francisco Counties, California	Science Applications International Corporation
S-031997	Jami Layton	2005	Historical Resources Evaluation Report, BART Seismic Retrofit Project, Berkeley Hills Tunnel to Montgomery Street Station, Alameda and San Francisco Counties, California	Caltrans District 4
S-031997		2005	Archaeological Survey Report, Bart Seismic Retrofit Project, Berkeley Hills Tunnel to Montgomery Street Station, Caltrans District 4, Alameda and San Francisco Counties, California	Caltrans District 4
S-031997		2005	Finding of No Adverse Effect, BART Seismic Retrofit Project, Berkeley Hills Tunnel to Montgomery Street Station, Caltrans District 4, Alameda and San Francisco Counties, California	Caltrans District 4
S-035853		2005	Finding of No Adverse Effect Metro PCS SF-11120A Webster Posey Tube, 370.5 Webster Street, Oakland, Alameda County, California	Earth Touch, Inc.
S-038249	Suzanne Baker	2005	Positive Archaeological Survey Report for the Alameda-Contra Costa Transit District's East Bay Bus Rapid Transit Project in Berkeley, Oakland, and San Leandro	Archaeological / Historical Constultants
S-032603	John Holson	2006	Archaeological Survey of Highway 880/7th Avenue Cell Site at 301 East 10th Street, Oakland, Alameda County. (Clayton Project No. 70-06598.00; PL. No. 922-145) (letter report)	Pacific Legacy
S-033061	Nancy Sikes, Cindy Arrington, Bryon Bass, Chris Corey, Kevin Hunt, Steve O'Neil, Catherine Pruett, Tony Sawyer, Michael Tuma, Leslie Wagner, and Alex Wesson	2006	Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project, State of California	SWCA Environmental Consultants
S-033061		2006	Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project, State of California	SWCA Environmental Consultants
S-038249	Milford Wayne Donaldson and Leslie T. Rogers	2006	FTA051227A; National Register of Historic Places Determination of Eligibility for Properties within the Area of Potential Effects for the Propsed AC Transit Bus Rapid Transit Project, Alameda County, California	Office of Historic Preservation; U.S. Department of Transportation
S-031175	Allen G. Pastron	2007	Archaeological Final Report for the Uptown Oakland Project, City of Oakland, Alameda County, California	Archeo-Tec
S-033061	Nancy E. Sikes	2007	Final Report of Monitoring and Findings for the Qwest Network Construction Project (letter report)	SWCA Environmental Consultants
S-033627		2007	Archaeological Final Report, 2nd and Broadway Project, City of Oakland, Alameda County, California	Archeo-Tec, Inc.
S-034055	James M. Allan, Leigh Martin, and Connie Moreno	2007	Archaeological Monitoring Report, Site C, Jack London Square Redevelopment Project, Oakland, Alameda County, California	William Self Associates, Inc.
S-035500	Christian Gerike and Neil Kaptain	2008	Historic Property Survey Report for the 12th Street Reconstruction Project, Oakland, Alameda County, California, Federal Aid #BRLS- 5012 (085), Caltrans District 4.	LSA Associates, Inc.
S-035500	Christian Gerike and Neal Kaptain	2008	Archaeological Survey Report for the 12th Street Reconstruction Project, Oakland, Alameda County, California, Federal Aid #BRLS-5012 (085), Caltrans District 4	LSA Associates, Inc.
S-035500	Michael Hibma and Christian Gerike	2008	Historical Resources Evaluation Project for the 12th Street Reconstruction Project, Oakland, Alameda County, California, Federal Aid #BRLS-5012 (085), Caltrans District 4, Volume I: Historical Resources Evaluation Report	LSA Associates, Inc.
S-035500	Michael Hibma and Neal Kaptain	2008	Findings of Effect for the 12th Street Reconstruction Project, Oakland, Alameda County, California, Federal Aid #BRLS-5012 (085), Caltrans District 4	LSA Associates, Inc.

S-035853	Lorna Billat	2009	Collocation ("CO") Submission Packet, FCC Form 621, Webster Posey Tunnel, SF-11120A	Earth Touch, Inc.
S-038249	Suzanne Baker	2010	Historic Property Survey Report, the Alameda County Transit District's East Bay Bus Rapid Transit Project in Berkeley, Oakland, and San Leandro	Archaeological/Historical Consultants
S-038249	Suzanne Baker	2010	Addendum to Positive Archaeological Survey Report for the Alameda County Transit District's East Bay Bus Rapid Transit Project in Berkeley, Oakland, and San Leandro, California	Archaeological/Historical Consultants
S-038249	Suzanne Baker	2010	Addendum Historic Property Survey Report, the Alameda County Transit Project in Berkeley, Oakland, and San Leandro	Archaeological/Historical Consultants
S-038249	Suzanne Baker	2010	Second Addendum to Positive Archaeological Survey Report for Alameda County Transit District's East Bay Bus Rapid Transit Project in Berkeley, Oakland, and San Leandro, California	Archaeological/Historical Consultants
S-038628	Carrie Wills	2010	Cultural Resources Records Search & Site Visit For T-Mobile West Corporation a Delaware Corporation Candidate BA12033-D (PG&E Pole Cap Posey Tube), Front of 425 Harrison Street, Oakland, Alameda County, CA (letter report)	Michael Brandman Associates
S-038895	Allison Vanderslice	2011	Archaeological Monitoring for the Oakland Power Plant Site Assessment for Remedial Designs Project in the City of Oakland, CA (letter report)	Pacific Legacy
S-039656	Carrie D. Wills and Kathleen A. Crawford	2012	Cultural Resources Records Search and Site Visit Results for Sprint Nextel Candidate FNO3XC008-C (Hein) 315 15th Street, Oakland, Alameda County, California (letter report)	Michael Brandman Associates
S-039970	Jessica Tudor and Kathleen A. Crawford	2012	Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC, Candidate BA02012A (PL012 Grand-Beacon Storage), 2227 San Pablo Avenue, Oakland, Alameda County, California	Michael Brandman Associates
S-040615	Cher L. Peterson and Kathleen A. Crawford	2012	Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC, Candidate BA02001A (PL001 Downtown Oakland), 1714 Franklin Street, Oakland, Alameda County, California (letter report)	Michael Brandman Associates
S-044827	Kathryn Emmitt Kay	2012	Submission Packet, FCC Form 621, for Proposed Collocation Project, 1415 Harrison Street, Oakland, Alameda County, CA, 14th Street & Harrison Street / CC4233, EBI Project Number: 61126449 (letter report)	EBI Consulting
S-043282	Carrie D. Wills and Kathleen A. Crawford	2013	Cultural Resources Records Search and Site Visit for Crown Castle Candidate Oakland Tunnels (Posey Tube & Webster Tube), Nimitz Freeway and Harrison Street and Nimitz Freeway and Webster Street, Oakland, Alameda County, California (letter report)	Michael Brandman Associates
S-043321	Carrie D. Wills and Kathleen Crawford	2013	Cultural Resources Records Search and Site Visit Results for AT&T Mobility, LLC Candidate CCL00727 (Harrison - 17th), 1814 Franklin Street, Oakland, Alameda County, California, FA No. 100087930 (letter report)	Michael Brandman Associates
S-045417	Frances Schierenbeck and Karen Reichardt	2014	Historic Property Survey Report; 04-ALA-880 PM 30.775-30.791; Hanlon Lead Bridge Replacement	Caltrans District 4
S-045417	Karen Reichardt	2014	Archaeological Survey Report for the Proposed Hanlon Lead Bridge Replacement Project, Lake Merritt, Oakland, Alameda County, CA 04-ALA-880 PM 30.5/30.5	Caltrans District 4
S-045444	Vicki Beard	2014	Historic Property Survey Report, planned modifications to the Harrison Street/20th Street intersection, construction of sidewalks and a running trail along Lakeside Drive and Harrison Street, landscape modifications to Lake Merritt and Snow Park, street and pathway lights, new catch basins, and modifications to utilities, 04-ALA, STP5012(123), Oakland	Tom Origer & Associates
S-046408	Robert Ramirez	2015	Historic Property Survey Report, District 4, Alameda County, HP2IL-5012 (122), City of Oakland, Proposed Lake Merritt Imporvement Project at the Intersection of Grand Avenue at Bellevue Avenue (west); Access Improvements to Children's Fairyland; And Access Improvements to the Garden Center	Rincon Consultants; Caltrans
S-046408	James Steely and Hannah Haas	2015	Historical Resourves Evaluation Report for the Lake Merritt Improvement Project, Oakland, Alameda County, California, HP2IL-5012 (122)	Rincon Consultants
S-046408	Robert S. Ramirez and Hannah Haas	2015	Archaeological Survey Report for the Lake Merritt Improvement Project, Oakland, Alameda Coutny, California, HP2IL-5012 (122)	Rincon Consultants
S-046408	Shannon Carmack	2015	Finding of No Adverse Effect Finding of No Adverse Effect with Standard Conditions - SOIS/ESA Action Plan for the Lake Merritt Improvement Project, Oakland, Alameda County, California HP21L 5012(122)	Rincon Consultants
S-046409	Robert Ramirez	2015	Historic Property Survey Report, District 4, Alameda County, STPL 5012 (123), Oakland, Proposed Lakeside Green Streets Project	Rincon Consultants, Inc.

S-046409	James Steely and Hannah Haas	2015	Historical Resources Evaluation Report for the Lakeside Green Streets Project, Oakland, Alameda County, California, STPL 5012 (123)	Rincon Consultants
S-046409	Robert S. Ramirez and Hannah Haas	2015	Archaeological Survey Report for the Lakeside Green Streets Project, Oakland, Alameda County, California, STPL 5012 (123)	Rincon Consultants
S-046409	Shannon Carmack	2015	Finding of No Adverse Effect with Standard Conditions-SOIS/ESA Action Plan for the Lakeside Green Streets Project, Oakland, Alameda County, California	Rincon Consultants
S-047078	Suzanne Baker	2015	Historic Property Survey Report, Streetscape Improvements to Martin Luther King Jr. Way between West Grand Avenue and 40th Street, Alameda County, California	Archaeological/Historical Consultants
S-047078	Suzanne Baker	2015	Archaeological Survey Report, Martin Luther King Jr. Way Streetscape Project, From West Grand Avenue to 40th Street, City of Oakland, Alameda County, California, Federal Project No. CML 5012 (128)	Archaeological/Historical Consultants
S-048021	Carrie D. Wills and Kathleen A. Crawford	2015	FCC Form 621 Collocation Submission Packet: BA02011A (PL011 Harbor - Jack London), 101 Washington Street, Oakland, CA 94607	Environmental Assessment Specialists, Inc.
S-048021	Carrie D. Wills and Kathleen A. Crawford	2015	Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC Candidate BA02011A (PL011 harbor - Jack London), 101 Washington Street, Oakland, Alameda County, California (letter report)	Environmental Assessment Specialists, Inc.
S-048021	Carrie D. Wills and Kathleen A. Crawford	2015	Direct APE Historic Architectural Assessment for T-Mobile West, LLC, Candidate BA02011A (PL011 Harbor - Jack London), 101 Washington Street, Oakland, Alameda County, California (letter report)	Environmental Assessment Specialists, Inc.
S-048021	Julianne Polanco	2015	FCC_2015_1102_004: BA02011A (PL011 Harbor-Jack London) 101 Washington Street, Oakland, Collocation	Office of Historic Preservation
S-047792	Carolyn Losee	2016	Cultural Resources Investigation for AT&T CCL00727 "Harrison - 17th" 1814 Franklin Street, Oakland, Alameda County, California 94612 (letter report)	Archaeological Resources Technology
S-047792	Julianne Polanco	2016	FCC_2016_0624_003; CCL00727 "Harrison-17th" 1814 Franklin Street, Oakland, Collocation	Office of Historic Preservation
S-047792	Carolyn Losee	2016	FCC Wireless Telecommunication Bureau Collocation (“CO”) Submission Packet, FCC Form 621, AT&T CCL00727 "Harrison - 17th" 1814 Franklin Street, Oakland, CA 94612	Archaeological Resources Technology
S-047804	Carolyn Losee	2016	Cultural Resources Investigation for AT&T Mobility CCL04233 "14th Street & Harrison Street" 1415 Harrison Street, Oakland, Alameda County, California 94612 (letter report)	Archaeological Resources Technology
S-047804	Stephen Geist	2016	FCC Form 621 Collocation Submission Packet/Rooftop Facility Collocation Modification, ATT Name: "14th Street & Harrison Street/ AT&T ID: CCL04233/ FA 10150834, 1415 Harrison Street, Oakland, Alameda County, CA 94612	Geist Engineering & Environmental Group Inc
S-047804	Carolyn Losee and Julianne Polanco	2016	FCC_2016_0705_005, CCL014233 "14th Street & Harrison Street, 1414 Oakland Street, Oakland, Collocation	Geist Engineering & Environmental Group Inc
S-048565	Heidi Koenig	2016	South Interceptor 3rd Street Rehabilitation Project East Bay Municipal Utility District Oakland, Alameda County, Phase I Cultural Resources Survey Report	Environmental Science Associates

Table 2: Cultural Resource Studies Within the Project Study Area

Report Number	Authors	Year	Title	Publisher
S-001230	David Chavez	1978	A Cultural Resources Evaluation of the Alameda Marina Village Project Location (letter report).	N/A
S-009537	Donna M. Garaventa, Rebecca L. Anastasio, Colin I. Busby, and Melody E. Tannam	1987	Historic Property Survey Report for a Parcel at 1220 Harrison Street Between 12th and 13th Streets, City of Oakland, Alameda County, California	Basin Research Associates, Inc.
S-018228	Mary L. Maniery, Cindy Baker, and Keith Syda	1996	An Archaeological Evaluation of the Fleet Industrial Supply Center - Alameda Annex/Facility, and Naval Air Station, Alameda Family Housing (East and North), Alameda County, California	PAR Environmental Services, Inc.
S-021561	Colin I. Busby and Stuart A. Guedon	1998	Cultural Resources Assessment, Glen Echo Creek (Zone 12, Line B) Drainage Improvements Project from about 28th to 30th Streets, City of Oakland, Alameda County, California (letter report)	Basin Research Associates
S-025108	Lorna Billat	2002	Nextel Communications Evaluation of Proposed Cellular Facility (Nextel Site Number CA-1086C/ Clinton Basin) in Oakland, California (letter report)	Earth Touch, LLC
S-025649	Mary Praetzellis, Suzanne B. Stewart, Erica S. Gibson, Lori Hager, Virginia Hellmann, Madeline Hirn, Jack Mc Ilroy, Michael D. Meyer, Adrian Praetzellis, Mary Praetzellis, Sunsjine Psota, Maria Ribeiro, Margo Schur, Elaine-Maryse Solari, Suzanne B. Stewart, Michael Stoyka, Rose White, Nancy Olmsted, and Roger W. Olmsted	2001	Block Technical Report: Historical Archaeology, I-880 Cypress Replacement Project, Blocks 4, 5, 6 and 9	Anthropological Studies Center, Sonoma State University
S-031696	Heather Price	2006	BART OKS Radio Site Project, Alameda County, California (letter report)	William Self Associates
S-031733	Dana E. Supernowicz	2006	Collocation ("CO") Submission Packet, FCC Form 621, Min Tong Herbs, BA-12550Z	Earth Touch, Inc.
S-031733		2006	Visual Assessment of the Min Tong Herbs Project, T-Mobile Site No. BA-12550Z, 318 7th Street, Oakland, Alameda County, California 94607	Historic Resource Associates
S-035940	Carolyn Losee	2009	Cultural Resources Investigation for Verizon Site #123229 "Laney College" 601-715 E. 8th Street (aka 740-5th Avenue) Oakland, CA 94606	Archaeological Resources Technology
S-035988	Brad Brewster and Heidi Koenig	2009	Alta Bates Summit Medical Center Project: Cultural Resources Survey Report	ESA
S-036527	Brian Hatoff	2009	Collocation ("CO") Submission Packet; FCC Form 621: 221 Oak Street, Oakland, Alameda County, California	URS Corporation
S-037000	Carolyn Losee	2010	Cultural Resources Investigation for Clearwire #CA-SFO0168A "Alameda", 2394 Mariner Square Drive, Alameda City and County, California (letter report)	Archaeological Resources Technology
S-038198	Sunshine Psota and David G. Bieling	2010	Archaeological Survey Report for a 28,910 Square-Foot Parcel at 11th and Jackson in Oakland, Alameda County, California	Holman & Associates
S-039694	David R. Cohen and Kathleen A. Crawford	2012	Cultural Resources Records Search and Site Visit Results for Sprint Nextel Candidate FN03XC009-D (Barn Hill Construction), 2394 Mariner Square Drive, Alameda, Alameda County, California (letter report)	Michael Brandman Associates
S-043154	Lorna Billat	2013	Collocation Submission Packet, Madison Street & 7th Street, CNU4234	Earth Touch, Inc.
S-044360		2014	Archaeological Sensitivity Study for the Brooklyn Basin Project, Phases I and II, Oakland, Alameda County, California	Archeo-Tec
S-044360		2018	Final Archaeological Resources Report for the Brooklyn Basin Project, Phases I and II, Oakland, Alameda County, California	Archeo-Tec
S-045621	Hisashi Sugaya	2014	Implementation of Mitigation Measures, Environmental Impact Report, Broadway-West Grand Mixed-Use Project, Oakland, California (November 19, 2004). Property: 442-448 23rd Street, Oakland, California	Carey & Co. Inc.
S-048344	Daniel Shoup	2016	Historic Property Survey Report: International Boulevard Pedestrian Lighting and Sidewalk Repair Project, Oakland, Alameda County, California 04-ALA ATPL 5012 (132)	Archaeological/Historical Consultants

S-048344	Daniel Shoup	2016	Archaeological Survey Report: International Boulevard Pedestrian Lighting and Sidewalk Repair Project, Oakland, Alameda County, California 04-ALA ATPL 5012 (132)	Archaeological/Historical Consultants
S-048844	Beatrice Cox and Darryl Dang	2013	Cultural Resources Constraints Report: GPRP 25th San Pablo, Alameda County	Garcia and Associates
S-048844	Kruger Frank	2015	Cultural Resources Monitoring Log: GPRP 25th San Pablo, Oakland, Alameda California	Garcia and Associates
S-048844	Kruger Frank	2015	Cultural Resources Monitoring Log: GPRP 25th San Pablo, Oakland, Alameda County, California	Garcia and Associates

Appendix B.
Native American Coordination

Additional Information

- California Native Americans
- Cultural Resources
- Strategic Plan
- Commissioners
- Federal Laws and Codes
- State Laws and Codes
- Local Ordinances and Codes
- Additional Information
- Return to CNAHC Home Page

Sacred Lands File & Native American Contacts List Request

NATIVE AMERICAN HERITAGE COMMISSION
915 Capitol Mall, RM 364
Sacramento, CA 95814
(916) 653-4082
(916) 657-5390 – Fax
nahc@pacbell.net

Information Below is Required for a Sacred Lands File Search

Project: Downtown Oakland Specific Plan

County Alameda

USGS Quadrangle

Name Oakland West 7.5' (1997) - see attached map

Township N/A Range N/A Section(s) unsectioned

Company/Firm/Agency:
PaleoWest

Contact Person: Christina Alonso

Street Address: 61d Avenida de Orinda

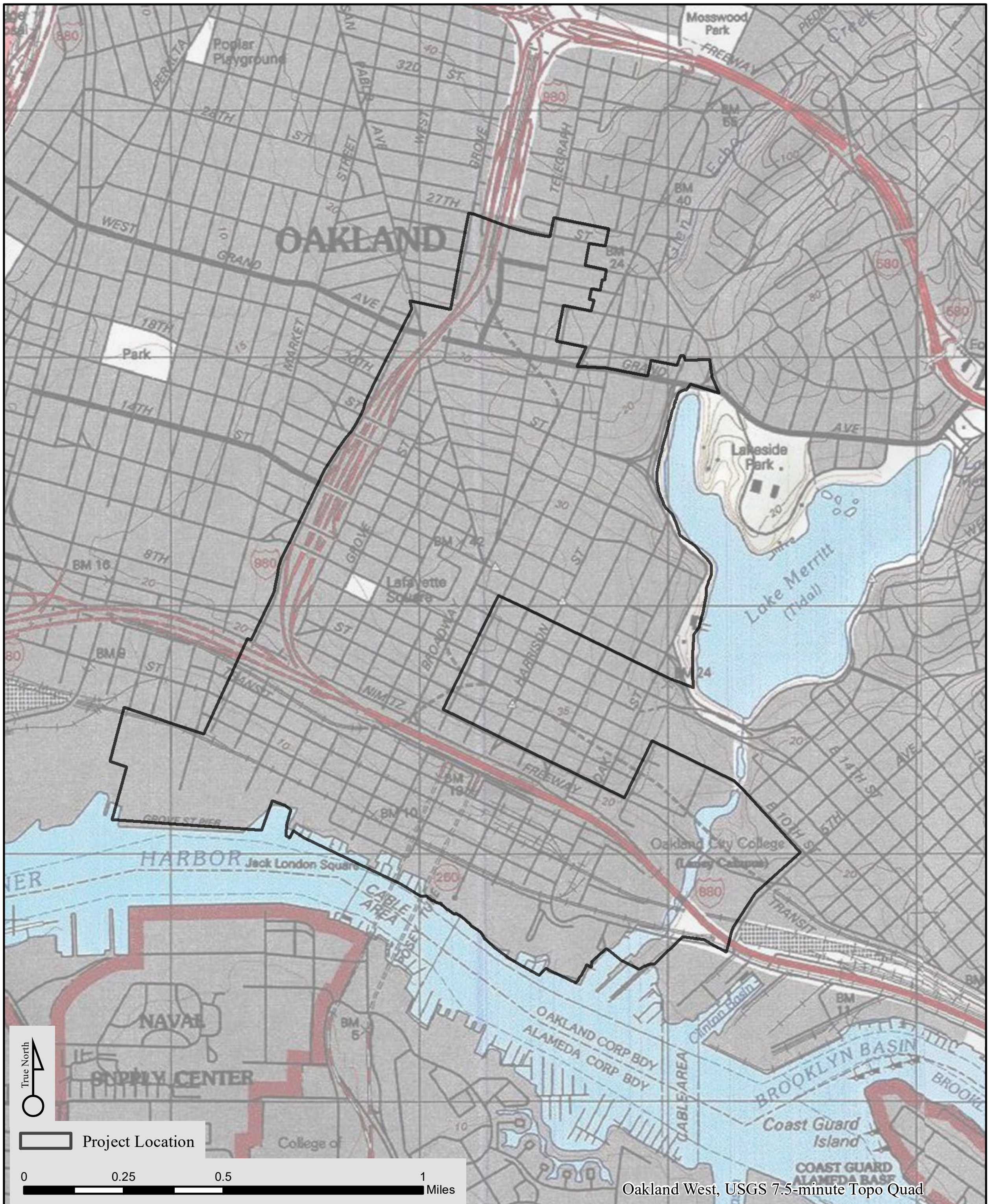
City: Orinda, CA Zip: 94563

Phone: (925) 253-9070

Fax: (925) 254-3553

Email: calonso@paleowest.com

Project Description:



PALEO WEST
archaeology

Project Location Map

Downtown Oakland Specific Plan
Alameda County, CA

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916) 373-3710

December 4, 2018

Christina Alonso
PaleoWest

Sent by E-mail: calonso@paleowest.com

RE: Proposed Downtown Oakland Specific Plan Project, City of Oakland; Oakland West USGS Quadrangle, Alameda County, California

Dear Ms. Alonso:

A record search of the Native American Heritage Commission (NAHC) *Sacred Lands File* was completed for the area of potential project effect (APE) referenced above with negative results. Please note that the absence of specific site information in the *Sacred Lands File* does not indicate the absence of Native American cultural resources in any APE.

Attached is a list of tribes culturally affiliated to the project area. I suggest you contact all of the listed Tribes. If they cannot supply information, they might recommend others with specific knowledge. The list should provide a starting place to locate areas of potential adverse impact within the APE. By contacting all those on the list, your organization will be better able to respond to claims of failure to consult. If a response has not been received within two weeks of notification, the NAHC requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact via email: gayle.totton@nahc.ca.gov.

Sincerely,

Gayle Totton

Gayle Totton, M.A., Ph.D.
Associate Governmental Program Analyst
(916) 373-3714

Native American Heritage Commission
Native American Contact List
Alameda County
12/4/2018

Amah MutsunTribal Band
Edward Ketchum,
35867 Yosemite Ave
Davis, CA, 95616
aerieways@aol.com
Costanoan
Northern Valley Yokut

Amah MutsunTribal Band
Valentin Lopez, Chairperson
P.O. Box 5272
Galt, CA, 95632
Phone: (916) 743 - 5833
vlopez@amahmutsun.org
Costanoan
Northern Valley Yokut

Amah MutsunTribal Band of Mission San Juan Bautista
Irenne Zwierlein, Chairperson
789 Canada Road
Woodside, CA, 94062
Phone: (650) 851 - 7489
Fax: (650) 332-1526
amahmutsuntribal@gmail.com
Costanoan

Indian Canyon Mutsun Band of Costanoan
Ann Marie Sayers, Chairperson
P.O. Box 28
Hollister, CA, 95024
Phone: (831) 637 - 4238
ams@indiancanyon.org
Costanoan

Muwekma Ohlone Indian Tribe of the SF Bay Area
Charlene Nijmeh, Chairperson
20885 Redwood Road, Suite 232
Castro Valley, CA, 94546
Phone: (408) 464 - 2892
cnijmeh@muwekma.org
Costanoan

North Valley Yokuts Tribe
Katherine Erolinda Perez, Chairperson
P.O. Box 717
Linden, CA, 95236
Phone: (209) 887 - 3415
canutes@verizon.net
Costanoan
Northern Valley Yokut

The Ohlone Indian Tribe
Andrew Galvan,
P.O. Box 3152
Fremont, CA, 94539
Phone: (510) 882 - 0527
Fax: (510) 687-9393
chochenyo@AOL.com
Bay Miwok
Costanoan
Patwin
Plains Miwok

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Downtown Oakland Specific Plan Project, Alameda County.

Record of Native American Contacts and Comments

Native American Contact	Date of Notification Letter (certified)	Date of Phone Contact	Comments	Date of Follow-Up Phone Contact	Comments
Katherine Erolinda Perez, Chairperson North Valley Yokuts Tribe P.O. Box 717 Linden, CA 95236 209-887-3415 canutes@verizon.net	12/10/18	1/7/18	Called no answer, left message	1/14/18	Called no answer, left message, sent follow up email.
Valentin Lopez, Chairperson Amah Mutsun Tribal Band P.O. Box 5272 Galt, CA 95632 Phone: (916) 743 - 5833 vlopez@amahmutsun.org	12/10/18	1/7/18	Called no answer, left message	1/14/18	Spoke with Val Lopez, this is outside of his territory so they have no comment.
Irene Zwierlein, Chairperson Amah Mutsun Tribal Band of Mission San Juan Bautista 789 Canada Road Woodside, CA 94062 650-851-7489 (cell) 650-851-7747 (office) 650-332-1526 (fax) amahmutsuntribal@gmail.com	12/10/18	1/7/18	Spoke with Irene, if they do any ground disturbing activities please let her know. She has no additional information about sites in the area.	------------	-----------------------
Ann Marie Sayers, Chairperson Indian Canyon Mutsun Band of Costanoan P.O. Box 28 Hollister, CA 95024 831-637-4238 ams@indiancanyon.org	12/10/18	1/7/18	Called no answer, left message	1/14/18	Called no answer, left message, sent follow up email.
Charlene Nijmeh, Chairperson Muwekma Ohlone Indian Tribe of the SF Bay Area 20885 Redwood Road, Suite 232 Castro Valley, CA, 94546 Phone: (408) 464 - 2892 cnijmeh@muwekma.org	12/10/18	1/7/18	Called no answer, left message	1/14/18	Called no answer, left message, sent follow up email.

Native American Contact	Date of Notification Letter (certified)	Date of Phone Contact	Comments	Date of Follow-Up Phone Contact	Comments
Andrew Galvan The Ohlone Indian Tribe P.O. Box 3152 Fremont, CA 94539 510-882-0527 cell 510-687-9393 fax chochenyo@aol.com	12/10/18	1/7/18	Sent follow up email. Andy emailed back 1/8/19 asking for a copy of the report, no additional information was provided.	-----------	---------------------
Edward Ketchum Amah Mutsun Tribal Band 35867 Yosemite Ave Davis, CA 95616 aerieways@aol.com	12/10/18	1/7/18	Sent follow up email. Edward emailed back 1/7/18, this is outside of his tribal territory he recommends Alan Leventhal be called (see below)	-----------	---------------------

PALEOWEST archaeology

925.253.9070 | paleowest.com | 61d Avenida de Orinda | Orinda, CA 94563

December 10, 2018

Valentin Lopez, Chairperson
Amah Mutsun Tribal Band
P.O. Box 5272
Galt, CA 95632

RE: Urban Planning Partners, Downtown Oakland Specific Plan, Alameda County, California

Dear Mr. Lopez,

Paleowest has been contracted by Urban Planning Partners to help prepare a Cultural Resources Assessment Report for the Downtown Oakland Specific Plan Project, located in the City of Oakland, Alameda County. Paleowest has agreed to conduct a Records Search with the Northwest Information Center (NWIC) of the 900-acre proposed project area and a 1/4-mile radius to identify known cultural resource sites and previous surveys in or near the project area. The project location is in a developed area, therefore, has no township. section, and range. A map has been provided showing the location of the project study area.

Paleowest contacted the NAHC on November 30, 2018 with a request that they search their Sacred Lands File for the project vicinity. The December 4, 2018 response from Gayle Totton of the NAHC states, "A record search of the Native American Heritage commission (NAHC) *Sacred Lands File* was completed for the area of potential project effect (APE) referenced above with negative results."

We would appreciate receiving any comments, concerns, or information you wish to share regarding cultural resources or sacred sites within the immediate project area. If you could provide your response in writing, at your earliest convenience, to the address below, we will make sure the relevant information is considered in preparing our report. Should you have any questions, I can be reached by e-mail at calonso@paleowest.com or by telephone at (925) 253-9070.

Thank you again for your assistance.

Sincerely,

Christina Alonso
Project Director
Attachment: Map

PALEOWEST archaeology

925.253.9070 | paleowest.com | 61d Avenida de Orinda | Orinda, CA 94563

December 10, 2018

Edward Ketchum
Amah Mutsun Tribal Band
35867 Yosemite Ave
Davis, CA 95616

RE: Urban Planning Partners, Downtown Oakland Specific Plan, Alameda County, California

Dear Mr. Ketchum,

Paleowest has been contracted by Urban Planning Partners to help prepare a Cultural Resources Assessment Report for the Downtown Oakland Specific Plan Project, located in the City of Oakland, Alameda County. Paleowest has agreed to conduct a Records Search with the Northwest Information Center (NWIC) of the 900-acre proposed project area and a 1/4-mile radius to identify known cultural resource sites and previous surveys in or near the project area. The project location is in a developed area, therefore, has no township. section, and range. A map has been provided showing the location of the project study area.

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Thank you again for your assistance.

Sincerely,

Christina Alonso
Project Director
Attachment: Map

December 10, 2018

Irenne Zwierlein, Chairperson
Amah Mutsun Tribal Band of
Mission San Juan Bautista
789 Canada Road
Woodside, CA, 94062

RE: Urban Planning Partners, Downtown Oakland Specific Plan, Alameda County, California

Dear Ms. Zwierlein,

Paleowest has been contracted by Urban Planning Partners to help prepare a Cultural Resources Assessment Report for the Downtown Oakland Specific Plan Project, located in the City of Oakland, Alameda County. Paleowest has agreed to conduct a Records Search with the Northwest Information Center (NWIC) of the 900-acre proposed project area and a 1/4-mile radius to identify known cultural resource sites and previous surveys in or near the project area. The project location is in a developed area, therefore, has no township. section, and range. A map has been provided showing the location of the project study area.

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Thank you again for your assistance.

Sincerely,

Christina Alonso
Project Director
Attachment: Map

PALEOWEST archaeology
925.253.9070 | paleowest.com | 61d Avenida de Orinda | Orinda, CA 94563

December 10, 2018

Katherine Erolinda Perez, Chairperson
North Valley Yokuts Tribe
P.O. Box 717
Linden, CA, 95236

RE: Urban Planning Partners, Downtown Oakland Specific Plan, Alameda County, California

Dear Ms. Perez,

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Sincerely,

Christina Alonso
Project Director
Attachment: Map

PALEOWEST
archaeology

925.253.9070 | paleowest.com | 61d Avenida de Orinda | Orinda, CA 94563

December 10, 2018

Andrew Galvan
The Ohlone Indian Tribe
P.O. Box 3152
Fremont, CA, 94539

RE: Urban Planning Partners, Downtown Oakland Specific Plan, Alameda County, California

Dear Mr. Galvan,

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Thank you again for your assistance.

Sincerely,

Christina Alonso

Christina Alonso
Project Director
Attachment: Map

December 10, 2018

Ann Marie Sayers, Chairperson
Indian Canyon Mutsun Band of
Costanoan
P.O. Box 28
Hollister, CA 95024

RE: Urban Planning Partners, Downtown Oakland Specific Plan, Alameda County, California

Dear Ms. Sayers,

Paleowest has been contracted by Urban Planning Partners to help prepare a Cultural Resources Assessment Report for the Downtown Oakland Specific Plan Project, located in the City of Oakland, Alameda County. Paleowest has agreed to conduct a Records Search with the Northwest Information Center (NWIC) of the 900-acre proposed project area and a 1/4-mile radius to identify known cultural resource sites and previous surveys in or near the project area. The project location is in a developed area, therefore, has no township. section, and range. A map has been provided showing the location of the project study area.

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Thank you again for your assistance.

Sincerely,

Christina Alonso
Project Director
Attachment: Map

PALEOWEST archaeology

925.253.9070 | paleowest.com | 61d Avenida de Orinda | Orinda, CA 94563

December 10, 2018

Charlene Nijmeh, Chairperson
Muwekma Ohlone Indian Tribe
of the SF Bay Area
20885 Redwood Road, Suite 232
Castro Valley, CA, 94546

RE: Urban Planning Partners, Downtown Oakland Specific Plan, Alameda County, California

Dear Ms. Nijmeh,

Paleowest has been contracted by Urban Planning Partners to help prepare a Cultural Resources Assessment Report for the Downtown Oakland Specific Plan Project, located in the City of Oakland, Alameda County. Paleowest has agreed to conduct a Records Search with the Northwest Information Center (NWIC) of the 900-acre proposed project area and a 1/4-mile radius to identify known cultural resource sites and previous surveys in or near the project area. The project location is in a developed area, therefore, has no township. section, and range. A map has been provided showing the location of the project study area.

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Thank you again for your assistance.

Sincerely,

Christina Alonso
Project Director
Attachment: Map

Appendix C.
SB-18 Coordination

Local Government Tribal Consultation List Request

Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
916-373-3710
916-373-5471 – Fax
nahc@nahc.ca.gov

Type of List Requested

☐ **CEQA Tribal Consultation List (AB 52)** *– Per Public Resources Code § 21080.3.1, subs. (b), (d), (e) and 21080.3.2*

☑ **General Plan (SB 18)** *- Per Government Code § 65352.3.*

Local Action Type:

___ **General Plan** ___ **General Plan Element** ___ **General Plan Amendment**

X **Specific Plan** ___ **Specific Plan Amendment** ___ **Pre-planning Outreach Activity**

Required Information

Project Title: Downtown Oakland Specific Plan

Local Government/Lead Agency: City of Oakland

Contact Person: Christina Alonso (PaleoWest) for Alicia Parker City of Oakland

Street Address: 61d Avenida de Orinda see Alicia's address below

City: Orinda **Zip:** 94563

Phone: 925-253-9070 **Fax:**

Email: calonso@paleowest.com

Alicia Parker Address
250 Frank H Ogawa Plaza Suite 3315
Oakland, A 94612

Specific Area Subject to Proposed Action

County: Alameda **City/Community:** Oakland

Project Description:

City of Oakland's plans to prepare a Specific Plan and EIR to guide policy on the development of the City's Downtown area, with the goal of linking land use, transportation, economic development, open space, landscape design, historic preservation, cultural arts, and social equity.

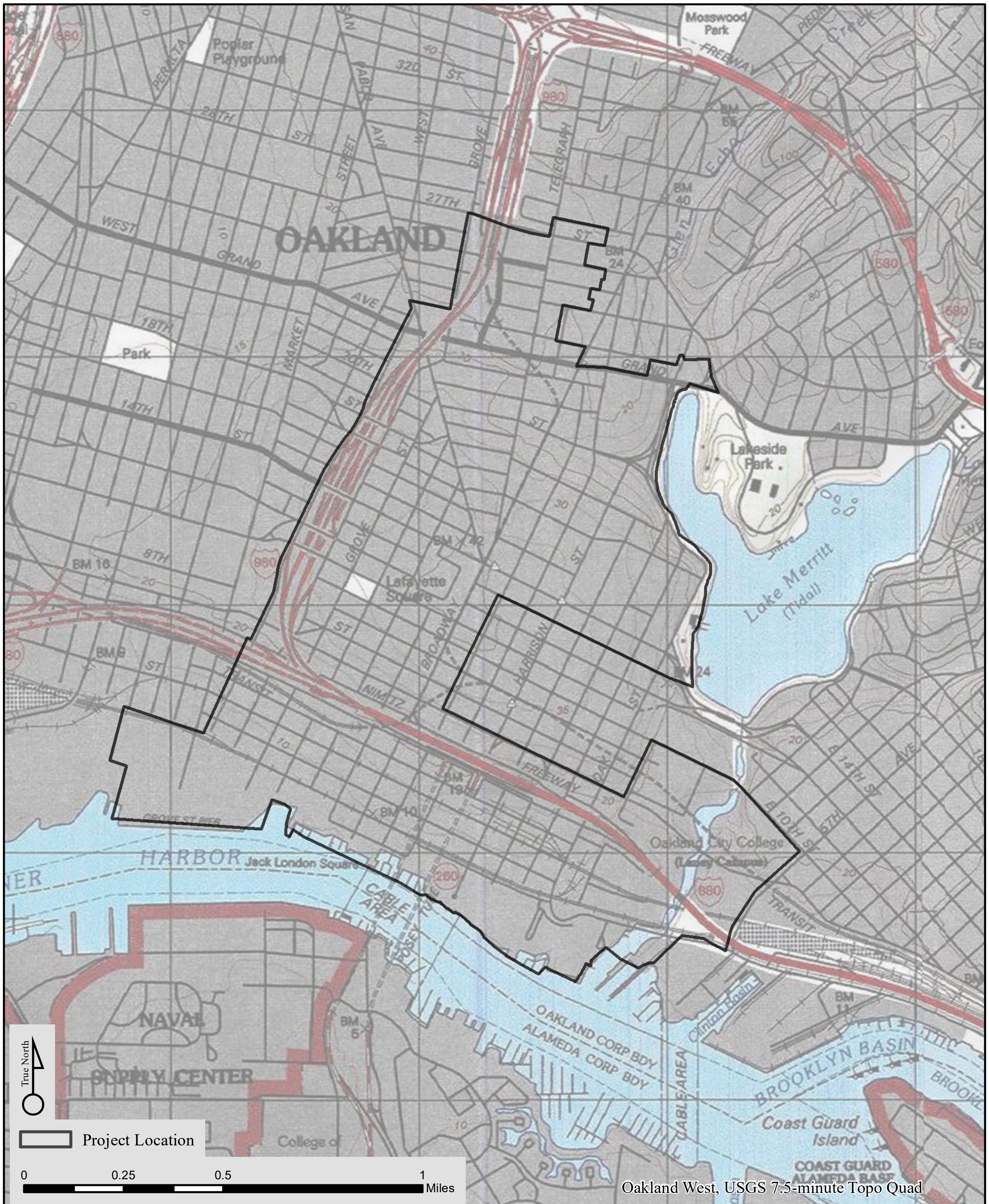
Please see attached map

Additional Request

☒ **Sacred Lands File Search** - ***Required Information:***

USGS Quadrangle Name(s): Oakland West 7.5' (1997) - see attached map

Township: N/A **Range:** N/A **Section(s):** unsectioned



Project Location Map

Downtown Oakland Specific Plan
Alameda County, CA

NATIVE AMERICAN HERITAGE COMMISSION
Environmental and Cultural Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916) 373-3710

December 4, 2018

Alicia Parker
City of Oakland

Sent by E-mail: aparker@oaklandca.gov
Cc: calonso@paleowest.com

RE: Proposed Downtown Oakland Specific Plan Project, City of Oakland; Oakland West USGS Quadrangle, Alameda County, California

Dear Ms. Parker:

Government Code §65352.3 requires **local governments** to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of avoiding, protecting, and/or mitigating impacts to cultural places in creating or amending general plans, including specific plans. Attached is a consultation list of tribes traditionally and culturally affiliated with the area that may have cultural places located within the boundaries of the project referenced above.

As a part of consultation, the NAHC recommends that local governments conduct record searches through the NAHC and California Historic Resources Information System (CHRIS) to determine if any cultural places are located within the area(s) affected by the proposed action. A record search of the Native American Heritage Commission (NAHC) *Sacred Lands File* was completed for the area of potential project effect (APE) referenced above with negative results. Please note that the absence of specific site information in the *Sacred Lands File* does not indicate the absence of Native American cultural resources in any APE. Records maintained by the NAHC and CHRIS are not exhaustive, and a negative response to these searches does not preclude the existence of a cultural place. A tribe may be the only source of information regarding the existence of tribal cultural resources.

The list should provide a starting place to locate areas of potential adverse impact within the APE. I suggest you contact all of those listed, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those on the list, your organization will be better able to respond to claims of failure to consult. If a response has not been received within two weeks of notification, the NAHC requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes on the attached list, please notify me. With your assistance we are able to assure that our consultation list contains current information.

If you have any questions, please contact me at my email address: gayle.totton@nahc.ca.gov.

Sincerely,

Gayle Totton

Gayle Totton, M.A., PhD.
Associate Governmental Program Analyst
(916) 373-3714

CITY OF OAKLAND

DALZIEL BUILDING • 250 FRANK H. OGAWA PLAZA • SUITE 3315 • OAKLAND, CALIFORNIA 94612

Planning and Building Department
Bureau of Planning

(510) 238-3941
FAX (510) 238-6538
TDD (510) 238-3254

Date: January 30, 2019

Subject: Downtown Oakland Specific Plan – Environmental Impact Report

The City of Oakland's Planning and Building Department, Bureau of Planning, is assessing potential impacts to cultural resources as part of the proposed Downtown Oakland Specific Plan Project (Project), in Oakland, Alameda County, California. As such, and pursuant to Government Code §65352.3, we are seeking your consultation to protect cultural places in the Project area and/or mitigate any potential impacts to those places.

The Project area is located within unsectioned land in a developed section of Downtown Oakland, with no Township or Range, on the 1997 Oakland West, California 7.5' United States Geological Survey (USGS) topographic quadrangle (see attached map). The City of Oakland (City) is the lead agency for this project.

The Downtown Oakland Specific Plan Area encompasses approximately 850 acres in Downtown Oakland and is generally bounded by 27th Street to the north; I-980, Brush and Market Street to the west; the Jack London estuary waterfront and Embarcadero West to the south; and Lake Merritt and Channel to the east.

The Downtown Oakland Specific Plan will provide a roadmap for how the area develops over the next 20 to 25 years through policy guidance on land use, transportation, housing, economic development, public spaces, cultural arts, and social equity. The Plan aims to ensure that Downtown remains a place of continuing growth and revitalization, as well as a valuable resource for the larger Oakland community through increased employment, housing, arts, and cultural opportunities. Supporting existing residents by growing existing businesses and the creative economy are important to creating a plan that serves both current and future residents.

A records search indicated that 15 historic-era resources, six prehistoric resources, and three unknown age resources have been recorded in the Project area. The prehistoric resources include P-01-000042, P-01-000091, P-01-010690, P-01-010691, P-01-010796, and P-01-010994. P-01-000042, was a large groundstone mortar found during the excavation of one of the Bart tunnels. P-01-000091, is a sandy midden site with shell and human remains. P-01-010690 is an isolated clam shell encountered in a tree well in an area with high potential archaeological sensitivity. P-01-01691 is an isolated shell in an area with high archaeological sensitivity. P-01-010796 is a single burial with ground stone located during the excavation of a foundation. P-01-010994 is an isolated charmstone encountered during excavations.

As this project will consist of the drafting of a Specific Plan, the City is required to implement Government Code §65352.3, which requires local governments to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of protecting, and/or mitigating impacts to cultural places. In accordance with statutory requirements stipulated in Senate Bill 18 (SB 18):

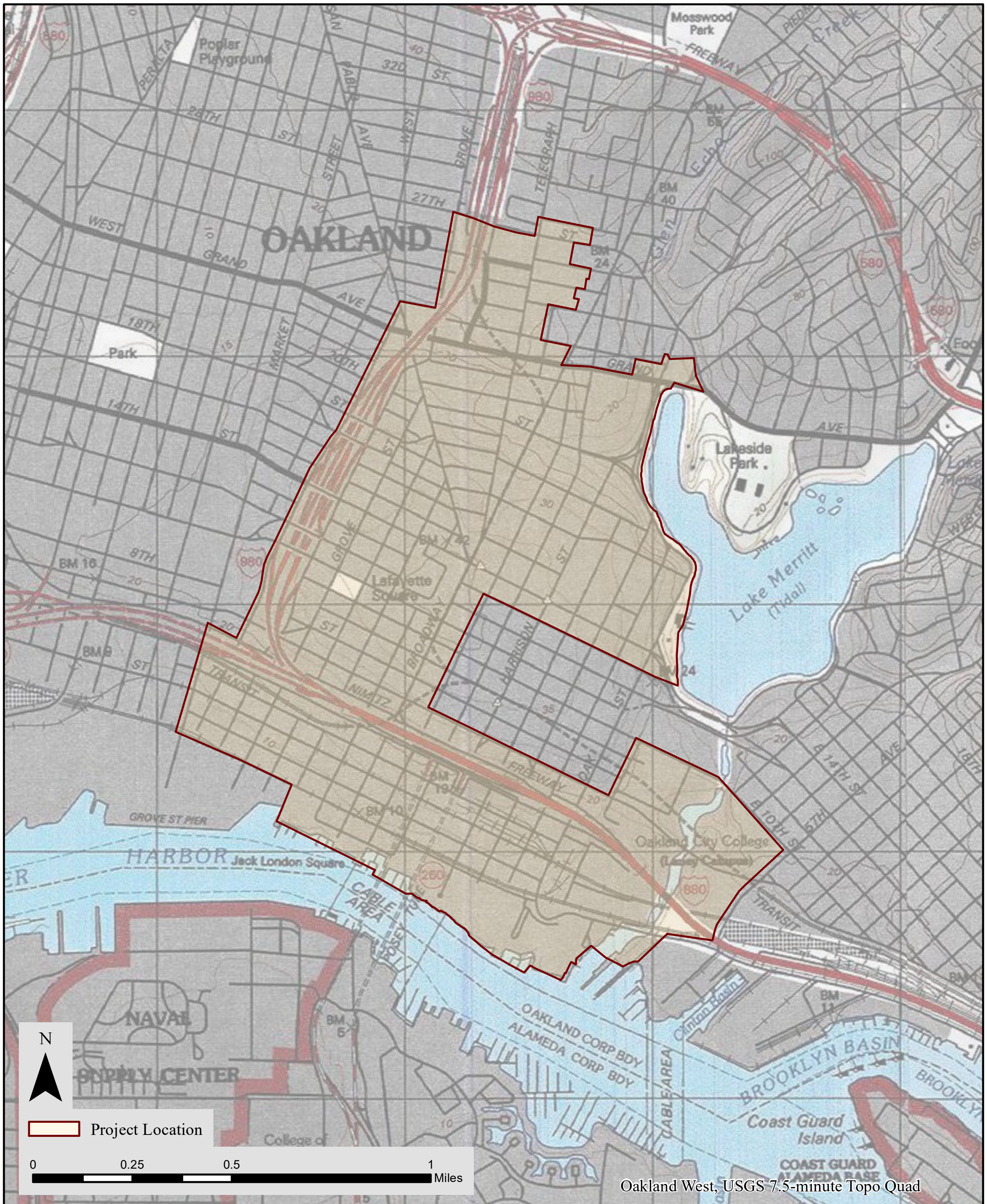
> Prior to the adoption or any amendment of a general or specific plan, a local government must notify the appropriate tribes (on the contact list maintained by the NAHC) of the opportunity to conduct consultations for the purposes of preserving, or mitigating, impacts to cultural places located on land within the local government's jurisdiction that is affected by the proposed plan adoption or amendment . . . . [Supplement to General Plan Guidelines-2005].

To facilitate this government-to-government consultation and on behalf of the City, PaleoWest contacted the NAHC by email on November 30, 2018 with a request for the SB 18 Tribal Consultation List. The NAHC provided your name as a person who may be interested in consulting with the City during the planning stages leading to the development of the Downtown Oakland Specific Plan.

Based on the information we have collected to date, the City does not anticipate that the proposed project will impact prehistoric cultural resources. The City understands and appreciates the importance of the Native American participation in the local planning process. We would appreciate your response to this invitation at your earliest convenience. Per Government Code §65352.3(a)(2), you have up to 90 days from the date of receipt of this letter to consider this invitation and to request consultation.

Should you wish to consult with the City, please contact Ms. Alicia Parker, Planner III for the City of Oakland, at 250 Frank H Ogawa Plaza Suite 3315, by phone at 510-238-3362, or by e-mail at AParker@oaklandca.gov

We appreciate your interest in this process and hope that you will contact us if we may be of any further service or may answer any questions you might have regarding this consultation.



Project Location Map

Figure 2
Downtown Oakland Specific Plan
Alameda County, CA

APPENDIX E

TRAFFIC MODEL OUTPUT AND NOISE FIELD NOTES

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Embarcadero between Market and MLK

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	24.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	1.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	0.0
Average heavy truck speed (mph):	0.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft): 50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA): 47.3

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Embarcadero between Market and MLK existing+DOSP

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	38.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	2.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	0.0
Average heavy truck speed (mph):	0.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft): 50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA): 49.6

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

6th Street between Brush Street and Castro Street AM E

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	25.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	1.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	0.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	47.4

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

6th Street between Brush Street and Castro Street AM C

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	76.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	3.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	1.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	53.1

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

6th Street between Brush Street and Castro Street AM C+P

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	85.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	4.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	1.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft): 50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA): 53.7

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Brush Street between 3rd Street and 5th Street AM E

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	182.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	8.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	2.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	56.9

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Brush Street between 3rd Street and 5th Street AM C

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	522.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	22.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	6.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	61.4

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Brush Street between 3rd Street and 5th Street AM C+P

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	589.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	25.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	6.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	61.9

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Castro Street between 3rd Street and 5th Street AM E

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	62.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	3.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	1.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	52.6

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Castro Street between 3rd Street and 5th Street AM C

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	209.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	9.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	2.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	57.4

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Castro Street between 3rd Street and 5th Street AM C+P

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	228.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	10.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	2.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft): 50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA): 57.7

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Castro Street between 5th Street and 6th Street AM E

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	52.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	2.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	1.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	51.8

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Castro Street between 5th Street and 6th Street AM C

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	219.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	9.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	2.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft): 50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA): 57.5

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Castro Street between 5th Street and 6th Street AM C+P

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	237.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	10.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	3.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	58.1

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Castro Street between 6th Street and 7th Street AM E

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	84.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	4.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	1.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	53.7

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Castro Street between 6th Street and 7th Street AM C

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	266.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	11.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	3.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	58.5

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Castro Street between 6th Street and 7th Street AM C+P

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	295.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	12.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	3.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	58.8

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Market Street between 3rd Street and 7th Street AM E

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	331.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	14.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	3.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	59.3

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Market Street between 3rd Street and 7th Street AM C

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	1340.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	56.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	14.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	65.5

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Market Street between 3rd Street and 7th Street AM C+P

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	1454.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	61.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	15.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	65.8

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Market Street between 3rd Street and 7th Street PM E

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	340.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	14.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	4.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	59.6

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Market Street between 3rd Street and 7th Street PM C

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	1586.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	67.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	17.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft): 50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA): 66.2

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Market Street between 3rd Street and 7th Street PM C+P

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	1691.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	71.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	18.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	66.5

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Market Street between 7th Street and 12th Street E AM

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	465.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	20.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	5.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	60.9

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Market Street between 7th Street and 12th Street C AM

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	1055.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	44.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	11.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	64.4

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Market Street between 7th Street and 12th Street C+P AM

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	1491.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	63.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	16.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	66.0

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Market Street between Embarcadero and 3rd Street AM E

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	142.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	6.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	2.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	56.0

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Market Street between Embarcadero and 3rd Street AM C

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	1425.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	60.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	15.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	65.7

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Market Street between Embarcadero and 3rd Street AM C+P

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	1472.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	62.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	16.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	65.9

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Market Street between Embarcadero and 3rd Street PM E

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	104.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	4.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	1.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	54.2

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Market Street between Embarcadero and 3rd Street PM C

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	1653.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	70.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	17.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	66.4

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Market Street between Embarcadero and 3rd Street PM C+P

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	1681.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	71.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	18.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	66.5

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

MLK between 3rd Street and 5th Street AM E

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	186.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	8.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	2.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	56.9

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

MLK between 3rd Street and 5th Street AM C

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	636.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	27.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	7.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	62.3

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

MLK between 3rd Street and 5th Street AM C+P

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	703.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	30.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	7.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	62.7

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

MLK between 3rd Street and 5th Street PM E

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	273.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	11.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	3.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft): 50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA): 58.5

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

MLK between 3rd Street and 5th Street PM C

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	807.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	34.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	9.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	63.3

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

MLK between 3rd Street and 5th Street PM C+P

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	884.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	37.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	9.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	63.6

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

MLK between 5th Street and 6th Street AM E

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	124.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	5.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	1.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	54.9

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

MLK between 5th Street and 6th Street AM C

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	485.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	20.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	5.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	61.0

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

MLK between 5th Street and 6th Street AM C+P

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	532.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	22.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	6.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	61.5

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

MLK between 6th Street and 7th Street AM E

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	116.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	5.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	1.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	54.7

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

MLK between 6th Street and 7th Street AM C

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	409.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	17.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	4.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft): 50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA): 60.3

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

MLK between 6th Street and 7th Street AM C+P

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	446.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	19.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	5.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	60.8

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

MLK between 6th Street and 7th Street PM E

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	212.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	9.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	2.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft): 50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA): 57.4

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

MLK between 6th Street and 7th Street PM C

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	627.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	26.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	7.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft): 50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA): 62.2

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

MLK between 6th Street and 7th Street PM C+P

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	694.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	29.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	7.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	62.6

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

MLK between 7th Street and 8th Street AM E

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	148.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	6.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	2.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	56.1

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

MLK between 7th Street and 8th Street AM C

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	418.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	18.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	4.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	60.4

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

MLK between 7th Street and 8th Street AM C+P

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	465.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	20.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	5.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	60.9

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

MLK between Embarcadero and 3rd Street AM E

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	121.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	5.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	1.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	54.9

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

MLK between Embarcadero and 3rd Street AM C

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	675.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	28.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	7.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft): 50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA): 62.5

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

MLK between Embarcadero and 3rd Street AM C+P

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	712.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	30.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	8.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	62.8

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

MLK between Embarcadero and 3rd Street PM E

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	189.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	8.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	2.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft): 50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA): 57.0

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

MLK between Embarcadero and 3rd Street PM C

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	960.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	40.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	10.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft): 50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA): 64.0

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

MLK between Embarcadero and 3rd Street PM C+P

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	1016.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	43.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	11.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	64.3

APPENDIX F

TRANSPORTATION AND CIRCULATION SUPPLEMENTAL INFORMATION

Downtown Oakland Specific Plan (DOSP) - CMP Analsyis
Alameda CTC Roadway System Analysis Summary - 2020 PM

Link Location	Segment Limits		# Lanes	Model Volume	Project Trips	No Project Volume	With Project Volume	V/C Ratio - No Project	V/C Ratio - With Project	No Project LOS	With Project LOS	Change from LOS E or better to LOS F	LOS F and Change in V/C >3%
Freeway Segments													
I-580 Eastbound													
Between	I-80/I-580	MacArthur Blvd	4	9,095	530	9,090	9,620	1.14	1.20	F	F	-	Yes
Between	MacArthur Blvd	I-980/SR 24	5	8,662	530	8,660	9,190	0.87	0.92	D	E	No	-
Between	I-980/SR 24	Oakland Avenue	5	7,844	630	7,840	8,470	0.78	0.85	D	D	No	-
Between	Oakland Avenue	Grand Avenue	4	8,469	470	8,470	8,940	1.06	1.12	F	F	-	Yes
Between	Grand Avenue	Lakeshore Avenue	4	7,393	580	7,390	7,970	0.92	1.00	E	F	Yes	-
Between	Lakeshore Avenue	Park Blvd	5	8,721	630	8,720	9,350	0.87	0.94	D	E	No	-
Between	Park Blvd	Fruitvale Avenue	5	8,310	630	8,310	8,940	0.83	0.89	D	D	No	-
Between	Fruitvale Avenue	35th Avenue	5	7,438	470	7,440	7,910	0.74	0.79	C	D	No	-
Between	35th Avenue	High Street	4	6,696	470	6,700	7,170	0.84	0.90	D	D	No	-
Between	High Street	MacArthur Blvd	4	6,072	370	6,070	6,440	0.76	0.81	D	D	No	-
Between	MacArthur Blvd	SR 13	4	5,724	320	5,720	6,040	0.72	0.76	C	D	No	-
I-580 Westbound													
Between	SR 13	MacArthur Blvd	4	4,121	420	4,120	4,540	0.52	0.57	B	B	No	-
Between	MacArthur Blvd	High Street	4	4,290	420	4,290	4,710	0.54	0.59	B	C	No	-
Between	High Street	35th Avenue	4	4,546	530	4,550	5,080	0.57	0.64	B	C	No	-
Between	35th Avenue	Fruitvale Avenue	5	5,096	530	5,100	5,630	0.51	0.56	B	B	No	-
Between	Fruitvale Avenue	Park Blvd	4	5,947	530	5,950	6,480	0.74	0.81	C	D	No	-
Between	Park Blvd	Lakeshore Avenue	4	6,123	530	6,120	6,650	0.77	0.83	D	D	No	-
Between	Lakeshore Avenue	Grand Avenue	4	5,760	420	5,760	6,180	0.72	0.77	C	D	No	-
Between	Grand Avenue	Oakland Avenue	4	6,472	530	6,470	7,000	0.81	0.88	D	D	No	-
Between	Oakland Avenue	I-980/SR 24	5	6,202	740	6,200	6,940	0.62	0.69	C	C	No	-
Between	I-980/SR 24	I-580/I-880	3	4,110	1,260	4,110	5,370	0.69	0.90	C	D	No	-
I-980 Eastbound													
Between	I-880	12th Street	2	2,724	680	2,720	3,400	0.68	0.85	C	D	No	-
Between	12th Street	27th Street	3	3,755	2,260	3,750	6,010	0.63	1.00	C	F	Yes	-
Between	27th Street	I-580	5	4,990	2,260	4,990	7,250	0.50	0.73	B	C	No	-
I-980 Westbound													
Between	I-580	27th Street	5	3,085	1,580	3,090	4,670	0.31	0.47	A	B	No	-
Between	27th Street	12th Street	3	2,235	1,260	2,240	3,500	0.37	0.58	B	B	No	-
Between	12th Street	I-880	3	2,645	420	2,650	3,070	0.44	0.51	B	B	No	-

Downtown Oakland Specific Plan (DOSP) - CMP Analaysis Alameda CTC Roadway System Analysis Summary - 2020 PM													
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I-880 Northbound													
Between	42nd Avenue	29th Avenue	4	7,012	1,160	7,010	8,170	0.88	1.02	D	F	Yes	-
Between	29th Avenue	23rd Avenue	4	6,452	1,160	6,450	7,610	0.81	0.95	D	E	No	-
Between	23rd Avenue	Embarcadero	4	7,020	1,160	7,020	8,180	0.88	1.02	D	F	Yes	-
Between	Embarcadero	Oak Street	4	6,851	1,160	6,850	8,010	0.86	1.00	D	F	Yes	-
Between	Oak Street	Broadway	4	6,316	740	6,320	7,060	0.79	0.88	D	D	No	-
Between	Broadway	I-980	5	6,192	1,160	6,190	7,350	0.62	0.74	C	C	No	-
Between	I-980	Market Street	4	4,893	840	4,890	5,730	0.61	0.72	C	C	No	-
Between	Market Street	Union Street	3	4,622	630	4,620	5,250	0.77	0.88	D	D	No	-
Between	Union Street	7th Street	3	4,747	950	4,750	5,700	0.79	0.95	D	E	No	-
Between	7th Street	I-80	3	4,203	1,160	4,200	5,360	0.70	0.89	C	D	No	-
I-880 Southbound													
Between	I-80	7th Street	3	4,256	890	4,260	5,150	0.71	0.86	C	D	No	-
Between	7th Street	Union Street	3	4,632	890	4,630	5,520	0.77	0.92	D	E	No	-
Between	Union Street	Market Street	3	3,945	530	3,940	4,470	0.66	0.75	C	C	No	-
Between	Market Street	I-980	4	4,154	530	4,150	4,680	0.52	0.59	B	C	No	-
Between	I-980	Broadway	3	2,645	890	2,650	3,540	0.44	0.59	B	C	No	-
Between	Broadway	Oak Street	5	6,266	1,160	6,270	7,430	0.63	0.74	C	C	No	-
Between	Oak Street	Embarcadero	5	7,374	1,680	7,370	9,050	0.74	0.91	C	E	No	-
Between	Embarcadero	23rd Avenue	4	7,434	1,890	7,430	9,320	0.93	1.17	E	F	Yes	-
Between	23rd Avenue	42nd Avenue	4	7,320	1,890	7,320	9,210	0.92	1.15	E	F	Yes	-
SR 24 Eastbound													
Between	I-580	MLK Jr. Way	4	4,626	1,160	4,630	5,790	0.58	0.72	B	C	No	-
Between	MLK Jr. Way	Claremont Avenue	4	6,530	1,160	6,530	7,690	0.82	0.96	D	E	No	-
Between	Claremont Avenue	Broadway	4	7,308	1,160	7,310	8,470	0.91	1.06	E	F	Yes	-
Between	Broadway	SR 13	5	7,800	1,020	7,800	8,820	0.78	0.88	D	D	No	-
Between	SR 13	Tunnel Lane	4	8,745	890	8,740	9,630	1.09	1.20	F	F	-	Yes
Between	Tunnel Lane	Caldecott Tunnel	4	9,070	890	9,070	9,960	1.13	1.25	F	F	-	Yes
SR 24 Westbound													
Between	Caldecott Tunnel	Tunnel Lane	4	5,859	890	5,860	6,750	0.73	0.84	C	D	No	-
Between	Tunnel Lane	SR 13	4	5,839	890	5,840	6,730	0.73	0.84	C	D	No	-
Between	SR 13	Broadway	5	4,055	790	4,050	4,840	0.41	0.48	B	B	No	-
Between	Broadway	Telegraph Avenue	4	3,814	790	3,810	4,600	0.48	0.58	B	B	No	-
Between	Telegraph Avenue	I-580	4	4,392	790	4,390	5,180	0.55	0.65	B	C	No	-

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Link Location	Segment Limits		# Lanes	Model Volume	Project Trips	No Project Volume	With Project Volume	V/C Ratio - No Project	V/C Ratio - With Project	No Project LOS	With Project LOS	Change from LOS E or better to LOS F	LOS F and Change in V/C >3%
Arterials													
Grand Avenue Eastbound													
Between	I-880	Mandela Parkway	2	1,426	100	1,430	1,530	0.89	0.96	D	E	No	-
Between	Mandela Parkway	Adeline Street	3	1,379	150	1,380	1,530	0.58	0.64	B	C	No	-
Between	Adeline Street	San Pablo Ave	3	1,395	270	1,400	1,670	0.58	0.70	B	C	No	-
Between	San Pablo Ave	Telegraph Avenue	2	542	280	540	820	0.34	0.51	A	B	No	-
Between	Telegraph Avenue	Broadway	2	400	130	400	530	0.25	0.33	A	A	No	-
Between	Broadway	Harrison Street	2	884	240	880	1,120	0.55	0.70	B	C	No	-
Between	Harrison Street	MacArthur Blvd/I-580	2	1,100	200	1,100	1,300	0.69	0.81	C	D	No	-
Between	MacArthur Blvd/I-580	Lake Park Avenue	2	855	100	850	950	0.53	0.59	B	C	No	-
Between	Lake Park Avenue	Oakland Avenue	2	278	50	280	330	0.18	0.21	A	A	No	-
Grand Avenue Westbound													
Between	Oakland Avenue	Lake Park Avenue	2	349	50	350	400	0.22	0.25	A	A	No	-
Between	Lake Park Avenue	MacArthur Blvd/I-580	2	516	80	520	600	0.33	0.38	A	B	No	-
Between	MacArthur Blvd/I-580	Harrison Street	2	422	130	420	550	0.26	0.34	A	A	No	-
Between	Harrison Street	Broadway	2	677	180	680	860	0.43	0.54	B	B	No	-
Between	Broadway	Telegraph Avenue	2	1,009	340	1,010	1,350	0.63	0.84	C	D	No	-
Between	Telegraph Avenue	San Pablo Ave	2	611	310	610	920	0.38	0.58	B	B	No	-
Between	San Pablo Ave	Adeline Street	3	745	150	750	900	0.31	0.38	A	B	No	-
Between	Adeline Street	Mandela Parkway	3	826	130	830	960	0.35	0.40	B	B	No	-
Between	Mandela Parkway	I-880	2	1,058	80	1,060	1,140	0.66	0.71	C	C	No	-
Broadway Northbound													
Between	Embarcadero	5th Street	2	233	180	230	410	0.14	0.26	A	A	No	-
Between	5th Street	7th Street	2	648	250	650	900	0.41	0.56	B	B	No	-
Between	7th Street	12th Street	3	48	150	50	200	0.02	0.08	A	A	No	-
Between	12th Street	14th Street	2	5	160	10	170	0.01	0.11	A	A	No	-
Between	14th Street	20th Street	3	187	180	190	370	0.08	0.15	A	A	No	-
Between	20th Street	Grand Avenue	2	464	190	460	650	0.29	0.41	A	B	No	-
Between	Grand Avenue	27th Street	2	391	210	390	600	0.24	0.38	A	B	No	-
Between	27th Street	Piedmont Avenue	2	448	240	450	690	0.28	0.43	A	B	No	-
Between	Piedmont Avenue	MacArthur Blvd	2	622	280	620	900	0.39	0.56	B	B	No	-
Between	MacArthur Blvd	40th Street	2	538	200	540	740	0.34	0.46	A	B	No	-
Between	40th Street	51st Street	2	895	150	900	1,050	0.56	0.66	B	C	No	-
Between	51st Street	College Avenue	3	600	120	600	720	0.25	0.30	A	A	No	-
Between	College Avenue	SR 24	1	706	100	710	810	0.89	1.01	D	F	Yes	-

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Broadway Southbound													
Between	SR 24	College Avenue	1	345	50	340	390	0.43	0.49	B	B	No	-
Between	College Avenue	51st Street	3	479	100	480	580	0.20	0.24	A	A	No	-
Between	51st Street	40th Street	2	309	100	310	410	0.19	0.26	A	A	No	-
Between	40th Street	MacArthur Blvd	2	392	150	390	540	0.24	0.34	A	A	No	-
Between	MacArthur Blvd	Piedmont Avenue	2	482	280	480	760	0.30	0.48	A	B	No	-
Between	Piedmont Avenue	27th Street	2	569	310	570	880	0.36	0.55	B	B	No	-
Between	27th Street	Grand Avenue	2	375	210	380	590	0.24	0.37	A	B	No	-
Between	Grand Avenue	20th Street	2	353	140	350	490	0.22	0.31	A	A	No	-
Between	20th Street	14th Street	3	157	150	160	310	0.07	0.13	A	A	No	-
Between	14th Street	12th Street	2	214	200	210	410	0.13	0.26	A	A	No	-
Between	12th Street	7th Street	3	74	230	70	300	0.03	0.13	A	A	No	-
Between	7th Street	5th Street	2	313	120	310	430	0.19	0.27	A	A	No	-
Between	5th Street	Embarcadero	2	163	50	160	210	0.10	0.13	A	A	No	-
Telegraph Avenue Northbound													
Between	15th Street	17th Street	1	210	90	210	300	0.26	0.38	A	B	No	-
Between	17th Street	19th Street	1	254	70	250	320	0.31	0.40	A	B	No	-
Between	19th Street	Grand Avenue	1	391	190	390	580	0.49	0.73	B	C	No	-
Between	Grand Avenue	27th Street	1	853	220	850	1,070	1.06	1.34	F	F	-	Yes
Between	27th Street	29th Street	1	284	120	280	400	0.35	0.50	B	B	No	-
Between	29th Street	MacArthur Blvd	2	365	80	360	440	0.23	0.28	A	A	No	-
Telegraph Avenue Southbound													
Between	MacArthur Blvd	29th Street	2	508	250	510	760	0.32	0.48	A	B	No	-
Between	29th Street	27th Street	1	561	250	560	810	0.70	1.01	C	F	Yes	-
Between	27th Street	Grand Avenue	1	249	70	250	320	0.31	0.40	A	B	No	-
Between	Grand Avenue	19th Street	1	184	90	180	270	0.23	0.34	A	A	No	-
Between	19th Street	17th Street	1	244	60	240	300	0.30	0.38	A	B	No	-
Between	17th Street	15th Street	1	130	50	130	180	0.16	0.23	A	A	No	-

Downtown Oakland Specific Plan (DOSP) - CMP Analsyis Alameda CTC Roadway System Analysis Summary - 2020 PM													
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San Pablo Avenue Northbound													
Between	17th Street	19th Street	2	328	60	330	390	0.21	0.24	A	A	No	-
Between	19th Street	20th Street	2	224	60	220	280	0.14	0.18	A	A	No	-
Between	20th Street	Castro St/MLK	2	223	100	220	320	0.14	0.20	A	A	No	-
Between	Castro St/MLK	Grand Avenue	2	711	180	710	890	0.44	0.56	B	B	No	-
Between	Grand Avenue	27th Street	2	844	200	840	1,040	0.53	0.65	B	C	No	-
Between	27th Street	Market Street	2	900	150	900	1,050	0.56	0.66	B	C	No	-
Between	Market Street	MacArthur Blvd	2	723	100	720	820	0.45	0.51	B	B	No	-
Between	MacArthur Blvd	40th Street	2	1,348	80	1,350	1,430	0.84	0.89	D	D	No	-
Between	40th Street	Powell Street	2	1,653	30	1,650	1,680	1.03	1.05	F	F	-	No
San Pablo Avenue Southbound													
Between	Powell Street	40th Street	2	830	50	830	880	0.52	0.55	B	B	No	-
Between	40th Street	MacArthur Blvd	2	1,302	80	1,300	1,380	0.81	0.86	D	D	No	-
Between	MacArthur Blvd	Market Street	2	1,169	100	1,170	1,270	0.73	0.79	C	D	No	-
Between	Market Street	27th Street	2	457	130	460	590	0.29	0.37	A	B	No	-
Between	27th Street	Grand Avenue	2	320	150	320	470	0.20	0.29	A	A	No	-
Between	Grand Avenue	Castro St/MLK	2	609	150	610	760	0.38	0.48	B	B	No	-
Between	Castro St/MLK	20th Street	2	718	150	720	870	0.45	0.54	B	B	No	-
Between	20th Street	19th Street	2	612	180	610	790	0.38	0.49	B	B	No	-
Between	19th Street	17th Street	2	565	100	560	660	0.35	0.41	B	B	No	-
Posey Tube Northbound													
Between	Alameda	7th Street	2	2,725	200	2,730	2,930	1.71	1.83	F	F	-	Yes
Harrison Street Northbound													
Between	7th Street	12th Street	3	1,345	100	1,350	1,450	0.56	0.60	B	C	No	-
Between	12th Street	14th Street	2	420	100	420	520	0.26	0.33	A	A	No	-
Between	14th Street	20th Street	2	443	140	440	580	0.28	0.36	A	B	No	-
Between	20th Street	Grand Avenue	2	637	510	640	1,150	0.40	0.72	B	C	No	-
Between	Grand Avenue	27th Street	3	531	310	530	840	0.22	0.35	A	B	No	-
Between	27th Street	Oakland Avenue	2	499	250	500	750	0.31	0.47	A	B	No	-
Harrison Street Southbound													
Between	Monte Vista Avenue	I-580	3	726	50	730	780	0.30	0.33	A	A	No	-
Between	I-580	27th Street	2	229	200	230	430	0.14	0.27	A	A	No	-
Between	27th Street	Grand Avenue	3	228	130	230	360	0.10	0.15	A	A	No	-
Between	Grand Avenue	20th Street	2	146	120	150	270	0.09	0.17	A	A	No	-
Between	20th Street	14th Street	2	355	120	360	480	0.23	0.30	A	A	No	-
Between	14th Street	12th Street	2	374	90	370	460	0.23	0.29	A	A	No	-
Between	12th Street	7th Street	3	1,345	100	1,350	1,450	0.56	0.60	B	C	No	-

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Webster Street Northbound													
Between	Grand Avenue	Broadway	1	72	30	70	100	0.09	0.13	A	A	No	-
Webster Street Southbound													
Between	Broadway	Grand Avenue	1	76	130	80	210	0.10	0.26	A	A	No	-
Between	Grand Avenue	20th Street	3	85	190	80	270	0.03	0.11	A	A	No	-
Between	20th Street	14th Street	3	191	190	190	380	0.08	0.16	A	A	No	-
Between	14th Street	12th Street	3	777	210	780	990	0.33	0.41	A	B	No	-
Between	12th Street	7th Street	3	811	320	810	1,130	0.34	0.47	A	B	No	-
Webster Tube Southbound													
Between	7th Street	Alameda	2	3,559	580	3,560	4,140	2.23	2.59	F	F	-	Yes
Martin Luther King Jr. Way Northbound													
Between	Embarcadero	5th Street	2	2	30	-	30	0.00	0.02	A	A	No	-
Between	5th Street	6th Street	2	3	50	-	50	0.00	0.03	A	A	No	-
Between	6th Street	7th Street	2	3	30	-	30	0.00	0.02	A	A	No	-
Between	7th Street	8th Street	2	15	10	10	20	0.01	0.01	A	A	No	-
Between	8th Street	11th Street	2	24	30	20	50	0.01	0.03	A	A	No	-
Between	11th Street	12th Street	2	171	40	170	210	0.11	0.13	A	A	No	-
Between	12th Street	14th Street	2	70	50	70	120	0.04	0.08	A	A	No	-
Between	14th Street	17th Street	2	70	70	70	140	0.04	0.09	A	A	No	-
Between	17th Street	19th Street	2	70	60	70	130	0.04	0.08	A	A	No	-
Between	19th Street	San Pablo Ave	2	1	80	-	80	0.00	0.05	A	A	No	-
Between	San Pablo Ave	Grand Avenue	2	80	50	80	130	0.05	0.08	A	A	No	-
Between	Grand Avenue	27th Street	2	10	30	10	40	0.01	0.03	A	A	No	-
Between	27th Street	MacArthur Blvd	2	36	30	40	70	0.03	0.04	A	A	No	-
Martin Luther King Jr. Way Southbound													
Between	MacArthur Blvd	27th Street	2	16	10	20	30	0.01	0.02	A	A	No	-
Between	27th Street	Grand Avenue	2	1	10	-	10	0.00	0.01	A	A	No	-
Between	Grand Avenue	San Pablo Ave	2	77	30	80	110	0.05	0.07	A	A	No	-
Between	San Pablo Ave	19th Street	2	97	30	100	130	0.06	0.08	A	A	No	-
Between	19th Street	17th Street	2	26	20	30	50	0.02	0.03	A	A	No	-
Between	17th Street	14th Street	2	26	30	30	60	0.02	0.04	A	A	No	-
Between	14th Street	12th Street	2	119	30	120	150	0.08	0.09	A	A	No	-
Between	12th Street	11th Street	2	51	40	50	90	0.03	0.06	A	A	No	-
Between	11th Street	8th Street	2	43	50	40	90	0.03	0.06	A	A	No	-
Between	8th Street	7th Street	2	90	70	90	160	0.06	0.10	A	A	No	-
Between	7th Street	6th Street	2	4	40	-	40	0.00	0.03	A	A	No	-
Between	6th Street	5th Street	2	4	60	-	60	0.00	0.04	A	A	No	-
Between	5th Street	Embarcadero	2	4	50	-	50	0.00	0.03	A	A	No	-

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Castro Street Northbound													
Between	6th Street	7th Street	2	402	140	400	540	0.25	0.34	A	A	No	-
Between	7th Street	8th Street	3	656	250	660	910	0.28	0.38	A	B	No	-
Between	8th Street	12th Street	3	1,325	440	1,320	1,760	0.55	0.73	B	C	No	-
Between	12th Street	14th Street	3	1,080	90	1,080	1,170	0.45	0.49	B	B	No	-
Between	14th Street	San Pablo Avenue	3	1,210	440	1,210	1,650	0.50	0.69	B	C	No	-
Brush Street Southbound													
Between	Grand Avenue	18th Street	3	596	450	600	1,050	0.25	0.44	A	B	No	-
Between	18th Street	14th Street	3	219	130	220	350	0.09	0.15	A	A	No	-
Between	14th Street	12th Street	3	39	530	40	570	0.02	0.24	A	A	No	-
Between	12th Street	7th Street	3	1,170	360	1,170	1,530	0.49	0.64	B	C	No	-
Between	7th Street	6th Street	3	604	170	600	770	0.25	0.32	A	A	No	-
Market Street Northbound													
Between	6th Street	7th Street	2	276	50	280	330	0.18	0.21	A	A	No	-
Between	7th Street	8th Street	2	404	40	400	440	0.25	0.28	A	A	No	-
Between	8th Street	12th Street	2	355	40	360	400	0.23	0.25	A	A	No	-
Between	12th Street	14th Street	2	617	30	620	650	0.39	0.41	B	B	No	-
Between	14th Street	18th Street	2	553	20	550	570	0.34	0.36	A	B	No	-
Between	18th Street	Grand Avenue	2	554	10	550	560	0.34	0.35	A	B	No	-
Market Street Southbound													
Between	Grand Avenue	18th Street	2	895	20	900	920	0.56	0.58	B	B	No	-
Between	18th Street	14th Street	2	340	30	340	370	0.21	0.23	A	A	No	-
Between	14th Street	12th Street	2	347	40	350	390	0.22	0.24	A	A	No	-
Between	12th Street	8th Street	2	466	50	470	520	0.29	0.33	A	A	No	-
Between	8th Street	7th Street	2	489	60	490	550	0.31	0.34	A	A	No	-
Between	7th Street	6th Street	2	307	60	310	370	0.19	0.23	A	A	No	-
Middle Harbor Road / Adeline Street Northbound													
Between	Maritime Street	3rd Street	2	170	10	170	180	0.11	0.11	A	A	No	-
Between	3rd Street	5th Street	2	204	10	200	210	0.13	0.13	A	A	No	-
Between	5th Street	6th Street	2	108	10	110	120	0.07	0.08	A	A	No	-
Between	6th Street	7th Street	2	82	10	80	90	0.05	0.06	A	A	No	-
Middle Harbor Road / Adeline Street Southbound													
Between	7th Street	6th Street	2	192	10	190	200	0.12	0.13	A	A	No	-
Between	6th Street	5th Street	2	151	10	150	160	0.09	0.10	A	A	No	-
Between	5th Street	3rd Street	2	131	10	130	140	0.08	0.09	A	A	No	-
Between	3rd Street	Maritime Street	2	107	10	110	120	0.07	0.08	A	A	No	-

Downtown Oakland Specific Plan (DOSP) - CMP Analsyis Alameda CTC Roadway System Analysis Summary - 2020 PM													
Link Location	Segment Limits		# Lanes	Model Volume	Project Trips	No Project Volume	With Project Volume	V/C Ratio - No Project	V/C Ratio - With Project	No Project LOS	With Project LOS	Change from LOS E or better to LOS F	LOS F and Change in V/C >3%
14th Street Eastbound													
Between	Brush Street	Castro Street	2	181	50	180	230	0.11	0.14	A	A	No	-
Between	Castro Street	Broadway	2	192	80	190	270	0.12	0.17	A	A	No	-
Between	Broadway	Harrison Street	2	38	80	40	120	0.03	0.08	A	A	No	-
Between	Harrison Street	Lakeside Drive	2	4	170	-	170	0.00	0.11	A	A	No	-
Between	Lakeside Drive	Lake Merritt Blvd	2	598	70	600	670	0.38	0.42	B	B	No	-
Between	Lake Merritt Blvd	5th Avenue	1	340	50	340	390	0.43	0.49	B	B	No	-
Between	5th Avenue	14th Avenue	1	238	30	240	270	0.30	0.34	A	A	No	-
14th Street Westbound													
Between	14th Avenue	5th Avenue	1	350	50	350	400	0.44	0.50	B	B	No	-
Between	5th Avenue	Lake Merritt Blvd	1	560	80	560	640	0.70	0.80	C	D	No	-
Between	Lake Merritt Blvd	Lakeside Drive	3	864	110	860	970	0.36	0.40	B	B	No	-
Between	Lakeside Drive	Harrison Street	2	3	110	-	110	0.00	0.07	A	A	No	-
Between	Harrison Street	Broadway	2	98	210	100	310	0.06	0.19	A	A	No	-
Between	Broadway	Castro Street	2	141	200	140	340	0.09	0.21	A	A	No	-
Between	Castro Street	Brush Street	2	1	50	-	50	0.00	0.03	A	A	No	-
12th Street Westbound													
Between	14th Avenue	5th Avenue	2	313	80	310	390	0.19	0.24	A	A	No	-
Between	5th Avenue	Lake Merritt Blvd	2	341	100	340	440	0.21	0.28	A	A	No	-
Between	Lake Merritt Blvd	Lakeside Drive	3	864	150	860	1,010	0.36	0.42	B	B	No	-
Between	Lakeside Drive	Harrison Street	3	992	200	990	1,190	0.41	0.50	B	B	No	-
Between	Harrison Street	Broadway	3	1,301	210	1,300	1,510	0.54	0.63	B	C	No	-
Between	Broadway	Castro Street	3	1,899	220	1,900	2,120	0.79	0.88	D	D	No	-
Between	Castro Street	Brush Street	3	767	60	770	830	0.32	0.35	A	B	No	-
11th Street Eastbound													
Between	Brush Street	Castro Street	3	333	200	330	530	0.14	0.22	A	A	No	-
Between	Castro Street	Broadway	3	286	200	290	490	0.12	0.20	A	A	No	-
Between	Broadway	Harrison Street	3	885	290	890	1,180	0.37	0.49	B	B	No	-
Between	Harrison Street	Oak Street	3	1,422	190	1,420	1,610	0.59	0.67	C	C	No	-
East 8th Street Eastbound													
Between	5th Avenue	14th Avenue	3	770	250	770	1,020	0.32	0.43	A	B	No	-

Downtown Oakland Specific Plan (DOSP) - CMP Analsyis Alameda CTC Roadway System Analysis Summary - 2020 PM														
Link Location	Segment Limits		# Lanes	Model Volume	Project Trips	No Project Volume	With Project Volume	V/C Ratio - No Project	V/C Ratio - With Project	No Project LOS	With Project LOS	Change from LOS E or better to LOS F	LOS F and Change in V/C >3%
8th Street Westbound													
Between	14th Avenue	5th Avenue	3	167	150	170	320	0.07	0.13	A	A	No	-
Between	5th Avenue	Oak Street	3	258	180	260	440	0.11	0.18	A	A	No	-
Between	Oak Street	Harrison Street	4	1,583	200	1,580	1,780	0.49	0.56	B	B	No	-
Between	Harrison Street	Broadway	4	672	150	670	820	0.21	0.26	A	A	No	-
Between	Broadway	Castro Street	2	669	130	670	800	0.42	0.50	B	B	No	-
7th Street Eastbound													
Between	Brush Street	Castro Street	3	645	570	650	1,220	0.27	0.51	A	B	No	-
Between	Castro Street	Broadway	4	568	460	570	1,030	0.18	0.32	A	A	No	-
Between	Broadway	Harrison Street	4	249	290	250	540	0.08	0.17	A	A	No	-
Between	Harrison Street	Oak Street	4	917	460	920	1,380	0.29	0.43	A	B	No	-
Between	Oak Street	5th Avenue	3	1,131	350	1,130	1,480	0.47	0.62	B	C	No	-

Fehr & Peers, 2019.

Downtown Oakland Specific Plan (DOSP) - CMP Analsyis Alameda CTC Roadway System Analysis Summary - 2040 PM													
Link Location	Segment Limits		# Lanes	Model Volume	Project Trips	No Project Volume	With Project Volume	V/C Ratio - No Project	V/C Ratio - With Project	No Project LOS	With Project LOS	Change from LOS E or better to LOS F	LOS F and Change in V/C >3%
Freeway Segments													
I-580 Eastbound													
Between	I-80/I-580	MacArthur Blvd	4	10,298	530	10,300	10,830	1.29	1.35	F	F	-	Yes
Between	MacArthur Blvd	I-980/SR 24	5	9,168	530	9,170	9,700	0.92	0.97	E	E	No	-
Between	I-980/SR 24	Oakland Avenue	5	8,997	630	9,000	9,630	0.90	0.96	D	E	No	-
Between	Oakland Avenue	Grand Avenue	4	9,672	470	9,670	10,140	1.21	1.27	F	F	-	Yes
Between	Grand Avenue	Lakeshore Avenue	4	8,983	580	8,980	9,560	1.12	1.20	F	F	-	Yes
Between	Lakeshore Avenue	Park Blvd	5	10,558	630	10,560	11,190	1.06	1.12	F	F	-	Yes
Between	Park Blvd	Fruitvale Avenue	5	10,959	630	10,960	11,590	1.10	1.16	F	F	-	Yes
Between	Fruitvale Avenue	35th Avenue	5	10,091	470	10,090	10,560	1.01	1.06	F	F	-	Yes
Between	35th Avenue	High Street	4	8,649	470	8,650	9,120	1.08	1.14	F	F	-	Yes
Between	High Street	MacArthur Blvd	4	7,893	370	7,890	8,260	0.99	1.03	E	F	Yes	-
Between	MacArthur Blvd	SR 13	4	7,102	320	7,100	7,420	0.89	0.93	D	E	No	-
I-580 Westbound													
Between	SR 13	MacArthur Blvd	4	5,717	420	5,720	6,140	0.72	0.77	C	D	No	-
Between	MacArthur Blvd	High Street	4	6,081	420	6,080	6,500	0.76	0.81	D	D	No	-
Between	High Street	35th Avenue	4	6,372	530	6,370	6,900	0.80	0.86	D	D	No	-
Between	35th Avenue	Fruitvale Avenue	5	6,942	530	6,940	7,470	0.69	0.75	C	C	No	-
Between	Fruitvale Avenue	Park Blvd	4	7,833	530	7,830	8,360	0.98	1.05	E	F	Yes	-
Between	Park Blvd	Lakeshore Avenue	4	8,084	530	8,080	8,610	1.01	1.08	F	F	-	Yes
Between	Lakeshore Avenue	Grand Avenue	4	7,280	420	7,280	7,700	0.91	0.96	E	E	No	-
Between	Grand Avenue	Oakland Avenue	4	8,100	530	8,100	8,630	1.01	1.08	F	F	-	Yes
Between	Oakland Avenue	I-980/SR 24	5	7,309	740	7,310	8,050	0.73	0.81	C	D	No	-
Between	I-980/SR 24	I-580/I-880	3	4,718	1,260	4,720	5,980	0.79	1.00	D	F	Yes	-
I-980 Eastbound													
Between	I-880	12th Street	2	3,201	680	3,200	3,880	0.80	0.97	D	E	No	-
Between	12th Street	27th Street	3	4,184	2,260	4,180	6,440	0.70	1.07	C	F	Yes	-
Between	27th Street	I-580	5	6,249	2,260	6,250	8,510	0.63	0.85	C	D	No	-
I-980 Westbound													
Between	I-580	27th Street	5	3,555	1,580	3,550	5,130	0.36	0.51	B	B	No	-
Between	27th Street	12th Street	3	3,315	1,260	3,310	4,570	0.55	0.76	B	D	No	-
Between	12th Street	I-880	3	3,834	420	3,830	4,250	0.64	0.71	C	C	No	-

Downtown Oakland Specific Plan (DOSP) - CMP Analsyis Alameda CTC Roadway System Analysis Summary - 2040 PM													
Link Location	Segment Limits		# Lanes	Model Volume	Project Trips	No Project Volume	With Project Volume	V/C Ratio - No Project	V/C Ratio - With Project	No Project LOS	With Project LOS	Change from LOS E or better to LOS F	LOS F and Change in V/C >3%
I-880 Northbound													
Between	42nd Avenue	29th Avenue	4	8,007	1,160	8,010	9,170	1.00	1.15	F	F	-	Yes
Between	29th Avenue	23rd Avenue	4	7,044	1,160	7,040	8,200	0.88	1.03	D	F	Yes	-
Between	23rd Avenue	Embarcadero	4	7,884	1,160	7,880	9,040	0.99	1.13	E	F	Yes	-
Between	Embarcadero	Oak Street	4	7,538	1,160	7,540	8,700	0.94	1.09	E	F	Yes	-
Between	Oak Street	Broadway	4	7,069	740	7,070	7,810	0.88	0.98	D	E	No	-
Between	Broadway	I-980	5	7,069	1,160	7,070	8,230	0.71	0.82	C	D	No	-
Between	I-980	Market Street	4	5,344	840	5,340	6,180	0.67	0.77	C	D	No	-
Between	Market Street	Union Street	3	4,867	630	4,870	5,500	0.81	0.92	D	E	No	-
Between	Union Street	7th Street	3	5,288	950	5,290	6,240	0.88	1.04	D	F	Yes	-
Between	7th Street	I-80	3	4,079	1,160	4,080	5,240	0.68	0.87	C	D	No	-
I-880 Southbound													
Between	I-80	7th Street	3	5,062	890	5,060	5,950	0.84	0.99	D	E	No	-
Between	7th Street	Union Street	3	5,677	890	5,680	6,570	0.95	1.10	E	F	Yes	-
Between	Union Street	Market Street	3	5,634	530	5,630	6,160	0.94	1.03	E	F	Yes	-
Between	Market Street	I-980	4	4,781	530	4,780	5,310	0.60	0.66	C	C	No	-
Between	I-980	Broadway	3	3,834	890	3,830	4,720	0.64	0.79	C	D	No	-
Between	Broadway	Oak Street	5	7,498	1,160	7,500	8,660	0.75	0.87	C	D	No	-
Between	Oak Street	Embarcadero	5	8,861	1,680	8,860	10,540	0.89	1.05	D	F	Yes	-
Between	Embarcadero	23rd Avenue	4	8,245	1,890	8,250	10,140	1.03	1.27	F	F	-	Yes
Between	23rd Avenue	42nd Avenue	4	8,958	1,890	8,960	10,850	1.12	1.36	F	F	-	Yes
SR 24 Eastbound													
Between	I-580	MLK Jr. Way	4	6,985	1,160	6,980	8,140	0.87	1.02	D	F	Yes	-
Between	MLK Jr. Way	Claremont Avenue	4	8,479	1,160	8,480	9,640	1.06	1.21	F	F	-	Yes
Between	Claremont Avenue	Broadway	4	9,297	1,160	9,300	10,460	1.16	1.31	F	F	-	Yes
Between	Broadway	SR 13	5	9,866	1,020	9,870	10,890	0.99	1.09	E	F	Yes	-
Between	SR 13	Tunnel Lane	4	11,327	890	11,330	12,220	1.42	1.53	F	F	-	Yes
Between	Tunnel Lane	Caldecott Tunnel	4	12,080	890	12,080	12,970	1.51	1.62	F	F	-	Yes
SR 24 Westbound													
Between	Caldecott Tunnel	Tunnel Lane	4	6,991	890	6,990	7,880	0.87	0.99	D	E	No	-
Between	Tunnel Lane	SR 13	4	6,466	890	6,470	7,360	0.81	0.92	D	E	No	-
Between	SR 13	Broadway	5	4,780	790	4,780	5,570	0.48	0.56	B	B	No	-
Between	Broadway	Telegraph Avenue	4	4,611	790	4,610	5,400	0.58	0.68	B	C	No	-
Between	Telegraph Avenue	I-580	4	5,270	790	5,270	6,060	0.66	0.76	C	D	No	-

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Link Location	Segment Limits		# Lanes	Model Volume	Project Trips	No Project Volume	With Project Volume	V/C Ratio - No Project	V/C Ratio - With Project	No Project LOS	With Project LOS	Change from LOS E or better to LOS F	LOS F and Change in V/C >3%
Arterials													
Grand Avenue Eastbound													
Between	I-880	Mandela Parkway	2	1,949	100	1,950	2,050	1.22	1.28	F	F	-	Yes
Between	Mandela Parkway	Adeline Street	3	2,408	150	2,410	2,560	1.00	1.07	F	F	-	Yes
Between	Adeline Street	San Pablo Ave	3	2,517	270	2,520	2,790	1.05	1.16	F	F	-	Yes
Between	San Pablo Ave	Telegraph Avenue	2	1,289	280	1,290	1,570	0.81	0.98	D	E	No	-
Between	Telegraph Avenue	Broadway	2	668	130	670	800	0.42	0.50	B	B	No	-
Between	Broadway	Harrison Street	2	1,173	240	1,170	1,410	0.73	0.88	C	D	No	-
Between	Harrison Street	MacArthur Blvd/I-580	2	1,234	200	1,230	1,430	0.77	0.89	D	D	No	-
Between	MacArthur Blvd/I-580	Lake Park Avenue	2	815	100	810	910	0.51	0.57	B	B	No	-
Between	Lake Park Avenue	Oakland Avenue	2	619	50	620	670	0.39	0.42	B	B	No	-
Grand Avenue Westbound													
Between	Oakland Avenue	Lake Park Avenue	2	570	50	570	620	0.36	0.39	B	B	No	-
Between	Lake Park Avenue	MacArthur Blvd/I-580	2	750	80	750	830	0.47	0.52	B	B	No	-
Between	MacArthur Blvd/I-580	Harrison Street	2	540	130	540	670	0.34	0.42	A	B	No	-
Between	Harrison Street	Broadway	2	965	180	970	1,150	0.61	0.72	C	C	No	-
Between	Broadway	Telegraph Avenue	2	1,439	340	1,440	1,780	0.90	1.11	D	F	Yes	-
Between	Telegraph Avenue	San Pablo Ave	2	938	310	940	1,250	0.59	0.78	C	D	No	-
Between	San Pablo Ave	Adeline Street	3	1,152	150	1,150	1,300	0.48	0.54	B	B	No	-
Between	Adeline Street	Mandela Parkway	3	1,271	130	1,270	1,400	0.53	0.58	B	B	No	-
Between	Mandela Parkway	I-880	2	1,918	80	1,920	2,000	1.20	1.25	F	F	-	Yes
Broadway Northbound													
Between	Embarcadero	5th Street	2	322	180	320	500	0.20	0.31	A	A	No	-
Between	5th Street	7th Street	2	973	250	970	1,220	0.61	0.76	C	D	No	-
Between	7th Street	12th Street	3	15	150	10	160	0.00	0.07	A	A	No	-
Between	12th Street	14th Street	2	6	160	10	170	0.01	0.11	A	A	No	-
Between	14th Street	20th Street	3	267	180	270	450	0.11	0.19	A	A	No	-
Between	20th Street	Grand Avenue	2	611	190	610	800	0.38	0.50	B	B	No	-
Between	Grand Avenue	27th Street	2	625	210	620	830	0.39	0.52	B	B	No	-
Between	27th Street	Piedmont Avenue	2	851	240	850	1,090	0.53	0.68	B	C	No	-
Between	Piedmont Avenue	MacArthur Blvd	2	1,042	280	1,040	1,320	0.65	0.83	C	D	No	-
Between	MacArthur Blvd	40th Street	2	1,204	200	1,200	1,400	0.75	0.88	C	D	No	-
Between	40th Street	51st Street	2	1,356	150	1,360	1,510	0.85	0.94	D	E	No	-
Between	51st Street	College Avenue	3	1,023	120	1,020	1,140	0.43	0.48	B	B	No	-
Between	College Avenue	SR 24	1	1,046	100	1,050	1,150	1.31	1.44	F	F	-	Yes

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Broadway Southbound													
Between	SR 24	College Avenue	1	591	50	590	640	0.74	0.80	C	D	No	-
Between	College Avenue	51st Street	3	745	100	740	840	0.31	0.35	A	B	No	-
Between	51st Street	40th Street	2	822	100	820	920	0.51	0.58	B	B	No	-
Between	40th Street	MacArthur Blvd	2	1,830	150	1,830	1,980	1.14	1.24	F	F	-	Yes
Between	MacArthur Blvd	Piedmont Avenue	2	1,469	280	1,470	1,750	0.92	1.09	E	F	Yes	-
Between	Piedmont Avenue	27th Street	2	2,003	310	2,000	2,310	1.25	1.44	F	F	-	Yes
Between	27th Street	Grand Avenue	2	536	210	540	750	0.34	0.47	A	B	No	-
Between	Grand Avenue	20th Street	2	462	140	460	600	0.29	0.38	A	B	No	-
Between	20th Street	14th Street	3	204	150	200	350	0.08	0.15	A	A	No	-
Between	14th Street	12th Street	2	331	200	330	530	0.21	0.33	A	A	No	-
Between	12th Street	7th Street	3	52	230	50	280	0.02	0.12	A	A	No	-
Between	7th Street	5th Street	2	508	120	510	630	0.32	0.39	A	B	No	-
Between	5th Street	Embarcadero	2	178	50	180	230	0.11	0.14	A	A	No	-
Telegraph Avenue Northbound													
Between	15th Street	17th Street	1	278	90	280	370	0.35	0.46	B	B	No	-
Between	17th Street	19th Street	1	357	70	360	430	0.45	0.54	B	B	No	-
Between	19th Street	Grand Avenue	1	553	190	550	740	0.69	0.93	C	E	No	-
Between	Grand Avenue	27th Street	1	870	220	870	1,090	1.09	1.36	F	F	-	Yes
Between	27th Street	29th Street	1	558	120	560	680	0.70	0.85	C	D	No	-
Between	29th Street	MacArthur Blvd	2	741	80	740	820	0.46	0.51	B	B	No	-
Telegraph Avenue Southbound													
Between	MacArthur Blvd	29th Street	2	1,313	250	1,310	1,560	0.82	0.98	D	E	No	-
Between	29th Street	27th Street	1	979	250	980	1,230	1.23	1.54	F	F	-	Yes
Between	27th Street	Grand Avenue	1	296	70	300	370	0.38	0.46	B	B	No	-
Between	Grand Avenue	19th Street	1	239	90	240	330	0.30	0.41	A	B	No	-
Between	19th Street	17th Street	1	291	60	290	350	0.36	0.44	B	B	No	-
Between	17th Street	15th Street	1	165	50	160	210	0.20	0.26	A	A	No	-

Downtown Oakland Specific Plan (DOSP) - CMP Analsyis Alameda CTC Roadway System Analysis Summary - 2040 PM													
Link Location	Segment Limits		# Lanes	Model Volume	Project Trips	No Project Volume	With Project Volume	V/C Ratio - No Project	V/C Ratio - With Project	No Project LOS	With Project LOS	Change from LOS E or better to LOS F	LOS F and Change in V/C >3%
San Pablo Avenue Northbound													
Between	17th Street	19th Street	2	364	60	360	420	0.23	0.26	A	A	No	-
Between	19th Street	20th Street	2	257	60	260	320	0.16	0.20	A	A	No	-
Between	20th Street	Castro St/MLK	1	255	100	250	350	0.31	0.44	A	B	No	-
Between	Castro St/MLK	Grand Avenue	1	630	180	630	810	0.79	1.01	D	F	Yes	-
Between	Grand Avenue	27th Street	1	956	200	960	1,160	1.20	1.45	F	F	-	Yes
Between	27th Street	Market Street	1	1,021	150	1,020	1,170	1.28	1.46	F	F	-	Yes
Between	Market Street	MacArthur Blvd	1	613	100	610	710	0.76	0.89	D	D	No	-
Between	MacArthur Blvd	40th Street	1	976	80	980	1,060	1.23	1.33	F	F	-	Yes
Between	40th Street	Powell Street	1	1,033	30	1,030	1,060	1.29	1.33	F	F	-	Yes
San Pablo Avenue Southbound													
Between	Powell Street	40th Street	1	1,067	50	1,070	1,120	1.34	1.40	F	F	-	Yes
Between	40th Street	MacArthur Blvd	1	1,058	80	1,060	1,140	1.33	1.43	F	F	-	Yes
Between	MacArthur Blvd	Market Street	1	793	100	790	890	0.99	1.11	E	F	Yes	-
Between	Market Street	27th Street	1	1,028	130	1,030	1,160	1.29	1.45	F	F	-	Yes
Between	27th Street	Grand Avenue	1	479	150	480	630	0.60	0.79	C	D	No	-
Between	Grand Avenue	Castro St/MLK	1	782	150	780	930	0.98	1.16	E	F	Yes	-
Between	Castro St/MLK	20th Street	1	912	150	910	1,060	1.14	1.33	F	F	-	Yes
Between	20th Street	19th Street	2	773	180	770	950	0.48	0.59	B	C	No	-
Between	19th Street	17th Street	2	716	100	720	820	0.45	0.51	B	B	No	-
Posey Tube Northbound													
Between	Alameda	7th Street	2	3,339	200	3,340	3,540	2.09	2.21	F	F	-	Yes
Harrison Street Northbound													
Between	7th Street	12th Street	3	979	100	980	1,080	0.41	0.45	B	B	No	-
Between	12th Street	14th Street	2	607	100	610	710	0.38	0.44	B	B	No	-
Between	14th Street	20th Street	2	646	140	650	790	0.41	0.49	B	B	No	-
Between	20th Street	Grand Avenue	2	853	510	850	1,360	0.53	0.85	B	D	No	-
Between	Grand Avenue	27th Street	3	1,164	310	1,160	1,470	0.48	0.61	B	C	No	-
Between	27th Street	Oakland Avenue	2	1,853	250	1,850	2,100	1.16	1.31	F	F	-	Yes
Harrison Street Southbound													
Between	Monte Vista Avenue	I-580	3	1,041	50	1,040	1,090	0.43	0.45	B	B	No	-
Between	I-580	27th Street	2	346	200	350	550	0.22	0.34	A	A	No	-
Between	27th Street	Grand Avenue	3	444	130	440	570	0.18	0.24	A	A	No	-
Between	Grand Avenue	20th Street	2	176	120	180	300	0.11	0.19	A	A	No	-
Between	20th Street	14th Street	2	462	120	460	580	0.29	0.36	A	B	No	-
Between	14th Street	12th Street	2	471	90	470	560	0.29	0.35	A	B	No	-
Between	12th Street	7th Street	3	979	100	980	1,080	0.41	0.45	B	B	No	-

Downtown Oakland Specific Plan (DOSP) - CMP Analsyis
Alameda CTC Roadway System Analysis Summary - 2040 PM

Link Location	Segment Limits		# Lanes	Model Volume	Project Trips	No Project Volume	With Project Volume	V/C Ratio - No Project	V/C Ratio - With Project	No Project LOS	With Project LOS	Change from LOS E or better to LOS F	LOS F and Change in V/C >3%
Webster Street Northbound													
Between	Grand Avenue	Broadway	1	155	30	150	180	0.19	0.23	A	A	No	-
Webster Street Southbound													
Between	Broadway	Grand Avenue	1	167	130	170	300	0.21	0.38	A	B	No	-
Between	Grand Avenue	20th Street	3	175	190	180	370	0.08	0.15	A	A	No	-
Between	20th Street	14th Street	3	288	190	290	480	0.12	0.20	A	A	No	-
Between	14th Street	12th Street	3	986	210	990	1,200	0.41	0.50	B	B	No	-
Between	12th Street	7th Street	3	1,015	320	1,010	1,330	0.42	0.55	B	B	No	-
Webster Tube Southbound													
Between	7th Street	Alameda	2	4,277	580	4,280	4,860	2.68	3.04	F	F	-	Yes
Martin Luther King Jr. Way Northbound													
Between	Embarcadero	5th Street	2	2	30	-	30	0.00	0.02	A	A	No	-
Between	5th Street	6th Street	2	3	50	-	50	0.00	0.03	A	A	No	-
Between	6th Street	7th Street	2	3	30	-	30	0.00	0.02	A	A	No	-
Between	7th Street	8th Street	2	37	10	40	50	0.03	0.03	A	A	No	-
Between	8th Street	11th Street	2	47	30	50	80	0.03	0.05	A	A	No	-
Between	11th Street	12th Street	2	205	40	210	250	0.13	0.16	A	A	No	-
Between	12th Street	14th Street	2	110	50	110	160	0.07	0.10	A	A	No	-
Between	14th Street	17th Street	2	110	70	110	180	0.07	0.11	A	A	No	-
Between	17th Street	19th Street	2	110	60	110	170	0.07	0.11	A	A	No	-
Between	19th Street	San Pablo Ave	2	12	80	10	90	0.01	0.06	A	A	No	-
Between	San Pablo Ave	Grand Avenue	2	120	50	120	170	0.08	0.11	A	A	No	-
Between	Grand Avenue	27th Street	2	11	30	10	40	0.01	0.03	A	A	No	-
Between	27th Street	MacArthur Blvd	2	55	30	50	80	0.03	0.05	A	A	No	-
Martin Luther King Jr. Way Southbound													
Between	MacArthur Blvd	27th Street	2	151	10	150	160	0.09	0.10	A	A	No	-
Between	27th Street	Grand Avenue	2	4	10	-	10	0.00	0.01	A	A	No	-
Between	Grand Avenue	San Pablo Ave	2	109	30	110	140	0.07	0.09	A	A	No	-
Between	San Pablo Ave	19th Street	2	122	30	120	150	0.08	0.09	A	A	No	-
Between	19th Street	17th Street	2	29	20	30	50	0.02	0.03	A	A	No	-
Between	17th Street	14th Street	2	29	30	30	60	0.02	0.04	A	A	No	-
Between	14th Street	12th Street	2	130	30	130	160	0.08	0.10	A	A	No	-
Between	12th Street	11th Street	2	71	40	70	110	0.04	0.07	A	A	No	-
Between	11th Street	8th Street	2	65	50	60	110	0.04	0.07	A	A	No	-
Between	8th Street	7th Street	2	120	70	120	190	0.08	0.12	A	A	No	-
Between	7th Street	6th Street	2	4	40	-	40	0.00	0.03	A	A	No	-
Between	6th Street	5th Street	2	4	60	-	60	0.00	0.04	A	A	No	-
Between	5th Street	Embarcadero	2	4	50	-	50	0.00	0.03	A	A	No	-

Downtown Oakland Specific Plan (DOSP) - CMP Analsyis
Alameda CTC Roadway System Analysis Summary - 2040 PM

Link Location	Segment Limits		# Lanes	Model Volume	Project Trips	No Project Volume	With Project Volume	V/C Ratio - No Project	V/C Ratio - With Project	No Project LOS	With Project LOS	Change from LOS E or better to LOS F	LOS F and Change in V/C >3%
Castro Street Northbound													
Between	6th Street	7th Street	2	1,331	140	1,330	1,470	0.83	0.92	D	E	No	-
Between	7th Street	8th Street	3	1,583	250	1,580	1,830	0.66	0.76	C	D	No	-
Between	8th Street	12th Street	3	2,026	440	2,030	2,470	0.85	1.03	D	F	Yes	-
Between	12th Street	14th Street	3	1,850	90	1,850	1,940	0.77	0.81	D	D	No	-
Between	14th Street	San Pablo Avenue	3	2,085	440	2,080	2,520	0.87	1.05	D	F	Yes	-
Brush Street Southbound													
Between	Grand Avenue	18th Street	3	719	450	720	1,170	0.30	0.49	A	B	No	-
Between	18th Street	14th Street	3	296	130	300	430	0.13	0.18	A	A	No	-
Between	14th Street	12th Street	3	78	530	80	610	0.03	0.25	A	A	No	-
Between	12th Street	7th Street	3	1,207	360	1,210	1,570	0.50	0.65	B	C	No	-
Between	7th Street	6th Street	3	447	170	450	620	0.19	0.26	A	A	No	-
Market Street Northbound													
Between	6th Street	7th Street	2	840	50	840	890	0.53	0.56	B	B	No	-
Between	7th Street	8th Street	2	996	40	1,000	1,040	0.63	0.65	C	C	No	-
Between	8th Street	12th Street	2	955	40	950	990	0.59	0.62	C	C	No	-
Between	12th Street	14th Street	2	1,476	30	1,480	1,510	0.93	0.94	E	E	No	-
Between	14th Street	18th Street	2	1,351	20	1,350	1,370	0.84	0.86	D	D	No	-
Between	18th Street	Grand Avenue	2	1,398	10	1,400	1,410	0.88	0.88	D	D	No	-
Market Street Southbound													
Between	Grand Avenue	18th Street	2	1,863	20	1,860	1,880	1.16	1.18	F	F	-	No
Between	18th Street	14th Street	2	609	30	610	640	0.38	0.40	B	B	No	-
Between	14th Street	12th Street	2	625	40	630	670	0.39	0.42	B	B	No	-
Between	12th Street	8th Street	2	902	50	900	950	0.56	0.59	B	C	No	-
Between	8th Street	7th Street	2	938	60	940	1,000	0.59	0.63	C	C	No	-
Between	7th Street	6th Street	2	398	60	400	460	0.25	0.29	A	A	No	-
Middle Harbor Road / Adeline Street Northbound													
Between	Maritime Street	3rd Street	2	314	10	310	320	0.19	0.20	A	A	No	-
Between	3rd Street	5th Street	2	361	10	360	370	0.23	0.23	A	A	No	-
Between	5th Street	6th Street	2	226	10	230	240	0.14	0.15	A	A	No	-
Between	6th Street	7th Street	2	192	10	190	200	0.12	0.13	A	A	No	-
Middle Harbor Road / Adeline Street Southbound													
Between	7th Street	6th Street	2	162	10	160	170	0.10	0.11	A	A	No	-
Between	6th Street	5th Street	2	201	10	200	210	0.13	0.13	A	A	No	-
Between	5th Street	3rd Street	2	174	10	170	180	0.11	0.11	A	A	No	-
Between	3rd Street	Maritime Street	2	134	10	130	140	0.08	0.09	A	A	No	-

Downtown Oakland Specific Plan (DOSP) - CMP Analsyis Alameda CTC Roadway System Analysis Summary - 2040 PM														
Link Location	**Segment Limits**		**# Lanes**	**Model Volume**	**Project Trips**	**No Project Volume**	**With Project Volume**	**V/C Ratio - No Project**	**V/C Ratio - With Project**	**No Project LOS**	**With Project LOS**	**Change from LOS E or better to LOS F**	**LOS F and Change in V/C >3%**
14th Street Eastbound													
Between	Brush Street	Castro Street	2	224	50	220	270	0.14	0.17	A	A	No	-
Between	Castro Street	Broadway	2	240	80	240	320	0.15	0.20	A	A	No	-
Between	Broadway	Harrison Street	2	77	80	80	160	0.05	0.10	A	A	No	-
Between	Harrison Street	Lakeside Drive	2	5	170	10	180	0.01	0.11	A	A	No	-
Between	Lakeside Drive	Lake Merritt Blvd	2	902	70	900	970	0.56	0.61	B	C	No	-
Between	Lake Merritt Blvd	5th Avenue	1	545	50	550	600	0.69	0.75	C	C	No	-
Between	5th Avenue	14th Avenue	1	383	30	380	410	0.48	0.51	B	B	No	-
14th Street Westbound													
Between	14th Avenue	5th Avenue	1	606	50	610	660	0.76	0.83	D	D	No	-
Between	5th Avenue	Lake Merritt Blvd	1	612	80	610	690	0.76	0.86	D	D	No	-
Between	Lake Merritt Blvd	Lakeside Drive	3	1,680	110	1,680	1,790	0.70	0.75	C	C	No	-
Between	Lakeside Drive	Harrison Street	2	3	110	-	110	0.00	0.07	A	A	No	-
Between	Harrison Street	Broadway	2	145	210	150	360	0.09	0.23	A	A	No	-
Between	Broadway	Castro Street	2	255	200	260	460	0.16	0.29	A	A	No	-
Between	Castro Street	Brush Street	2	4	50	-	50	0.00	0.03	A	A	No	-
12th Street Westbound													
Between	14th Avenue	5th Avenue	2	1,410	80	1,410	1,490	0.88	0.93	D	E	No	-
Between	5th Avenue	Lake Merritt Blvd	2	1,289	100	1,290	1,390	0.81	0.87	D	D	No	-
Between	Lake Merritt Blvd	Lakeside Drive	3	1,680	150	1,680	1,830	0.70	0.76	C	D	No	-
Between	Lakeside Drive	Harrison Street	3	1,670	200	1,670	1,870	0.70	0.78	C	D	No	-
Between	Harrison Street	Broadway	3	1,981	210	1,980	2,190	0.83	0.91	D	E	No	-
Between	Broadway	Castro Street	3	2,452	220	2,450	2,670	1.02	1.11	F	F	-	Yes
Between	Castro Street	Brush Street	3	1,198	60	1,200	1,260	0.50	0.53	B	B	No	-
11th Street Eastbound													
Between	Brush Street	Castro Street	3	468	200	470	670	0.20	0.28	A	A	No	-
Between	Castro Street	Broadway	3	466	200	470	670	0.20	0.28	A	A	No	-
Between	Broadway	Harrison Street	3	1,343	290	1,340	1,630	0.56	0.68	B	C	No	-
Between	Harrison Street	Oak Street	3	1,997	190	2,000	2,190	0.83	0.91	D	E	No	-
East 8th Street Eastbound													
Between	5th Avenue	14th Avenue	3	2,563	250	2,560	2,810	1.07	1.17	F	F	-	Yes

Downtown Oakland Specific Plan (DOSP) - CMP Analsyis Alameda CTC Roadway System Analysis Summary - 2040 PM														
Link Location	**Segment Limits**		**# Lanes**	**Model Volume**	**Project Trips**	**No Project Volume**	**With Project Volume**	**V/C Ratio - No Project**	**V/C Ratio - With Project**	**No Project LOS**	**With Project LOS**	**Change from LOS E or better to LOS F**	**LOS F and Change in V/C >3%**
8th Street Westbound													
Between	14th Avenue	5th Avenue	3	378	150	380	530	0.16	0.22	A	A	No	-
Between	5th Avenue	Oak Street	3	658	180	660	840	0.28	0.35	A	B	No	-
Between	Oak Street	Harrison Street	4	1,626	200	1,630	1,830	0.51	0.57	B	B	No	-
Between	Harrison Street	Broadway	4	548	150	550	700	0.17	0.22	A	A	No	-
Between	Broadway	Castro Street	2	443	130	440	570	0.28	0.36	A	B	No	-
7th Street Eastbound													
Between	Brush Street	Castro Street	3	1,406	570	1,410	1,980	0.59	0.83	C	D	No	-
Between	Castro Street	Broadway	4	1,304	460	1,300	1,760	0.41	0.55	B	B	No	-
Between	Broadway	Harrison Street	4	967	290	970	1,260	0.30	0.39	A	B	No	-
Between	Harrison Street	Oak Street	4	2,548	460	2,550	3,010	0.80	0.94	D	E	No	-
Between	Oak Street	5th Avenue	3	2,852	350	2,850	3,200	1.19	1.33	F	F	-	**Yes**
Fehr & Peers, 2019.													

Two-Way Road Segment V/C Ratios

ID	Street	From	To	Existing AM V/C	Existing + DOSP AM V/C	Cumulative 2040 AM V/C	Cumulative 2040 + DOSP AM V/C	Existing PM V/C	Existing + DOSP PM V/C	Cumulative 2040 PM V/C	Cumulative 2040 + DOSP PM V/C
1	Brush Street	3rd Street	5th Street	0.17	0.23	0.49	0.55	0.20	0.25	0.50	0.55
2	Brush Street	5th Street	6th Street	0.22	0.29	0.43	0.51	0.20	0.27	0.40	0.46
3	Brush Street	6th Street	7th Street	0.22	0.29	0.42	0.49	0.21	0.27	0.40	0.46
4	Brush Street	7th Street	11th Street	0.58	0.78	1.01	1.21	0.44	0.57	0.79	0.92
5	Brush Street	11th Street	12th Street	0.90	1.21	1.50	1.80	0.64	0.83	1.09	1.29
6	Brush Street	12th Street	14th Street	0.25	0.33	0.38	0.47	0.16	0.21	0.25	0.30
7	Brush Street	14th Street	17th Street	0.49	0.66	0.74	0.91	0.25	0.32	0.38	0.45
8	Brush Street	17th Street	19th Street	1.02	1.37	1.56	1.91	0.54	0.71	0.83	0.99
9	Brush Street	19th Street	20th Street								
10	Brush Street	20th Street	21st Street								
11	Brush Street	21st Street	Grand Avenue								
12	Castro Street	3rd Street	5th Street	0.06	0.08	0.20	0.21	0.22	0.28	0.53	0.59
13	Castro Street	5th Street	6th Street	0.02	0.03	0.08	0.09	0.10	0.14	0.26	0.29
14	Castro Street	6th Street	7th Street	0.03	0.04	0.10	0.11	0.17	0.22	0.35	0.40
15	Castro Street	7th Street	8th Street	0.08	0.10	0.19	0.22	0.30	0.40	0.61	0.70
16	Castro Street	8th Street	11th Street	0.16	0.21	0.32	0.37	0.48	0.62	0.87	1.01
17	Castro Street	11th Street	12th Street	0.17	0.23	0.32	0.38	0.40	0.52	0.73	0.85
18	Castro Street	12th Street	14th Street	0.08	0.10	0.14	0.17	0.11	0.15	0.22	0.25
19	Castro Street	14th Street	17th Street	0.20	0.27	0.33	0.40	0.32	0.42	0.53	0.63
20	Castro Street	17th Street	19th Street	0.28	0.38	0.44	0.54	0.41	0.52	0.64	0.76
21	Castro Street	19th Street	20th Street								
22	Castro Street	20th Street	San Pablo Avenue								
23	MLK	Embarcadero	3rd Street	0.07	0.15	0.39	0.66	0.11	0.23	0.55	0.95
24	MLK	3rd Street	5th Street	0.11	0.24	0.37	0.66	0.16	0.33	0.47	0.82
25	MLK	5th Street	6th Street	0.07	0.16	0.28	0.50	0.17	0.37	0.47	0.85
26	MLK	6th Street	7th Street	0.07	0.14	0.24	0.42	0.12	0.26	0.36	0.65
27	MLK	7th Street	8th Street	0.09	0.19	0.24	0.43	0.14	0.30	0.36	0.66
28	MLK	8th Street	11th Street	0.09	0.20	0.21	0.40	0.14	0.29	0.31	0.58
29	MLK	11th Street	12th Street	0.16	0.35	0.32	0.61	0.16	0.35	0.35	0.64
30	MLK	12th Street	14th Street	0.14	0.30	0.30	0.56	0.21	0.44	0.42	0.77
31	MLK	14th Street	17th Street	0.17	0.38	0.30	0.59	0.19	0.40	0.33	0.62
32	MLK	17th Street	19th Street	0.11	0.24	0.21	0.40	0.15	0.31	0.27	0.51
33	MLK	19th Street	20th Street								
34	MLK	20th Street	San Pablo Avenue								
35	Jefferson Street	Embarcadero	3rd Street	0.03	0.04	0.05	0.06	0.05	0.06	0.08	0.10
36	Jefferson Street	5th Street	6th Street	0.16	0.21	0.24	0.29	0.14	0.19	0.22	0.27
37	Jefferson Street	6th Street	7th Street	0.12	0.16	0.18	0.22	0.11	0.14	0.17	0.20
38	Jefferson Street	7th Street	8th Street	0.08	0.11	0.13	0.15	0.11	0.14	0.16	0.20

Two-Way Road Segment V/C Ratios

ID	Street	From	To	Existing AM V/C	Existing + DOSP AM V/C	Cumulative 2040 AM V/C	Cumulative 2040 + DOSP AM V/C	Existing PM V/C	Existing + DOSP PM V/C	Cumulative 2040 PM V/C	Cumulative 2040 + DOSP PM V/C
39	Jefferson Street	8th Street	11th Street	0.09	0.13	0.14	0.18	0.11	0.14	0.16	0.19
40	Jefferson Street	11th Street	12th Street								
41	Jefferson Street	12th Street	14th Street	0.15	0.20	0.23	0.28	0.16	0.21	0.25	0.30
42	Jefferson Street	14th Street	17th Street	0.19	0.25	0.29	0.35	0.16	0.21	0.25	0.30
43	Jefferson Street	17th Street	San Pablo Avenue	0.06	0.08	0.09	0.12	0.10	0.14	0.16	0.19
44	Clay Street	Embarcadero	3rd Street	0.07	0.10	0.12	0.15	0.32	0.43	0.50	0.59
45	Clay Street	7th Street	8th Street	0.06	0.08	0.09	0.11	0.09	0.12	0.14	0.16
46	Clay Street	8th Street	11th Street	0.09	0.12	0.14	0.17	0.12	0.15	0.18	0.21
47	Clay Street	11th Street	12th Street	0.27	0.35	0.40	0.49	0.45	0.59	0.68	0.82
48	Clay Street	12th Street	14th Street	0.20	0.26	0.29	0.36	0.27	0.35	0.41	0.49
49	Clay Street	14th Street	17th Street	0.22	0.30	0.33	0.41	0.23	0.30	0.36	0.43
50	San Pablo Avenue	17th Street	19th Street	0.23	0.30	0.34	0.42	0.37	0.48	0.55	0.66
51	San Pablo Avenue	19th Street	20th Street	0.14	0.19	0.21	0.26	0.25	0.32	0.38	0.45
52	San Pablo Avenue	20th Street	21st Street	0.25	0.34	0.38	0.47	0.34	0.45	0.52	0.62
53	San Pablo Avenue	21st Street	Grand Avenue	0.23	0.31	0.35	0.43	0.33	0.43	0.50	0.60
54	Washington Street	Embarcadero	3rd Street	0.08	0.11	0.13	0.16	0.16	0.20	0.24	0.28
55	Washington Street	3rd Street	5th Street	0.18	0.24	0.27	0.34	0.27	0.35	0.41	0.49
56	Washington Street	5th Street	6th Street	0.18	0.25	0.28	0.35	0.25	0.32	0.37	0.44
57	Washington Street	6th Street	7th Street	0.17	0.24	0.27	0.34	0.24	0.31	0.35	0.43
58	Washington Street	7th Street	8th Street	0.12	0.17	0.20	0.24	0.19	0.24	0.27	0.33
59	Washington Street	8th Street	10th Street	0.08	0.11	0.13	0.16	0.16	0.20	0.24	0.28
60	Telegraph Avenue	15th Street	17th Street	0.26	0.34	0.39	0.48	0.33	0.43	0.50	0.60
61	Telegraph Avenue	17th Street	19th Street	0.25	0.33	0.38	0.46	0.30	0.39	0.46	0.55
62	Telegraph Avenue	19th Street	20th Street	0.30	0.40	0.45	0.55	0.42	0.55	0.64	0.77
63	Telegraph Avenue	20th Street	21st Street	0.55	0.74	0.83	1.02	0.61	0.80	0.93	1.11
64	Telegraph Avenue	21st Street	Grand Avenue	0.61	0.82	0.92	1.13	0.64	0.83	0.97	1.15
65	Telegraph Avenue	Grand Avenue	27th Street	0.52	0.70	0.80	0.98	0.66	0.86	1.00	1.20
66	Telegraph Avenue	27th Street	29th Street	0.69	0.93	1.05	1.29	0.84	1.09	1.27	1.52
67	Telegraph Avenue	29th Street	34th Street								
68	Broadway	Embarcadero	3rd Street	0.07	0.09	0.10	0.13	0.12	0.15	0.18	0.22
69	Broadway	3rd Street	5th Street	0.20	0.26	0.30	0.37	0.29	0.38	0.44	0.53
70	Broadway	5th Street	6th Street	0.20	0.27	0.30	0.37	0.31	0.40	0.47	0.56
71	Broadway	6th Street	7th Street	0.21	0.28	0.32	0.39	0.27	0.35	0.40	0.48
72	Broadway	7th Street	8th Street	0.28	0.80	0.42	1.11	0.35	0.99	0.53	1.37
73	Broadway	8th Street	11th Street	0.28	0.82	0.43	1.13	0.37	1.02	0.55	1.43
74	Broadway	11th Street	12th Street	0.31	0.88	0.46	1.22	0.40	1.11	0.60	1.55
75	Broadway	12th Street	14th Street	0.50	1.09	0.76	1.51	0.67	1.41	1.01	1.97
76	Broadway	14th Street	17th Street	0.39	0.85	0.59	0.94	0.51	1.08	0.77	1.20

Two-Way Road Segment V/C Ratios

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77	Broadway	17th Street	19th Street	0.22	0.89	0.33	1.23	0.30	1.20	0.46	1.67
78	Broadway	19th Street	20th Street	0.24	0.98	0.36	1.34	0.32	1.27	0.48	1.76
79	Broadway	20th Street	21st Street	0.29	0.83	0.43	1.14	0.34	0.96	0.52	1.33
80	Broadway	21st Street	Grand Avenue	0.29	0.84	0.44	1.10	0.37	1.03	0.56	1.36
81	Broadway	Grand Avenue	27th Street	0.27	0.36	0.40	0.49	0.44	0.57	0.66	0.79
82	Broadway	27th Street	29th Street	0.46	0.61	0.70	0.85	0.58	0.76	0.88	1.05
83	Broadway	29th Street	34th Street								
84	Franklin Street	Embarcadero	3rd Street								
85	Franklin Street	3rd Street	5th Street								
86	Franklin Street	6th Street	7th Street	0.06	0.07	0.09	0.11	0.07	0.10	0.12	0.15
87	Franklin Street	7th Street	8th Street	0.05	0.27	0.07	0.23	0.05	0.27	0.07	0.23
88	Franklin Street	8th Street	11th Street	0.08	0.47	0.12	0.39	0.09	0.47	0.13	0.39
89	Franklin Street	11th Street	12th Street	0.09	0.47	0.13	0.38	0.08	0.47	0.11	0.38
90	Franklin Street	12th Street	14th Street	0.10	0.56	0.15	0.46	0.09	0.56	0.14	0.46
91	Franklin Street	14th Street	17th Street	0.08	0.40	0.13	0.41	0.10	0.40	0.15	0.41
92	Franklin Street	17th Street	19th Street	0.19	0.93	0.29	0.97	0.24	0.93	0.36	0.97
93	Franklin Street	19th Street	20th Street	0.15	0.84	0.23	0.87	0.24	0.84	0.37	0.87
94	Franklin Street	20th Street	21st Street	0.12	0.54	0.18	0.57	0.27	0.54	0.41	0.57
95	Franklin Street	21st Street	Broadway	0.13	0.64	0.20	0.68	0.33	0.64	0.49	0.68
96	Webster Street	Embarcadero	3rd Street								
97	Webster Street	3rd Street	5th Street								
98	Webster Street	5th Street	6th Street								
99	Webster Street	6th Street	7th Street	0.31	0.42	0.49	0.60	0.70	0.91	1.09	1.30
100	Webster Street	7th Street	8th Street	0.28	0.37	0.42	0.51	0.39	0.50	0.58	0.70
101	Webster Street	8th Street	11th Street	0.15	0.20	0.23	0.29	0.25	0.33	0.38	0.45
102	Webster Street	11th Street	12th Street	0.14	0.18	0.21	0.25	0.19	0.25	0.29	0.35
103	Webster Street	12th Street	14th Street	0.09	0.13	0.14	0.17	0.17	0.23	0.26	0.32
104	Webster Street	14th Street	17th Street	0.22	1.08	0.34	0.90	0.28	1.08	0.42	0.90
105	Webster Street	17th Street	19th Street	0.16	0.82	0.24	0.85	0.23	0.82	0.34	0.85
106	Webster Street	19th Street	20th Street	0.20	0.94	0.31	0.98	0.24	0.94	0.36	0.98
107	Webster Street	20th Street	21st Street	0.23	0.70	0.35	0.72	0.26	0.70	0.39	0.72
108	Webster Street	21st Street	Grand Avenue	0.32	0.85	0.49	0.88	0.27	0.85	0.41	0.88
109	Webster Street	Grand Avenue	Broadway	0.31	0.42	0.46	0.57	0.37	0.49	0.58	0.69
110	Lakeside Drive	14th Street	17th Street								
111	Lakeside Drive	17th Street	19th Street	0.39	0.53	0.59	0.72	0.42	0.54	0.64	0.76
112	Lakeside Drive	19th Street	20th Street	0.43	0.58	0.66	0.81	0.54	0.70	0.82	0.98
113	Harrison Street	2nd Street	3rd Street								
114	Harrison Street	3rd Street	5th Street								

Two-Way Road Segment V/C Ratios

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115	Harrison Street	6th Street	7th Street	0.31	0.41	0.49	0.60	0.24	0.31	0.39	0.46
116	Harrison Street	7th Street	8th Street	0.36	0.48	0.57	0.69	0.36	0.47	0.57	0.68
117	Harrison Street	8th Street	10th Street	0.29	0.40	0.44	0.54	0.33	0.44	0.50	0.61
118	Harrison Street	10th Street	11th Street	0.45	0.61	0.68	0.83	0.42	0.54	0.64	0.76
119	Harrison Street	11th Street	12th Street	0.39	0.52	0.59	0.72	0.36	0.47	0.55	0.66
120	Harrison Street	12th Street	14th Street	0.36	0.48	0.54	0.66	0.34	0.44	0.51	0.61
121	Harrison Street	14th Street	17th Street	0.41	0.55	0.62	0.76	0.46	0.59	0.69	0.83
122	Harrison Street	17th Street	19th Street								
123	Harrison Street	19th Street	20th Street	0.46	0.61	0.69	0.84	0.47	0.62	0.72	0.86
124	Harrison Street	20th Street	21st Street	0.66	0.89	1.00	1.23	0.71	0.93	1.08	1.29
125	Harrison Street	21st Street	Grand Avenue	0.54	0.73	0.82	1.01	0.67	0.86	1.00	1.20
126	Harrison Street	Grand Avenue	27th Street	0.41	0.55	0.63	0.77	0.48	0.63	0.73	0.88
127	Alice Street	2nd Street	5th Street								
128	Alice Street	6th Street	7th Street								
129	Alice Street	7th Street	8th Street								
130	Alice Street	8th Street	10th Street								
131	Alice Street	11th Street	12th Street								
132	Alice Street	12th Street	14th Street								
133	Alice Street	14th Street	17th Street								
134	Alice Street	17th Street	19th Street								
135	Jackson Street	2nd Street	3rd Street								
136	Jackson Street	3rd Street	5th Street	0.70	0.95	1.06	1.30	0.73	0.94	1.09	1.30
137	Jackson Street	5th Street	6th Street	0.54	0.73	0.82	1.01	0.78	1.01	1.17	1.40
138	Jackson Street	6th Street	7th Street	0.41	0.55	0.61	0.75	0.41	0.53	0.62	0.74
139	Jackson Street	7th Street	8th Street	0.49	0.66	0.74	0.90	0.49	0.65	0.75	0.90
140	Jackson Street	8th Street	11th Street	0.47	0.63	0.72	0.88	0.47	0.61	0.71	0.85
141	Jackson Street	11th Street	12th Street								
142	Jackson Street	12th Street	14th Street								
143	Jackson Street	14th Street	17th Street								
144	Jackson Street	17th Street	19th Street								
145	Jackson Street	19th Street	Lakeside Drive								
146	Madison Street	2nd Street	3rd Street								
147	Madison Street	3rd Street	5th Street	0.09	0.12	0.13	0.20	0.10	0.13	0.15	0.22
148	Madison Street	5th Street	6th Street	0.24	1.03	0.37	1.07	0.24	1.03	0.36	1.07
149	Madison Street	6th Street	7th Street	0.33	1.45	0.50	1.51	0.34	1.45	0.52	1.51
150	Madison Street	7th Street	8th Street	0.28	1.34	0.42	1.38	0.35	1.34	0.52	1.38
151	Madison Street	8th Street	11th Street	0.24	1.21	0.36	1.26	0.33	1.21	0.49	1.26
152	Madison Street	11th Street	12th Street	0.20	1.05	0.31	1.09	0.29	1.05	0.44	1.09

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153	Madison Street	12th Street	14th Street	0.16	0.86	0.24	0.90	0.24	0.86	0.37	0.90
154	Madison Street	14th Street	17th Street	0.15	0.83	0.22	0.86	0.24	0.83	0.36	0.86
155	Madison Street	17th Street	19th Street	0.14	0.75	0.21	0.79	0.21	0.75	0.33	0.79
156	Oak Street	Embarcadero	3rd Street								
157	Oak Street	3rd Street	5th Street	0.51	0.68	0.77	0.95	0.60	0.77	0.90	1.08
158	Oak Street	5th Street	6th Street	0.44	0.60	0.67	0.82	0.55	0.72	0.83	0.99
159	Oak Street	6th Street	7th Street	0.40	1.70	0.61	1.78	0.39	1.70	0.59	1.78
160	Oak Street	7th Street	8th Street	0.23	1.38	0.34	1.43	0.26	1.38	0.39	1.43
161	Oak Street	8th Street	11th Street	0.23	1.37	0.35	1.42	0.25	1.37	0.37	1.42
162	Oak Street	11th Street	12th Street	0.24	1.22	0.37	1.34	0.18	1.22	0.28	1.34
163	Oak Street	12th Street	14th Street	0.22	0.88	0.34	0.96	0.18	0.88	0.28	0.96
164	Embarcadero	Market Street	MLK	0.03	0.05	0.06	0.07	0.07	0.09	0.11	0.13
165	Embarcadero	MLK	Clay Street	0.05	0.08	0.08	0.11	0.19	0.25	0.30	0.35
166	Embarcadero	Clay Street	Washington Street	0.08	0.11	0.11	0.14	0.19	0.24	0.28	0.34
167	Embarcadero	Washington Street	Broadway	0.10	0.13	0.15	0.18	0.20	0.27	0.32	0.38
168	Embarcadero	Broadway	Franklin Street	0.15	0.20	0.23	0.28	0.23	0.30	0.35	0.42
169	Embarcadero	Franklin Street	Webster Street								
170	Embarcadero	Webster Street	Oak Street								
171	3rd Street	Brush Street	Castro Street	0.29	0.38	0.64	0.74	0.61	0.79	1.27	1.45
172	3rd Street	Castro Street	MLK	0.28	0.37	0.56	0.66	0.57	0.74	1.09	1.26
173	3rd Street	MLK	Jefferson Street	0.24	0.32	0.43	0.51	0.51	0.66	0.88	1.03
174	3rd Street	Jefferson Street	Clay Street	0.23	0.31	0.42	0.50	0.49	0.65	0.86	1.01
175	3rd Street	Clay Street	Washington Street	0.17	0.23	0.33	0.39	0.48	0.63	0.83	0.98
176	3rd Street	Washington Street	Broadway	0.12	0.16	0.23	0.27	0.37	0.48	0.64	0.74
177	3rd Street	Broadway	Franklin Street	0.15	0.20	0.27	0.33	0.41	0.53	0.70	0.82
178	3rd Street	Franklin Street	Webster Street								
179	3rd Street	Webster Street	Harrison								
180	3rd Street	Harrison	Alice Street								
181	3rd Street	Alice Street	Jackson Street								
182	3rd Street	Jackson Street	Madison Street								
183	3rd Street	Madison Street	Oak Street								
184	5th Street	Brush Street	Castro Street	0.36	0.48	0.58	0.70	0.45	0.58	0.73	0.86
185	5th Street	Castro Street	MLK	0.34	0.46	0.55	0.66	0.42	0.55	0.67	0.80
186	5th Street	MLK	Jefferson Street	0.30	0.40	0.46	0.56	0.40	0.52	0.62	0.74
187	5th Street	Jefferson Street	Clay Street	0.32	0.43	0.49	0.60	0.39	0.51	0.61	0.73
188	5th Street	Clay Street	Washington Street	0.32	0.43	0.49	0.60	0.39	0.51	0.61	0.73
189	5th Street	Washington Street	Broadway	0.30	0.41	0.47	0.57	0.41	0.54	0.65	0.77
190	5th Street	Broadway	Franklin Street	0.16	0.21	0.25	0.30	0.29	0.37	0.46	0.55

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191	5th Street	Franklin Street	Webster Street								
192	5th Street	Webster Street	Harrison								
193	5th Street	Harrison	Alice Street								
194	5th Street	Alice Street	Jackson Street	0.44	0.60	0.67	0.82	0.47	0.61	0.71	0.85
195	5th Street	Jackson Street	Madison Street	0.19	0.25	0.28	0.35	0.30	0.40	0.46	0.55
196	5th Street	Madison Street	Oak Street	0.38	0.51	0.58	0.71	0.49	0.64	0.74	0.88
197	6th Street	Brush Street	Castro Street	0.01	0.01	0.03	0.03	0.01	0.02	0.03	0.04
198	6th Street	Castro Street	MLK	0.02	0.03	0.05	0.05	0.08	0.10	0.12	0.15
199	6th Street	MLK	Jefferson Street	0.03	0.04	0.07	0.08	0.05	0.07	0.09	0.11
200	6th Street	Jefferson Street	Washington Street	0.10	0.13	0.17	0.20	0.08	0.10	0.15	0.17
201	6th Street	Washington Street	Broadway	0.15	0.20	0.26	0.31	0.08	0.10	0.15	0.18
202	6th Street	Broadway	Jackson Street								
203	6th Street	Jackson Street	Madison Street	0.13	0.17	0.19	0.24	0.16	0.21	0.25	0.29
204	6th Street	Madison Street	Oak Street	0.31	0.42	0.47	0.58	0.20	0.26	0.30	0.36
205	7th Street	Brush Street	Castro Street	0.18	0.25	0.31	0.38	0.41	0.54	0.68	0.80
206	7th Street	Castro Street	MLK	0.28	1.39	0.44	1.25	0.70	1.39	1.09	1.25
207	7th Street	MLK	Jefferson Street	0.15	1.59	0.25	1.37	0.40	1.59	0.63	1.37
208	7th Street	Jefferson Street	Clay Street	0.14	1.68	0.23	1.44	0.45	1.68	0.69	1.44
209	7th Street	Clay Street	Washington Street	0.14	1.68	0.23	1.44	0.45	1.68	0.69	1.44
210	7th Street	Washington Street	Broadway	0.13	1.55	0.21	1.34	0.42	1.55	0.65	1.34
211	7th Street	Broadway	Franklin Street	0.21	2.11	0.33	1.80	0.53	2.11	0.82	1.80
212	7th Street	Franklin Street	Webster Street	0.22	1.82	0.34	2.04	0.64	1.82	0.99	2.04
213	7th Street	Webster Street	Harrison	0.14	1.05	0.22	1.11	0.35	1.05	0.54	1.11
214	7th Street	Harrison	Alice Street	0.48	3.03	0.73	3.19	0.58	3.03	0.89	3.19
215	7th Street	Alice Street	Jackson Street	0.25	1.61	0.39	1.70	0.50	1.61	0.77	1.70
216	7th Street	Jackson Street	Madison Street	0.20	1.76	0.31	1.85	0.41	1.76	0.63	1.85
217	7th Street	Madison Street	Oak Street	0.16	1.64	0.24	1.73	0.42	1.64	0.64	1.73
218	8th Street	Castro Street	MLK	0.10	0.40	0.19	0.39	0.19	0.40	0.32	0.39
219	8th Street	MLK	Jefferson Street	0.09	0.60	0.16	0.56	0.11	0.60	0.20	0.56
220	8th Street	Jefferson Street	Clay Street	0.20	0.61	0.36	0.56	0.22	0.61	0.38	0.56
221	8th Street	Clay Street	Washington Street	0.20	0.61	0.36	0.56	0.22	0.61	0.38	0.56
222	8th Street	Washington Street	Broadway	0.17	0.67	0.29	0.61	0.14	0.67	0.24	0.61
223	8th Street	Broadway	Franklin Street	0.14	0.80	0.24	0.72	0.13	0.80	0.23	0.72
224	8th Street	Franklin Street	Webster Street	0.18	0.99	0.29	1.09	0.17	0.99	0.27	1.09
225	8th Street	Webster Street	Harrison	0.24	1.26	0.38	1.38	0.20	1.26	0.33	1.38
226	8th Street	Harrison	Alice Street	0.19	1.05	0.29	1.11	0.18	1.05	0.28	1.11
227	8th Street	Alice Street	Jackson Street	0.16	0.93	0.25	0.98	0.16	0.93	0.25	0.98
228	8th Street	Jackson Street	Madison Street	0.15	0.84	0.24	0.89	0.14	0.84	0.21	0.89

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229	8th Street	Madison Street	Oak Street	0.19	1.03	0.30	1.09	0.17	1.03	0.26	1.09
230	11th Street	Brush Street	Castro Street	0.25	0.34	0.38	0.47	0.19	0.24	0.29	0.34
231	11th Street	Castro Street	MLK	0.25	0.33	0.38	0.46	0.18	0.23	0.27	0.32
232	11th Street	MLK	Jefferson Street	0.22	0.30	0.34	0.42	0.18	0.23	0.27	0.32
233	11th Street	Jefferson Street	Clay Street								
234	11th Street	Clay Street	Broadway	0.17	0.23	0.26	0.32	0.18	0.24	0.28	0.33
235	11th Street	Broadway	Franklin Street	0.22	0.30	0.34	0.42	0.23	0.29	0.34	0.41
236	11th Street	Franklin Street	Webster Street	0.17	0.23	0.27	0.32	0.35	0.45	0.54	0.64
237	11th Street	Webster Street	Harrison	0.18	0.24	0.27	0.33	0.35	0.46	0.54	0.65
238	11th Street	Harrison	Alice Street	0.22	0.29	0.33	0.40	0.42	0.54	0.64	0.77
239	11th Street	Alice Street	Jackson Street								
240	11th Street	Jackson Street	Madison Street	0.15	0.20	0.23	0.28	0.26	0.33	0.40	0.48
241	11th Street	Madison Street	Oak Street	0.12	0.16	0.19	0.23	0.23	0.30	0.36	0.42
242	12th Street	Brush Street	Castro Street	0.07	0.09	0.10	0.12	0.07	0.09	0.11	0.13
243	12th Street	Castro Street	MLK	0.13	0.17	0.21	0.25	0.29	0.38	0.46	0.54
244	12th Street	MLK	Jefferson Street	0.15	0.20	0.24	0.29	0.28	0.37	0.44	0.53
245	12th Street	Jefferson Street	Clay Street	0.18	0.24	0.29	0.36	0.27	0.34	0.42	0.50
246	12th Street	Clay Street	Broadway	0.22	0.29	0.35	0.42	0.26	0.33	0.40	0.48
247	12th Street	Broadway	Franklin Street	0.27	0.37	0.43	0.52	0.25	0.32	0.38	0.46
248	12th Street	Franklin Street	Webster Street	0.24	0.32	0.37	0.45	0.25	0.32	0.38	0.45
249	12th Street	Webster Street	Harrison	0.29	0.40	0.45	0.56	0.27	0.34	0.41	0.49
250	12th Street	Harrison	Alice Street	0.29	0.39	0.44	0.54	0.23	0.31	0.36	0.43
251	12th Street	Alice Street	Jackson Street								
252	12th Street	Jackson Street	Madison Street	0.31	0.41	0.47	0.58	0.20	0.27	0.32	0.38
253	12th Street	Madison Street	Oak Street	0.35	0.47	0.54	0.66	0.25	0.32	0.38	0.45
254	14th Street	Brush Street	Castro Street	0.35	1.01	0.53	1.40	0.37	1.03	0.56	1.45
255	14th Street	Castro Street	MLK	0.57	1.22	0.86	1.70	0.67	1.39	1.01	1.96
256	14th Street	MLK	Jefferson Street	0.54	1.17	0.82	1.63	0.64	1.34	0.97	1.88
257	14th Street	Jefferson Street	Clay Street	0.58	1.27	0.89	1.76	0.56	1.18	0.87	1.68
258	14th Street	Clay Street	Broadway								
259	14th Street	Broadway	Franklin Street	0.45	0.98	0.69	1.36	0.54	1.13	0.83	1.60
260	14th Street	Franklin Street	Webster Street	0.45	0.98	0.69	1.37	0.53	1.11	0.81	1.57
261	14th Street	Webster Street	Harrison	0.45	0.98	0.69	1.36	0.54	1.13	0.83	1.60
262	14th Street	Harrison	Alice Street	0.48	1.04	0.72	1.44	0.51	1.08	0.79	1.52
263	14th Street	Alice Street	Jackson Street								
264	14th Street	Jackson Street	Madison Street	0.35	0.74	0.53	1.04	0.32	0.66	0.49	0.95
265	14th Street	Madison Street	Oak Street	0.36	0.78	0.55	1.08	0.34	0.71	0.52	0.99
266	17th Street	Brush Street	Castro Street	0.47	0.64	0.72	0.89	0.23	0.30	0.35	0.42

Two-Way Road Segment V/C Ratios

ID	Street	From	To	Existing AM V/C	Existing + DOSP AM V/C	Cumulative 2040 AM V/C	Cumulative 2040 + DOSP AM V/C	Existing PM V/C	Existing + DOSP PM V/C	Cumulative 2040 PM V/C	Cumulative 2040 + DOSP PM V/C
267	17th Street	Castro Street	MLK	0.34	0.45	0.51	0.63	0.14	0.18	0.21	0.26
268	17th Street	MLK	Jefferson Street	0.30	0.40	0.45	0.55	0.12	0.15	0.18	0.22
269	17th Street	Jefferson Street	San Pablo Avenue	0.36	0.49	0.55	0.68	0.15	0.20	0.23	0.28
270	17th Street	San Pablo Avenue	Telegraph Avenue	0.26	0.34	0.40	0.48	0.17	0.22	0.26	0.31
271	17th Street	Telegraph Avenue	Broadway	0.20	0.27	0.31	0.38	0.17	0.22	0.26	0.31
272	17th Street	Broadway	Franklin Street	0.32	0.43	0.49	0.60	0.29	0.38	0.45	0.54
273	17th Street	Franklin Street	Webster Street	0.26	0.35	0.40	0.49	0.29	0.38	0.44	0.53
274	17th Street	Webster Street	Harrison Street	0.16	0.21	0.24	0.30	0.22	0.28	0.33	0.40
275	17th Street	Harrison Street	Alice Street								
276	17th Street	Alice Street	Jackson Street								
277	17th Street	Jackson Street	Madison Street	0.05	0.07	0.08	0.10	0.08	0.10	0.13	0.15
278	17th Street	Madison Street	Lakeside Drive	0.03	0.04	0.05	0.07	0.05	0.07	0.08	0.10
279	19th Street	Castro Street	MLK								
280	19th Street	San Pablo Avenue	Telegraph Avenue	0.19	0.26	0.29	0.35	0.26	0.34	0.39	0.47
281	19th Street	Telegraph Avenue	Broadway	0.14	0.19	0.22	0.27	0.30	0.39	0.47	0.56
282	19th Street	Broadway	Franklin Street	0.17	0.23	0.26	0.32	0.38	0.49	0.58	0.70
283	19th Street	Franklin Street	Webster Street	0.30	0.40	0.46	0.56	0.32	0.42	0.48	0.58
284	19th Street	Webster Street	Harrison Street	0.18	0.24	0.27	0.33	0.19	0.24	0.28	0.33
285	19th Street	Harrison Street	Alice Street								
286	19th Street	Alice Street	Jackson Street								
287	19th Street	Jackson Street	Madison Street								
288	20th Street	Castro Street	San Pablo Avenue	0.12	0.16	0.19	0.23	0.11	0.15	0.18	0.21
289	20th Street	San Pablo Avenue	Telegraph Avenue	0.24	0.32	0.37	0.45	0.33	0.43	0.51	0.61
290	20th Street	Telegraph Avenue	Broadway	0.32	0.43	0.48	0.59	0.32	0.41	0.48	0.58
291	20th Street	Broadway	Franklin Street	0.31	0.41	0.47	0.58	0.29	0.38	0.44	0.53
292	20th Street	Franklin Street	Webster Street	0.20	0.26	0.30	0.36	0.23	0.30	0.34	0.41
293	20th Street	Webster Street	Harrison Street	0.17	0.23	0.26	0.32	0.22	0.29	0.33	0.40
294	21st Street	San Pablo Avenue	Telegraph Avenue	0.12	0.17	0.19	0.24	0.11	0.15	0.17	0.20
295	21st Street	Telegraph Avenue	Broadway	0.15	0.21	0.24	0.29	0.09	0.12	0.16	0.19
296	21st Street	Broadway	Franklin Street	0.19	0.26	0.29	0.35	0.22	0.28	0.33	0.39
297	21st Street	Franklin Street	Webster Street	0.26	0.35	0.38	0.47	0.36	0.47	0.55	0.66
298	21st Street	Webster Street	Harrison Street	0.42	0.57	0.64	0.78	0.48	0.62	0.72	0.86
299	Grand Avenue	Brush Street	San Pablo Avenue	0.35	0.47	0.53	0.65	0.46	0.60	0.70	0.84
300	Grand Avenue	San Pablo Avenue	MLK	0.36	0.48	0.55	0.67	0.46	0.60	0.70	0.84
301	Grand Avenue	MLK	Telegraph Avenue	0.49	0.66	0.75	0.92	0.61	0.80	0.93	1.12
302	Grand Avenue	Telegraph Avenue	Broadway	0.36	0.49	0.55	0.68	0.50	0.64	0.75	0.90
303	Grand Avenue	Broadway	Webster Street	0.64	0.86	0.97	1.19	0.79	1.03	1.20	1.43
304	Grand Avenue	Webster Street	Harrison/Lakeside	0.30	0.41	0.46	0.57	0.44	0.57	0.66	0.79

Two-Way Road Segment V/C Ratios

ID	Street	From	To	Existing AM V/C	Existing + DOSP AM V/C	Cumulative 2040 AM V/C	Cumulative 2040 + DOSP AM V/C	Existing PM V/C	Existing + DOSP PM V/C	Cumulative 2040 PM V/C	Cumulative 2040 + DOSP PM V/C
305	27th Street	MLK	Telegraph Avenue	0.36	0.48	0.55	0.67	0.46	0.60	0.69	0.83
306	27th Street	Telegraph Avenue	Broadway	0.26	0.34	0.39	0.48	0.36	0.47	0.55	0.66
307	27th Street	Broadway	Harrison/Lakeside	0.25	0.33	0.38	0.46	0.31	0.40	0.46	0.55
308	29th Street	MLK	Telegraph Avenue								
309	29th Street	Telegraph Avenue	Broadway								
310	34th Street	MLK	Telegraph Avenue								
311	34th Street	Telegraph Avenue	Broadway								
312	International	1st Avenue	5th Avenue	0.67	0.90	1.01	1.24	0.77	1.00	1.16	1.39
313	E. 12th Street	1st Avenue	5th Avenue								
314	Lake Merritt Blvd	Oak Street	12th Street	0.26	0.35	0.39	0.48	0.32	0.41	0.48	0.58
315	1st Avenue	E. 12th Street	International Boulevard	0.56	0.75	0.84	1.03	0.64	0.84	0.97	1.16
316	7th Street	Fallon Street	5th Avenue	0.35	0.47	0.53	0.65	0.49	0.64	0.75	0.89
317	E. 8th Street	5th Avenue	E. 12th Street	0.21	0.28	0.32	0.39	0.26	0.34	0.40	0.47
318	Posey Tube NB	Willie Stargell Avenue	6th Street	1.53	2.05	2.35	2.87	1.15	1.50	1.77	2.12
319	Posey Tube SB	6th Street	Willie Stargell Avenue	1.07	1.44	1.64	2.01	1.82	2.36	2.79	3.33
320	Webster Street	Atlantic Avenue	Willie Stargell Avenue	0.55	0.74	0.86	1.04	0.62	0.80	0.96	1.14
321	Constitution Way	Atlantic Avenue	Marina Village Parkway	0.40	0.54	0.63	0.77	0.57	0.74	0.88	1.05
322	3rd Street	Adeline Street	Market Street	0.47	0.63	0.70	0.86	0.73	0.96	1.12	1.34
323	3rd Street	Market Street	Brush Street	0.34	0.46	0.52	0.64	0.71	0.92	1.07	1.29
324	7th Street	Union Street	Adeline Street	0.38	0.50	0.57	0.70	0.53	0.69	0.81	0.97
325	7th Street	Adeline Street	Market Street	0.27	0.36	0.40	0.49	0.43	0.56	0.64	0.77
326	7th Street	Market Street	Brush Street	0.29	0.38	0.43	0.53	0.38	0.50	0.58	0.69
327	Market Street	Embarcadero	3rd Street	0.08	0.11	0.82	0.85	0.06	0.08	0.95	0.97
328	Market Street	3rd Street	7th Street	0.11	0.15	0.44	0.48	0.11	0.15	0.52	0.56
329	Middle Harbor Rd	Maritime Street	3rd Street	0.28	0.38	0.43	0.53	0.37	0.48	0.56	0.67
330	Adeline Street	3rd Street	7th Street	0.25	0.33	0.37	0.46	0.29	0.38	0.44	0.53
331	5th Street	Union Street	Adeline Street	0.35	0.47	0.53	0.65	0.34	0.44	0.51	0.61
332	5th Street	Adeline Street	Market Street	0.67	0.90	1.01	1.24	0.63	0.82	0.95	1.14
333	5th Street	Market Street	Brush Street	0.20	0.27	0.31	0.38	0.29	0.37	0.44	0.52
334	Market Street	7th Street	12th Street	0.15	0.21	0.35	0.49	0.18	0.24	0.42	0.56
335	Market Street	12th Street	18th Street	0.18	0.23	0.32	0.37	0.20	0.26	0.36	0.40
336	Market Street	18th Street	Grand Avenue	0.18	0.24	0.37	0.52	0.22	0.29	0.43	0.57
337	Market Street	Grand Avenue	Grand Avenue North	0.13	0.18	0.24	0.30	0.16	0.21	0.29	0.37

Two-Way Road Segment Traffic Volume Forecasts

						Existing		Existing Plus Howard Terminal		Existing Plus DOSP		2040 Plus Major Projects		2040 Plus Major Projects Plus HT (Cumulative No Project for DOSP)		2040 Plus All Projects (Major Projects, DOSP, HT)	
ID	Direction	Street	From	To	Count Year	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
1	N/S	Brush Street	3rd Street	5th Street	2019	192	221	290	310	260	280	300	320	550	560	620	620
2	N/S	Brush Street	5th Street	6th Street	2019	600	555	720	660	810	730	920	850	1,190	1,100	1,400	1,270
3	N/S	Brush Street	6th Street	7th Street	2019	596	567	710	670	800	740	890	860	1,160	1,110	1,360	1,280
4	N/S	Brush Street	7th Street	11th Street	2019	1,590	1,205	1,960	1,510	2,140	1,570	2,420	1,820	2,790	2,170	3,340	2,530
5	N/S	Brush Street	11th Street	12th Street	2019	2,472	1,762	2,840	2,070	3,320	2,290	3,750	2,660	4,120	3,010	4,970	3,540
6	N/S	Brush Street	12th Street	14th Street	2019	686	452	690	460	920	580	1,040	680	1,060	690	1,290	820
7	N/S	Brush Street	14th Street	17th Street	2019	1,348	683	1,350	680	1,810	880	2,030	1,030	2,050	1,040	2,510	1,240
8	N/S	Brush Street	17th Street	19th Street	2019	2,811	1,500	2,810	1,500	3,770	1,950	4,270	2,270	4,290	2,280	5,250	2,730
9	N/S	Brush Street	19th Street	20th Street													
10	N/S	Brush Street	20th Street	21st Street													
11	N/S	Brush Street	21st Street	Grand Avenue													
12	N/S	Castro Street	3rd Street	5th Street	2019	66	246	120	340	90	320	100	370	220	600	240	670
13	N/S	Castro Street	5th Street	6th Street	2019	55	288	110	400	80	380	90	450	230	720	250	810
14	N/S	Castro Street	6th Street	7th Street	2019	89	464	150	580	120	600	140	700	280	970	310	1,110
15	N/S	Castro Street	7th Street	8th Street	2019	208	839	290	990	280	1,090	320	1,270	530	1,670	600	1,920
16	N/S	Castro Street	8th Street	11th Street	2019	439	1,321	510	1,460	590	1,710	670	1,990	880	2,390	1,030	2,780
17	N/S	Castro Street	11th Street	12th Street	2019	637	1,485	750	1,680	860	1,930	970	2,240	1,190	2,670	1,410	3,110
18	N/S	Castro Street	12th Street	14th Street	2019	212	309	220	350	280	400	320	470	390	610	460	700
19	N/S	Castro Street	14th Street	17th Street	2019	548	885	600	990	740	1,150	830	1,330	900	1,470	1,090	1,730
20	N/S	Castro Street	17th Street	19th Street	2019	1,035	1,492	1,080	1,570	1,390	1,930	1,560	2,240	1,630	2,370	1,980	2,810
21	N/S	Castro Street	19th Street	20th Street													
22	N/S	Castro Street	20th Street	San Pablo Avenue													
23	N/S	MLK	Embarcadero	3rd Street	2019	127	199	530	720	170	260	190	300	710	1,010	750	1,070
24	N/S	MLK	3rd Street	5th Street	2019	196	287	600	790	270	370	310	420	670	850	740	930
25	N/S	MLK	5th Street	6th Street	2019	130	316	440	720	180	420	210	490	510	860	560	960
26	N/S	MLK	6th Street	7th Street	2019	122	223	380	590	160	290	190	350	430	660	470	730
27	N/S	MLK	7th Street	8th Street	2019	156	259	400	620	210	340	230	400	440	660	490	740
28	N/S	MLK	8th Street	11th Street	2019	161	251	370	590	220	330	250	390	390	570	450	650
29	N/S	MLK	11th Street	12th Street	2019	299	296	470	540	400	390	450	450	590	630	690	720
30	N/S	MLK	12th Street	14th Street	2019	254	385	390	580	340	500	400	580	540	760	630	870
31	N/S	MLK	14th Street	17th Street	2019	319	348	420	490	430	450	480	520	550	600	660	700
32	N/S	MLK	17th Street	19th Street	2019	203	274	280	390	270	350	310	410	380	490	450	570
33	N/S	MLK	19th Street	20th Street													
34	N/S	MLK	20th Street	San Pablo Avenue													
35	N/S	Jefferson Street	Embarcadero	3rd Street	2019	37	54	40	50	50	70	60	90	60	90	70	110
36	N/S	Jefferson Street	5th Street	6th Street	2019	183	163	180	160	240	210	270	250	270	250	330	300
37	N/S	Jefferson Street	6th Street	7th Street	2019	183	163	180	160	240	210	270	250	270	250	330	300
38	N/S	Jefferson Street	7th Street	8th Street	2019	150	197	150	200	200	260	230	300	230	300	280	360
39	N/S	Jefferson Street	8th Street	11th Street	2019	169	192	170	190	230	250	260	290	260	290	320	350
40	N/S	Jefferson Street	11th Street	12th Street													
41	N/S	Jefferson Street	12th Street	14th Street	2017	280	290	280	290	370	380	420	450	420	450	510	540
42	N/S	Jefferson Street	14th Street	17th Street	2017	342	298	340	300	460	390	520	460	520	460	640	550
43	N/S	Jefferson Street	17th Street	San Pablo Avenue	2014	114	187	110	190	150	250	170	290	170	290	210	350
44	N/S	Clay Street	Embarcadero	3rd Street	2019	83	365	80	370	110	480	140	560	140	560	170	670
45	N/S	Clay Street	7th Street	8th Street	2015	109	158	110	160	150	210	160	250	160	250	200	300
46	N/S	Clay Street	8th Street	11th Street	2015	164	215	160	220	220	280	250	320	250	320	310	380
47	N/S	Clay Street	11th Street	12th Street	2015	300	505	300	510	400	660	450	770	450	770	550	920
48	N/S	Clay Street	12th Street	14th Street	2015	289	404	290	400	390	520	430	610	430	610	530	730
49	N/S	Clay Street	14th Street	17th Street	2015	397	424	400	420	540	550	610	650	610	650	750	780

Two-Way Road Segment Traffic Volume Forecasts

						Existing		Existing Plus Howard Terminal		Existing Plus DOSP		2040 Plus Major Projects		2040 Plus Major Projects Plus HT (Cumulative No Project for DOSP)		2040 Plus All Projects (Major Projects, DOSP, HT)	
ID	Direction	Street	From	To	Count Year	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
50	N/S	San Pablo Avenue	17th Street	19th Street	2016	335	550	340	550	450	710	510	820	510	820	620	980
51	N/S	San Pablo Avenue	19th Street	20th Street	2016	447	789	450	790	600	1,030	680	1,200	680	1,200	830	1,440
52	N/S	San Pablo Avenue	20th Street	21st Street	2016	799	1,095	800	1,100	1,080	1,430	1,220	1,650	1,220	1,650	1,500	1,980
53	N/S	San Pablo Avenue	21st Street	Grand Avenue	2016	734	1,056	730	1,060	980	1,370	1,120	1,590	1,120	1,590	1,370	1,900
54	N/S	Washington Street	Embarcadero	3rd Street	2019	91	175	90	180	120	230	150	270	150	270	180	320
55	N/S	Washington Street	3rd Street	5th Street	2019	202	301	200	300	270	390	310	460	310	460	380	550
56	N/S	Washington Street	5th Street	6th Street	2019	207	283	210	280	280	360	320	420	320	420	390	500
57	N/S	Washington Street	6th Street	7th Street	2019	196	268	200	270	270	350	310	400	310	400	380	480
58	N/S	Washington Street	7th Street	8th Street	2019	139	209	140	210	190	270	220	310	220	310	270	370
59	N/S	Washington Street	8th Street	10th Street	2019	92	176	90	180	120	230	150	270	150	270	180	320
60	N/S	Telegraph Avenue	15th Street	17th Street	2014	363	470	360	470	480	610	550	710	550	710	670	850
61	N/S	Telegraph Avenue	17th Street	19th Street	2016	350	424	350	420	470	550	530	650	530	650	650	780
62	N/S	Telegraph Avenue	19th Street	20th Street	2016	424	596	420	600	560	780	630	900	630	900	770	1,080
63	N/S	Telegraph Avenue	20th Street	21st Street	2016	808	905	810	910	1,090	1,180	1,230	1,370	1,230	1,370	1,510	1,640
64	N/S	Telegraph Avenue	21st Street	Grand Avenue	2016	900	953	900	950	1,210	1,230	1,360	1,430	1,360	1,430	1,670	1,710
65	N/S	Telegraph Avenue	Grand Avenue	27th Street	2016	770	983	770	980	1,040	1,270	1,180	1,480	1,180	1,480	1,450	1,770
66	N/S	Telegraph Avenue	27th Street	29th Street	2016	1,027	1,240	1,030	1,240	1,380	1,610	1,560	1,880	1,560	1,880	1,910	2,250
67	N/S	Telegraph Avenue	29th Street	34th Street													
68	N/S	Broadway	Embarcadero	3rd Street	2019	203	359	200	360	270	470	310	550	310	550	380	660
69	N/S	Broadway	3rd Street	5th Street	2019	596	880	620	920	800	1,140	890	1,320	910	1,350	1,110	1,610
70	N/S	Broadway	5th Street	6th Street	2019	639	987	640	990	860	1,280	970	1,490	970	1,490	1,190	1,780
71	N/S	Broadway	6th Street	7th Street	2019	968	1,223	970	1,220	1,300	1,590	1,460	1,850	1,460	1,850	1,790	2,220
72	N/S	Broadway	7th Street	8th Street	2019	836	1,065	840	1,070	1,130	1,390	1,280	1,610	1,280	1,610	1,570	1,930
73	N/S	Broadway	8th Street	11th Street	2019	858	1,113	860	1,110	1,150	1,440	1,300	1,680	1,300	1,680	1,590	2,010
74	N/S	Broadway	11th Street	12th Street	2012	978	1,265	980	1,270	1,310	1,650	1,480	1,910	1,480	1,910	1,810	2,290
75	N/S	Broadway	12th Street	14th Street	2012	919	1,222	920	1,220	1,230	1,590	1,390	1,850	1,390	1,850	1,700	2,220
76	N/S	Broadway	14th Street	17th Street	2017	715	935	720	940	960	1,220	1,080	1,410	1,080	1,410	1,320	1,690
77	N/S	Broadway	17th Street	19th Street	2017	744	1,037	740	1,040	1,000	1,350	1,130	1,570	1,130	1,570	1,390	1,880
78	N/S	Broadway	19th Street	20th Street	2017	815	1,095	820	1,100	1,100	1,430	1,230	1,650	1,230	1,650	1,510	1,980
79	N/S	Broadway	20th Street	21st Street	2016	869	1,039	870	1,040	1,170	1,350	1,310	1,570	1,310	1,570	1,610	1,880
80	N/S	Broadway	21st Street	Grand Avenue	2016	877	1,118	880	1,120	1,180	1,450	1,330	1,690	1,330	1,690	1,630	2,020
81	N/S	Broadway	Grand Avenue	27th Street	2016	852	1,397	850	1,400	1,140	1,820	1,290	2,100	1,290	2,100	1,580	2,520
82	N/S	Broadway	27th Street	29th Street	2016	1,462	1,857	1,460	1,860	1,960	2,410	2,220	2,800	2,220	2,800	2,720	3,350
83	N/S	Broadway	29th Street	34th Street													
84	N/S	Franklin Street	Embarcadero	3rd Street													
85	N/S	Franklin Street	3rd Street	5th Street													
86	N/S	Franklin Street	6th Street	7th Street	2019	63	84	60	80	80	110	100	140	100	140	120	170
87	N/S	Franklin Street	7th Street	8th Street	2019	183	171	180	170	240	220	270	260	270	260	330	310
88	N/S	Franklin Street	8th Street	11th Street	2019	287	313	290	310	390	400	430	470	430	470	530	560
89	N/S	Franklin Street	11th Street	12th Street	2016	318	277	320	280	430	360	480	410	480	410	590	490
90	N/S	Franklin Street	12th Street	14th Street	2016	375	336	380	340	510	440	570	510	570	510	700	610
91	N/S	Franklin Street	14th Street	17th Street	2016	228	277	230	280	310	360	350	410	350	410	430	490
92	N/S	Franklin Street	17th Street	19th Street	2017	537	659	540	660	720	860	810	1,000	810	1,000	990	1,200
93	N/S	Franklin Street	19th Street	20th Street	2017	413	673	410	670	550	870	620	1,010	620	1,010	760	1,210
94	N/S	Franklin Street	20th Street	21st Street	2016	214	492	210	490	280	640	320	750	320	750	390	900
95	N/S	Franklin Street	21st Street	Broadway	2016	244	593	240	590	320	770	370	900	370	900	450	1,080
96	N/S	Webster Street	Embarcadero	3rd Street													
97	N/S	Webster Street	3rd Street	5th Street													
98	N/S	Webster Street	5th Street	6th Street													

Two-Way Road Segment Traffic Volume Forecasts

						Existing		Existing Plus Howard Terminal		Existing Plus DOSP		2040 Plus Major Projects		2040 Plus Major Projects Plus HT (Cumulative No Project for DOSP)		2040 Plus All Projects (Major Projects, DOSP, HT)	
ID	Direction	Street	From	To	Count Year	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
99	N/S	Webster Street	6th Street	7th Street	2015	864	1,928	900	1,990	1,160	2,510	1,310	2,920	1,360	3,000	1,660	3,580
100	N/S	Webster Street	7th Street	8th Street	2019	760	1,062	760	1,060	1,020	1,380	1,150	1,610	1,150	1,610	1,410	1,930
101	N/S	Webster Street	8th Street	11th Street	2019	563	923	560	920	750	1,200	860	1,390	860	1,390	1,050	1,670
102	N/S	Webster Street	11th Street	12th Street	2016	499	697	500	700	670	910	760	1,060	760	1,060	930	1,270
103	N/S	Webster Street	12th Street	14th Street	2016	347	641	350	640	470	830	520	970	520	970	640	1,160
104	N/S	Webster Street	14th Street	17th Street	2016	615	762	620	760	830	990	930	1,160	930	1,160	1,140	1,390
105	N/S	Webster Street	17th Street	19th Street	2016	427	626	430	630	580	810	660	930	660	930	810	1,110
106	N/S	Webster Street	19th Street	20th Street	2018	560	654	560	650	750	840	860	980	860	980	1,050	1,170
107	N/S	Webster Street	20th Street	21st Street	2016	417	481	420	480	560	620	630	720	630	720	770	860
108	N/S	Webster Street	21st Street	Grand Avenue	2016	591	490	590	490	790	640	890	750	890	750	1,090	900
109	N/S	Webster Street	Grand Avenue	Broadway	2016	348	422	350	420	470	550	520	650	520	650	640	780
110	N/S	Lakeside Drive	14th Street	17th Street													
111	N/S	Lakeside Drive	17th Street	19th Street	2012	716	759	720	760	960	990	1,080	1,160	1,080	1,160	1,320	1,390
112	N/S	Lakeside Drive	19th Street	20th Street	2012	788	990	790	990	1,060	1,280	1,200	1,490	1,200	1,490	1,470	1,780
113	N/S	Harrison Street	2nd Street	3rd Street													
114	N/S	Harrison Street	3rd Street	5th Street													
115	N/S	Harrison Street	6th Street	7th Street	2015	841	664	920	720	1,130	860	1,280	1,010	1,350	1,070	1,640	1,270
116	N/S	Harrison Street	7th Street	8th Street	2019	980	1,003	1,060	1,060	1,320	1,300	1,490	1,520	1,560	1,580	1,900	1,880
117	N/S	Harrison Street	8th Street	10th Street	2019	806	921	810	920	1,090	1,200	1,220	1,390	1,220	1,390	1,500	1,670
118	N/S	Harrison Street	10th Street	11th Street	2015	825	760	830	760	1,110	990	1,240	1,160	1,240	1,160	1,520	1,390
119	N/S	Harrison Street	11th Street	12th Street	2015	712	658	710	660	950	860	1,080	1,000	1,080	1,000	1,320	1,200
120	N/S	Harrison Street	12th Street	14th Street	2016	654	618	650	620	870	800	990	930	990	930	1,210	1,110
121	N/S	Harrison Street	14th Street	17th Street	2016	742	831	740	830	1,000	1,080	1,130	1,260	1,130	1,260	1,390	1,510
122	N/S	Harrison Street	17th Street	19th Street													
123	N/S	Harrison Street	19th Street	20th Street	2016	830	866	830	870	1,110	1,130	1,250	1,310	1,250	1,310	1,530	1,570
124	N/S	Harrison Street	20th Street	21st Street	2016	2,105	2,276	2,110	2,280	2,830	2,960	3,200	3,450	3,200	3,450	3,920	4,130
125	N/S	Harrison Street	21st Street	Grand Avenue	2018	1,736	2,123	1,740	2,120	2,330	2,750	2,630	3,200	2,630	3,200	3,220	3,830
126	N/S	Harrison Street	Grand Avenue	27th Street	2018	1,248	1,465	1,250	1,470	1,680	1,910	1,900	2,220	1,900	2,220	2,330	2,660
127	N/S	Alice Street	2nd Street	5th Street													
128	N/S	Alice Street	6th Street	7th Street													
129	N/S	Alice Street	7th Street	8th Street													
130	N/S	Alice Street	8th Street	10th Street													
131	N/S	Alice Street	11th Street	12th Street													
132	N/S	Alice Street	12th Street	14th Street													
133	N/S	Alice Street	14th Street	17th Street													
134	N/S	Alice Street	17th Street	19th Street													
135	N/S	Jackson Street	2nd Street	3rd Street													
136	N/S	Jackson Street	3rd Street	5th Street	2015	795	820	800	820	1,070	1,060	1,200	1,230	1,200	1,230	1,470	1,470
137	N/S	Jackson Street	5th Street	6th Street	2015	610	880	610	880	820	1,140	930	1,320	930	1,320	1,140	1,580
138	N/S	Jackson Street	6th Street	7th Street	2015	457	457	460	460	620	600	690	700	690	700	850	840
139	N/S	Jackson Street	7th Street	8th Street	2015	548	557	550	560	740	730	830	850	830	850	1,020	1,020
140	N/S	Jackson Street	8th Street	11th Street	2012	533	525	530	530	710	690	810	800	810	800	990	960
141	N/S	Jackson Street	11th Street	12th Street													
142	N/S	Jackson Street	12th Street	14th Street													
143	N/S	Jackson Street	14th Street	17th Street													
144	N/S	Jackson Street	17th Street	19th Street													
145	N/S	Jackson Street	19th Street	Lakeside Drive													
146	N/S	Madison Street	2nd Street	3rd Street													
147	N/S	Madison Street	3rd Street	5th Street	2018	128	141	130	140	170	180	190	210	190	210	230	250

Two-Way Road Segment Traffic Volume Forecasts

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ID	Direction	Street	From	To	Count Year	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
148	N/S	Madison Street	5th Street	6th Street	2018	666	653	670	650	900	840	1,020	980	1,020	980	1,250	1,170
149	N/S	Madison Street	6th Street	7th Street	2015	918	944	920	940	1,230	1,220	1,390	1,420	1,390	1,420	1,700	1,700
150	N/S	Madison Street	7th Street	8th Street	2015	764	955	760	960	1,020	1,240	1,150	1,430	1,150	1,430	1,410	1,710
151	N/S	Madison Street	8th Street	11th Street	2012	662	899	660	900	880	1,170	990	1,360	990	1,360	1,210	1,630
152	N/S	Madison Street	11th Street	12th Street	2012	552	789	550	790	740	1,030	840	1,200	840	1,200	1,030	1,440
153	N/S	Madison Street	12th Street	14th Street	2012	427	671	430	670	580	870	660	1,010	660	1,010	810	1,210
154	N/S	Madison Street	14th Street	17th Street	2012	404	661	400	660	540	860	610	1,000	610	1,000	750	1,200
155	N/S	Madison Street	17th Street	19th Street	2012	372	592	370	590	500	770	570	900	570	900	700	1,080
156	N/S	Oak Street	Embarcadero	3rd Street													
157	N/S	Oak Street	3rd Street	5th Street	2018	572	674	570	670	770	870	870	1,020	870	1,020	1,070	1,220
158	N/S	Oak Street	5th Street	6th Street	2018	627	775	630	780	840	1,010	950	1,170	950	1,170	1,160	1,400
159	N/S	Oak Street	6th Street	7th Street	2016	1,112	1,073	1,110	1,070	1,490	1,390	1,690	1,620	1,690	1,620	2,070	1,940
160	N/S	Oak Street	7th Street	8th Street	2012	833	944	830	940	1,110	1,220	1,250	1,420	1,250	1,420	1,530	1,700
161	N/S	Oak Street	8th Street	11th Street	2012	835	907	840	910	1,130	1,180	1,280	1,370	1,280	1,370	1,570	1,640
162	N/S	Oak Street	11th Street	12th Street	2012	943	704	940	700	1,260	910	1,430	1,070	1,430	1,070	1,750	1,280
163	N/S	Oak Street	12th Street	14th Street	2012	650	533	650	530	870	690	980	810	980	810	1,200	970
164	E/W	Embarcadero	Market Street	MLK	2019	25	61	30	60	40	80	50	90	50	90	60	110
165	E/W	Embarcadero	MLK	Clay Street	2019	45	161	10	40	70	210	70	250	70	250	90	300
166	E/W	Embarcadero	Clay Street	Washington Street	2019	107	264	110	260	150	340	160	400	160	400	200	480
167	E/W	Embarcadero	Washington Street	Broadway	2019	135	288	140	290	190	380	210	450	210	450	260	540
168	E/W	Embarcadero	Broadway	Franklin Street	2019	214	321	210	320	280	420	320	490	320	490	390	590
169	E/W	Embarcadero	Franklin Street	Webster Street													
170	E/W	Embarcadero	Webster Street	Oak Street													
171	E/W	3rd Street	Brush Street	Castro Street	2019	322	686	350	730	430	890	500	1,030	720	1,430	830	1,630
172	E/W	3rd Street	Castro Street	MLK	2019	311	645	340	680	420	840	480	970	630	1,230	740	1,420
173	E/W	3rd Street	MLK	Jefferson Street	2019	270	573	310	630	360	740	410	870	480	990	570	1,160
174	E/W	3rd Street	Jefferson Street	Clay Street	2019	257	556	300	610	350	730	400	850	470	970	560	1,140
175	E/W	3rd Street	Clay Street	Washington Street	2019	193	546	230	600	260	710	300	820	370	940	440	1,100
176	E/W	3rd Street	Washington Street	Broadway	2019	166	516	210	570	230	670	250	780	320	900	380	1,050
177	E/W	3rd Street	Broadway	Franklin Street	2019	166	457	180	470	230	600	250	700	310	790	370	930
178	E/W	3rd Street	Franklin Street	Webster Street													
179	E/W	3rd Street	Webster Street	Harrison													
180	E/W	3rd Street	Harrison	Alice Street													
181	E/W	3rd Street	Alice Street	Jackson Street													
182	E/W	3rd Street	Jackson Street	Madison Street													
183	E/W	3rd Street	Madison Street	Oak Street													
184	E/W	5th Street	Brush Street	Castro Street	2019	989	1,233	1,110	1,400	1,330	1,600	1,500	1,870	1,600	2,010	1,940	2,380
185	E/W	5th Street	Castro Street	MLK	2019	943	1,159	1,060	1,310	1,260	1,510	1,430	1,750	1,510	1,850	1,830	2,200
186	E/W	5th Street	MLK	Jefferson Street	2019	824	1,091	920	1,250	1,100	1,420	1,240	1,650	1,270	1,710	1,550	2,040
187	E/W	5th Street	Jefferson Street	Clay Street	2019	878	1,081	970	1,240	1,180	1,400	1,330	1,630	1,360	1,690	1,660	2,010
188	E/W	5th Street	Clay Street	Washington Street	2019	878	1,081	970	1,240	1,180	1,400	1,330	1,630	1,360	1,690	1,660	2,010
189	E/W	5th Street	Washington Street	Broadway	2019	879	1,192	980	1,350	1,180	1,550	1,330	1,810	1,360	1,870	1,660	2,230
190	E/W	5th Street	Broadway	Franklin Street	2019	286	524	400	710	390	680	430	800	450	840	550	1,000
191	E/W	5th Street	Franklin Street	Webster Street													
192	E/W	5th Street	Webster Street	Harrison													
193	E/W	5th Street	Harrison	Alice Street													
194	E/W	5th Street	Alice Street	Jackson Street	2015	1,217	1,289	1,220	1,290	1,640	1,680	1,850	1,950	1,850	1,950	2,270	2,340
195	E/W	5th Street	Jackson Street	Madison Street	2018	511	835	510	840	690	1,090	780	1,270	780	1,270	960	1,520
196	E/W	5th Street	Madison Street	Oak Street	2018	1,049	1,345	1,050	1,350	1,410	1,750	1,590	2,030	1,590	2,030	1,950	2,430

Two-Way Road Segment Traffic Volume Forecasts																	
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ID	Direction	Street	From	To	Count Year	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
197	E/W	6th Street	Brush Street	Castro Street	2019	26	38	50	60	40	50	50	60	80	90	90	100
198	E/W	6th Street	Castro Street	MLK	2019	66	208	90	230	90	270	100	310	130	340	150	400
199	E/W	6th Street	MLK	Jefferson Street	2019	89	135	140	170	120	180	140	200	200	260	230	300
200	E/W	6th Street	Jefferson Street	Washington Street	2015	184	152	230	190	240	190	270	220	330	280	390	320
201	E/W	6th Street	Washington Street	Broadway	2019	277	146	320	180	370	190	420	220	480	280	570	320
202	E/W	6th Street	Broadway	Jackson Street													
203	E/W	6th Street	Jackson Street	Madison Street	2015	352	450	350	450	470	580	530	680	530	680	650	810
204	E/W	6th Street	Madison Street	Oak Street	2015	862	547	860	550	1,150	710	1,300	820	1,300	820	1,590	980
205	E/W	7th Street	Brush Street	Castro Street	2019	845	1,900	930	2,010	1,140	2,470	1,290	2,880	1,440	3,110	1,730	3,680
206	E/W	7th Street	Castro Street	MLK	2019	538	1,349	580	1,400	720	1,750	810	2,030	850	2,090	1,030	2,490
207	E/W	7th Street	MLK	Jefferson Street	2019	570	1,483	610	1,550	770	1,920	870	2,230	910	2,300	1,110	2,740
208	E/W	7th Street	Jefferson Street	Clay Street	2019	530	1,639	570	1,700	710	2,130	810	2,480	850	2,550	1,030	3,040
209	E/W	7th Street	Clay Street	Washington Street	2019	530	1,639	570	1,700	710	2,130	810	2,480	850	2,550	1,030	3,040
210	E/W	7th Street	Washington Street	Broadway	2019	476	1,534	520	1,600	640	1,990	720	2,320	760	2,390	920	2,850
211	E/W	7th Street	Broadway	Franklin Street	2019	776	1,936	820	2,000	1,050	2,520	1,180	2,940	1,220	3,010	1,490	3,590
212	E/W	7th Street	Franklin Street	Webster Street	2019	625	1,844	670	1,910	840	2,390	950	2,790	990	2,860	1,200	3,410
213	E/W	7th Street	Webster Street	Harrison	2019	380	965	400	990	510	1,260	580	1,460	600	1,490	730	1,780
214	E/W	7th Street	Harrison	Alice Street	2019	1,760	2,133	1,780	2,160	2,360	2,770	2,670	3,240	2,690	3,270	3,290	3,910
215	E/W	7th Street	Alice Street	Jackson Street	2015	697	1,379	710	1,400	940	1,790	1,050	2,080	1,070	2,110	1,310	2,520
216	E/W	7th Street	Jackson Street	Madison Street	2015	737	1,521	750	1,550	990	1,980	1,120	2,300	1,140	2,330	1,390	2,790
217	E/W	7th Street	Madison Street	Oak Street	2015	583	1,532	600	1,560	780	1,990	880	2,320	900	2,350	1,100	2,810
218	E/W	8th Street	Castro Street	MLK	2019	176	338	180	350	240	440	260	510	340	590	400	690
219	E/W	8th Street	MLK	Jefferson Street	2019	341	422	410	470	460	550	520	650	600	730	720	860
220	E/W	8th Street	Jefferson Street	Clay Street	2019	370	408	440	460	500	530	570	610	650	690	780	810
221	E/W	8th Street	Clay Street	Washington Street	2019	370	408	440	460	500	530	570	610	650	690	780	810
222	E/W	8th Street	Washington Street	Broadway	2019	476	375	540	430	640	490	720	570	800	650	960	760
223	E/W	8th Street	Broadway	Franklin Street	2019	528	489	600	540	710	640	790	750	870	830	1,050	980
224	E/W	8th Street	Franklin Street	Webster Street	2019	650	623	720	670	870	800	980	930	1,060	1,010	1,280	1,190
225	E/W	8th Street	Webster Street	Harrison	2019	865	745	940	800	1,170	970	1,310	1,120	1,400	1,200	1,700	1,420
226	E/W	8th Street	Harrison	Alice Street	2019	691	663	690	660	920	860	1,040	1,000	1,060	1,020	1,290	1,220
227	E/W	8th Street	Alice Street	Jackson Street	2012	594	602	590	600	790	780	890	910	910	930	1,110	1,110
228	E/W	8th Street	Jackson Street	Madison Street	2012	566	508	570	510	760	660	860	770	880	790	1,070	940
229	E/W	8th Street	Madison Street	Oak Street	2012	705	619	710	620	950	800	1,070	930	1,090	950	1,330	1,130
230	E/W	11th Street	Brush Street	Castro Street	2019	930	685	980	780	1,250	890	1,400	1,030	1,410	1,050	1,730	1,250
231	E/W	11th Street	Castro Street	MLK	2019	916	652	930	690	1,230	840	1,390	980	1,400	1,000	1,710	1,190
232	E/W	11th Street	MLK	Jefferson Street	2019	824	654	860	740	1,100	840	1,240	980	1,250	1,000	1,530	1,190
233	E/W	11th Street	Jefferson Street	Clay Street													
234	E/W	11th Street	Clay Street	Broadway	2012	630	671	660	760	840	870	950	1,010	960	1,030	1,170	1,230
235	E/W	11th Street	Broadway	Franklin Street	2012	610	620	640	710	820	800	930	930	940	950	1,150	1,130
236	E/W	11th Street	Franklin Street	Webster Street	2015	473	961	510	1,050	630	1,250	720	1,460	730	1,480	890	1,770
237	E/W	11th Street	Webster Street	Harrison	2015	482	973	510	1,060	650	1,260	740	1,470	750	1,490	920	1,780
238	E/W	11th Street	Harrison	Alice Street	2015	595	1,154	630	1,240	800	1,500	890	1,750	900	1,770	1,100	2,120
239	E/W	11th Street	Alice Street	Jackson Street													
240	E/W	11th Street	Jackson Street	Madison Street	2012	401	714	430	800	540	920	610	1,080	620	1,100	760	1,310
241	E/W	11th Street	Madison Street	Oak Street	2012	320	634	350	720	430	820	500	960	510	980	620	1,170
242	E/W	12th Street	Brush Street	Castro Street	2019	184	201	190	220	240	260	270	300	280	310	340	370
243	E/W	12th Street	Castro Street	MLK	2019	359	796	420	880	480	1,040	550	1,210	580	1,260	700	1,500
244	E/W	12th Street	MLK	Jefferson Street	2019	421	782	420	780	560	1,010	630	1,180	670	1,220	810	1,450
245	E/W	12th Street	Jefferson Street	Clay Street	2015	501	731	500	730	670	950	770	1,110	810	1,150	980	1,370

Two-Way Road Segment Traffic Volume Forecasts

						Existing		Existing Plus Howard Terminal		Existing Plus DOSP		2040 Plus Major Projects		2040 Plus Major Projects Plus HT (Cumulative No Project for DOSP)		2040 Plus All Projects (Major Projects, DOSP, HT)	
ID	Direction	Street	From	To	Count Year	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
246	E/W	12th Street	Clay Street	Broadway	2015	604	706	600	710	810	920	920	1,070	960	1,110	1,170	1,320
247	E/W	12th Street	Broadway	Franklin Street	2016	751	680	750	680	1,010	880	1,140	1,020	1,180	1,060	1,440	1,260
248	E/W	12th Street	Franklin Street	Webster Street	2016	661	680	660	680	880	880	990	1,020	1,010	1,040	1,230	1,240
249	E/W	12th Street	Webster Street	Harrison	2016	811	734	810	730	1,090	950	1,230	1,110	1,250	1,130	1,530	1,350
250	E/W	12th Street	Harrison	Alice Street	2015	796	645	800	650	1,070	840	1,200	970	1,220	990	1,490	1,180
251	E/W	12th Street	Alice Street	Jackson Street													
252	E/W	12th Street	Jackson Street	Madison Street	2012	842	561	840	560	1,130	730	1,280	860	1,300	880	1,590	1,050
253	E/W	12th Street	Madison Street	Oak Street	2012	972	679	970	680	1,300	880	1,480	1,020	1,500	1,040	1,830	1,240
254	E/W	14th Street	Brush Street	Castro Street	2019	1,113	1,176	1,170	1,270	1,490	1,530	1,690	1,780	1,700	1,800	2,080	2,150
255	E/W	14th Street	Castro Street	MLK	2019	1,031	1,214	1,040	1,240	1,380	1,570	1,560	1,830	1,570	1,850	1,920	2,210
256	E/W	14th Street	MLK	Jefferson Street	2019	984	1,162	1,030	1,230	1,320	1,510	1,490	1,750	1,500	1,770	1,840	2,120
257	E/W	14th Street	Jefferson Street	Clay Street	2017	1,065	1,023	1,110	1,100	1,430	1,330	1,610	1,560	1,620	1,580	1,980	1,890
258	E/W	14th Street	Clay Street	Broadway													
259	E/W	14th Street	Broadway	Franklin Street	2016	817	993	860	1,070	1,100	1,280	1,240	1,490	1,250	1,510	1,530	1,800
260	E/W	14th Street	Franklin Street	Webster Street	2016	826	963	870	1,040	1,110	1,250	1,250	1,460	1,260	1,480	1,540	1,770
261	E/W	14th Street	Webster Street	Harrison	2016	824	987	870	1,060	1,100	1,280	1,240	1,490	1,250	1,510	1,530	1,800
262	E/W	14th Street	Harrison	Alice Street	2016	869	938	920	1,010	1,170	1,220	1,310	1,420	1,320	1,440	1,620	1,720
263	E/W	14th Street	Alice Street	Jackson Street													
264	E/W	14th Street	Jackson Street	Madison Street	2012	630	583	680	660	840	750	950	880	960	900	1,170	1,070
265	E/W	14th Street	Madison Street	Oak Street	2012	661	615	710	690	880	800	990	920	1,000	940	1,220	1,120
266	E/W	17th Street	Brush Street	Castro Street	2019	1,304	631	1,300	630	1,750	820	1,980	960	1,990	970	2,440	1,160
267	E/W	17th Street	Castro Street	MLK	2019	1,244	516	1,250	530	1,660	670	1,870	780	1,880	790	2,300	940
268	E/W	17th Street	MLK	Jefferson Street	2019	1,089	439	1,100	460	1,460	570	1,650	670	1,660	680	2,030	810
269	E/W	17th Street	Jefferson Street	San Pablo Avenue	2014	1,053	437	1,060	460	1,410	570	1,590	660	1,600	670	1,960	800
270	E/W	17th Street	San Pablo Avenue	Telegraph Avenue	2013	714	472	720	490	950	610	1,080	710	1,090	720	1,330	860
271	E/W	17th Street	Telegraph Avenue	Broadway	2017	550	467	560	490	740	610	840	710	850	720	1,040	860
272	E/W	17th Street	Broadway	Franklin Street	2017	587	536	590	550	790	700	890	810	900	820	1,100	980
273	E/W	17th Street	Franklin Street	Webster Street	2016	479	529	490	550	640	690	720	800	730	810	890	970
274	E/W	17th Street	Webster Street	Harrison Street	2016	291	393	300	410	390	510	430	600	440	610	540	730
275	E/W	17th Street	Harrison Street	Alice Street													
276	E/W	17th Street	Alice Street	Jackson Street													
277	E/W	17th Street	Jackson Street	Madison Street	2012	85	147	90	170	120	190	140	220	150	230	180	270
278	E/W	17th Street	Madison Street	Lakeside Drive	2012	53	89	60	110	70	120	90	140	100	150	120	180
279	E/W	19th Street	Castro Street	MLK													
280	E/W	19th Street	San Pablo Avenue	Telegraph Avenue	2016	346	475	350	480	470	620	520	710	520	710	640	850
281	E/W	19th Street	Telegraph Avenue	Broadway	2017	264	551	260	550	350	720	410	850	410	850	500	1,020
282	E/W	19th Street	Broadway	Franklin Street	2017	311	693	310	690	420	900	480	1,060	480	1,060	590	1,270
283	E/W	19th Street	Franklin Street	Webster Street	2017	542	587	540	590	730	760	830	880	830	880	1,020	1,050
284	E/W	19th Street	Webster Street	Harrison Street	2016	324	339	320	340	430	440	500	510	500	510	610	610
285	E/W	19th Street	Harrison Street	Alice Street													
286	E/W	19th Street	Alice Street	Jackson Street													
287	E/W	19th Street	Jackson Street	Madison Street													
288	E/W	20th Street	Castro Street	San Pablo Avenue	2016	134	128	130	130	180	170	210	200	210	200	260	240
289	E/W	20th Street	San Pablo Avenue	Telegraph Avenue	2016	362	493	360	490	480	640	550	750	550	750	670	900
290	E/W	20th Street	Telegraph Avenue	Broadway	2018	579	581	580	580	780	750	880	880	880	880	1,080	1,050
291	E/W	20th Street	Broadway	Franklin Street	2018	560	526	560	530	750	690	860	800	860	800	1,050	960
292	E/W	20th Street	Franklin Street	Webster Street	2018	631	728	630	730	840	950	950	1,100	950	1,100	1,160	1,320
293	E/W	20th Street	Webster Street	Harrison Street	2018	552	696	550	700	740	910	840	1,060	840	1,060	1,030	1,270
294	E/W	21st Street	San Pablo Avenue	Telegraph Avenue	2016	111	98	110	100	150	130	170	150	170	150	210	180

Two-Way Road Segment Traffic Volume Forecasts

						Existing		Existing Plus Howard Terminal		Existing Plus DOSP		2040 Plus Major Projects		2040 Plus Major Projects Plus HT (Cumulative No Project for DOSP)		2040 Plus All Projects (Major Projects, DOSP, HT)	
ID	Direction	Street	From	To	Count Year	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
295	E/W	21st Street	Telegraph Avenue	Broadway	2016	136	81	140	80	190	110	210	140	210	140	260	170
296	E/W	21st Street	Broadway	Franklin Street	2016	215	248	220	250	290	320	330	370	330	370	400	440
297	E/W	21st Street	Franklin Street	Webster Street	2016	289	411	290	410	390	530	430	620	430	620	530	740
298	E/W	21st Street	Webster Street	Harrison Street	2016	477	538	480	540	640	700	720	810	720	810	880	970
299	E/W	Grand Avenue	Brush Street	San Pablo Avenue	2016	1,055	1,394	1,060	1,390	1,420	1,810	1,600	2,100	1,620	2,130	1,980	2,550
300	E/W	Grand Avenue	San Pablo Avenue	MLK	2016	1,141	1,483	1,140	1,480	1,530	1,920	1,740	2,230	1,750	2,250	2,140	2,690
301	E/W	Grand Avenue	MLK	Telegraph Avenue	2018	1,569	1,963	1,570	1,960	2,110	2,550	2,380	2,960	2,390	2,980	2,930	3,570
302	E/W	Grand Avenue	Telegraph Avenue	Broadway	2018	1,165	1,584	1,170	1,580	1,570	2,050	1,760	2,390	1,760	2,390	2,160	2,860
303	E/W	Grand Avenue	Broadway	Webster Street	2016	1,173	1,444	1,170	1,440	1,570	1,870	1,770	2,180	1,770	2,180	2,170	2,610
304	E/W	Grand Avenue	Webster Street	Harrison/Lakeside	2018	971	1,392	970	1,390	1,300	1,810	1,480	2,100	1,480	2,100	1,810	2,520
305	E/W	27th Street	MLK	Telegraph Avenue	2016	1,147	1,457	1,150	1,460	1,540	1,900	1,740	2,200	1,740	2,200	2,130	2,640
306	E/W	27th Street	Telegraph Avenue	Broadway	2016	818	1,155	820	1,160	1,100	1,510	1,240	1,750	1,240	1,750	1,520	2,100
307	E/W	27th Street	Broadway	Harrison/Lakeside	2016	794	980	790	980	1,060	1,270	1,200	1,480	1,200	1,480	1,470	1,770
308	E/W	29th Street	MLK	Telegraph Avenue													
309	E/W	29th Street	Telegraph Avenue	Broadway													
310	E/W	34th Street	MLK	Telegraph Avenue													
311	E/W	34th Street	Telegraph Avenue	Broadway													
312	E/W	International Boulevard	1st Avenue	5th Avenue	2012	758	867	760	870	1,020	1,130	1,140	1,310	1,140	1,310	1,400	1,570
313	E/W	E. 12th Street	1st Avenue	5th Avenue													
314	E/W	Lake Merritt Boulevard	Oak Street	12th Street	2012	789	966	790	970	1,060	1,260	1,200	1,470	1,200	1,470	1,470	1,760
315	N/S	1st Avenue	E. 12th Street	International Boulevard	2012	1,777	2,056	1,780	2,060	2,390	2,670	2,690	3,100	2,690	3,100	3,300	3,710
316	E/W	7th Street	Fallon Street	5th Avenue	2012	1,116	1,568	1,120	1,570	1,500	2,040	1,690	2,380	1,690	2,380	2,070	2,850
317	E/W	E. 8th Street	5th Avenue	E. 12th Street	2012	966	1,209	970	1,210	1,300	1,570	1,460	1,820	1,460	1,820	1,790	2,180
318	N/S	Posey Tube NB	Willie Stargell Avenue	6th Street	2015	2,790	2,097	2,870	2,160	3,740	2,730	4,220	3,170	4,290	3,230	5,240	3,860
319	N/S	Posey Tube SB	6th Street	Willie Stargell Avenue	2015	1,950	3,319	1,990	3,380	2,620	4,310	2,950	5,010	3,000	5,090	3,670	6,080
320	N/S	Webster Street	Atlantic Avenue	Willie Stargell Avenue	2015	1,764	1,967	1,800	2,030	2,360	2,560	2,680	2,980	2,730	3,060	3,330	3,650
321	N/S	Constitution Way	Atlantic Avenue	Marina Village Parkway	2015	1,292	1,820	1,370	1,880	1,730	2,360	1,950	2,750	2,020	2,810	2,460	3,350
322	E/W	3rd Street	Adeline Street	Market Street	2019	525	828	450	750	710	1,080	790	1,260	790	1,260	970	1,510
323	E/W	3rd Street	Market Street	Brush Street	2019	387	801	440	880	520	1,040	590	1,210	590	1,210	720	1,450
324	E/W	7th Street	Union Street	Adeline Street	2019	1,200	1,702	1,230	1,740	1,610	2,210	1,820	2,580	1,820	2,580	2,230	3,090
325	E/W	7th Street	Adeline Street	Market Street	2019	1,226	1,960	1,260	2,000	1,650	2,550	1,850	2,960	1,850	2,960	2,270	3,550
326	E/W	7th Street	Market Street	Brush Street	2019	1,309	1,764	1,640	2,090	1,760	2,290	1,980	2,660	1,980	2,660	2,430	3,190
327	N/S	Market Street	Embarcadero	3rd Street	2019	150	109	1,330	1,570	200	140	230	170	1,500	1,740	1,550	1,770
328	N/S	Market Street	3rd Street	7th Street	2019	348	358	1,480	1,710	470	470	520	550	1,410	1,670	1,530	1,780
329	N/S	Middle Harbor Road	Maritime Street	3rd Street	2019	512	676	540	710	690	880	780	1,020	780	1,020	960	1,220
330	N/S	Adeline Street	3rd Street	7th Street	2019	449	526	520	640	600	690	680	800	680	800	830	960
331	E/W	5th Street	Union Street	Adeline Street	2019	1,121	1,086	1,410	1,470	1,500	1,410	1,690	1,630	1,690	1,630	2,070	1,950
332	E/W	5th Street	Adeline Street	Market Street	2019	1,281	1,207	1,570	1,580	1,720	1,570	1,940	1,820	1,940	1,820	2,380	2,180
333	E/W	5th Street	Market Street	Brush Street	2019	560	792	660	940	750	1,030	860	1,200	860	1,200	1,050	1,440
334	N/S	Market Street	7th Street	12th Street	2019	490	587	790	1020	660	760	880	1020	1110	1330	1570	1790
335	N/S	Market Street	12th Street	18th Street	2019	561	638	780	930	750	830	840	940	1020	1160	1180	1290
336	N/S	Market Street	18th Street	Grand Avenue	2019	570	697	730	900	770	910	1010	1180	1170	1380	1650	1830
337	N/S	Market Street	Grand Avenue	Grand North	2019	418	513	550	670	560	660	670	810	760	940	970	1170

APPENDIX F

WATER SUPPLY ASSESSMENT

EAST BAY
MUNICIPAL UTILITY DISTRICT

August 27, 2019

Alicia Parker, AICP
Planner III
City of Oakland – Bureau of Planning
250 Frank H. Ogawa Plaza, Suite 3315
Oakland, CA 94612

Re: Water Supply Assessment – Downtown Oakland Specific Plan, Oakland

Dear Ms. Parker:

This letter is in response to your August 9, 2019 correspondence advising East Bay Municipal Utility District (EBMUD) of changes to the project elements of the Downtown Oakland Specific Plan Project (August 2019 Project) and to essentially determine if a revised Water Supply Assessment (WSA) would be required based on the August 2019 Project changes. EBMUD provided a written response to a request from the City of Oakland (City) for water agency consultation and prepared a WSA for the Downtown Oakland Specific Plan Project on April 23, 2019 (April 2019 WSA). EBMUD appreciates the opportunity to provide additional information concerning the August 2019 Project.

The April 2019 WSA concluded that the water demands for the project – estimated at 9.43 million gallons per day (MGD) – were accounted for in EBMUD's water demand projections. The staff report on the April 2019 WSA further explained that "The 2015 [Urban Water Management Plan] concludes that EBMUD has, and will have, adequate water supplies to serve existing and projected demands within the Ultimate Service Boundary during normal and wet years, but that deficits are projected for drought years."

California Water Code Section 10910(h) provides that where a project has been the subject of a WSA, no additional WSA shall be required for subsequent projects within the scope of the project considered in the earlier WSA unless one or more of the following occurs:

1. Changes in the project that result in a substantial increase in water demand for the project;

2. Changes in the circumstances or conditions substantially affecting the ability of the public water system to provide a sufficient supply of water for the project; or

3. Significant new information becomes available which was not known and could not have been known at the time when the assessment was prepared.

The August 2019 Project is essentially the same as the project analyzed under the April 2019 WSA, except there is additional office space (approximately 3 million square feet), additional light industrial space (approximately 75,700 square feet), additional institutional space (approximately 12,000 square feet), and less retail and commercial space (approximately 118,500 square feet and 50,100 square feet, respectively). For the reasons explained below, EBMUD concludes that a second WSA need not be approved for the August 2019 Project.

Changes in the Project

Since the April 2019 WSA, there have been minor modifications to the project, none of which affect the April 2019 WSA conclusions regarding water supply. The project area is still bounded to the north by 27th Street, to the south by the Jack London Estuary Waterfront and Embarcadero West, to the east by Lake Merritt, and to the west by Interstate 890, and still consists of approximately 850 acres. At build-out, the project analyzed under the April 2019 WSA would have added approximately 30,000 multi-family housing units, 13.8 million square feet of office space, 2.5 million square feet of retail space, 940,000 square feet of commercial space, 184,000 square feet of light industrial space, and 1.3 million square feet of institutional space, in addition to existing land uses. The August 2019 Project is proposing approximately 30,000 multi-family housing units, 16.8 million square feet of office space, 2.3 million square feet of retail space, 890,000 square feet of commercial space, 260,000 square feet of light industrial space, and 1.3 million square feet of institutional space, in addition to existing land uses.

The changes that were made to the April 2019 WSA as part of the August 2019 Project will result in a slight increase in water demand. Based on the changes, EBMUD estimates the August 2019 Project would require approximately 9.7 MGD compared to the April 2019 WSA, which was estimated to require approximately 9.4 MGD. Accordingly, there have been no changes in the project that would result in a substantial increase in water demand for the project.

Changes in Circumstances or Conditions

EBMUD concludes that there have been no changes in circumstances or conditions that substantially affect its ability to provide a sufficient supply of water for the project. The April 2019 WSA relied on EBMUD's 2015 UWMP and considered multi-year droughts in its analysis. EBMUD has not adopted a new UWMP since approval of the April 2019 WSA.

For these reasons, EBMUD concludes that there have been no changes in circumstances or conditions that substantially affect its ability to provide a sufficient supply of water for the project.

New Information

No significant new information has become available that was not known and could not have been known at the time when the April 2019 WSA was prepared. As stated in the April 23, 2019 WSA response letter, this letter addresses the issue of water supply only and is not a guarantee of service, and future water service is subject to rates and regulations in effect at the time.

If you have any questions concerning this response, please contact me at (510) 287-1365.

Sincerely,

David J. Rehnstrom
Manager of Water Distribution Planning

DJR:JLM:sjp
sb19_154 Downtown Oakland Specific Plan_WSA_Letter_Revised

bcc: Jennifer McGregor
Chron
File: WSA 19-001 File
A-0920 File

EAST BAY
MUNICIPAL UTILITY DISTRICT

April 23, 2019

Alicia Parker, Planner III
City of Oakland Bureau of Planning
259 Frank H. Ogawa Plaza, Suite 3315
Oakland, CA 94612

Re: Water Supply Assessment – Downtown Oakland Specific Plan

Dear Ms. Parker:

This letter is in response to your request dated February 8, 2019, for water agency consultation (Enclosure 1) concerning the Water Supply Assessment (WSA) for the Downtown Oakland Specific Plan (Project), located in the City of Oakland (City), which is within East Bay Municipal Utility District's (EBMUD's) Ultimate Service Boundary. EBMUD appreciates the opportunity to provide this response.

Pursuant to Sections 10910-10915 of the California Water Code, the Project meets the threshold requirement for an assessment of water supply availability based on the amount of water this Project would require, which is greater than the amount of water required by a 500-dwelling-unit project.

Please note this WSA addresses the issue of water supply only and is not a guarantee of service; future water service is subject to the rates and regulations in effect at that time.

Project Demand

The water demand for the Project is accounted for in EBMUD's water demand projections, as published in EBMUD's Urban Water Management Plan (UWMP) 2015 (Enclosure 2). EBMUD's water demand projections account for anticipated future water demands within EBMUD's service boundaries and for variations in demand-attributed changes in development patterns. The historical water use in the Project area is approximately 2.58 million gallons per day (MGD). The projected water demand at Project build-out is estimated at 9.43 MGD.

EBMUD's demand projections indicate both densification and land use changes in a few existing land use classifications, including commercial and residential land use areas. These changes increase demand for EBMUD water. EBMUD's UWMP 2015 projects water demands over time, accounting for estimated variations in demand usage less conservation and recycled supply sources, as noted in the UWMP 2015, Table 4-1, Mid-Cycle Demand Projections (Table 1). Typically, EBMUD prepares a full demand study every ten years; the most recent version, the

2040 Demand Study, was completed in 2009. For planning purposes, water demands are estimated in five-year increments, but it is recognized that actual incremental amounts may occur stepwise in shorter time increments. An increase in usage by one customer in a particular customer class does not require a strict gallon-for-gallon increase in conservation by other customers in that class as, in actuality, the amount of potable demand, conservation and recycled water use EBMUD-wide will vary somewhat. In 2014, EBMUD prepared the Mid-Cycle Demand Assessment (MCDA) in order to assess any significant effects on metered water consumption caused by the 2008-2010 drought, and the economic downturn that affected growth in the Bay Area. As part of the MCDA, EBMUD reviewed recently updated city and county general plans for significant changes since the 2040 Demand Study, and held meetings with representatives from the cities of Alameda, Oakland, Richmond, and San Ramon. The MCDA concluded that, while the cities and counties might reach their build-out goals later than originally anticipated, they would still reach these goals by 2040. Accordingly, the MCDA validated the 2040 Demand Study, as demands are expected to gradually increase back to 2040 projected levels as development and water use return to pre-drought and pre-recession conditions. EBMUD plans to complete another comprehensive demand study in 2019 with a long-term horizon of 2050. As part of the demand study, EBMUD will reach out to each city and county in the service area to ask about projected development and future land use changes. The study results will be incorporated into the UWMP 2020.

Table 1
Mid-Cycle Demand Projections (UWMP 2015, Table 4-1)

TABLE 4-1 — MID-CYCLE DEMAND PROJECTIONS

AVERAGE ANNUAL DEMAND (MGD)	2015	2020	2025	2030	2035	2040
PROJECTED TOTAL DEMAND	232	267	276	290	304	312
CONSERVATION[1]	-33	-39	-44	-51	-57	-62
NON-POTABLE WATER[1,2]	-9	-11	-14	-17	-18	-20
PLANNING LEVEL OF DEMAND	190	217	218	222	229	230

1 See Chapters 6 and 7 for more discussion of water recycling and conservation, respectively.
2 Non-potable water includes recycled water and raw water projects.

Project Area

The Project is located in the central downtown portion of the City and is generally bounded to the north by 27th Street, to the south by the Jack London Estuary Waterfront and Embarcadero West, to the east by Lake Merritt, and to the west by Interstate 980, Brush and Market Streets. The Project area consists of approximately 850 acres. At build-out, the Project will include approximately 30,000 multi-family housing units, 13.8 million square feet of office space, 2.5 million square feet of retail space, 940,000 square feet of commercial space, 184,000 square feet of light industrial space, and 1.3 million square feet of institutional space, in addition to existing land uses.

EBMUD Water Demand Projections

Since the 1970s, water demand within EBMUD's service area has ranged from 200 to 220 million gallons per day (MGD) in non-drought years. Section 4.1 of the UWMP 2015 outlines past and current EBMUD water demand, including Figure 4-1 which shows historic water use (including metered and unmetered demands) within EBMUD's service area, along with the number of customer accounts. The 2040 water demand forecast of 312 MGD for EBMUD's service area can be reduced to 230 MGD with the successful implementation of water recycling and conservation programs, as outlined in the UWMP 2015. Current demand is lower than estimated in the MCDA as a result of the recent multi-year drought. This is because the planning level of demand may differ from the actual demand in any given year due to water use reductions that typically occur during droughts. After droughts, a rebound effect is expected wherein demand rises back to projected levels. Thus, the MCDA still reflects a reasonable expectation for demand in year 2040, as the demands are expected to gradually increase back to 2040 projected demand levels as development and water use return to pre-drought and pre-recession conditions. The proposed Project's future development and operations will not change EBMUD's 2040 demand projection.

EBMUD Water Supply, Water Rights and the UWMP 2015

EBMUD has water right permits and licenses that allow for delivery of up to a maximum of 325 MGD from the Mokelumne River, subject to the availability of Mokelumne River runoff and the senior water rights of other users. EBMUD's position in the hierarchy of Mokelumne River water users is determined by a variety of agreements between Mokelumne River water right holders and the terms of the appropriative water right permits and licenses.

Conditions that could, depending on hydrology, restrict EBMUD's ability to receive its full entitlement include:

- Upstream water use by senior water right holders.
- Downstream water use by riparian and senior appropriators and other downstream obligations, including protection of public trust resources.
- Variability in precipitation and runoff.

During prolonged droughts, the Mokelumne River supply cannot meet EBMUD's projected customer demands. To address this, EBMUD has completed construction of the Freeport Regional Water Facility and the Bayside Groundwater Project Phase 1, which are discussed below in the Supplemental Water Supply and Demand Management section of this assessment. EBMUD has obtained and continues to seek supplemental supplies.

The UWMP 2015, adopted on June 28, 2016 by EBMUD's Board of Directors under Resolution No. 34092-16, is a long-range planning document used to assess current and projected water usage, water supply planning, along with conservation and recycling efforts. EBMUD's water supply sources are discussed in Section 1.5.1 of the UWMP 2015. EBMUD's main water supply is the Mokelumne River, and EBMUD has rights to receive up to 325 MGD of water from this source subject to the availability of runoff, senior water rights of other users, and downstream fishery flow requirements. EBMUD also has a Long-Term Renewal Contract (Contract No. 14-06-200-5183A-LTR1) with the United States (U.S.) Bureau of Reclamation to receive water from the Central Valley Project (CVP) through the Freeport Regional Water Facility in years when EBMUD's water supplies are relatively low (for more details, see Section 3.3.2 of the UWMP 2015). During some dry years, EBMUD may purchase water transfers to help meet customer demands. Section 5.1 of the UWMP 2015 discusses EBMUD's water transfer program.

EBMUD maintains a biennial budget and five-year capital improvement program to optimize investments and maximize drinking water quality, and the reliability, safety, flexibility, and overall efficiency of the water supply system. EBMUD's most recently adopted budget, which includes capital expenditures for the delivery of water supplies to its customers, can be found at http://www.ebmud.com/about-us/investors/budget-and-rates/.

EBMUD complies with applicable local, state, and federal regulations in the operation of its water supply system. Figure 1-4 of the UWMP 2015 illustrates the numerous local, state, and federal agencies that may regulate EBMUD's facilities and operations.

A summary of EBMUD's demand and supply projections, in five-year increments, for a 25-year planning horizon is provided in UWMP 2015, Table 4-5, Preliminary EBMUD Baseline Supply and Demand Analysis (Table 2).

EBMUD's evaluation of water supply availability accounts for the diversions of both upstream and downstream water right holders and fishery releases on the Mokelumne River. Fishery releases are based on the requirements of a 1998 Joint Settlement Agreement (JSA) between EBMUD, U.S. Fish and Wildlife Service, and the California Department of Fish and Wildlife. The JSA requires EBMUD to make minimum flow releases from its reservoirs to the lower Mokelumne River to protect and enhance the fishery resources and ecosystem of the river. As this water is released downriver, it is, therefore, not available for use by EBMUD's customers.

Table 2
Preliminary EBMUD Baseline Supply and Demand Analysis (UWMP 2015, Table 4-5)

TABLE 4-5 — **PRELIMINARY EBMUD BASELINE SUPPLY & DEMAND ANALYSIS**

SUPPLY AND DEMAND COMPARISON - NORMAL YEAR (MGD)		2015	2020	2025	2030	2035	2040
	MOKELUMNE SYSTEM	>190	>217	>218	>222	>229	>230
	DEMAND TOTALS	190	217	218	222	229	230
	DIFFERENCE	0	0	0	0	0	0

DRY YEAR RESULTS FROM EBMUDSIM (MGD)		2015	2020	2025	2030	2035	2040
SINGLE DRY YEAR OR FIRST YEAR OF MULTI-YEAR DROUGHT	MOKELUMNE SYSTEM	145	169	170	173	179	179
	CVP SUPPLIES[2]	36	35	35	35	35	35
	BAYSIDE[3]	0	0	0	0	0	0
	SUPPLY TOTALS	181	204	205	209	214	215
	PLANNING LEVEL DEMAND[1]	190	217	218	222	229	230
	RATIONING[4]	5%	6%	6%	6%	7%	7%
	DEMAND TOTALS	180	203	204	208	213	214
	NEED FOR WATER (TAF)[5]	0	0	0	0	0	0
SECOND YEAR	MOKELUMNE SYSTEM	81	103	103	107	112	113
	CVP SUPPLIES[2]	71	71	71	71	71	71
	BAYSIDE[3]	0	0	0	0	0	0
	SUPPLY TOTALS	152	174	174	178	183	184
	PLANNING LEVEL DEMAND[1]	190	217	218	222	229	230
	RATIONING[4]	20%	20%	20%	20%	20%	20%
	DEMAND TOTALS	152	174	175	178	184	185
	NEED FOR WATER (TAF)[5]	0	0	0	0	0	0
THIRD YEAR	MOKELUMNE SYSTEM	111	132	132	125	120	104
	CVP SUPPLIES[2]	40	40	40	40	40	40
	BAYSIDE[3]	1	1	1	1	1	1
	SUPPLY TOTALS	152	174	173	166	162	145
	PLANNING LEVEL DEMAND[1]	190	217	218	222	229	230
	RATIONING[4]	20%	20%	20%	20%	20%	20%
	DEMAND TOTALS	152	174	174	178	183	184
	NEED FOR WATER (TAF)[5]	0	0	2	13	24	48

1. Planning Level of Demand accounts for projected savings from water recycing and conservation programs as discussed in Chapters 6 and 7 respectively. Customer demand values are based on the Mid Cycle Demand Assessment, October 2014.
2. Projected available CVP supplies are taken according to the Drought Management Program Guidelines discussed in Chapter 3.
3. For the purposes of this modeling effort, it is assumed that the Bayside Groundwater Project would be brought online in the third year of a drought.
4. Rationing reduction goals are determined according to projected system storage levels in the Drought Management Program Guidelines discussed in Chapter 3.
5. Need for Water includes unmet customer demand as well as shortages on the Lower Mokelumne River.

The available supply and demand shown in Table 2 was derived from EBMUD's baseline hydrologic model with the following assumptions:

- Customer demand values are based on the MCDA, and planning level demands account for projected savings from water recycling and conservation programs.
- EBMUD Drought Planning Sequence assumes water years 1976, 1977 and a modified 1978 hydrology.
- Total system storage is depleted by the end of the third year of the drought.
- EBMUD will implement its Drought Management Program (DMP) when necessary.

- The diversions by Amador and Calaveras Counties upstream of Pardee Reservoir will increase over time, eventually reaching the full extent of their senior rights.
- Releases are made to meet the requirements of senior downstream water right holders and fishery releases, as required by the JSA.
- EBMUD allocation of CVP supply is available the first year of a drought and subsequent drought years, according to the U.S. Bureau of Reclamation's Municipal and Industrial Shortage Policy.
- The Bayside Groundwater Project Phase 1 is available and brought online in the third year of a drought.

The UWMP 2015 concludes that EBMUD has, and will have, adequate water supplies to serve existing and projected demand within the Ultimate Service Boundary during normal and wet years, but that deficits are projected for multi-year droughts. During multi-year droughts, EBMUD may require significant customer water use reductions and may also need to acquire supplemental supplies to meet customer demand.

As discussed under the DMP Guidelines section in Chapter 3 of the UWMP 2015, EBMUD's system storage generally allows EBMUD to continue serving its customers during dry-year events. EBMUD typically imposes water use restrictions based on the projected storage available at the end of September and, based on recent changes to its DMP Guidelines (summarized below), may also implement water use restrictions in response to a State of California mandate. By imposing water use restrictions in the first dry year of potential drought periods, EBMUD attempts to minimize water use restrictions in subsequent years if a drought persists. Throughout dry periods, EBMUD must continue to meet its current and subsequent-year fishery flow release requirements and obligations to downstream agencies.

The UWMP 2015 includes DMP Guidelines that establish the level of water use restrictions EBMUD may implement under varying conditions. Under the DMP Guidelines, water use restrictions may be determined based upon either projected end-of-September Total System Storage (TSS) or water use restriction mandates from the State Water Resources Control Board. When state-mandated water use restrictions exceed the reductions that would otherwise be called for based upon end-of-September TSS, EBMUD's water use reduction requirements may be guided by the applicable state mandates. Under either scenario, while EBMUD strives to keep water use reductions at or below 15 percent, if the drought is severe, mandatory water use reductions could exceed 15 percent.

Despite water savings from EBMUD's aggressive conservation and recycling programs and water use restrictions called for in the DMP Guidelines, supplemental supplies are still needed in significant, severe, and critical droughts. The proposed Project will be subject to the same drought restrictions that apply to all EBMUD customers. In addition, the proposed Project will be subject to EBMUD's regulations aimed at encouraging efficient water use, such as Sections 29 and 31 of EBMUD's Regulations Governing Water Service. Section 29, "Water Use Restrictions," promotes efficient water use by EBMUD customers and prohibits certain uses of potable water. Section 31, "Water Efficiency Requirements," identifies the types of water efficiency requirements (i.e., maximum flow rates for flow control devices) for water service.

Supplemental Water Supply and Demand Management

The goals of meeting projected water needs and increased water reliability rely on supplemental supplies, improving reliability of existing water supply facilities, water conservation and recycled water programs.

By 2011, EBMUD completed construction of the Freeport Regional Water Facility and the Bayside Groundwater Project Phase 1 to augment its water supply during drought periods. However, additional supplemental supplies beyond those provided through these facilities will still be needed, as noted above. Chapter 5 of the UWMP 2015 describes potential supplemental water supply projects that could be implemented to meet projected long-term water demands during multi-year drought periods.

The Freeport Regional Water Facility became operational in February 2011. EBMUD's ability to take delivery of CVP water through the Freeport Regional Water Facility is based on its Long Term Renewal Contract (LTRC) with the U.S. Bureau of Reclamation. The LTRC provides for up to 133,000 acre feet of CVP supply in a single dry year, not to exceed a total of 165,000 acre feet in three consecutive dry years. Under the LTRC, the CVP supply is available to EBMUD only in dry years when EBMUD's total stored water supply is forecast to be below 500,000 total acre feet on September 30 of each year.

EBMUD is developing the Bayside Groundwater Project in phases to provide a source of supplemental supply in dry years. Construction of the first phase (Bayside Groundwater Project Phase 1) was completed in 2010, allowing EBMUD to inject treated potable water into a deep aquifer in the South East Bay Plain Groundwater Basin for later extraction, treatment, and use during severe droughts. A permit from the Department of Public Health is required before the groundwater can be extracted and treated for municipal use. As described in Chapter 4 of the UWMP 2015, EBMUD's drought planning calls for using the Bayside Groundwater Project Phase 1 during the third year of multi-year droughts to provide up to 1 MGD of water to meet customer demands. Additional information on the Bayside Groundwater Project can be found in Section 5.3 and Appendix E of the UWMP 2015.

Chapter 5 of the UWMP 2015 also lists other potential supplemental water projects, including Northern California water transfers, Bayside Groundwater Project Expansion, Expansion of Contra Costa Water District's Los Vaqueros Reservoir, and others that could be implemented to meet the projected long-term water supplemental need during multi-year drought periods. The UWMP 2015 identifies a broad mix of projects, with inherent scalability and the ability to adjust implementation schedules for particular components, which will allow EBMUD to pursue the necessary supplemental supplies, while minimizing the risks associated with future uncertainties such as project implementation challenges and global climate change. The Environmental Impact Report that EBMUD certified for the Water Supply Management Program 2040 examined the impacts of pursuing these supplemental supply projects at a program level. Separate project-level environmental documentation will be prepared, as appropriate, for specific components as they are developed in further detail and implemented in accordance with EBMUD's water supply needs.

In addition to pursuing supplemental water supply sources, EBMUD also maximizes resources through continuous improvements in the delivery and transmission of available water supplies and investments in ensuring the safety of its existing water supply facilities. These programs, along with emergency interties and planned water recycling and conservation efforts, would ensure a reliable water supply to meet projected demands for current and future EBMUD customers within the current service area.

Water Conservation and Recycled Water Considerations

The proposed Project presents opportunities to incorporate water conservation measures. Conditions of approval for the implementation of the proposed Project should require that the Project comply with the California Model Water Efficient Landscape Ordinance (Division 2, Title 23, California Code of Regulations, Chapter 2.7, Sections 490 through 495). EBMUD staff would appreciate the opportunity to meet with the City to discuss conservation measures. This meeting will explore early opportunities to expand water conservation via EBMUD's conservation programs and best management practices applicable to the Project.

Conservation strategies will be required to achieve water use reduction goals and restrictions, including compliance with Sections 29 and 31, described above, of EBMUD's Regulations Governing Water Service, and the Water Conservation Act of 2009. The Water Conservation Act of 2009 sets an overall goal of reducing per capita urban water use by 20 percent by December 31, 2020.

Portions of the Project area fall within and around the main recycled water pipeline infrastructure of the East Bayshore Recycled Water Project service area. As part of its long-term water supply planning, EBMUD will consider the feasibility of providing recycled water to the project area for appropriate uses including landscape irrigation and commercial uses, as well as toilet and urinal flushing in non-residential buildings. EBMUD recommends the City and developers maintain continued coordination and consultation with EBMUD on the feasibility of recycled water as they plan and implement the various components of the Project.

The Project sponsor should contact Jennifer L. McGregor, Senior Civil Engineer, at (510) 287-1030 for further information.

Sincerely,

David J. Rehnstrom

David J. Rehnstrom
Manager of Water Distribution Planning Division

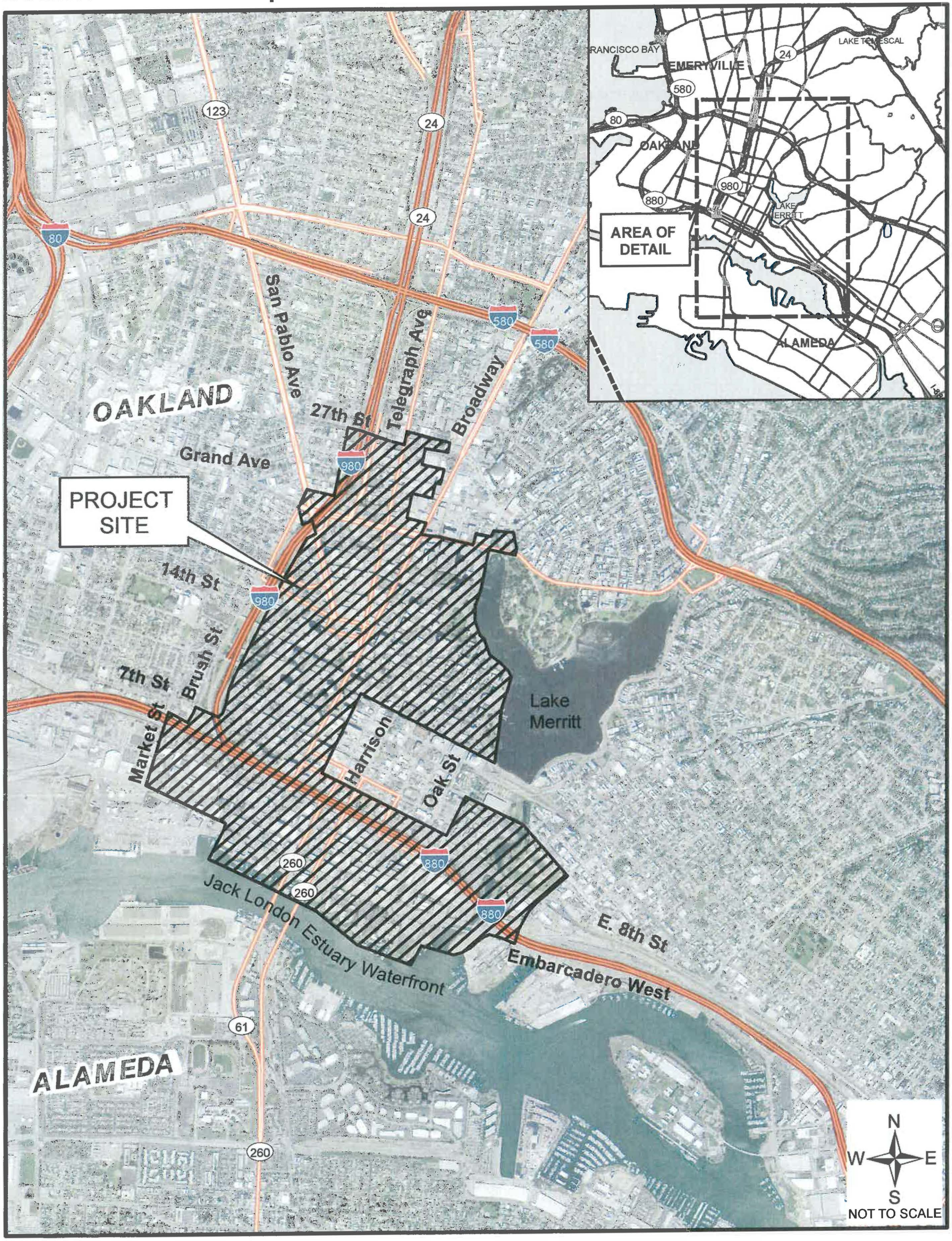
DJR:CW:nl
sb19_051b_Downtown Oakland Specific Plan_WSA_Letter

Enclosures: 1. Letter of Request for Water Supply Assessment dated February 8, 2019
2. EBMUD Urban Water Management Plan 2015

cc: Board of Directors w/o Enclosure 2

Downtown Oakland Specific Plan

Attachment A



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FEB 15 2019

WATER SERVICE PLANNING

CITY OF OAKLAND

DALZIEL BUILDING • 250 FRANK H. OGAWA PLAZA • SUITE 3315 • OAKLAND, CALIFORNIA 94612

Planning and Building Department (510) 238-3941

Bureau of Planning FAX (510) 238-6538

TDD (510) 238-3254

February 8, 2019

Mr. David Rehnstrom
East Bay Municipal Utility District
Water Distribution Planning Division
375 11th Street
Oakland, CA 94607

Subject: Request for Water Supply Assessment for the proposed Downtown Oakland Specific Plan (ER18020 and SP16-001)

Dear Mr. Rehnstrom:

Per amendments to Section 10912 of the Water Code implemented by Senate Bill 610, the City of Oakland is submitting the request to the East Bay Municipal Utility District (EBMUD) to prepare a Water Supply Assessment (WSA). The assessment is required in order to determine whether adequate water supply is available to meet the projected water demand of the proposed Downtown Oakland Specific Plan (the project) in the City of Oakland, which encompasses approximately 850 acres in Downtown Oakland. The project is generally bounded by 27th Street to the north; I-980, Brush and Market Street to the west; the Jack London estuary waterfront and Embarcadero West to the south; and Lake Merritt and Channel to the east.

An Environmental Impact Report (EIR) for the Downtown Oakland Specific Plan is being prepared by the City of Oakland as lead agency, as indicated in the attached Notice of Preparation dated January 4, 2019. The Downtown Oakland Specific Plan will be a 20 to 25- year planning document, with a planning horizon to the year 2040. The project would provide for up to approximately 29,077 residential units and 18,717,882 square feet of new non-residential space within the Plan Area, which collectively exceeds the thresholds for requiring a WSA. The development potential is estimated to result in 49,431 new residents and 58,598 new jobs.

The City respectfully requests that EBMUD prepare a water supply assessment for the project. The City acknowledges that this request for an assessment is required as part of the environmental documents for the project. We appreciate your prompt response to this request.

Please contact me if you need additional information. I can be reached by phone at (510) 238-3362 or by email at aparker@oaklandca.gov.

Sincerely,

Alicia Parker
Planner III
City of Oakland, Bureau of Planning

Attachment: January 4, 2019 Notice of Preparation

CITY OF OAKLAND

DALZIEL BUILDING • 250 FRANK H. OGAWA PLAZA • SUITE 3315 • OAKLAND, CALIFORNIA 94612

Planning and Building Department (510) 238-3941
Bureau of Planning FAX (510) 238-6538
TDD (510) 238-3254

Dear Interested Party,

The comment period for the Notice of Preparation (NOP) of a Draft Environmental Impact Report for the Downtown Oakland Specific Plan has been extended to February 21, 2019. Responses to the NOP and any questions or comments should be directed in writing or via email to: Alicia Parker, City of Oakland, Bureau of Planning, 250 Frank H. Ogawa, Suite 3315 Oakland, CA 94612; (510) 238-3362 (phone); or by e-mail at aparker@oaklandca.gov. Written comments on the NOP must be received at the above mailing or e-mail address **by 4:00 p.m. on February 21, 2019**. Please reference case number **SP16-001**and **ER18020** in all correspondence.

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #

Project Title: Downtown Oakland Specific Plan

Lead Agency: City of Oakland | Contact Person: Alicia Parker
Mailing Address: 250 Frank H. Ogawa, Suite 3315 | Phone: (510) 238-3362
City: Oakland | Zip: 94612 | County: Alameda

Project Location: County: Alameda | City/Nearest Community: Oakland
Cross Streets: 27th St. (north); Brush and Market St. (west); Oakland Estuary (south); Lake Merritt (east) | Zip Code: 94612
Longitude/Latitude (degrees, minutes and seconds): ___° ___′ ___″ N / ___° ___′ ___″ W | Total Acres: 850
Assessor's Parcel No.: | Section: | Twp.: | Range: | Base:
Within 2 Miles: State Hwy #: I-980; I-580; I-880; SR-24 | Waterways: Lake Merritt; Lake Merritt Channel; Oakland Estuary
Airports: | Railways: BART | Schools: Lincoln ES; Westlake MS

Document Type:

CEQA: [X] NOP [ ] Early Cons [ ] Neg Dec [ ] Mit Neg Dec [ ] Draft EIR [ ] Supplement/Subsequent EIR (Prior SCH No.) ______ Other: ______
NEPA: [ ] NOI [ ] EA [ ] Draft EIS [ ] FONSI
Other: [ ] Joint Document [ ] Final Document [ ] Other: ______

Local Action Type:

[ ] General Plan Update
[ ] General Plan Amendment
[ ] General Plan Element
[ ] Community Plan
[X] Specific Plan
[ ] Master Plan
[ ] Planned Unit Development
[ ] Site Plan
[ ] Rezone
[ ] Prezone
[ ] Use Permit
[ ] Land Division (Subdivision, etc.)
[ ] Annexation
[ ] Redevelopment
[ ] Coastal Permit
[ ] Other: ______

Development Type:

[ ] Residential: Units ______ Acres ______
[ ] Office: Sq.ft. ______ Acres ______ Employees ______
[ ] Commercial: Sq.ft. ______ Acres ______ Employees ______
[ ] Industrial: Sq.ft. ______ Acres ______ Employees ______
[ ] Educational: ______
[ ] Recreational: ______
[ ] Water Facilities: Type ______ MGD ______
[ ] Transportation: Type ______
[ ] Mining: Mineral ______
[ ] Power: Type ______ MW ______
[ ] Waste Treatment: Type ______ MGD ______
[ ] Hazardous Waste: Type ______
[ ] Other: ______

Project Issues Discussed in Document:

[X] Aesthetic/Visual
[ ] Agricultural Land
[X] Air Quality
[X] Archeological/Historical
[X] Biological Resources
[ ] Coastal Zone
[ ] Drainage/Absorption
[ ] Economic/Jobs
[ ] Fiscal
[X] Flood Plain/Flooding
[ ] Forest Land/Fire Hazard
[X] Geologic/Seismic
[X] Minerals
[X] Noise
[X] Population/Housing Balance
[X] Public Services/Facilities
[X] Recreation/Parks
[ ] Schools/Universities
[ ] Septic Systems
[ ] Sewer Capacity
[ ] Soil Erosion/Compaction/Grading
[ ] Solid Waste
[X] Toxic/Hazardous
[X] Traffic/Circulation
[ ] Vegetation
[X] Water Quality
[ ] Water Supply/Groundwater
[ ] Wetland/Riparian
[ ] Growth Inducement
[X] Land Use
[X] Cumulative Effects
[ ] Other: Energy; GHG

Present Land Use/Zoning/General Plan Designation:

See Attached.

Project Description: *(please use a separate page if necessary)*

The Downtown Oakland Specific Plan will provide a roadmap for how the area develops over the next 20 to 25 years through policy guidance on land use, transportation, housing, economic development, public spaces, cultural arts, and social equity. The Plan aims to ensure that Downtown remains a place of continuing growth and revitalization, as well as a valuable resource for the larger Oakland community through increased employment, housing, arts, and cultural opportunities. Supporting existing residents by growing existing businesses and the creative economy are important to creating a plan that serves both current and future residents.

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "X".
If you have already sent your document to the agency please denote that with an "S".

X	Air Resources Board	X	Office of Historic Preservation
	Boating & Waterways, Department of		Office of Public School Construction
	California Emergency Management Agency		Parks & Recreation, Department of
	California Highway Patrol		Pesticide Regulation, Department of
	Caltrans District # ____		Public Utilities Commission
	Caltrans Division of Aeronautics		Regional WQCB # ____
X	Caltrans Planning		Resources Agency
	Central Valley Flood Protection Board		Resources Recycling and Recovery, Department of
	Coachella Valley Mtns. Conservancy	X	S.F. Bay Conservation & Development Comm.
	Coastal Commission		San Gabriel & Lower L.A. Rivers & Mtns. Conservancy
	Colorado River Board		San Joaquin River Conservancy
	Conservation, Department of		Santa Monica Mtns. Conservancy
	Corrections, Department of	X	State Lands Commission
	Delta Protection Commission		SWRCB: Clean Water Grants
	Education, Department of	X	SWRCB: Water Quality
	Energy Commission		SWRCB: Water Rights
	Fish & Game Region # ____		Tahoe Regional Planning Agency
	Food & Agriculture, Department of		Toxic Substances Control, Department of
	Forestry and Fire Protection, Department of		Water Resources, Department of
	General Services, Department of		
	Health Services, Department of	X	Other: San Francisco Bay Regional Water Quality Control Board
X	Housing & Community Development		Other: ____
	Native American Heritage Commission		

Local Public Review Period (to be filled in by lead agency)

Starting Date January 4th, 2019 Ending Date February 11th, 2019

Lead Agency (Complete if applicable):

Consulting Firm: Urban Planning Partners
Address: 388 17th Street, Suite 230
City/State/Zip: Oakland, CA 94612
Contact: Lynette Dias
Phone: (510) 251-8210

Applicant: ____
Address: ____
City/State/Zip: ____
Phone: ____

Signature of Lead Agency Representative: ____ **Date:** 1/3/19

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

CITY OF OAKLAND

DALZIEL BUILDING • 250 FRANK H. OGAWA PLAZA • SUITE 3315 • OAKLAND, CALIFORNIA 94612

Planning and Building Department (510) 238-3941
Bureau of Planning FAX (510) 238-6538
TDD (510) 238-3254

NOTICE OF PREPARATION (NOP) OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE DOWNTOWN OAKLAND SPECIFIC PLAN

The City of Oakland's Planning and Building Department, Bureau of Planning, is preparing an Environmental Impact Report (EIR) on the Downtown Oakland Specific Plan concurrently with the development of the Draft Downtown Oakland Specific Plan (the Project) as identified below, and is requesting comments on the scope and content of the EIR. The EIR will address the potential physical and environmental effects that the project may have on each of the environmental topics outlined in the California Environmental Quality Act (CEQA). The City has **not** prepared an Initial Study. Under CEQA, a Lead Agency may proceed directly with EIR preparation without an Initial Study if it is clear that an EIR will be required. The City has made such determination for the Project.

The City of Oakland is the Lead Agency for the Project and is the public agency with the greatest responsibility for approving the Project or carrying it out. This notice is being sent to Responsible Agencies and other interested parties. Responsible Agencies are those public agencies, besides the City of Oakland, that also have a role in approving or carrying out the Project. When the EIR is published, it will be sent to all Responsible Agencies and to others who respond to this NOP or who otherwise indicate that they would like to receive a copy.

Responses to this NOP and any questions or comments should be directed in writing or via email to: Alicia Parker, City of Oakland, Bureau of Planning, 250 Frank H. Ogawa, Suite 3315 Oakland, CA 94612; (510) 238-3362 (phone); or by e-mail at aparker@oaklandca.gov. Written comments on the NOP must be received at the above mailing or e-mail address **by 4:00 p.m. on February 11th, 2019**. Please reference case number **SP16-001and ER18020** in all correspondence.

In addition, comments may be provided at the EIR Scoping Session Public Hearings to be held before the Landmarks Preservation Advisory Board and the City Planning Commission.

All comments should focus on potential impacts on the physical environment, ways in which potential adverse effects might be minimized, and alternatives to the project in light of the EIR's purpose to provide useful and accurate information about such factors.

EIR SCOPING SESSION PUBLIC HEARINGS:

(1) The Landmarks Preservation Advisory Board

Monday February 4, 2019 at 6:00pm
Oakland City Hall, Hearing Room 1
1 Frank H. Ogawa Plaza

2) City Planning Commission
Wednesday, February 6, 2019 at 6:00pm
Oakland City Hall, Hearing Room 1
1 Frank H. Ogawa Plaza

PROJECT TITLE: Downtown Oakland Specific Plan

PROJECT LOCATION: The Downtown Oakland Specific Plan Area encompasses approximately 850 acres in Downtown Oakland and is generally bounded by 27th Street to the north; I-980, Brush and Market Street to the west; the Jack London estuary waterfront and Embarcadero West to the south; and Lake Merritt and Channel to the east. The Plan Area's location is shown in Figure 1, and the Plan Area Boundary is shown in Figure 2.

PROJECT SPONSOR: City of Oakland

EXISTING CONDITIONS: The City of Oakland, with the assistance of grants from the Metropolitan Transportation Commission (MTC) and Bay Area Rapid Transit (BART), is preparing the Downtown Oakland Specific Plan. Downtown Oakland is the cultural, business, government, and entertainment hub of the East Bay. The Plan Area also includes several historic properties and districts including those designated by the City of Oakland as being Areas of Primary Importance (API); Areas of Secondary Importance (ASI); properties individually rated A, B, C, or D; and Landmark Properties. The Plan Area is serviced by two Bay Area Rapid Transit (BART) stations, multiple Alameda County (AC) Transit bus lines, Amtrak train service, and ferry service. There is potential soil and groundwater contamination associated with previous uses in the project area, including approximately 100 properties identified on the California Environmental Protection Agency's Cortese List.

PROJECT DESCRIPTION: The Downtown Oakland Specific Plan will provide a roadmap for how the area develops over the next 20 to 25 years through policy guidance on land use, transportation, housing, economic development, public spaces, cultural arts, and social equity.

The Plan aims to ensure that Downtown remains a place of continuing growth and revitalization, as well as a valuable resource for the larger Oakland community through increased employment, housing, arts, and cultural opportunities. Supporting existing residents by growing existing businesses and the creative economy are important to creating a plan that serves both current and future residents.

The Plan builds on extensive community feedback to meet its goals of:

1. Create opportunities for economic growth for all Oaklanders.
2. Ensure sufficient housing is built and retained to meet the varied needs of current and future residents.
3. Make downtown's streets comfortable, safe, and inviting, as well as improve connections to the city as a whole so that everyone has efficient and reliable access to downtown's jobs and services.
4. Allow diverse voices and forms of expression flourish.
5. Provide vibrant public spaces and a healthy environment that improve the quality of life downtown today and for generations to come.
6. Develop downtown in a way that contributes to community needs and preserves Oakland's unique character.

The components of the Specific Plan will include:

- The distribution, location, and extent of the uses of land, including open space, within the area covered by the plan;
- The proposed distribution location, and extent of the uses of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy, and other essential facilities proposed to be located within the area covered by the plan and need to support the land uses described in the plan;
- Standards and criteria by which development will proceed, and standards for the conservation, development, and utilization of natural resources, where applicable; and
- A program of implementation measures, including regulations, public works projects, and financing measures necessary to carry out the proposed improvements

For more information on the project, please visit the project website at: https://www.oaklandca.gov/topics/downtown-oakland-specific-plan.

PROBABLE ENVIRONMENTAL EFFECTS: It is anticipated that the project may have significant environmental impacts to the following: Aesthetics, Air Quality, Biological Resources, Cultural and Historic Architectural Resources, Flood Plain/Flooding, Energy, Geology and Soils, Greenhouse Gas Emissions and Global Climate Change, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Mineral Resources, Noise and Vibration, Population and Housing, Public Services, Recreation, Traffic and Transportation, and Utilities and Infrastructure, as well as cumulative effects. All of the noted environmental factors will be analyzed in the EIR.

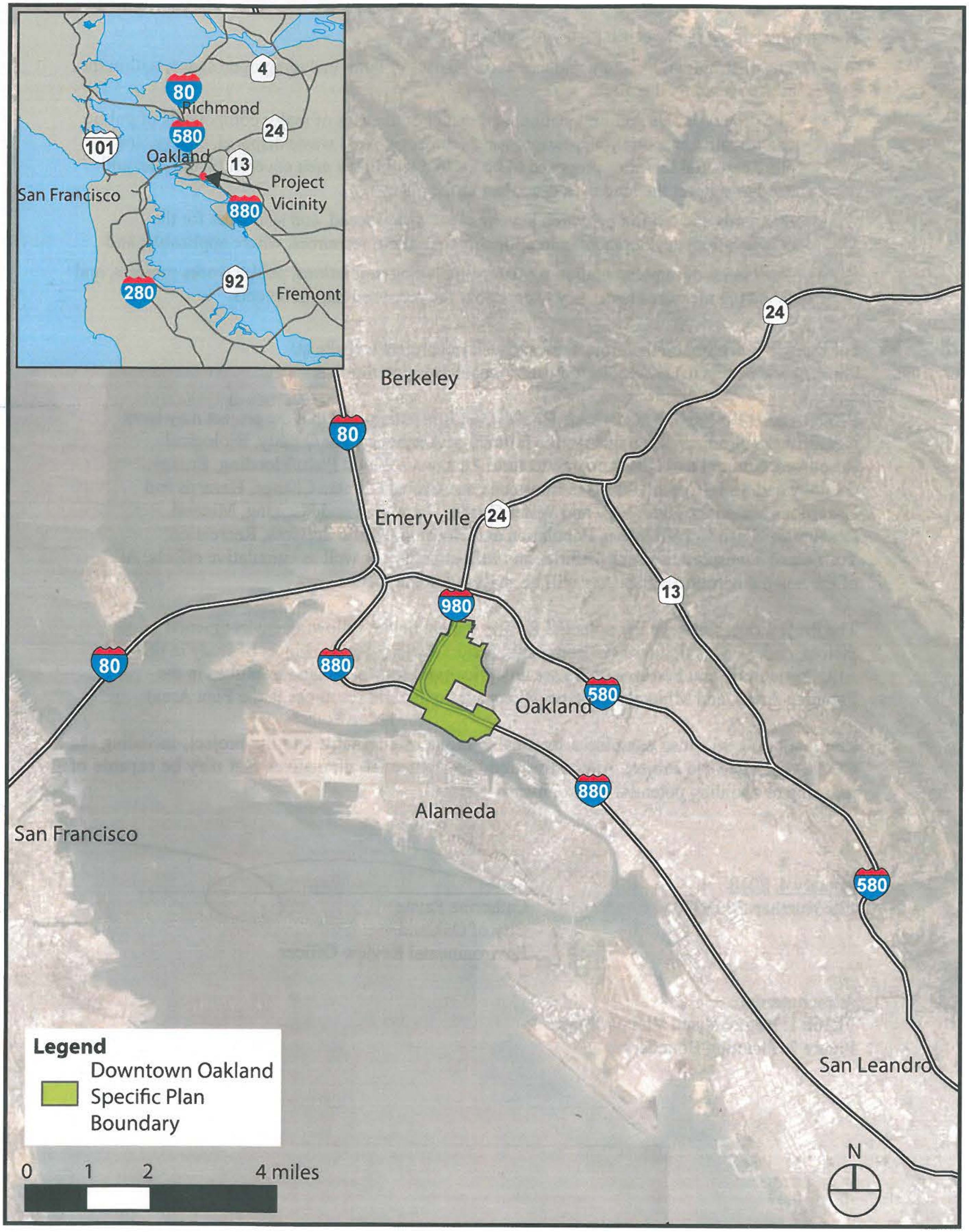
The Project does not have the potential for any impact on the following environmental factors, and, as a result, these environmental factors will <u>not be</u> the subject of study in this EIR: Agriculture and Forestry (there are no agricultural and forest land resources in the Planning Area), and Mineral Resources (there are no mineral resources in the Plan Area).

The Draft EIR will also examine a reasonable range of alternatives to the project, including the CEQA-mandated No Project Alternative and other potential alternatives that may be capable of reducing or avoiding potential environmental effects.

<u>January 4, 2018</u>
File Number ER18020

Catherine Payne
City of Oakland
Environmental Review Officer

Attachments:
Figure 1: Regional and Vicinity Map
Figure 2: Planning Boundary



Downtown Oakland Specific Plan Draft EIR
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Figure 1
Regional and Vicinity Map

Source: Google Earth, 2018.

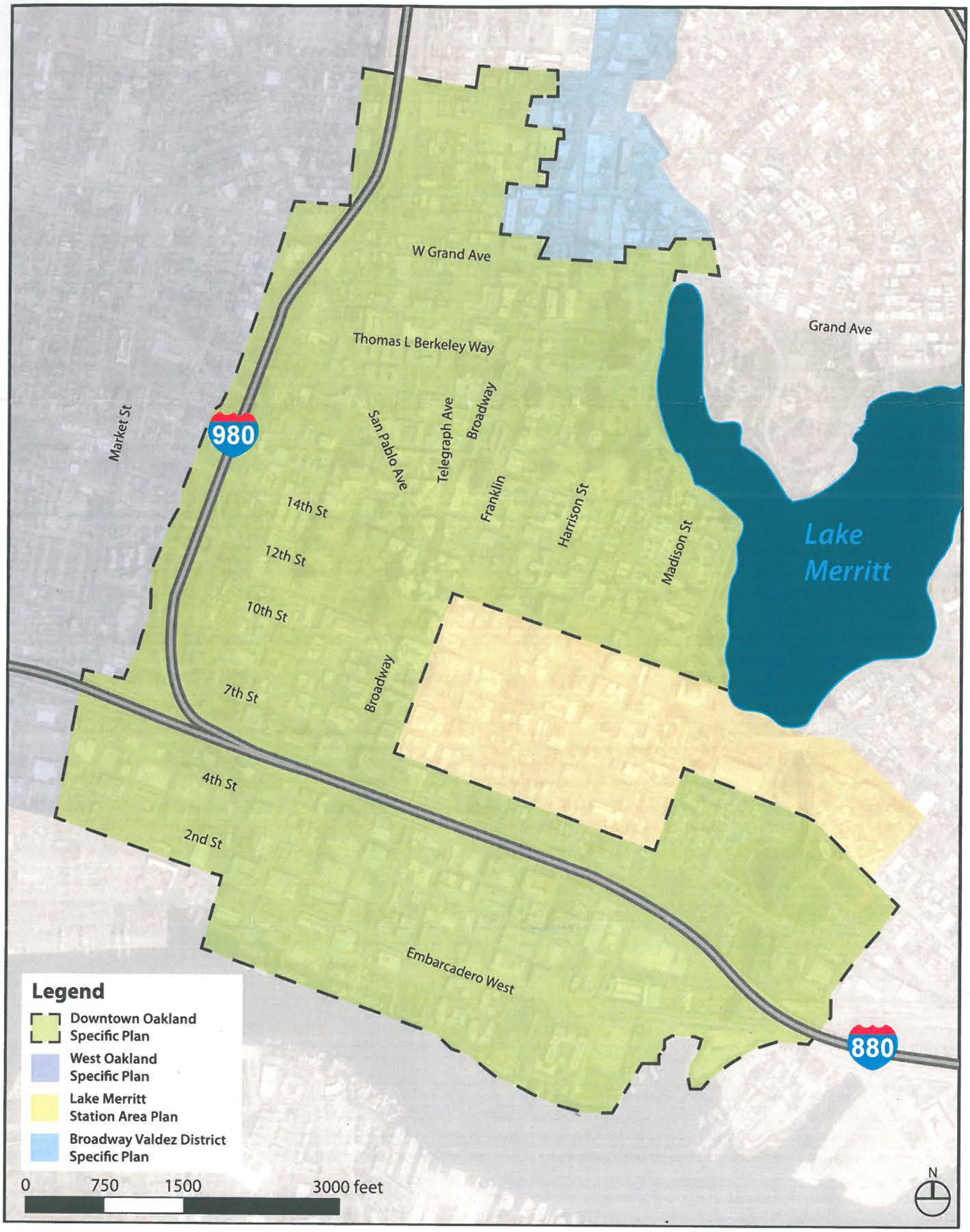

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Figure 2
Planning Boundary

Source: Google Earth, 2018.

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