W12 MIXED-USE PROJECT

CEQA Analysis

Pursuant to California Resources Code Sections 21083.3, 21094.5.5, and 21166 and CEQA Guidelines Sections 15162, 15164, 15183, 15183.3, 15168, and 15180

Date:	July 15, 2016
Project Address:	W12, 285 and 301 12th Street
Case Number:	PLN16-133
Zoning:	D-LM-4 Lake Merritt Station Area Plan District Flex District
General Plan:	Central Business District (CBD), Lake Merritt Station Area Plan
APNs:	002-006300600 and 002-006900301
Lot Size:	1.72 acres
Applicant:	Emerge Development, LLC c/o Forma Development 896 Folsom Street San Francisco, CA 94107
Staff Contact:	Christina Ferracane, Planner III Bureau of Planning, cferracane@oaklandnet.com (510) 238-3903

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I. Executive Summary

The proposed W12 Mixed-Use Project ("proposed project") would be two seven-story, approximately 87-foot-tall buildings containing up to 416 residential units, approximately 25,050 square feet of commercial space, and up to 317 on-site parking spaces. The project site consists of two parcels located on the 301 12th Street (Assessor's Parcel Number 002-006300600) and 285 12th Street (Assessor's Parcel Number 002-00960301). On the block bound by 11th, 12th, Webster, and Harrison Streets (referred to as the "Full Block"), the project would construct a seven-story structure: "Building A." This building would include 339 residential units and approximately 23,400 square feet of ground-floor commercial use. The portion of the project site across Harrison Street (referred to as the "Quarter Block") would be developed with a seven-story structure: "Building B." This building would include 77 residential units and approximately 1,650 square feet of ground-floor commercial use. The Full Block is currently occupied by a single structure being used for a school (Downtown Oakland Charter School) and public parking. The Quarter Block is vacant and serves as a paved recreation area for the Downtown Oakland Charter School. The up to 317 vehicular parking spaces provided on site would include regular (single stall) and tandem parking spaces. A residential loading area also would be located on the first floor of each building. The project construction period would last between 18 and 24 months.

Both parcels are located within the Lake Merritt Station Area Plan ("LMSAP"). The City certified an Environmental Impact Report ("EIR") for the LMSAP in November 2014, pursuant to the California Environmental Quality Act ("CEQA").[1] The 2014 LMSAP EIR analyzed the environmental impacts of adoption and implementation of the LMSAP. The proposed project is within the impact envelope of the reasonably foreseeable maximum development program analyzed by the LMSAP EIR, providing the basis for use of an Addendum. Separate and independently, qualified planning level documents that can be used as a basis to provide CEQA clearance of the W12 Mixed-Use Project under specific CEQA provisions include Oakland's 1998 General Plan Land Use and Transportation Element EIR ("1998 LUTE EIR"), the 2010 General Plan Housing Element Update EIR and its 2014 Addendum, and the 2011 Central District Urban Renewal Plan Amendments EIR (or "Redevelopment Plan Amendments EIR"). These are referred to collectively throughout this document as "the Previous CEQA Documents" Or "Prior EIRs."

[1] Lake Merritt Station Area Plan Final EIR, Certified November 18, 2014. SCH No. 2012032012. Oakland Case Nos. ZS11225, ER1100-17, GP13287, ZT13288, RZ13289.

II. Background

Planning Context

A portion of the project site is located within the Lake Merritt Station Area Plan ("LMSAP"), for which the City of Oakland certified an Environmental Impact Report ("EIR") in November 2014, pursuant to the California Environmental Quality Act ("CEQA").

The LMSAP encompasses approximately 286 acres of area within a half-mile radius of the Lake Merritt BART Station. Its goal is to guide actions to improve the area's vitality and to accommodate and promote future growth over a 25-year period. The LMSAP EIR analyzed the LMSAP "Development Program," which was the assumed future development for the Plan with up to 4,900 new housing units, 4,100 new jobs, 404,000 square feet of retail use, and l.3 million square feet of office uses. The LMSAP EIR also presented detailed potential development assumptions for certain "Opportunity Sites," which are properties considered "most likely to redevelop." The portion of the project site on the Full Block parcel is included in the LMSAP Development Program and the level of development currently proposed for the site is within the broader development assumptions analyzed in the EIR. Specifically, the LMSAP EIR allows for flexibility in future development in terms of the precise mix of newly developed land uses and their location within the Planning Area. As long as the actual plan area buildout stays within the impact envelope analyzed in the EIR, individual development projects need not adhere to the specific site-by-site assumptions in the Development Program.

CEQA Context

The LMSAP EIR anticipated that the environmental review of specific development projects assumed as part of the LMSAP would be streamlined in accordance with CEQA. At the time this environmental document for the proposed project is being prepared, the following four projects are either approved or proposed within the LMSAP—the 298-unit, 24-story Lake Merritt Apartments Project on East 12th Street, the 114 room Hampton Inn at 378 11th Street, the 126-unit project at 250 14th Street, and 256- unit project at 226 13th Street.

The analysis in this environmental review document supports determinations that (1) the proposed project, as separate and independent bases, qualifies for an exemption per CEQA Guidelines Section 15183 (Projects Consistent with a Community Plan, General Plan, or Zoning); (2) the proposed project qualifies for streamlining provisions of CEQA under Public Resources Code Section 21094.5 and CEQA Guidelines Section 15183.3 (Streamlining for Infill Projects); and (3) the proposed project qualifies for an addendum pursuant to CEQA Guidelines Section 15164 (Addendum to an EIR) as none of the conditions requiring a supplemental or subsequent EIR, as specified in Public Resources Code section 21166 and CEQA Guidelines Sections 15162 (Subsequent EIRs) and 15163 (Supplement to an EIR), are present.

LMSAP EIR

The analysis in the LMSAP EIR applies to the proposed project and provides the basis for its qualification for the aforementioned CEQA exemption and streamlining provisions. The LMSAP EIR is hereby incorporated by reference and can be obtained from the City of Oakland Bureau of Planning at 250 Frank H. Ogawa Plaza, Suite 2114, Oakland, California 94612, and/or located at http://ec2-54-235-79-104.compute-1.amazonaws.com/Government/o/PBN/OurServices/Application/DOWD009157.htm.

This CEQA Checklist is an addendum to the LMSAP EIR, which provides the planning level an analysis of the environmental impacts of adoption and implementation of the Station Area Plan. Specifically, it evaluates the physical and land use changes from potential development that could occur with adoption and implementation of the Station Area Plan. Further, where feasible, and where an adequate level of detail is available such that the potential environmental effects may be understood and analyzed, the LMSAP EIR provides a level of analysis that eliminates or minimizes the need for subsequent CEQA review of projects that could occur under the Station Area Plan.

This CEQA Checklist is an addendum to the LMSAP EIR which provides the planning level analysis evaluating the potential significant impacts that could result from the reasonably foreseeable maximum development under the plan. As specified in CEQA Guidelines Section 15168, the LMSAP EIR is appropriate for a Specific Plan since the degree of specificity in an EIR corresponds to the degree of specificity in the underlying activity described in the EIR. Preparation of a planning-level document simplifies the task of preparing subsequent project-level environmental documents for future projects under the Station Area Plan for which the details are currently unknown. As such, the LMSAP EIR presents an analysis of the environmental impacts of adoption and implementation of the Station Area Plan. Specifically, it evaluates the physical and land use changes from potential development that could occur with adoption and implementation of the Station Area Plan. Further, where feasible, and where an adequate level of detail is available such that the potential environmental effects may be understood and analyzed, the LMSAP EIR provides a project-level analysis to eliminate or minimize the need for subsequent CEQA review of projects that could occur under the Station Area Plan.

Environmental Effects Summary – 2014 LMSAP EIR

The 2014 LMSAP EIR (including its Initial Study Checklist) determined that development consistent with the LMSAP would result in impacts that would be **reduced to a less-than-significant level with the implementation of mitigation measures and/or standard conditions of approval** (described in Section III): aesthetics (degradation of existing visual character, adversely affect scenic vistas, new light or glare); air quality (conflicts with the Bay Area Clean Air Plan ("CAP")); cultural resources (archaeological, human remains, paleontological); greenhouse gases and global climate change (generation of greenhouse gas emissions); hazards and hazardous materials; geology and soils; hydrology and water quality (flooding, runoff in excess of existing capacity, groundwater depletion); noise (use and density incompatibilities, interior noise levels, violation of noise ordinance); utilities and service systems (impacts on existing stormwater, solid waste, and wastewater facilities); biological resources (fish or wildlife

species, riparian habitat, wetlands, trees); public services (except as noted below as significant)[2]; and transportation/circulation (intersection operations Downtown).

Less-than-significant impacts were identified for the following resources in the 2014 LMSAP EIR and Initial Study: land use (adjacent land uses and land use policy); parks and recreation (expansion of existing park facilities on environment and increase demand for facilities); aesthetics (shadow, conflict with existing policies); noise (in excess of applicable standards); and hydrology and water quality (exposure to loss or risk of death). **No impacts** were identified for agricultural or forestry resources, and mineral resources.

Significant unavoidable impacts were identified for the following environmental resources in the 2014 LMSAP EIR: transportation/circulation (roadway segment operations); air quality (exposure of sensitive receptors to TACs, cumulative impacts); and cultural resources (changes to historic resources). Due to the potential for significant unavoidable impacts, a Statement of Overriding Considerations was adopted as part of the City's approvals.

Other Applicable Previous CEQA Documents

The analysis in the 2014 LMSAP EIR directly applies to the W12 Mixed-Use Project, providing the basis for use of an Addendum. The following describes EIRs that constitute the other applicable Previous CEQA Documents considered in this CEQA Analysis. Each of the following documents are hereby incorporated by reference and can be obtained from the City of Oakland Bureau of Planning at 250 Frank H. Ogawa Plaza, Suite 2114, Oakland, California 94612, and/or located at http://ec2-54-235-79-104.compute1.amazonaws.com/Government/o/PBN/OurServices/Application/DOWD009157.htm.

Land Use and Transportation Element EIR

The City certified the EIR for its General Plan Land Use and Transportation Element (LUTE) in 1998. The LUTE identifies policies for utilizing Oakland's land as change takes place and sets forth an action program to implement the land use policy through development controls and other strategies. The LUTE identifies five "Showcase Districts" targeted for continued growth; the project site is located within the "Downtown Showcase District" ("Downtown") intended to promote a mixture of vibrant and unique districts with around-the-clock activity, continued expansion of job opportunities, and growing residential population. The 1998 LUTE EIR is designated a "Program EIR" under CEQA Guidelines Sections 15183 and 15183.3. As such, subsequent activities under the LUTE are subject to requirements under each of the aforementioned CEQA Sections, which are described further in Section III.

Applicable mitigation measures identified in the 1998 LUTE EIR are largely the same as those identified in the other EIRs prepared *after* the 1998 LUTE EIR, either as mitigation measures or newer standard conditions of approval, the latter of which are described below in Section III.

[2] The 1998 LUTE EIR addressed effects on solid waste demand and infrastructure facilities for water, sanitary sewer and stormwater drainage under *Public Services*.

Environmental Effects Summary – 1998 LUTE EIR

The 1998 LUTE EIR (including its Initial Study Checklist) determined that development consistent with the LUTE would result in impacts that would be **reduced to a less-than-significant level with the implementation of mitigation measures and/or standard conditions of approval** (described in Section III): aesthetics (views, architectural compatibility and shadow only); air quality (construction dust [including PM10] and emissions Downtown, odors); cultural resources (except as noted below as less than significant); hazards and hazardous materials; land use (use and density incompatibilities); noise (use and density incompatibilities, including from transit/transportation improvements); population and housing (induced growth, policy consistency/clean air plan); public services (except as noted below as significant)[3]; and transportation/circulation (intersection operations Downtown).

Less-than-significant impacts were identified for the following resources in the 1998 LUTE EIR and Initial Study: aesthetics (scenic resources, light and glare); air quality (clean air plan consistency, roadway emissions in Downtown, energy use emissions, local/regional climate change); biological resources; cultural resources (historic context/settings, architectural compatibility); energy; geology and seismicity; hydrology and water quality; land use (conflicts in mixed use projects and near transit); noise (roadway noise Downtown and citywide, multifamily near transportation/transit improvements); population and housing (exceeding household projections, housing displacement from industrial encroachment); public services (water demand, wastewater flows, stormwater quality, parks services); and transportation/circulation (transit demand).

No impacts were identified for agricultural or forestry resources, and mineral resources.

Significant unavoidable impacts were identified for the following environmental resources in the 1998 LUTE EIR: air quality (regional emissions, roadway emissions Downtown); noise (construction noise and vibration in Downtown); public services (fire safety); transportation/circulation (roadway segment operations); wind hazards, and policy consistency (clean air plan). Due to the potential for significant unavoidable impacts, a Statement of Overriding Considerations was adopted as part of the City's approvals.

Oakland Housing Element Update EIR and Addendum

The City has twice amended its General Plan to adopt updates to its Housing Element. It certified a 2010 EIR for the 2007-2014 Housing Element, and a 2014 Addendum to the 2010 EIR for the 2015-2023 Housing Element. The General Plan identifies the City's current and projected housing needs, and sets goals, policies, and programs to address those needs, as specified by the state's *Regional Housing Needs Allocation* ("RHEA") process. The project site is specified as a "Housing Opportunity Site" in the 2015-2023 Housing Element, and thus the W12 Mixed-Use Project would contribute to the total number of housing units needed in the City of Oakland to meet its RHNA target. Applicable mitigation measures and SCAs identified in the 2014 Addendum to the 2010 EIR are considered in the analysis of the residential components of the W12 Mixed-Use Project in this document, and are largely the same as those identified in the 2011 Redevelopment Plan

[3] The 1998 LUTE EIR addressed effects on solid waste demand and infrastructure facilities for water, sanitary sewer and stormwater drainage under *Public Services*.

Amendments EIR. The 2010 Housing Element Update EIR was designated a "Program EIR" under CEQA Guidelines Sections 15183 and 15183.3. As such, subsequent activities under the Housing Element that involve housing, are subject to requirements under each of the aforementioned CEQA Sections, which are described further in Section III.

Applicable mitigation measures and standard conditions of approval (also described in Section III) identified in the 2010 Housing Element Update EIR are considered in the analysis in this document and are largely the same as those identified in the other EIR documents described in this section.

Environmental Effects Summary – 2010 Housing Element and its 2014 Addendum

The 2010 Housing Element Update EIR (including its Initial Study Checklist) and its 2014 Addendum determined that housing developed pursuant to the Housing Element, which would include the project site, would result in impacts that would be **reduced to a less-than-significant level with the implementation of mitigation measures and/or standard conditions of approval** (described in Section III): aesthetics (visual character/quality and light/glare only); air quality (except as noted below); biological resources; cultural resources; geology and soils; greenhouse gas emissions; hazards and hazardous materials (except as noted below, and no impacts regarding airport/airstrip hazards and emergency routes); hydrology and water quality (except as noted below); noise; public services (police and fire only); and utilities and service systems (except as noted below).

Less-than-significant impacts were identified for the following resources in the Housing Element Update EIR and Addendum: hazards and hazardous materials (emergency plans and risk via transport/disposal); hydrology and water quality (flooding/flood flows, and inundation by seiche, tsunami or mudflow); land use (except no impact regarding community division or conservation plans); population and housing (except no impact regarding growth inducement); public services and recreation (except as noted above, and no impact regarding new recreation facilities); and utilities and service systems (landfill, solid waste, and energy capacity only, and no impact regarding energy standards). **No impacts** were identified for agricultural or forestry resources, and mineral resources.

Significant unavoidable impacts were identified for the following environmental resources in the Housing Element Update EIR and Addendum: air quality (toxic air contaminant exposure) and traffic delays. Due to the potential for significant unavoidable impacts, a Statement of Overriding Considerations was adopted as part of the City's approvals.

Central District Urban Renewal Plan Amendments EIR (Redevelopment Plan Amendments EIR)

The W12 Mixed-Use Project site is located within the Central District Urban Renewal Plan Area, which generally encompasses the entire Downtown: approximately 250 city blocks (828 acres) in an area generally bounded by Interstate 980 (I-980), Lake Merritt, 27th Street and the Embarcadero. The Oakland City Council adopted the Central District Urban Renewal Plan (the "Redevelopment Plan") for the Project Area in June 1969. The City prepared and certified an EIR for proposed

amendments to the Urban Renewal Plan in 2011, and amended or supplemented the Plan up to April 3, 2012.[4] The 2011 Redevelopment Plan EIR was designated a "Program EIR" under CEQA Guidelines Section 15180; as such, subsequent activities are subject to requirements under CEQA Section 15168.

Applicable mitigation measures and standard conditions of approval (described in Section III) identified in the 2011 Redevelopment Plan Amendments EIR are considered in the analysis in this document and are also largely the same as those identified in the other EIRs described in this section.

Environmental Effects Summary – 2011 Redevelopment Plan Amendments EIR

The 2011 Redevelopment Plan Amendments EIR determined that development facilitated by the Proposed Amendments would result in impacts to the following resources **that would be reduced to a less-than-significant level with the implementation of identified mitigation measures and/or standard conditions of approval** (described in Section III): aesthetics (light/glare only); air quality (except as noted below as less than significant and significant); biological resources (except no impacts regarding wetlands or conservation plans); cultural resources (except as noted below as significant); geology and soils; greenhouse gas emissions; hazards and hazardous materials; hydrology and water quality (stormwater and 100-year flooding only); noise (exceeding standards – construction and operations only); traffic/circulation (safety and transit only); utilities and service systems (stormwater and solid waste only).

Less-than-significant impacts were identified for the following resources in the 2011 Redevelopment Plan EIR: aesthetics (except as noted above as less than significant with standard conditions of approval); air quality (clean air plan consistency); hydrology and water quality (except as noted above as less than significant with standard conditions of approval); land use and planning; population and housing; noise (roadway noise only); public services and recreation; traffic/circulation (air traffic and emergency access); and utilities and service systems (except as noted above as less than significant with standard conditions of approval). **No impacts** were identified for agricultural or forestry resources, and mineral resources.

The 2011 Redevelopment Plan EIR determined that the Proposed Amendments combined with cumulative development would have **significant unavoidable impacts** on the following environmental resources: air quality (toxic air contaminant exposure and odors); cultural resources (historic); and traffic/circulation (roadway segment operations).[5] Due to the potential for significant unavoidable impacts, a Statement of Overriding Considerations was adopted as part of the City's approvals.

[4] The 2011 EIR addressed two amendments. A 17th Amendment to the Redevelopment Plan to (1) extend the duration of the Plan from 2012 to 2022 and extend the time period that the then-Redevelopment Agency could receive tax increment funds from 2022 to 2032, as allowed by Senate Bill (SB) 211 (codified as Health and Safety Code Section 33333.10 et seq.); (2) increase the cap on the receipt of tax increment revenue to account for the proposed time extensions; and (3) renew the then-Redevelopment Agency's authority to use eminent domain in the Project Area. An 18th Amendment further extended the then-Redevelopment Plan time limit from 2022 to 2023 and extended the time period that the then-Redevelopment Agency could receive tax increment funds from 2032 to 2033, as allowed by Health and Safety Code Section 33331.5.

[5] The 2011 Redevelopment Plan Amendments EIR also identified significant and avoidable noise effects specifically associated with the potential development of a new baseball stadium at Victory Court, and multimodal safety at at-grade rail crossings, both near the Oakland Estuary. These effects would not pertain to the proposed project given the distance and presumably minimal contribution of multimodal trips affecting these impacts.

III. Purpose and Summary of this Document

The purpose of this document is to evaluate CEQA compliance of the proposed W12 Mixed-Use Project. The 2014 LMSAP EIR analyzed the environmental impacts of development located within the LMSAP boundaries. The LMSAP EIR anticipated that the environmental review of specific development projects within the impact envelope assumed in the LMSAP would be streamlined in accordance with CEQA. An addendum is considered suitable for the currently proposed W12 Mixed-Use Project, as demonstrated by the CEQA Checklist presented in Section VI, herein. For comprehensive review and public information, the CEQA Checklist and its supporting attachments demonstrate that the W12 Mixed-Use Project would qualify for certain other CEQA exemptions, as summarized below, which separately and independently provide a basis for CEQA compliances.

1. **Addendum.** Public Resources Code Section 21166 and CEQA Guidelines Sections 15162 and 15164 (Subsequent EIRs, Supplements and Addenda to an EIR or Negative Declaration), state that an addendum to a certified EIR is allowed when minor changes or additions are necessary, and none of the conditions for preparation of a subsequent EIR or Negative Declaration per Sections 15162 and 15164 are satisfied.

   The analysis in the 2014 LMSAP EIR directly applied to the proposed project, providing the basis for use of an Addendum.

2. **Community Plan Exemption.** Public Resources Code Section 21083.3 and CEQA Guidelines Section 15183 (Projects Consistent with a Community Plan or Zoning) allow streamlined environmental review for projects that are "consistent with the development density established by existing zoning, community plan or general plan policies for which an EIR was certified, except as might be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site." Section 15183(c) specifies that "if an impact is not peculiar to the parcel or to the proposed project, has been addressed as a significant effect in the prior EIR, or can be substantially mitigated by the imposition of uniformly applied development policies or standards…, then an EIR need not be prepared for the project solely on the basis of that impact."

   The analysis in the Previous CEQA Documents—the 1998 LUTE EIR and, for only the residential component of the W12 Mixed-Use Project, the 2010 Housing Element Update EIR and its 2014 Addendum, as well as the 2011 Redevelopment Plan Amendments EIR and 2014 LMSAP EIR—are applicable to the W12 Mixed-Use Project and are the Previous CEQA Documents providing the basis for use of the Community Plan Exemption.

3. **Qualified Infill Exemption.** Public Resources Code Section 21094.5 and CEQA Guidelines Section 15183.3 (Streamlining for Infill Projects) allow streamlining for certain qualified infill projects by limiting the topics subject to review at the project level, if the effects of infill development have been addressed in a planning level decision, or by uniformly applicable development policies. Infill projects are eligible if they are located in an urban area on a site that either has been previously developed or that adjoins existing qualified urban uses on at least 75 percent of the site's perimeter; satisfy the performance standards provided in CEQA Guidelines Appendix M; and are consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in either a sustainable communities strategy or an alternative planning strategy. No additional environmental review is required if the infill project would not cause any new

specific effects or more significant effects, or if uniformly applicable development policies or standards would substantially mitigate such effects.

The analysis in the EIRs noted above is applicable to the W12 Mixed-Use Project and are the Previous CEQA Documents providing the basis for use of the Qualified Infill Exemption under CEQA Guidelines Section 15183.3.

4. **Other Applicable Previous CEQA Documents - Prior EIRs and Redevelopment Projects.** CEQA Guidelines Section 15168 (Program EIRs) and Section 15180 (Redevelopment Projects) provide that the 2011 Redevelopment Plan Amendments EIR can be used as a Program EIR in support of streamlining and/or tiering provisions under CEQA. The 2011 Redevelopment Plan Amendments EIR is a Program EIR for streamlining and/or tiering provisions by CEQA Section 15168. The section defines the "program EIR" as one prepared on a series of actions that can be characterized as one large project and are related geographically and by other shared characteristics. Section 15168 continues that "subsequent activities in the program EIR must be examined in the light of the program EIR to determine whether an additional environmental document must be prepared." If the agency finds that pursuant to CEQA Guidelines Section 15162, no new effects could occur or no new mitigation measures would be required, the agency can approve the activity as being within the scope of the project covered by the program EIR and no new environmental document would be required.

   Further, CEQA Guidelines Section 15180 specifies that if a certified redevelopment plan EIR is prepared, no subsequent EIRs are required for individual components of the redevelopment plan unless a subsequent EIR or supplement to the EIR would be required by Section 15162 or 15163.

Previous Mitigation Measures and Current Standard Conditions of Approval (SCAs)

The CEQA Checklist provided in Section VI of this document evaluates the potential project-specific environmental effects of the proposed W12 Mixed-Use Project, and evaluates whether such impacts were adequately covered by the 2014 LMSAP EIR (as well as the Prior EIRs previously described in Section II) to allow the above-listed provisions of CEQA to apply. The analysis conducted incorporates by reference the information contained in each of the Previous CEQA Documents. The W12 Mixed-Use Project is legally required to incorporate and/or comply with the applicable requirements of the mitigation measures identified in the 2014 LMSAP EIR. Therefore, the mitigation measures are herein assumed to be included as part of the proposed project, including those that have been modified to reflect the City's Current standard language and requirements, as discussed below.

SCA Application in General

The City established its *Standard Conditions of Approval and Uniformly Applied Development Standards* ("SCAs") in 2008, and they have since been amended and revised several times.[6] The City's SCAs are incorporated into new and changed projects as conditions of approval regardless of a project's

[6] A revised set of SCAs was recently published by the City of Oakland on July 22, 2015.

environmental determination. The SCAs incorporate policies and standards from various adopted plans, policies, and ordinances (such as the Oakland Planning and Municipal Codes, Oakland Creek Protection Ordinance, Stormwater Water Management and Discharge Control Ordinance, Oakland Protected Trees Ordinance, Oakland Grading Regulations, National Pollutant Discharge Elimination System (NPDES) permit requirements, Housing Element-related mitigation measures, California Building Code and Uniform Fire Code, among others), which have been found to substantially mitigate environmental effects. The SCAs are adopted as requirements of an individual project when it is approved by the City and are designed to, and will, substantially mitigate environmental effects.

SCA Application in this CEQA Analysis

Mitigation measures and SCAs identified in the 2014 LMSAP EIR that would apply to the W12 Street Mixed-Use Project are listed in Attachment A to this document, which is incorporated by reference into this CEQA Analysis. Because the SCAs are mandatory City requirements, the impact analysis for the proposed project assumes that they will be imposed and implemented, which the project sponsor has agreed to do or ensure as part of the proposed project. If this CEQA Checklist or its attachments inaccurately identifies or fails to list a mitigation measure or SCA, the applicability of that mitigation measure or SCA to the proposed project is not affected.

Most of the SCAs that are identified for the W12 Mixed-Use Project were also identified in the 2014 LMSAP EIR, the 2011 Redevelopment Plan Amendments EIR, and the 2010 Oakland Housing Element Update EIR and its 2014 Addendum; the 1998 LUTE EIR was developed prior to the City's application of SCAs. As discussed specifically in Attachment A to this document, since certification of the LMSAP EIR, the City of Oakland has revised its SCAs, and the most current SCAs are identified in this CEQA Analysis. All mitigation measures identified in the LMSAP EIR that would apply to the proposed project are also identified in Attachment A to this document.

W12 Mixed-Use Project CEQA Compliance

The W12 Mixed-Use Project satisfies each of the CEQA provisions, as summarized below.

- **Addendum.** The analysis conducted in this document indicates that, pursuant to CEQA Guidelines Section 15162 through 15164, an addendum to the 2014 LMSAP EIR applies; therefore, this CEQA Analysis is considered to be the addendum. The level of development currently proposed for the site is within the broader development assumptions analyzed in the EIR. As stated in the LMSAP EIR, deviation from the specific site-by-site assumptions in the Development Program may be considered minor as they are anticipated and analyzed in the EIR. Therefore, the W12 Mixed-Use Project meets the requirements for an addendum, as evidenced in Attachment B to this document.

- **Community Plan Exemption.** Based on the analysis conducted in this document, and pursuant to CEQA Guidelines Section 15183, the W12 Mixed-Use Project also qualifies for a community plan exemption. It is permitted in the zoning district where the project site is located, and is consistent with the land uses envisioned for the site. The analysis herein considers the analysis in the 2010 Oakland Housing Element Update EIR and its 2014

Addendum for the evaluation of the housing components of the W12 Mixed-Use Project, and further reconsiders the analysis in the 1998 LUTE EIR and 2014 LMSAP EIR for the overall project. This CEQA Analysis concludes that the proposed project would not result in significant impacts that (1) are peculiar to the project or project site; (2) were not identified as significant project-level, cumulative, or offsite effects in the 2014 LMSAP EIR; or (3) were previously identified as significant effects, but are determined to have a more severe adverse impact than discussed in the LMSAP EIR. Findings regarding the proposed project's consistency with the zoning are included as Attachment C to this document.

- **Qualified Infill Exemption**. The analysis conducted indicates that the proposed project qualifies for a qualified infill exemption and, pursuant to CEQA Guidelines Section 1518.3., is generally consistent with the required performance standards provided in CEQA Guidelines Appendix M, as evaluated in Table D-1 in Attachment D to this document. This CEQA Analysis supports that the W12 Mixed-Use Project would not cause any new specific effects or more significant effects than previously identified in applicable planning level EIRs, and uniformly applicable development policies or standards (SCAs) would substantially mitigate the project's effects. The W12 Mixed-Use Project is proposed on a previously developed site in downtown Oakland and is surrounded by urban uses. Furthermore, the proposed project is consistent with the land use, density, building intensity, and applicable policies for the site. The analysis herein considers the analysis in the 2014 LMSAP EIR; the 2011 Redevelopment Plan EIR; the 1998 LUTE EIR; and for the residential components of the W12 Mixed-Use Project only, the 2010 Housing Element Update EIR and its 2014 Addendum.

- **Other Applicable Previous CEQA Documents – Prior EIRs and Redevelopment Projects.** The analysis in the 2011 Redevelopment Plan Amendments EIR, the 2010 General Plan Housing Element Update EIR and its 2014 Addendum, and in this CEQA Analysis demonstrates that the W12 Mixed-Use Project would not result in substantial changes or involve new information that would warrant preparation of a subsequent EIR, per CEQA Guidelines Section 15162, because the level of development now proposed for the site is within the broader development assumptions analyzed in the EIR.

Overall, based on an examination of the analysis, findings, and conclusions of the 2014 LMSAP EIR, as well as those of the 1998 LUTE EIR, the 2011 Redevelopment Plan Amendments EIR (or "Redevelopment Plan Amendments EIR"), and for the housing components of the proposed project, the 2010 General Plan Housing Element Update EIR and its 2014 Addendum—all of which are summarized in the CEQA Checklist in Section VI of this document—the potential environmental impacts associated with the W12 Mixed-Use Project have been adequately analyzed and covered in the planning-level LMSAP EIR and other Previous CEQA Documents. Therefore, no further review or analysis under CEQA is required.

IV. Project Description

W12 Project Site

Project Location

The W12 Project site ("project site") is located at 301 12th Street, on the block bounded by 11th, 12th, Webster, and Harrison Streets (referred to as the "Full Block") and 285 12th Street Harrison Street on the northwest corner of block bounded by 11th, 12th, Harrison, and Alice Streets (referred to as the "Quarter Block") (see **Figure 1**). The project site is approximately 1.72 acres and comprised of two parcels (Assessor's Parcel Numbers 002-006300600 and 002-006900301).

Existing Site Conditions

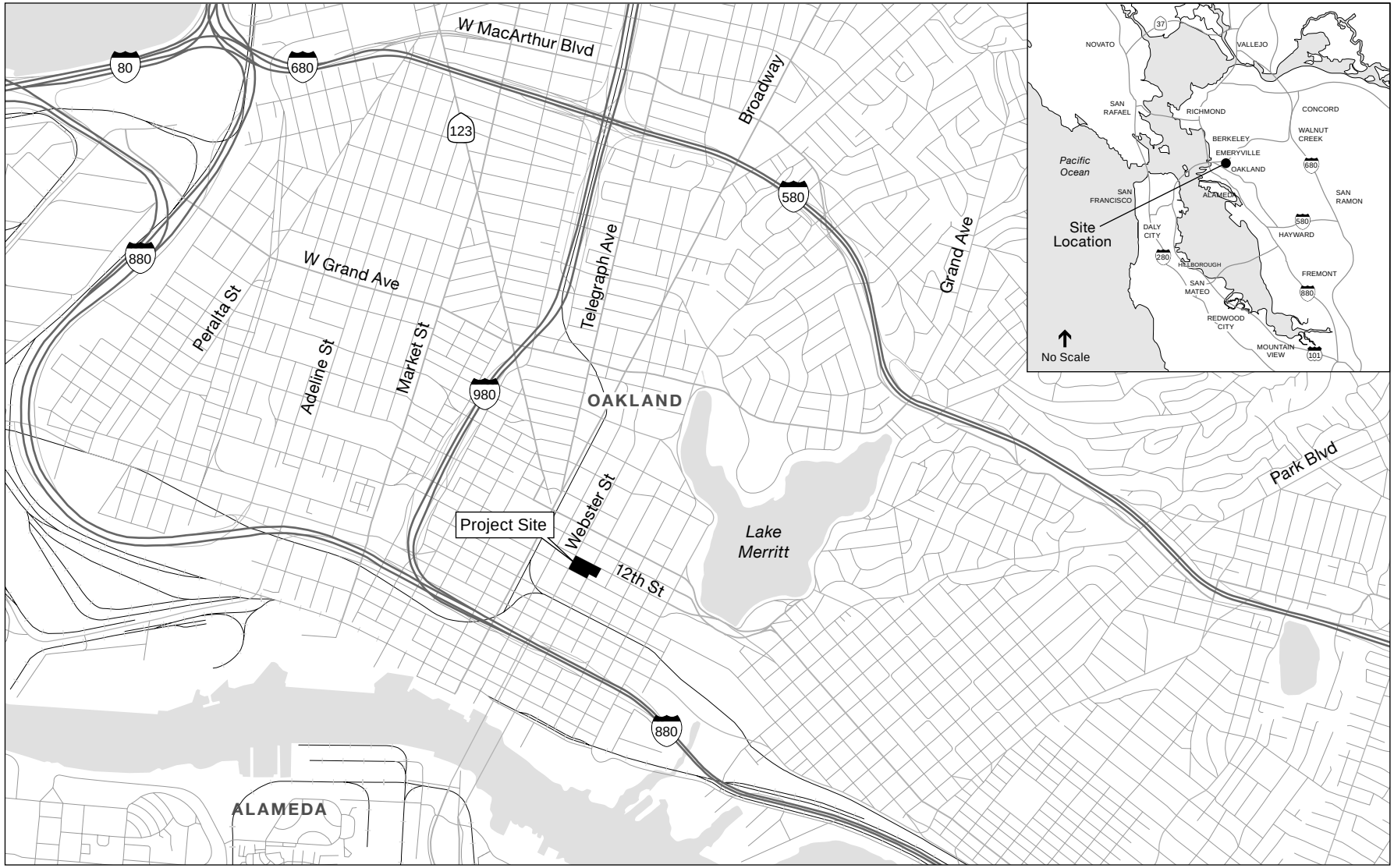
The Full Block of the project site is currently occupied by the Downtown Charter Academy and a covered public parking lot. The Downtown Charter Academy is operated by Amethod Public Schools and is located in two story building along the 12th Street frontage; it is a middle school (Grades 6 through 8) with an enrollment of approximately 250 students. Student access to the school is provided by way of an approximately 60-foot-long white passenger loading zone along 12th Street, while garage doors on Harrison and Webster Streets provide access for bulk deliveries. The covered parking lot is operated by Star Park Corporation and is located in a one story building along the 11th Street frontage; it accommodates approximately 80 vehicles. Access to the parking facility is provided by driveways on 12th, Harrison Street, and Webster Streets. The Full Block is surrounded by concrete sidewalks on all frontages and there are no street trees.

The Quarter Block of the project site is also part of the Downtown Charter Academy, serving multiple recreational uses on a paved open area. It is surrounded by a six-foot-tall metal fence with vehicle gates provided along 12th and Harrison Streets and a pedestrian gate provided along Harrison Street. The Quarter Block is surrounded by concrete sidewalks on both frontages (12th and Harrison Streets) and there are two large street trees (ficus) on 12th Street and two large street trees (ficus) on Harrison Street.

Surrounding Context

The area immediately surrounding the project site contains primarily commercial and community facility land uses.

- A mixed-use residential building with ground-floor retail is located to the northeast on Harrison Street between 12th and 13th Streets.
- To the west of the project site, along Webster Street, a mix of two- to three-story commercial buildings are currently occupied by a hotel, a florist, beauty salons, furniture stores, and a pizzeria.
- To the east of the project site, along Harrison Street, there is a small, single story commercial-strip shopping center with a mix of retail and dining establishments; further to the east (adjacent to the Quarter Block site), there is a mix of two- to three-story commercial buildings



SOURCE: ESA

W12 Mixed-Use Project . 150815

Figure 1
Project Location

currently occupied by a large home decor store/showroom, a lighting and hardware store, a cookie factory, a beauty salon, and a medical supply store.

- To the north of the project site, along 12th Street, there are two four-story office buildings:
  - King Building, an approximately 36,000-square-foot office building; and
  - Frank G. Mar Apartments, with 119 units of affordable housing.

  The remaining buildings are a mix of one- to two-story commercial buildings that are currently occupied by a day spa, a furniture store, a flooring store, a cabinet store, two restaurants, and a beauty salon.
- To the south of the project site, along 11th Street, a mix of one- to two-story commercial buildings are currently occupied by offices, a bakery, a car audio store, two beauty salons, and a spa.

The Bay Area Rapid Transit District ("BART") 12th Street City Center station entrance (12th and Broadway) is approximately one-fifth of a mile (approximately 1,000 feet) from the midpoint of the project site. The Lake Merritt BART station is also nearby at approximately half of one mile from the project site. Multiple transit routes serve the project site, including the Alameda-Contra Costa County Transit District ("AC Transit") that provides bus lines and major transfer points along 11th Street (one way, eastbound), 12th Street (one way, westbound), adjacent to the project site and along Broadway within two blocks of the project site. The free Oakland shuttle that services Broadway from Jack London Square to approximately 20th Street also runs along Broadway. Access to and from ramps to I-980 is approximately seven blocks west (via 11th and 12th Streets) of the project site; access to I-880 South is approximately eight blocks southwest (at 5th Street and Broadway); access to I-880 North is approximately eight blocks south (at 6th and Madison Streets).

Project Characteristics

W12 Mixed-Use Project Program

The proposed project analyzed in this CEQA Analysis is referred to as the "W12 Project" (or "proposed project"). The Project Sponsor proposes to construct two seven-story, approximately 87-foot-tall, buildings with up to 416 residential units, approximately 25,050 square feet of commercial space, and up to 317 on-site parking spaces. The proposed project is consistent with the types of projects considered in the 2014 LMSAP EIR and within the overall development program analyzed in that EIR.

"Building A" would include 339 residential units and approximately 23,400 square feet of ground-floor commercial use. "Building B" would include 77 residential units and approximately 1,650 square feet of ground-floor commercial use.

As shown in **Figures 2** through **6**, the parking garage for the proposed project would be located on the basement level of Building A and the interior portions of the ground and second floor levels of both Building A and Building B. The project would provide up to 317 combined vehicle parking spaces. The commercial spaces and residential lobbies/amenity space would be located on the ground floor of both buildings. On the Full Block, the commercial spaces would face Webster,

Harrison, 11th and 12th Streets and the residential lobbies would face Webster, 12th, and Harrison Streets. On the Quarter Block, the commercial space would have Harrison and 12th Street and the residential lobby would open on to Harrison Street. Interior units in Building A would surround an approximately 13,800 square foot central courtyard on the podium (third) level; interior units in Building B would surround an approximately 3,100 square foot courtyard on the podium (third) level. Landscaped rooftop terraces on both buildings would provide an additional 11,120-square-foot of open space.

Figures 7 and **8** show project elevations that were prepared to illustrate the exterior elevations of the proposed project.

Other Characteristics of the Proposed Project

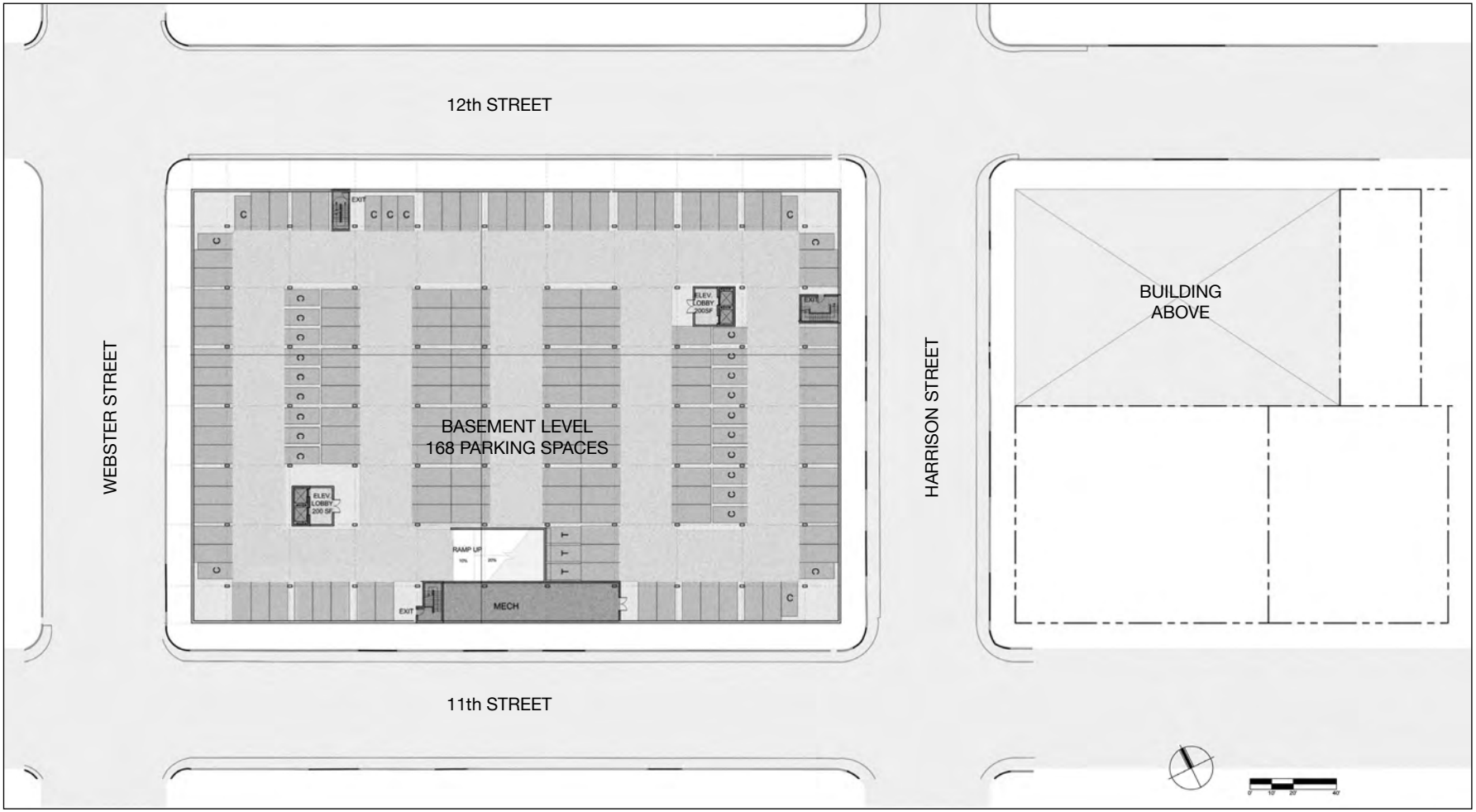
Landscaping, Open Space, and Tree Removal

The four street trees on 12th Street and Harrison Street fronting the Quarter Block qualify as protected trees per the City of Oakland Protected Trees Ordinance, and would be removed following the Conditions of Approval described later in this document. In addition, the proposed project would install new street trees, as required, along all of the street frontages of the Full Block. The proposed project also would provide approximately 50,560 square-foot of group open space for residents on the podium (third) and roof levels of the Building A and Building B. Open space and amenities include landscaped roof decks, landscaped courtyards, balconies, a fitness center, and a resident lounge.

Parking and Circulation

The Full Block would contain approximately 273 vehicle parking spaces for residents and commercial customers/employees on the basement and two lower levels of Building A. An additional 44 spaces would be provided on the lower two levels of the Building B. Loading areas would be located on the first floor of both buildings on 12th and Harrison Streets (Full Block) and on 12th Street (Quarter Block). Long-term, secured bicycle parking for 288 bicycles would be located on the lower level of the garage, and bicycle racks along the project site street frontages are proposed to accommodate an additional 26 bicycles.

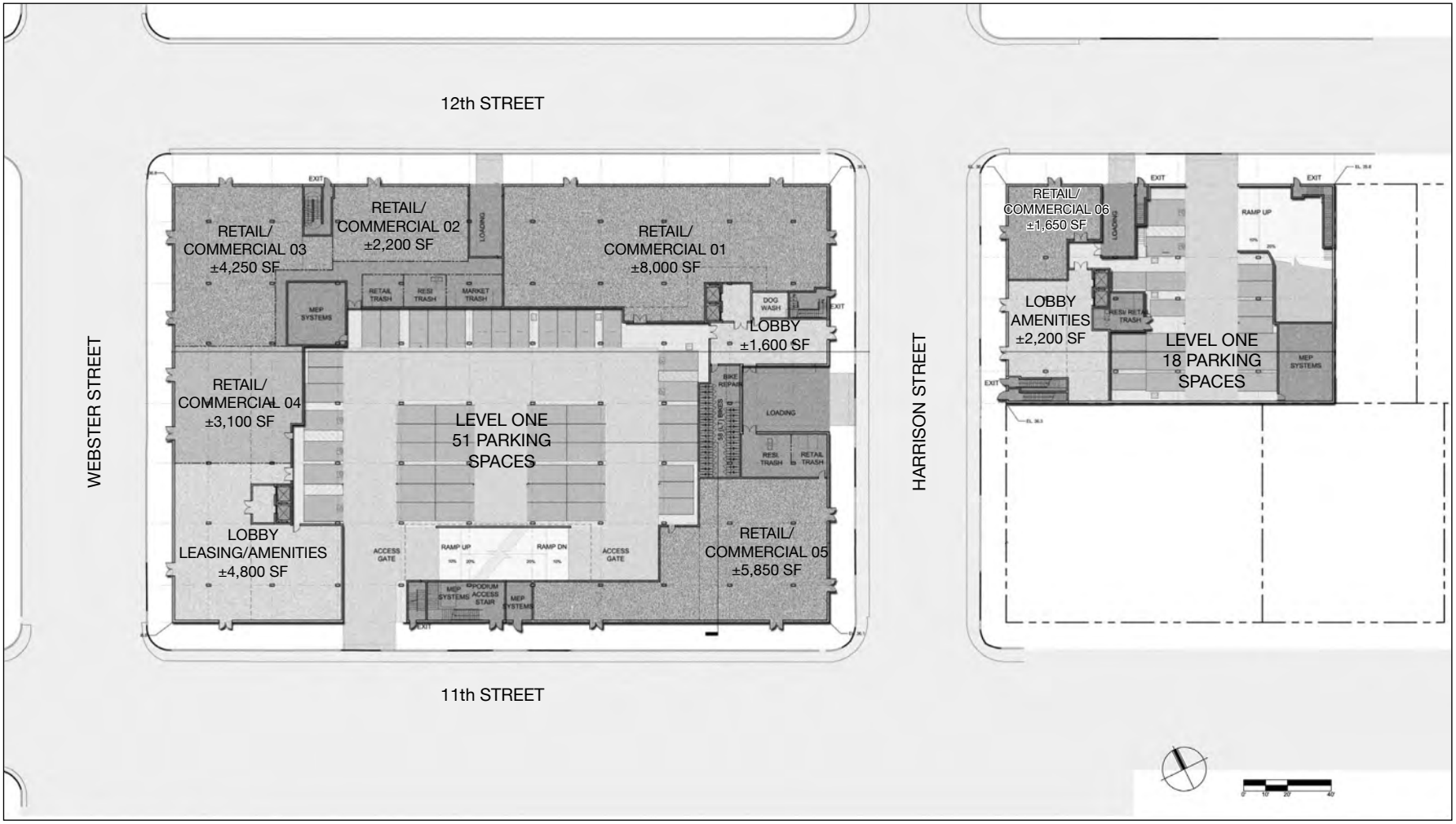
Vehicular Access. The parking garage ingress and egress for the Full Block would be located in the middle of the 11th Street façade of the building. The remaining curb cuts along Harrison, Webster, and 11th Street serving the existing school and parking lot would be removed. Access to the parking garage of the Quarter Block would be provided by the existing driveway on 12th Street; the remaining curb cut on Harrison Street would be removed.



SOURCE: VTBS Architects

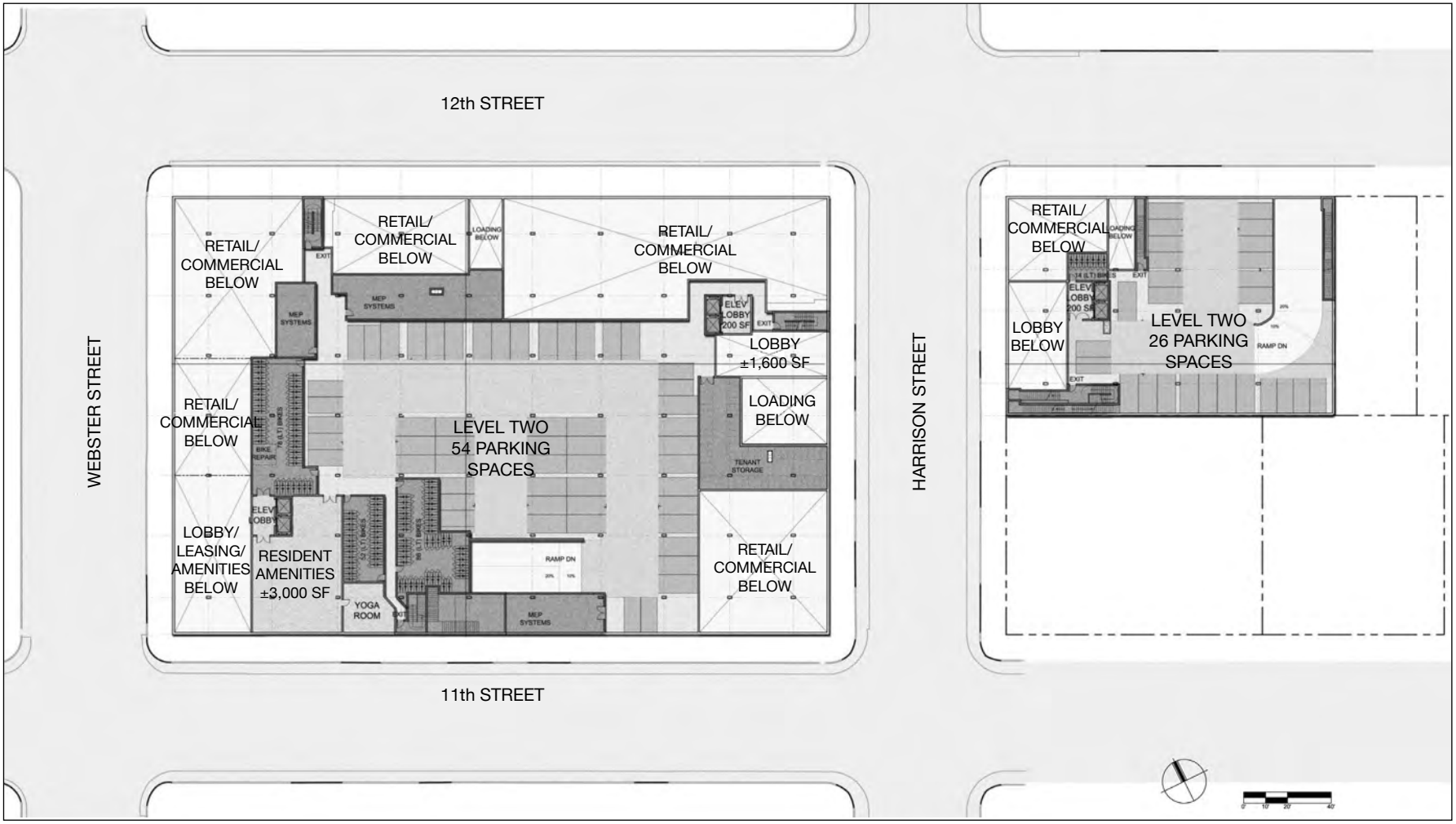
W12 Mixed-Use Project . 150815

Figure 2
Basement Floor Plan



SOURCE: VTBS Architects

Figure 3
Ground Floor Plan

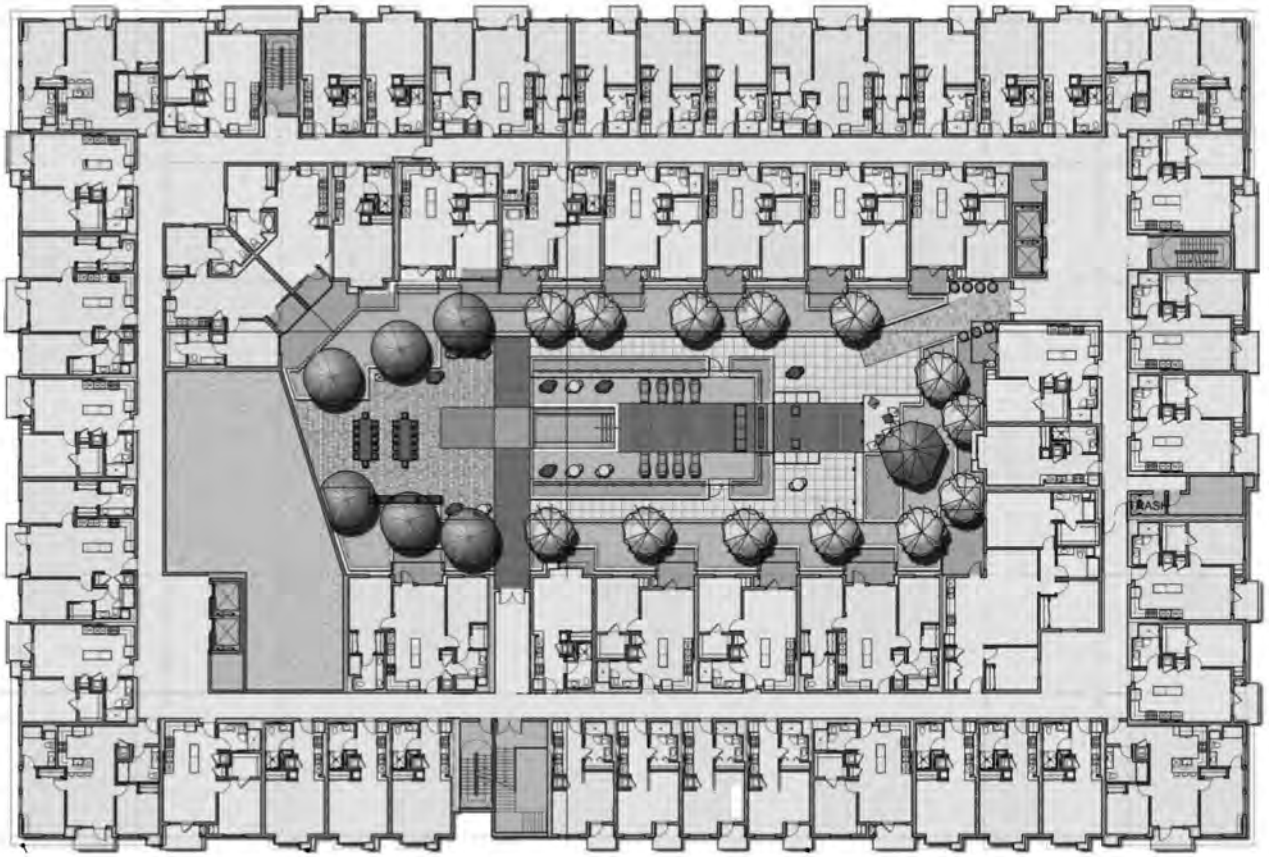


SOURCE: VTBS Architects

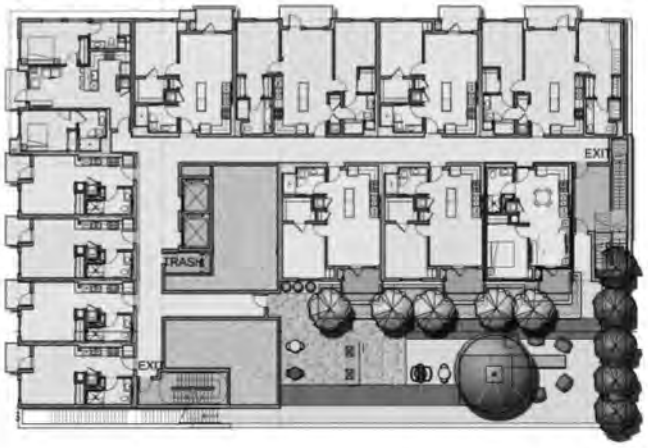
W12 Mixed-Use Project . 150815

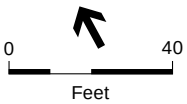
Figure 4
Level 2 Floor Plan

BUILDING A



BUILDING B

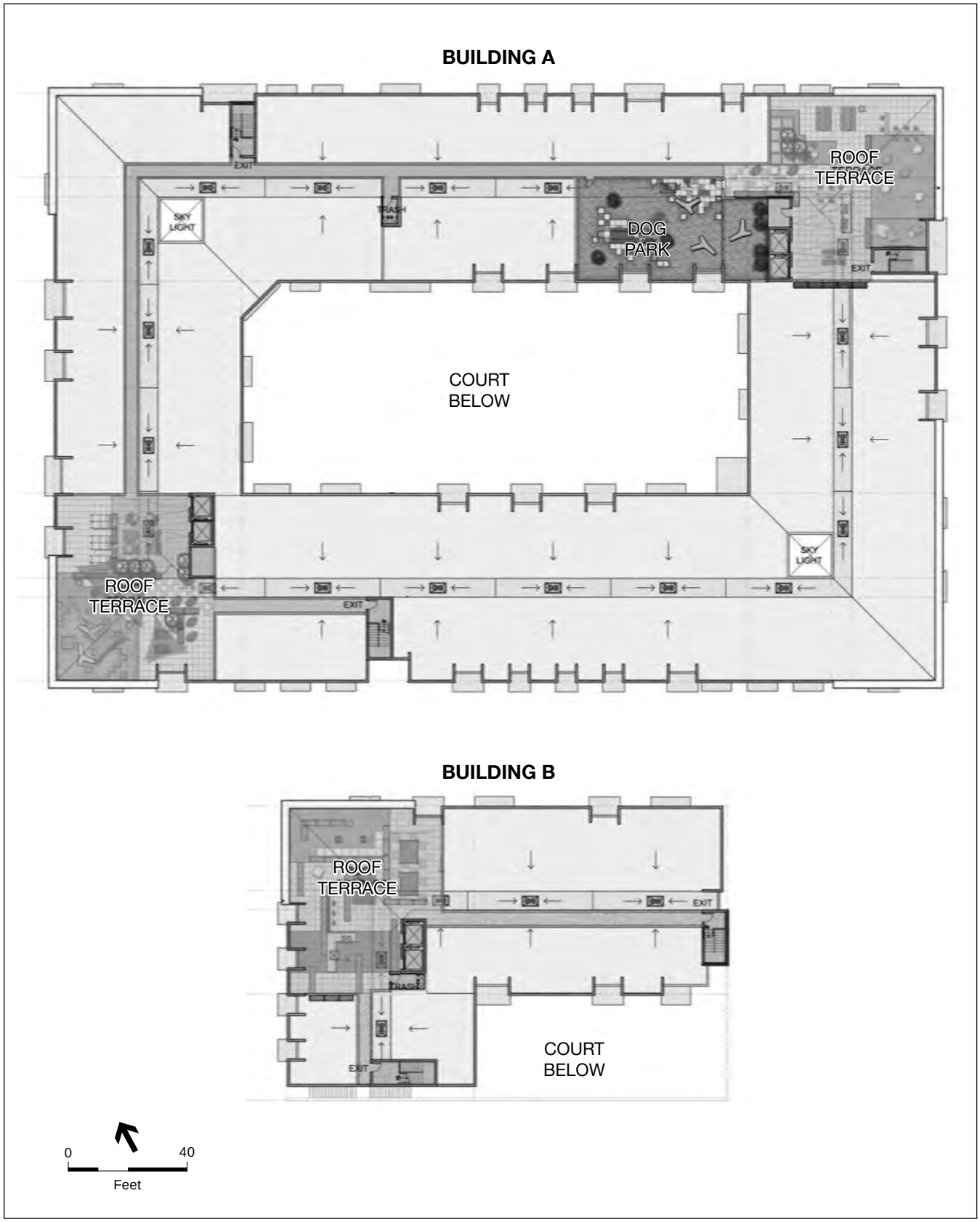




SOURCE: VTBS Architects

W12 Mixed-Use Project . 150815

Figure 5
Level 3 Floor Plan



SOURCE: VTBS Architects

W12 Mixed-Use Project . 150815

Figure 6
Roof Floor Plan

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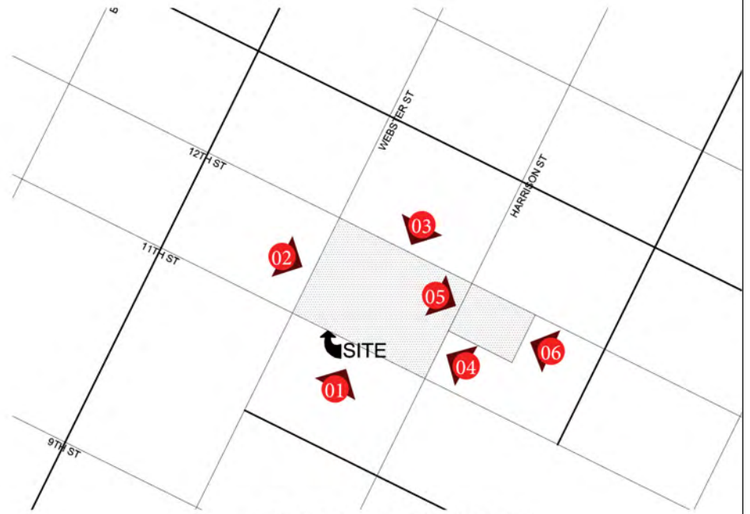
(01) / 11TH STREET ELEVATION (SOUTH-WEST)

(02) / WEBSTER STREET ELEVATION (NORTH-WEST)



ELEVATION KEY PLAN

SOURCE: VTBS Architects

W12 Mixed-Use Project . 150815

Figure 7
Project Elevations

(03) / 12TH STREET ELEVATION (NORTH-EAST)

(04) / HARRISON STREET ELEVATION
(SOUTH-EAST)

(05) / 1/4 BLOCK HARRISON STREET ELEVATION
(NORTH-WEST)

(06) / 1/4 BLOCK
(SOUTH-EAST)

0' 10' 20' 40'

SOURCE: VTBS Architects

W12 Mixed-Use Project . 150815

Figure 8
Project Elevations

Pedestrian Access. Primary pedestrian access to the residential component of the proposed project would be through residential lobbies accessible from Harrison, Webster, and 11th Street (Full Block) and Harrison Street (Quarter Block). Pedestrian access to the commercial spaces of the proposed project would be provided via entrances on 11th, 12th, Webster, and Harrison Streets for the Full Block and on Harrison and 12th Streets for the Quarter Block (see Figure 3).

Sustainability and Efficiency

The Project Sponsor intends to meet LEED Silver standards and comply with the Green Building ordinance and requirements. The proposed project would optimize the efficiency of its building envelope, and through the use of efficient lighting and HVAC systems it would reduce domestic energy use. The proposed project would meet the newly implemented Building Energy Efficiency Standards.

Construction and Phasing

Project construction is anticipated to last a period of approximately 18 to 24 months. Construction activities on the project site would consist of excavation and shoring, foundation and below-grade construction, and construction of the project building and finishing interiors.

Discretionary Project Approvals Requested

The Project Sponsor requests, and the proposed project would require, a number of discretionary actions/approvals, as listed below.

Actions by the City of Oakland

- **Conditional Use Permit ("CUP")**: A CUP is required due to the size of the project (over 100,000 square feet).
- **Tentative Parcel Map Parcel Map Waiver ("TPM")**: TPM to create commercial and residential condominiums.
- **Building and other Discretionary Development Permits**: Grading and other related onsite and offsite work permits, and minor encroachment permits.
- **Design Review Approval**: The proposed project would be subject to design criteria that are utilized as a part of the City's design review process.

Actions by Other Agencies

- **Bay Area Air Quality Management District ("BAAQMD")**: Issuance of permits for installation and operation of the emergency generator.
- **Regional Water Quality Control Board, San Francisco Bay Region ("RWQCB")**: Acceptance of a Notice of Intent to obtain coverage under the General Construction Activity Storm Water Permit, and Notice of Termination after construction is complete. Granting of required clearances to confirm that all applicable standards, regulations, and conditions for all previous contamination at the site have been met.
- **East Bay Municipal Utility District ("EBMUD")**: Approval of new service requests and new water meter installations.

V. Summary of Findings

An evaluation of the proposed project is provided in the CEQA Checklist in Section VI that follows. This evaluation concludes that the W12 Mixed-Use Project qualifies for an addendum as well as an exemption from additional environmental review. It is consistent with the development density and land use characteristics established by the City of Oakland General Plan, and any potential environmental impacts associated with its development were adequately analyzed and covered by the analysis in the 2014 LMSAP EIR, and in the applicable Prior EIRs: the 1998 LUTE EIR, the 2011 Redevelopment Plan Amendments EIR, and the 2010 General Plan Housing Element Update EIR and its 2014 Addendum.

The proposed project would be required to comply with the applicable mitigation measures and City of Oakland SCAs identified in the 2014 LMSAP EIR and presented in Attachment A to this document.[7] With implementation of the applicable mitigation measures and SCAs, the proposed project would not result in a substantial increase in the severity of previously identified significant impacts in the 2014 LMSAP EIR, the applicable Prior EIRs, or in any new significant impacts that were not previously identified in any of those Previous CEQA Documents.

In accordance with California Public Resources Code Sections 21083.3, 21094.5, and 21166; and CEQA Guidelines Sections 15183, 15183.3, 15162, 15164, 15168, and 15180, and as set forth in the CEQA Checklist below, the proposed project qualifies for an addendum and one or more exemptions because the following findings can be made:

- **Addendum.** The 2014 LMSAP EIR analyzed the impacts of development within the LMSAP. The proposed project would not result in substantial changes or involve new information not already analyzed in the 2014 LMSAP EIR because the level of development now proposed for the site is within the broader development assumptions analyzed in the EIR. The proposed project would not cause new significant impacts not previously identified in the 2014 LMSAP EIR, or result in a substantial increase in the severity of previously identified significant impacts. No new mitigation measures would be necessary to reduce significant impacts. No changes have occurred with respect to circumstances surrounding the LMSAP that would cause significant environmental impacts to which the proposed project would contribute considerably, and no new information has been put forward that shows that the proposed project would cause significant environmental impacts. Therefore, no supplemental environmental review is required in accordance with Public Resources Code Section 21166, and CEQA Guidelines Sections 15162 through 15164, as well as 15168 and 15180.

- **Community Plan Exemption.** The proposed project would not result in significant impacts that (1) are peculiar to the project or project site; (2) were not previously identified as significant project-level, cumulative, or offsite effects in the 2014 LMSAP EIR, or in the applicable Previous CEQA Documents: 1998 LUTE EIR, the 2011 Redevelopment Plan Amendments EIR, and for the housing components of the proposed project, the 2010 General Plan Housing Element Update EIR and its 2014 Addendum; or (3) were previously

[7] Throughout this document, except where necessary for clarity, "2014 LMSAP EIR" encompasses the Initial Study, Draft EIR, and Final EIR for the Lake Merritt Station Area Plan.

identified as significant effects, but—as a result of substantial new information not known at the time the 2014 LMSAP EIR was prepared, or when the Prior EIRs were certified—would increase in severity beyond that described in those EIRs. Therefore, the proposed project would meet the criteria to be exempt from further environmental review in accordance with Public Resources Code Section 21083.3 and CEQA Guidelines Section 15183.

- **Qualified Infill Exemption**. The proposed project would not cause any new specific effects on the environment that were not already analyzed in the 2014 LMSAP EIR or in the applicable Prior EIRs: the 1998 LUTE EIR, the 2011 Redevelopment Plan Amendments EIR, and for the housing components of the proposed project, the 2010 General Plan Housing Element Update EIR and its 2014 Addendum. Further, the proposed project would not cause any new specific effects on the environment that are more significant than previously analyzed in the 2014 LMSAP EIR, or the aforementioned previously certified applicable Prior EIRs. The effects of the proposed project have been addressed in the 2014 LMSAP EIR and Prior EIRs, and no further environmental documents are required in accordance with Public Resources Code Section 21094.5 and CEQA Guidelines Section 15183.3.

- **Other Applicable Previous CEQA Documents - Prior EIRs and Redevelopment Projects.** The analysis in the 2011 Redevelopment Plan Amendments EIR, the 2010 General Plan Housing Element Update EIR and its 2014 Addendum, and in this CEQA Analysis demonstrates that the proposed project would not result in substantial changes or involve new information that would warrant preparation of a subsequent EIR, per CEQA Guidelines Section 15162, because the level of development now proposed for the site is within the broader development assumptions analyzed in the EIR. The effects of the proposed project have been addressed in that EIR and no further environmental documents are required in accordance with CEQA Guidelines Sections CEQA Guidelines Sections 15168 and 15180.

Overall, based on an examination of the analysis, findings, and conclusions of the 2014 LMSAP EIR, as well as those of the 1998 LUTE EIR, the 2011 Redevelopment Plan Amendments EIR (or "Redevelopment Plan Amendments EIR"), and for the housing components of the proposed project, the 2010 General Plan Housing Element Update EIR and its 2014 Addendum—all of which are summarized in the CEQA Checklist in Section VI of this document—the potential environmental impacts associated with the W12 Mixed-Use Project have been adequately analyzed and covered in the LMSAP EIR and other Previous CEQA Documents. Therefore, no further review or analysis under CEQA is required.

Each of the above findings provides a separate and independent basis for CEQA compliance.

7/12/16

Darin Ranelletti
Environmental Review Officer

Date

VI. CEQA Checklist

Overview

The analysis in this CEQA Checklist provides a summary of the potential environmental impacts that may result from the proposed project. The analysis in this CEQA Checklist also summarizes the impacts and findings of the certified 2014 LMSAP EIR[8], as well as the Prior EIRs that covered the environmental effects of various projects encompassing the project site and that are still applicable for the proposed project. As previously indicated, the Prior EIRs are referred to collectively throughout this CEQA Analysis as the "Previous CEQA Documents" and include the 1998 Land Use and Transportation Element EIR, the 2011 Central District Urban Renewal Plan (or Redevelopment Plan) Amendments EIR, and for the housing components of the proposed project, the 2010 General Plan Housing Element Update EIR and its 2014 Addendum. Given the timespan between the preparations of these EIRs, there are variations in the specific environmental topics addressed and significance criteria; however, as discussed above in Section II and throughout this Checklist, the overall environmental effects identified in each are largely the same; any significant differences are noted.

Several SCAs would apply to the W12 Mixed-Use Project because of the proposed project's characteristics; the SCAs are triggered because the City is considering discretionary actions for the proposed project.

All SCAs identified in the 2014 LMSAP EIR that would apply to the W12 Mixed-Use Project are listed in Attachment A to this document, which is incorporated by reference into this CEQA Analysis. Because the SCAs are mandatory City requirements, the impact analysis for the proposed project assumes that they will be imposed and implemented, which the Project Sponsor has agreed to do or ensure as part of the proposed project. If this CEQA Checklist or its attachments inaccurately identifies or fails to list a mitigation measure or SCA, the applicability of that mitigation measure or SCA to the proposed project is not affected.

Most of the SCAs that are identified for the W12 Mixed-Use Project were also identified in the 2014 LMSAP EIR, the 2011 Redevelopment Plan Amendments EIR, and the 2010 Oakland Housing Element Update EIR and its 2014 Addendum; the 1998 LUTE EIR was developed prior to the City's application of SCAs. As discussed specifically in Attachment A to this document, since certification of the LMSAP EIR, the City of Oakland has revised its SCAs, and the most current SCAs are identified in this CEQA Analysis. All mitigation measures identified in the LMSAP EIR that would apply to the proposed project are also identified in Attachment A to this document.

This CEQA Checklist hereby incorporates by reference the discussion and analysis of all potential environmental impact topics as presented in the certified 2014 LMSAP EIR and the Previous CEQA Documents. This CEQA Checklist provides a determination of whether the proposed project would result in:

[8] Reference to the "2014 LMSAP EIR" or the "LMSAP EIR" encompasses the Initial Study, Draft EIR, and Final EIR for the Lake Merritt Station Area Plan.

- Equal or Less Severity of Impact Previously Identified in the Previous CEQA Documents;
- Substantial Increase in Severity of Previously Identified Significant Impact in the Previous CEQA Documents; or
- New Significant Impact.

Where the severity of the impacts of the proposed project would be the same as or less than the severity of the impacts described in the 2014 LMSAP EIR and the Previous CEQA Documents, the checkbox for "Equal or Less Severity of Impact Previously Identified in Previous CEQA Documents" is checked.

If the checkbox for "Substantial Increase in Severity of Previously Identified Significant Impact in Previous CEQA Documents" or "New Significant Impact" were checked, there would be significant impacts that are:

- Peculiar to project or project site (per CEQA Guidelines Sections 15183 or 15183.3);
- Not identified in the previous 1998 LUTE EIR, 2010 General Plan Housing Element Update EIR and its 2014 Addendum, Redevelopment Plan Amendments EIR, or 2014 LMSAP EIR (per CEQA Guidelines Sections 15183 or 15183.3), including offsite and cumulative impacts (per CEQA Guidelines Section 15183);
- Due to substantial changes in the project (per CEQA Guidelines Section 15162 and 15168);
- Due to substantial changes in circumstances under which the project will be undertaken (per CEQA Guidelines Sections 15162 and 15168); or
- Due to substantial new information not known at the time the Previous CEQA Documents were certified (per CEQA Guidelines Sections 15162, 15168, 15183, or 15183.3).

None of the aforementioned conditions were found for the proposed project, as demonstrated throughout the following CEQA Checklist and in its supporting attachments (Attachments A through D) that specifically describe how the proposed project meets the criteria and standards specified in the CEQA Guidelines sections identified above.

1. Aesthetics, Shadow, and Wind

Would the project:	Equal or Less Severity of Impact Previously Identified in Previous CEQA Documents	Substantial Increase in Severity of Previously Identified Significant Impact in Previous CEQA Documents	New Significant Impact
a. Have a substantial adverse effect on a public scenic vista; substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, located within a state or locally designated scenic highway; substantially degrade the existing visual character or quality of the site and its surroundings; or create a new source of substantial light or glare which would substantially and adversely affect day or nighttime views in the area;	☒	☐	☐
b. Introduce landscape that would now or in the future cast substantial shadows on existing solar collectors (in conflict with California Public Resource Code sections 25980-25986); or cast shadow that substantially impairs the function of a building using passive solar heat collection, solar collectors for hot water heating, or photovoltaic solar collectors;	☒	☐	☐
c. Cast shadow that substantially impairs the beneficial use of any public or quasi-public park, lawn, garden, or open space; or, cast shadow on an historical resource, as defined by CEQA Guidelines Section 15064.5(a), such that the shadow would materially impair the resource's historic significance;	☒	☐	☐
d. Require an exception (variance) to the policies and regulations in the General Plan, Planning Code, or Uniform Building Code, and the exception causes a fundamental conflict with policies and regulations in the General Plan, Planning Code, and Uniform Building Code addressing the provision of adequate light related to appropriate uses; or	☒	☐	☐
e. Create winds that exceed 36 mph for more than one hour during daylight hours during the year. The wind analysis only needs to be done if the project's height is 100 feet or greater (measured to the roof) and one of the following conditions exist: (a) the project is located adjacent to a substantial water body (i.e., Oakland Estuary, Lake Merritt or San Francisco Bay); or (b) the project is located in Downtown.	☒	☐	☐

Previous CEQA Documents Findings

Scenic vistas, scenic resources, visual character, and light and glare, and shadow were analyzed in each of the Previous CEQA Documents, which found that the effects to these topics would be less than significant. The Redevelopment Plan EIR and the Housing Element Update EIR and its 2014 Addendum cited applicable SCAs that would ensure the less-than-significant visual quality

effects. The 1998 LUTE EIR identified mitigation measures that are functionally equivalent to the SCAs to reduce certain potential effects to less than significant. The 1998 LUTE EIR also identified significant and unavoidable impacts regarding wind hazards.

LMSAP Findings

The 2014 LMASP EIR determined that with implementation of SCAs, impacts related to aesthetics would be less than significant with development occurring under the LMSAP. Individual projects would be subject to the design guidelines outlined in the LMSAP and would be required to comply with the height limits identified in the LMSAP. The LMSAP did not analyze potential wind hazards, determining that such analysis shall be undertaken for specific projects, as applicable pursuant to the City of Oakland's thresholds of significance.

Project Analysis

Aesthetics (Criterion 1a)

The proposed project would construct two seven-story buildings on the project site. The Full Block is currently occupied with two-story structures on the corner of 12th and Webster Streets and single-story structures covering the remainder of the block. The Quarter Block is currently vacant with a three-story residential building abutting the site to the east and a single-story commercial building abutting the project site to the south. The maximum height of the proposed project buildings would be approximately 85 feet tall. The proposed building design and siting on the parcel would align with the adjacent buildings, and the buildings would be developed to cover the entire lot. The ground-floor commercial base would create a continuous streetwall consistent with the buildings in the immediate project site surroundings (see Figure 3). The proposed project would not have an adverse effect on the visual character of this portion of Downtown. As the proposed project would be constructed on an existing block in a densely built urban area and would not alter street patterns, the proposed buildings would not obstruct views of existing scenic vistas. In addition, given the relative height of the building compared to taller and varied building heights Downtown in general, as well as the limited views in the area because of the dense, multi-story development, the proposed project would not substantially degrade the existing visual character or quality of the site and its surroundings. The proposed project also would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

The potential impacts of the proposed project regarding scenic vistas, scenic resources and visual character would be similar to, or less severe than, those identified in the LMSAP EIR and the Previous CEQA Documents considered in this analysis. The proposed building would not obstruct views of existing scenic vistas or degrade the visual character or quality of the site and its surroundings. As shown in the project plans in Figures 2-8, the building and site layout would result in development that is compatible with the visual character and patterns in this portion of Downtown. Development of the proposed project also would be required to comply with the City of Oakland SCAs related to landscaping, street frontages, landscape maintenance, utility undergrounding, public right-of-way improvements, graffiti control, and lighting plans; therefore, the visual impacts of the proposed project would remain less than significant.

Shadow (Criteria 1b through 1d)

Except for the 1998 LUTE EIR, each of the Previous CEQA Documents found less-than-significant shadow effects, assuming incorporation of applicable SCAs. The 1998 LUTE EIR identified mitigation measures, functionally equivalent to the SCAs, to reduce potential shadow effects to less than significant.

The proposed seven-story building's potential shadow impacts would be less than significant, given its surrounding developed context, which include no shadow sensitive resources. Six historic resources are within the immediate vicinity of the project site. These include the Charles H. King Building (300 12th Street), The Dietz Building (338 12th Street), the King (J.H.) Building (319 13th Street, the Gates Stables Co. Building (343 13th Street), The Angelus Hotel (1101 Webster Street), and the Webster Block (1127 Webster Street). Each of these is a commercial building and none possess any sunlight-sensitive features such as stained glass, elaborately carved ornamentation, or design elements that depend on the contrast between light and dark (e.g., open galleries, arcades, or recessed balconies). Thus the proposed project's shadow would not result in significant adverse impacts with respect to historic resources. The nearest open space to the project site is Lincoln Square Park, south of the project site at Harrison and 11th Streets and, given the height of the proposed structure, and the position of the park south of the project site, the proposed project would not add new significant shadow to the park and the impact would be less than significant. Therefore, the potential impacts of the proposed project regarding shadows would be similar to, or less severe than, those identified in the LMSAP EIR and the Previous CEQA Documents considered in this analysis.

Wind (Criterion 1e)

The City of Oakland considers a significant wind impact to occur if a project were to "Create winds exceeding 36 miles per hour (mph) for more than one hour during daylight hours during the year." A wind analysis is required if a project's height is 100 feet or greater and one of the following conditions exists: (a) the project is located adjacent to a substantial water body; or (b) the project is located in Downtown. Since the proposed project would not be greater than 100 feet in height, no wind study is required and the proposed project's effects with respect to wind hazards are considered to be less than significant.

Conclusion

Based on an examination of the analysis, findings, and conclusions of the LMSAP EIR and the Previous CEQA Documents, implementation of the proposed project would not substantially increase the severity of significant impacts identified in the LMSAP EIR or the Previous CEQA Documents, nor would it result in new significant impacts related to aesthetics, shadow, or wind that were not identified in the LMSAP EIR or the Previous CEQA Documents. Implementation of **SCAs AES-1, Graffiti Control, AES-2, Landscape Plan, AES-3, Lighting, and SCA UTIL-2, Underground Utilities** (see Attachment A) would be applicable to and would be implemented by the proposed project and would further ensure that aesthetics-related impacts would be less than significant. No mitigation measures are required.

2. Air Quality

Would the project:	Equal or Less Severity of Impact Previously Identified in Previous CEQA Documents	Substantial Increase in Severity of Previously Identified Significant Impact in Previous CEQA Documents	New Significant Impact
a. During project construction result in average daily emissions of 54 pounds per day of ROG, NO_X, or $PM_{2.5}$ or 82 pounds per day of PM_{10}; during project operation result in average daily emissions of 54 pounds per day of ROG, NO_X, or $PM_{2.5}$, or 82 pounds per day of PM_{10}; result in maximum annual emissions of 10 tons per year of ROG, NO_X, or $PM_{2.5}$, or 15 tons per year of PM_{10}; or	☒	☐	☐
b. For new sources of Toxic Air Contaminants (TACs), during either project construction or project operation expose sensitive receptors to substantial levels of TACs under project conditions resulting in (a) an increase in cancer risk level greater than 10 in one million, (b) a noncancer risk (chronic or acute) hazard index greater than 1.0, or (c) an increase of annual average $PM_{2.5}$ of greater than 0.3 microgram per cubic meter; or, under cumulative conditions, resulting in (a) a cancer risk level greater than 100 in a million, (b) a noncancer risk (chronic or acute) hazard index greater than 10.0, or (c) annual average $PM_{2.5}$ of greater than 0.8 microgram per cubic meter; or expose new sensitive receptors to substantial ambient levels of Toxic Air Contaminants (TACs) resulting in (a) a cancer risk level greater than 100 in a million, (b) a noncancer risk (chronic or acute) hazard index greater than 10.0, or (c) annual average $PM_{2.5}$ of greater than 0.8 microgram per cubic meter.	☒	☐	☐

Previous CEQA Documents Findings

Construction and Operational Emissions and Odors. The 1998 LUTE EIR identified mitigation measures that would address operational emissions effects to less than significant, and it found significant and unavoidable cumulative effects regarding increased criteria pollutants from increased traffic regionally. The Redevelopment Plan EIR and Housing Element Update EIR and its 2014 Addendum found that emissions associated with construction and operations resulting from increased criteria pollutants would result in less-than-significant effects with incorporation of SCAs. The Redevelopment Plan EIR and Housing Element Update EIR and its 2014 Addendum also identified effective SCAs to address potentially significant effects regarding dust/Particular Matter $(PM)_{10}$, odors, and consistency with the applicable regional clean air plan.

Toxic Air Contaminants. The 1998 LUTE EIR did not quantify or address cumulative health risks, as such analysis was not required when that EIR was prepared. The Redevelopment Plan

EIR and Housing Element Update EIR and its 2014 Addendum identified significant and unavoidable impacts regarding cumulative health risks after the consideration of SCAs.

LMSAP Findings

The 2014 LMSAP EIR identified less than significant impacts regarding consistency with the current Bay Area 2010 Clean Air Plan ("Clean Air Plan"), with implementation of applicable SCAs. The LMSAP EIR also identified impacts associated with potential exposure of sensitive receptors to substantial health risks from toxic air contaminants ("TACs") from sources including both diesel particulate matter ("DPM") and gaseous emissions. The LMSAP EIR identified SCAs to reduce DPM exposure to less than significant levels, but risk from gaseous TACs would (plan and cumulative level) be a significant and unavoidable impact. The LMSAP EIR also identified potential impacts associated with the installation of back-up generators (a source of TACs) and identified SCAs to reduce the potential effect to less than significant. Moreover, as discussed further below, the Bay Area Air Quality Management District's ("BAAQMD") does not permit any new generators that may have emissions levels that pose adverse health impacts.

The LMSAP EIR did not quantitatively assess criteria air pollutants from construction or operation, determining that such analysis shall be undertaken for specific projects, as applicable pursuant to the City of Oakland's thresholds of significance.

Project Analysis[9]

Construction and Operational Emissions (Criterion 2a)

Construction Air Emissions

Assumptions for Construction Emissions

The analysis below used the following assumptions to calculate average daily construction emissions associated with a worst-case construction scenario for the proposed project:

- The length of the various construction phases (e.g., demolition, grading, building, etc.) assumed CalEEMod default values based on acreage of the project site and size of project elements;
- The amount and types of construction equipment used for each phase and the number of off-road vehicle trips were based on CalEEMod defaults for a 1.72 acre site;
- Demolition of 78,500 square feet of existing structures based on an overall building footprint of 60,000 square feet and an assumed second story contribution of 18,500 square feet based on GoogleEarth measurements;
- Excavation and off-haul of 55,500 cubic yards of material based on a total of 1.72 acres of building footprints, 16 feet of excavation depth and a 25% percent soil expansion factor;

[9] The Air Quality technical analysis conducted for this CEQA Checklist conservatively assumes up to 510 residential units and 3,500 square feet of restaurant/café and 14,700 square feet of commercial use, based on a previous project proposal. The previous project proposal would yield more vehicle trips than the currently proposed project (see Appendix A) and thus, for the purposes of CEQA, the results of the Air Quality analysis are considered suitably conservative.

- Construction of up to 510 units of residential apartment use, 3,500 square feet of restaurant/café use and 14,700 square feet of commercial use.[10]

Analysis of Construction Emissions

The average daily construction-related emissions for the proposed project, based on the assumptions above, are presented in **Table AIR-1**. As shown in the table, annual average daily construction emissions for the proposed project would not exceed the City's Thresholds for ROG NO_X, PM_{10} or $PM_{2.5}$. These thresholds were developed to represent a cumulatively considerable contribution to regional air quality, and, as such, represent not only a project level threshold but a cumulative threshold as well. The LMSAP EIR did not quantitatively assess criteria air pollutants from construction. As shown in Table AIR-1, the proposed project would have less than significant project-level impacts with respect to construction emissions and thus would not result in a new or more severe significant impact compared with the LMSAP EIR.

TABLE AIR-1
UNMITIGATED EMISSIONS FROM CONSTRUCTION (average lbs per day)[a]

Construction Year (phase)	ROG	NO_x	PM_{10}	$PM_{2.5}$
Project				
Average Daily Construction Emissions	24.79	31.02	0.36	1.30
City of Oakland Thresholds	54	54	82	54
Significant (Yes or No)?	**No**	**No**	**No**	**No**

[a] Project construction emissions estimates were made using CalEEMod, version 2013.2.2. Emissions are average daily pounds per day during a default estimated 12-month construction period which is conservative for this analysis.

SOURCE: ESA, 2015.

Operational Air Emissions

Assumptions for Operational Emissions

The analysis below used the following assumptions to calculate the daily operational emissions associated with a worst-case construction scenario for the proposed project:

- The vehicle trip generation rates that were input into CalEEMod (Version 2013.2.2) account for the 2000 Bay Area Travel Survey ("BATS") modal split adjustment factor that is required by the City of Oakland for near-transit developments as well as the elimination of existing vehicle trips generated by the middle school on the project site;
- The operational emissions generated assumed a default number of fireplaces. All fireplaces were assumed to be gas-fired. No wood burning fireplaces or woodstoves were assumed;
- Default energy consumption rates reflecting 2008 Title 24 demand were adjusted down 25 percent to reflect improvements due to the 2013 update to Title 24;
- Electrical CO_2 emission factor was adjusted to reflect PG&E 5-year rolling average published in November 2015;

[10] See footnote number 9 regarding previous project assumptions.

- All wastewater treatment energy was assumed to be aerobically processed at EBMUD plant. Septic and lagoons contributions were set to a zero percentage;
- All other inputs in CalEEMod were based on model default values.
- Two backup diesel generators were assumed pursuant to California Building Code Requirements for buildings in excess of 70 feet. The generators were assumed to have a rating of 560 kW-hr (750 hp), a Tier 3 engine and to be operated for maintenance purposes 50 hours per year or about 1 hour per test day.

Analysis of Operational Emissions

The daily operational emissions for the proposed project, based on the assumptions above, are presented in **Table AIR-2**. As shown in the table, annual average daily regional emissions for the proposed project would not exceed the City's thresholds for ROG, NOx, PM_{10} or $PM_{2.5}$. As with the construction thresholds, these thresholds were developed to represent a cumulatively considerable contribution to regional air quality and, as such, represent not only a project-level threshold but a cumulative threshold as well. The LMSAP EIR did not quantitatively assess criteria air pollutants from operation under the LMSAP. As shown in Table AIR-2, the proposed project would have less than significant project-level impacts with respect to operational emissions and thus would not result in a new or more severe significant impact compared with the LMSAP EIR.

TABLE AIR-2
UNMITIGATED EMISSIONS FROM OPERATION (lbs per day)[a]

	ROG	NO_x	PM_{10}	$PM_{2.5}$
Project				
Area Source Emissions	13.98	0.24	0.12	0.12
Energy Emissions	0.12	1.07	0.09	0.09
Project Vehicle Emissions[b, c]	6.98	18.69	9.31	2.66
Backup Diesel Generator	0.09	1.49	0.14	0.14
Total Emissions	**21.17**	**21.49**	**9.66**	**3.01**
City of Oakland Thresholds	54	54	82	54
Significant (Yes or No)?	**No**	**No**	**No**	**No**

[a] Project operational emissions estimates were made using CalEEMod, version 2013.2.2.
[b] The vehicle trip rates used to calculate the emissions accounts for mode split and internal capture as recommended by the City of Oakland for projects located in dense, urban environments such as the project site.
[c] As noted above, the Air Quality technical analysis conducted for this CEQA Checklist conservatively assumes up to 510 residential units and 3,500 square feet of restaurant/café and 14,700 square feet of commercial use, based on a previous project proposal. The previous project proposal would yield more vehicle trips than the currently proposed project (see Appendix A) and thus, for the purposes of CEQA, the results of the Air Quality analysis are considered suitably conservative.

SOURCE: ESA, 2015.

Toxic Air Contaminants (Criterion 2b)

Assumptions and Area Sources for Health Risk

TACs are types of air pollutants that can cause health risks. TACs do not have ambient air quality standards, but are regulated using a risk-based approach. This approach uses a health risk assessment to determine what sources and pollutants to control as well as the degree of control.

The health risk assessment, presented in the analysis below, considers exposure to toxic substances and human health risks from exposure to toxic substances and is estimated, based on the potency of the toxic substances. Such an assessment evaluates chronic, long-term effects, calculating the increased risk of cancer as a result of exposure to one or more TACs.

Additionally, the City's CEQA significance thresholds require that new projects containing sensitive receptors (such as residences) be evaluated to determine whether those receptors would be exposed to health risks from existing nearby sources of TACs. When siting new sensitive receptors, existing TAC sources located within 1,000 feet including, but not limited to, stationary sources, freeways, and major roadways (10,000 or greater vehicles per day) should be considered.[11] The BAAQMD provides a publicly available inventory of TAC-related health risks for permitted stationary sources throughout the San Francisco Bay Area Air Basin as well as for freeways. The inventory presents community risk and hazards from screening tools and tables that are intentionally conservative. The screening-level risk factors derived from the BAAQMD's tools are intended to indicate whether additional review related to the impact is necessary and are not intended to be used to assess actual risk for all projects.

Analysis of Health Risk

Construction Impact. Regarding construction TACs emissions, project construction activities would produce DPM and $PM_{2.5}$ emissions due to exhaust emissions from equipment such as loaders, backhoes, and cranes, as well as haul truck trips. These emissions could result in elevated concentrations of DPM and $PM_{2.5}$ at nearby receptors. These elevated concentrations could lead to an increase in the risk of cancer or other health impacts. BAAQMD developed screening tables for commercial and residential land use development projects that estimate screening distances from sensitive receptors sufficient to avoid exposure to substantial construction-related health risks. For development sites of 1.7 acres in area, a screening distance of 95 meters (312 feet) is identified as sufficient to avoid a construction-related TAC impact. The project site is located approximately 75 feet from the nearest sensitive receptors across Webster Street to the west. Therefore, a potential impact of the proposed project regarding exposure to construction-related health risks to nearby receptors would be potentially significant.

Due to the variable nature of construction activity, the generation of TAC emissions in most cases would be temporary, especially considering the short amount of time such equipment is typically within an influential distance that would result in the exposure of sensitive receptors to substantial concentrations. Current models and methodologies for conducting health risk assessments are associated with longer-term exposure periods of 9, 40, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities. This results in difficulties with producing accurate estimates of increased health risk. The LMSAP EIR determined that sensitive receptors in proximity to construction-related DPM emissions (generally within 200 meters) could be subject to increased cancer risk, chronic health problems and acute health risk. However, all future development projects pursuant to the LMSAP would

[11] CEQA requires the analysis of potential adverse effects of a project on the environment. Potential effects of the environment on a project are legally not required to be analyzed or mitigated under CEQA. However, this analysis nevertheless assesses potential effects of "the environment on the project" in order to provide information to decision-makers.

be subject to basic construction control measures through implementation of the City's SCAs (SCA-A in the LMSAP, see Attachment A). SCA AIR-1, which requires "enhanced" construction emission control measures for of all residential development in excess of 240 units, would implement construction-related Best Management Practices to substantially reduce construction-related impacts to a less-than-significant level.

SCA-1, includes but is not limited to the following measures that would reduce DPM emissions from construction:

- Minimize the idling time of diesel-powered construction equipment to two minutes;
- Demonstrating that the off-road equipment to be used in the construction project would achieve a project wide fleet-average 20 percent NOx reduction and 45 percent particulate matter ("PM") reduction compared to the most recent California Air Resources Board ("CARB") fleet average; and
- Ensuring that all construction equipment, diesel trucks, and generators are equipped with Best Available Control Technology for emission reductions of NOx and PM, and that off-road heavy diesel engines shall meet the CARB's most recent certification standard.

Project-Level Operations Impact. The backup diesel generators assumed for the proposed project (given its high-rise height, as previously described under *Assumptions for Operational Emissions*) would be the only new source of TACs associated with the proposed project. The LMSAP EIR acknowledged that stationary sources complying with applicable BAAQMD permit requirements generally would not be considered to have an individual significant air quality impact as the BAAQMD would deny an Authority to Construct or would deny a Permit to Operate any new or modified source of TACs that exceeds a cancer risk of 10 in one million or a chronic or acute hazard index of 1.0. Therefore, the health risks impact of the proposed project on the environment would be less than significant.

However, the LMSAP EIR also acknowledged that such sources may result in a cumulative TAC impacts. Therefore, the project's backup diesel generators are assumed along with existing stationary sources in the cumulative analysis below.

Cumulative Impact. Regarding exposure of new sensitive receptors to existing and new sources of TACs, the screening health risk analysis contained herein relies on the BAAQMD's conservative screening-level tool to screen out low-emitting existing sources of TACs that pose no substantial threat to increased cancer risk exposure. According to BAAQMD's conservative screening-level tool for Alameda County, there are ten stationary TAC sources within 1,000 feet of the project site. One of these facilities is a dry cleaning business that no longer uses perchloroethylene (as verified in the latest BAAQMD air toxic inventory) and hence no longer represents a source of localized TAC contributions.

ESA conducted refinements to these screening values to account for distance between receptors on the project site and the stationary TAC sources within 1,000 feet of the project site. **Table AIR-3** presents the results of this refined, project-specific, screening effort that includes the risks posed by the proposed project's backup diesel generators. As shown, the cumulative cancer risks for new

receptors (residents) of the proposed project would be below the significance criterion of 100 in one million. The table also shows that cumulative $PM_{2.5}$ concentration contributions would exceed 0.8 micrograms per cubic meter and, unabated, would be considered significant. However **SCA AIR-2, Exposure to Air Pollution (Toxic Air Contaminants)**, (see Attachment A) requires the Project Sponsor to either:

(1) provide air filtration (MERV 13) to reduce cancer risks and Particulate Matter (PM) exposure for residents; or

(2) retain a qualified air quality consultant to prepare a Health Risk Assessment. If the HRA concludes that the health risk is at or below acceptable levels, then health risk reduction measures are not required. If the HRA concludes that the health risk exceeds acceptable levels, health risk reduction measures shall be identified to reduce the health risk to acceptable levels. Identified risk reduction measures shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City.

TABLE AIR-3
CUMULATIVE HEALTH IMPACTS FOR NEW RECEPTORS

Site #	Facility Name	Address	Cancer Risk (persons per million)	Chronic Hazard Impact	PM2.5 Concentration (μg/m3)
19039	Hotel Oakland	270 13th Street	7.53	0.003	0.002
13071	Mark Bosuk Esq.	1432 Harrison Street	0	0	0
378[a]	Ideal Cleaners	322 14th Street	0	0	0
G7875	Alameda County GSA	165 13th Street	0.082	<0.001	0
18100	Aqua Science	250 8th Street	0	0	0
G11497	China Town 76 Unocal	800 Harrison	0.235	<0.001	0
14837	Trans Pacific Centre	1000 Broadway	7.71	0.003	0.002
13728	East Bay MUD	375 11th Street	21.68	0.0120	**1.51**
18912	Paetec	427 14th Street	0.122	<0.001	<0.001
14742	Alameda County GSA	393 13th Street	1.28	<0.001	<0.001
		Project Generators	20	2	NA
		Cumulative Impacts	58.64	2.018	**1.51**
		City of Oakland Significance Criteria (new receptor)	100	10	0.8
		Potentially Significant Impact?	No	No	**Yes**

[a] per BAAQMD inventory, this facility no longer uses perchloroethylene and hence no longer poses a risk from TACs.

SOURCE: BAAQMD, 2012; ESA, 2015.

US EPA identifies MERV 13 filters as having a 90 percent or greater removal efficiency for auto emission particles (1 to 3 microns in diameter).[12] As such, with implementation of SCA 20 $PM_{2.5}$ concentration contributions would be reduced to 0.15 μg/m3 or less and the cumulative health risk exposure impact would be less than significant.

[12] U.S. EPA, Residential Air Cleaners, a Summary of Available Information, August 2009, page 11.

Conclusion

Emissions associated with construction and operations from development that could occur under the LMSAP EIR considered throughout this analysis were found to result in less-than-significant effects for construction-related TAC emissions with adherence to SCAs and significant and unavoidable impacts with regard to operational TAC emissions with adherence to mitigation measures or SCAs.

Based on an examination of the analysis, findings, and conclusions of the LMSAP EIR and Previous CEQA Documents, as well as the new analysis presented above per current thresholds, implementation of the proposed project would not result in a new significant impact regarding operational air quality emissions or a cumulative air quality impact identified in the LMSAP EIR. In addition, based on the health risk analysis above, implementation of the proposed project would not result in a new significant impact related to construction, operational, or cumulative TAC emissions, which were addressed in the LMSAP EIR and found to be significant and unavoidable. **SCA AIR-1, Construction-Related Air Pollution Controls (Dust and Equipment Emissions), SCA AIR-2, Exposure to Air Pollution (Toxic Air Contaminants)**, and **SCA AIR-3, Stationary Sources of Air Pollution (Toxic Air Contaminants)** (see Attachment A) would be applicable to and implemented by the proposed project to further ensure that, to the extent feasible, air quality impacts associated with the proposed project are less than significant. Therefore, no mitigation measures are required.

3. Biological Resources

Would the project:	Equal or Less Severity of Impact Previously Identified in Previous CEQA Documents	Substantial Increase in Severity of Previously Identified Significant Impact in Previous CEQA Documents	New Significant Impact
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service; Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service; Have a substantial adverse effect on federally protected wetlands (as defined by Section 404 of the Clean Water Act) or state protected wetlands, through direct removal, filling, hydrological interruption, or other means; Substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;	☒	☐	☐
b. Fundamentally conflict with the City of Oakland Tree Protection Ordinance (Oakland Municipal Code [OMC] Chapter 12.36) by removal of protected trees under certain circumstances; or Fundamentally conflict with the City of Oakland Creek Protection Ordinance (OMC Chapter 13.16) intended to protect biological resources.	☒	☐	☐

Previous CEQA Documents Findings

The Previous CEQA Documents identified less-than-significant impacts related to biological resources, with the Redevelopment Plan Amendments EIR and Housing Element Update EIR and its 2014 Addendum identifying applicable of City of Oakland SCAs. No mitigation measures were necessary.

LMSAP Findings

The LMSAP EIR identified 12 special status species that are known to have the potential to occur within the LMSAP Area. Within the Plan Area, Lake Merritt and the Lake Merritt Channel are places where there are particularly sensitive areas with regard to biological resources. The project site is located four to six blocks from Lake Merritt and the Lake Merritt Channel, respectively, and has no suitable habitat for special status species.

Project Analysis

Special-Status Species, Wildlife Corridors, Riparian and Sensitive Habitat, Wetlands, Tree and Creek Protection (Criteria 3a and 3b)

As previously described, the project site is located in the fully developed urban area of Downtown. The project site, covered fully by a one- and two-story structure on the Full Block and pavement on the Quarter Block, does not contain vegetation and hydrology conditions suitable for sustaining wetlands, nor are any known special status species or sensitive habitats, including those that could support migratory fish or birds, located on the site. The corner at 12th and Harrison Streets is lined with four mature little-leaf fig trees (*Ficus microcarpa*), two on 12th Street and two on Harrison Street. Three little-leaf fig trees are also present on the northeast side of 12th Street, approximately 50 feet from the project site. The four street trees located on the Quarter Block along the street frontages of 12th and Harrison Streets are considered "Protected Trees," per Oakland's Protected Tree Ordinance. However, they are not connected to other nearby natural habitats, and therefore would not constitute a wildlife corridor. There are also no natural sensitive communities in the area.

The existing trees have the potential to provide nesting habitat. Black-crowned night herons (Nycticorax nycticorax, BCNH) and snowy egrets (Egretta thula, SNEG), collectively referred to as "herons", nest in colonies, called rookeries. These rookeries provide perennial nesting habitat for the birds and nesting colonies of BCNH and SNEG are included on the California Department of Fish and Wildlife's Special Animals List. BCNH are known to have active nests from March through end of September in the San Francisco Bay Area.[13] Established heron rookeries exist in groups of trees in Downtown Oakland, including one rookery on the corner of 12th and Harrison Streets at the project site. Each tree can support a dozen or more nests.

A survey performed on January 21, 2016 found evidence of multiple medium-sized (approximately 10-12 inch diameter) stick platform nests in the canopies of each of the four trees. One tree had approximately six nests, and the other three trees had from 15 to 30 nests each. Whitewash, or bird guano, was apparent on a parking sign, parking meter, and fence under the tree canopies on Harrison Street.[14] The nests did not appear to be active as no herons were observed in any of the trees during the survey period, however, the composition of species and active nests among the trees can change from year to year.

These heron rookeries in Downtown Oakland are located in a highly disturbed urban setting, above concrete sidewalks, where pedestrian and vehicle activity is high, where development projects are planned, and which do not provide suitable long-term habitat for the herons relative to other nearby habitats (e.g., Lake Merritt).

Implementation of **SCA BIO-1, Tree Removal During Breeding Season**, (see Attachment A), requires that rookery trees be removed only during the non-nesting season. Adherence to this SCA

[13] Brianne E. Brussee and William E. Davis, Jr. 2010. Black-crowned Night-Heron (Nycticorax nycticorax), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/074 doi:10.2173/bna.74, Accessed January 21, 2016.

[14] ESA. 2016. W12 Mixed Use Project - Site Assessment for Heron Rookery, Oakland, CA. January 25. (See Appendix B)

would result in a less-than-significant impact to the herons as a result of tree removal at the project site. However, the City of Oakland recognizes the ecological and aesthetic value of the herons and their popularity with many of the City's residents. The City also recognizes that nearby Lake Merritt, home of the oldest designated wildlife refuge (est. 1870) in the United States, offers more appropriate habitat for this species. Thus, while not required to mitigate the CEQA impact, the following measure is recommended:

Recommendation BIO-1: While not required to address a CEQA impact, the following will be included as additional implementation details for **SCA BIO-1**.

For all projects that propose removal of a tree[15] that is associated with a heron rookery, the project applicant shall take the following additional actions, which will require City review and approval, to implement **SCA BIO-1**:

1) Prior to tree removal:

a. *Field Survey*: The applicant shall submit the results of a field survey conducted by a qualified biologist to determine if the heron rookery shall be deemed active. An historical heron rookery must be assumed to be active unless a qualified biologist visits the rookery three times between March and July, with at least one month between visits, and does not observe any herons engaging in nesting behavior (e.g., territorial displays, courtship, nest building, food deliveries to the nest) at any time. If the rookery is deemed inactive, no further steps are necessary. If the rookery is deemed active, the applicant shall proceed with steps 1(b) through 1 (f).

b. *Technical Memorandum*: The project applicant shall submit a Technical Memorandum drafted by a qualified biologist that characterizes the rookery by documenting individual tree size (i.e., diameter at breast height, vertical height); canopy width, height and depth (sq ft); distance between tree trunks or canopies, as appropriate; number of nests per tree canopy (sq ft), and overall characteristics of the existing rookery site (such as size, number of trees in rookery, noise level, substrate below trees, adjacent habitat/ building types, observations of predators or prey, etc.). Ideally, the survey is conducted during the breeding season, but it can be conducted during the non-breeding season.

c. *Identification of Replacement Site*: The project applicant, in coordination with the City of Oakland and a qualified biologist, shall identify a replacement rookery site located as near as possible to the existing rookery (e.g., Lake Merritt, Oakland shoreline, estuary, parks). The applicant must demonstrate how the replacement rookery site meets the following requirements:

i. Support an equal or greater number of nests as the existing rookery

ii. Be composed of trees/ shrubs that are the same or similar (in foliage cover, canopy density, and branching structure) to those which are documented to have supported a successful rookery for BCNH and SNEG; or be a site in which such trees/ shrubs (immature or mature) can

[15] "Tree removal" means the destruction of any tree by cutting, regrading, girdling, interfering with the water supply, or applying chemicals, or distortion of the tree's visual proportions by topping; or "Topping", which means elimination of the upper twenty-five percent or more of a tree's trunk(s) or main leader(s).

be planted in order to develop a rookery within the time frame required by the SCA (see item 1(f) below).

iii. Be within 3 miles of foraging habitat

iv. Be in an area of equal or less human disturbance than the existing rookery

v. Not conflict with other uses in that area (e.g., presence of dogs or other domestic animals, human activity that could either cause heron nest abandonment, scheduled redevelopment projects, or nuisance problems associated with heron activity affecting humans).

d. *Implementation Plan*: The applicant, in coordination with the City of Oakland and a qualified biologist, shall submit an Implementation Plan describing any enhancements to the replacement rookery site, including construction plans, landscaping plans or plant lists; detailed methods for using social attractants to attract herons to the site (e.g., number of decoy birds and nests, duration of playback recordings, etc.); and a timeline for implementation.

e. *Monitoring Program*: The project applicant, in coordination with a qualified Biologist, shall submit a Monitoring Program for monitoring birds and vegetation in the replacement rookery. The Program shall include a monitoring protocol; performance criteria; and strategies for adaptive management should performance criteria not be met. Colonial nesting birds are known to take several years to reach the point of self-recruitment to a new rookery site (i.e. when social attractants are no longer needed to attract additional birds to the site), so a monitoring period of at least three heron breeding seasons is recommended. The Monitoring Program can include a provision that monitoring may be suspended if performance criteria are met within the first or second breeding season.

f. *Implementation*: The project applicant, in coordination with the City of Oakland, and/or other entities, shall complete installation of any enhancements, including vegetation, and social attractants at the replacement rookery site. If new vegetation is required for rookery enhancement, it must be fully performing by the third year of monitoring.

2) Tree removal:

a. If the rookery is deemed active, tree removal can only occur during the non-nesting season, defined as October 1 through January 31.

3) Following tree removal:

a. Following tree removal and prior to the beginning of nesting season (February 1), social attractants will be activated to lure herons to the replacement rookery site.

b. The Monitoring Plan will be implemented during the first nesting season following tree removal and will be implemented for at least three breeding seasons, unless otherwise stated in the approved Monitoring Plan.

Conclusion

The proposed project would not result in any new or more severe significant impacts related to biological resources than those identified in the LMSAP EIR or the Previous CEQA Documents. Because the setting of the project site is not near any sensitive biological or recreational areas and does not possess any potential sensitive habitat or protected vegetation, certain SCAs identified in the LMSAP EIR would not pertain to the project, such as those pertaining to creek protection or the Creek Protection Ordinance, bird collisions, or Alameda Whipsnake protection measures. **SCA BIO-1, Tree Removal During Bird Nesting Season**; and **SCA BIO-2, Tree Permit** (see Attachment A) would be applicable to and implemented by the proposed project to further ensure that, to the extent feasible, birds in existing trees at the project site during the nesting season are avoided and protected and the existing street trees are protected during project construction, respectively. The LMSAP EIR did not identify any mitigation measures related to biological resources, and none would be needed for the proposed project.

4. Cultural Resources

Would the project:	Equal or Less Severity of Impact Previously Identified in Previous CEQA Documents	Substantial Increase in Severity of Previously Identified Significant Impact in Previous CEQA Documents	New Significant Impact
a. Cause a substantial adverse change in the significance of an historical resource as defined in CEQA Guidelines Section 15064.5. Specifically, a substantial adverse change includes physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be "materially impaired." The significance of an historical resource is "materially impaired" when a project demolishes or materially alters, in an adverse manner, those physical characteristics of the resource that convey its historical significance **and** that justify its inclusion on, or eligibility for inclusion on an historical resource list (including the California Register of Historical Resources, the National Register of Historic Places, Local Register, or historical resources survey form (DPR Form 523) with a rating of 1-5);	☒	☐	☐
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5;	☒	☐	☐
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or	☒	☐	☐
d. Disturb any human remains, including those interred outside of formal cemeteries.	☒	☐	☐

Previous CEQA Documents Findings

The 1998 LUTE EIR identified potentially significant impacts to historic resources, and identified mitigation measures to reduce the impact to less than significant. The Redevelopment Plan EIR, which addresses much of the oldest part of Downtown Oakland, identified a significant and unavoidable impact to historic resources, even with the implementation of mitigation measures. The Housing Element Update EIR and its 2014 Addendum identified City of Oakland SCAs pertaining to historic resources, and found a less-than-significant impact. Each of the Prior EIRs identified less-than-significant effects to archaeological and paleontological resources and human remains, specifically with the incorporation of City of Oakland SCAs, except that the LUTE EIR identified mitigation measures to reduce the effects to archaeological resources to less than significant.

LMSAP Findings

The LMSAP EIR does not include a project-level analysis of historic resources, indicating project-level analysis shall be conducted for individual development projects in the LMSAP. The LMSAP EIR further determined that impacts to archaeological resources, paleontological resources, and human remains would be less than significant with the implementation of applicable SCAs. The LMPSAP EIR indicates that paleontological sensitivity of the geologic units underlying the Plan Area is considered to be low to moderate.

Project Analysis

Historical Resources (Criterion 4a)

The project would include demolition of the structure on the Full Block. This building is a one- and two-story structure being used for a school (Downtown Oakland Charter School) and public parking. The structure does not qualify as a CEQA historic resource and demolition would not result in a new impact.

Six commercial buildings within the immediate vicinity of the project site are considered historic resources. These include the Charles H. King Building (300 12th Street), The Dietz Building (a Beaux Arts commercial building at 338 12th Street), the King (J.H.) Building (319 13th Street, the Gates Stables Co. Building (343 13th Street), The Angelus Hotel (a Colonial Revival commercial building at 1101 Webster Street), and the Webster Block (a store and office building at 1127 Webster Street). Construction of the proposed project would not directly affect these historic resources. None of these resources is within or adjacent to the project site and thus potential effects from construction vibration would be less than significant. As discussed above, none of these resources possess any sunlight-sensitive features such as stained glass, elaborately carved ornamentation, or design elements that depend on the contrast between light and dark (e.g., open galleries, arcades, or recessed balconies) and potential effects from the project shadow would be less than significant. Therefore, the impacts of the proposed project on historic resources would be less severe than those identified in the Previous CEQA Documents.

Archaeological and Paleontological Resources and Human Remains (Criteria 4b through 4d)

The proposed project would involve grading and excavation activities up to depths of approximately 16 feet below grade to construct the building; therefore, there is the potential to impact unknown archeological resources, as well as potential unknown paleontological resources or human remains, as noted in the LMSAP EIR and Previous CEQA Documents. However, applicable SCAs would require all work within 50 feet of inadvertent discoveries of any subsurface archaeological materials to be halted and a qualified archaeologist or paleontologist hired to both assess the significance of the find, and deal with the find according to regulatory guidance. As noted in the LMSAP EIR, implementation of the SCAs would ensure that archaeological resources are recovered and that appropriate procedures are followed in the event of accidental discovery.

Implementation of the SCAs also would require a qualified paleontologist to document a discovery and that appropriate procedures be followed in the event of a discovery, and would ensure that the appropriate procedures for handling and identifying human remains are followed.

Conclusion

Based on an examination of the analysis, findings, and conclusions of the 2014 LMSAP EIR and the Previous CEQA Documents considered throughout this analysis, the proposed project would not result in any more severe significant impacts identified in the LMSAP EIR or the Previous CEQA Documents, nor would it result in new significant impacts related to cultural resources that were not identified in the LMSAP EIR or the Previous CEQA Documents**. Implementation of SCAs CUL-1, Archaeological and Paleontological Resources – Discovery During Construction, CUL-2, Archaeologically Sensitive Areas – Pre-Construction Measures, and CUL-3, Human Remains – Discovery During Construction** (see Attachment A), would further ensure that potential impacts associated with cultural resources would be less than significant. No mitigation measures are required.

5. Geology, Soils, and Geohazards

Would the project:	Equal or Less Severity of Impact Previously Identified in Previous CEQA Documents	Substantial Increase in Severity of Previously Identified Significant Impact in Previous CEQA Documents	New Significant Impact
a. Expose people or structures to substantial risk of loss, injury, or death involving: • Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map or Seismic Hazards Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; • Strong seismic ground shaking; • Seismic-related ground failure, including liquefaction, lateral spreading, subsidence, collapse; or • Landslides;	☒	☐	☐
b. Be located on expansive soil, as defined in Section 1802.3.2 of the California Building Code (2007, as it may be revised), creating substantial risks to life or property; result in substantial soil erosion or loss of topsoil, creating substantial risks to life, property, or creeks/waterways.	☒	☐	☐

Previous CEQA Documents Findings

The Previous CEQA Documents identified that impacts to geology, soils, and geohazards would be less than significant, with the Redevelopment Plan Amendments EIR and Housing Element Update EIR and its 2014 Addendum identifying applicable City of Oakland SCAs. No mitigation measures were necessary.

LMSAP Findings

The LMSAP EIR determined that with implementation of SCAs, impacts related to seismic hazards and unstable soils would be less than significant with development occurring under the LMSAP.

Project Analysis

Seismic Hazards, Expansive Soils, and Soil Erosion (Criteria 5a and 5b)

A preliminary geotechnical evaluation was completed for the proposed project site by Langan Treadwell Rollo on November 3, 2015. The evaluation determined that the proposed project site is not within a seismic hazard zone and is in an area of moderate liquefaction susceptibility, as mapped in the LMSAP. The site is flat and not located in a landslide area or in an area of known unstable soil conditions. The proposed project would require a grading permit. Therefore, per City of Oakland SCAs, the project applicant will be required to prepare an Erosion and

Sedimentation Control Plan, the recommendations and provision of which the applicant will be required to implement. The proposed project also would be required to comply with the California Building Code's current seismic standards, which require specific design parameters for construction in various seismic environments per City of Oakland SCAs, to ensure that development of the proposed project would avoid and minimize potential geologic impacts through compliance specifically with local and state regulations governing design and construction practices. It is possible that unknown groundwater wells and abandoned structures (pits, mounts, septic tank vaults, sewer lines, etc.) could be present and disturbed during grading and construction activities, which would be appropriately addressed through implementation of SCAs applicable if the project requires a grading permit.

Conclusion

Based on an examination of the analysis, findings, and conclusions of the 2014 LMSAP EIR and the Previous CEQA Documents considered in this analysis, implementation of the proposed project would not result in any new or more significant impacts related to geology and soils than those identified in the LMSAP EIR or the Previous CEQA Documents. Furthermore, implementation of **SCA GEO-1, Construction-Related Permit(s), SCA GEO-2, Soils Report**, and **HYD-1, Erosion and Sedimentation Control Plan for Construction** (see Attachment A), would ensure that potential impacts associated with hazardous geologic and soils conditions would be less than significant. No mitigation measures are required.

6. Greenhouse Gas and Climate Change

Would the project:	Equal or Less Severity of Impact Previously Identified in Previous CEQA Documents	Substantial Increase in Severity of Previously Identified Significant Impact in Previous CEQA Documents	New Significant Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, specifically: • For a project involving a land use development, produce total emissions of more than 1,100 metric tons of CO_2e annually AND more than 4.64 metric tons of CO_2e per service population annually. The service population includes both the residents and the employees of the project. The project's impact would be considered significant if the emissions exceed BOTH the 1,100 metric tons threshold and the 4.6 metric tons threshold. Accordingly, the impact would be considered less than significant if the project's emissions are below EITHER of these thresholds.	☒	☐	☐
b. Fundamentally conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing greenhouse gas emissions.	☒		

Previous CEQA Documents Findings

Climate change and greenhouse gas emissions ("GHG") were not expressly addressed in the 1998 LUTE EIR. The Redevelopment Plan Amendments EIR and Housing Element Update EIR and its 2014 Addendum identified less-than-significant GHG impacts with the incorporation of applicable City of Oakland SCAs. No mitigation measures were necessary.

LMSAP Findings

The LMSAP EIR included GHG emissions and impacts analyses, and identified less-than-significant impacts with the incorporation of the applicable City of Oakland SCAs, and no mitigation measures were necessary. The LMSAP EIR determined that development occurring under the LMSAP would not generate greenhouse gas emissions, either directly or indirectly, that would have a significant impact on the environment at the plan level or at the project-level. The estimate of emissions from service population annually, was less than the applicable significance threshold, and implementation of the LMSAP would not fundamentally conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing greenhouse gas emissions. The LMSAP EIR determined that development of specific projects under the Plan would be subject to all applicable regulatory requirements adopted for the purpose of reducing greenhouse gas emissions.

Project Analysis[16]

Greenhouse Gas Emissions (Criterion 6a)

An analysis of the proposed project using the previously recommended May 2011 BAAQMD CEQA Guidelines and Thresholds was conducted and found that the proposed project would not result in a significant effect (cumulative) relating to GHG emissions, as shown below. Both BAAQMD and the California Air Pollution Control Officers Association ("CAPCOA") consider GHG impacts to be exclusively cumulative impacts, in that no single project could, by itself, result in a substantial change in climate. Therefore, the evaluation of GHG emissions impacts evaluates whether the proposed project would make a considerable contribution to cumulative climate change effects.

Construction GHG Emissions

The CalEEMod model run for the construction emissions associated with the proposed project (see Section 2. *Air Quality,* above) also calculated the GHG emissions that would be generated by construction activities of the proposed project. As shown in **Table GHG-1**, construction-related emissions would total approximately 843 metric tons of CO_2 equivalents ("CO_2e") during the entirety of the construction period. Annualized over an assumed project life of 40 years, construction-related GHG emissions would be approximately 21.08 metric tons per year of CO_2e. These emissions are factored into the total operational GHG emissions calculation below to determine significance.

Operational GHG Emissions

The proposed project would generate GHG emissions from many of the same sources as presented in air quality Tables AIR-1 and AIR-2 (see Section 2. *Air Quality*, above). Additionally, GHGs would be generated indirectly by increased electrical demand, increased water and wastewater demand, and increased solid waste generation.

The total operational GHG emissions for the proposed project are presented in Table GHG-1. This table presents the project-related GHG emissions from all sources and assesses the impact relative to City thresholds. Emissions from stationary sources permitted by the BAAQMD are assessed separately from other emissions relative to a threshold of 10,000 metric tons per year of CO_2e. Emissions from the backup diesel generator would be below this threshold and therefore less than significant. Therefore, the proposed project would have an equal or less severe GHG impact compared to that previously identified in the LMSAP EIR.

[16] The Greenhouse Gas Emissions technical analysis conducted for this CEQA Checklist conservatively assumes up to 510 residential units and 3,500 square feet of restaurant/café and 14,700 square feet of commercial use, based on a previous project proposal. The previous project proposal would yield more vehicle trips than the currently proposed project (see Appendix A) and thus, even considering the reduced estimated service population, for the purposes of CEQA, the results of the Greenhouse Gas Emissions analysis are considered suitably conservative.

TABLE GHG-1
PROPOSED PROJECT GHG EMISSIONS (metric tons per year)[a,b]

Project Component	CO_2e
Project	
Area Source Emissions	23.34
Energy Emissions	657.1
Mobile Emissions	1,934
Backup Generator[c]	43.50
Solid Waste	132.7
Water and Wastewater	77.58
Annualized Construction Emissions (Over 40 Years)	21.08
Total Increase	**2,889**
Total Increase without Mobile Sources and Generators[c]	**911**
City of Oakland Screening Threshold	1,100
Total Emissions per Service Population (1,035 residents and 15 employees)	**0.87**
City Emissions per Service Population Threshold	4.6
Significant?	**No**

[a] Project operational emissions estimates were made using CalEEMod, version 2013.2.2.
[b] The GHG analysis relied on inputs from the Transportation Analysis by Fehr & Peers.
[c] Emissions from stationary sources such as backup generators are assessed under a separate 10,000 metric ton per year threshold which is not exceeded.

As discussed below (see *Transit Priority Project*), and Attachments C and D to this document, the proposed project meets the criteria for a residential or mixed use "transit priority project," and is located within a "Regional Center" Priority Development Area ("PDA") pursuant to the Plan Bay Area, which represents the Sustainable Communities Strategy ("SCS") for the greater San Francisco Bay Area (MTC, 2014). Environmental documents for such projects need not analyze global warming impacts resulting from cars and light duty trucks. A lead agency should consider whether such projects may result in GHGs from other sources, however, consistent with the CEQA Guidelines. Consequently, if the project meets the requirements of a transit priority project, its mobile source need not be included in the assessment of GHG impacts. For this reason, Table GHG-1 presents the project-related GHG emissions without the mobile emissions, as permitted per CEQA guidelines Section 15183.5 (c).

As shown in Table GHG-1, the proposed project would not exceed either the threshold of 1,100 metric tons of CO2e per year or the City's 4.6 metric tons of CO2e per service population threshold. Therefore, the GHG emission impact would be less than significant. Although the City's GHG reduction plan SCA 38 would typically be triggered because the project would construct 500 or more residential units and hence be considered a "very large project", the goal of the GHG Reduction Plan has already been met because of the unique CEQA conditions for a *Transit Priority Project*. Numerous other City of Oakland SCAs that would contribute to minimizing potential GHG emissions from construction and operations of development projects would apply to the proposed project; they pertain to alternative transportation facilities (bicycles and BART), construction equipment emissions, transportation demand management, construction waste reduction and recycling, as well as California Green Building Standards.

Consistency with GHG Emissions Plans and Policies (Criterion 6b)

The proposed project would comply with the Oakland Energy and Climate Action Plan, current City Sustainability Programs, and General Plan policies and regulations regarding GHG reductions and other local, regional and statewide plans, policies and regulations that are related to the reduction of GHG emissions and relevant to the proposed project.

Specifically, the proposed project would also be consistent with the State's Updated Climate Change Scoping Plan and the City of Oakland's Energy and Climate Action Plan in that it will include a number of sustainability design features. The Project Sponsor intends to meet LEED Silver standards and comply with the Green Building ordinance and requirements. The proposed project would optimize the efficiency of its building envelope, and through the use of efficient lighting and HVAC systems it would reduce domestic energy use. The proposed project would meet the newly implemented Building Energy Efficiency Standards. Additionally, as noted above and discussed in Attachment D, the proposed project is located within a "Regional Center" PDA pursuant to the Plan Bay Area, and meets all conditions for qualification as a transit priority project with respect to the SCS.

Transit Priority Project

As introduced above, per CEQA Guidelines Section 15183.5 (c), environmental documents for certain residential and mixed use projects and transit priority projects, as defined in Section 21155 of the Public Resources Code, that are consistent with the general use designation, density, building intensity and applicable policies specified for the project area in an applicable SCS or alternative planning strategy, need not analyze global warming impacts resulting from cars and light duty trucks. A lead agency should consider whether such projects may result in GHGs from other sources, however, consistent with the CEQA Guidelines. Consequently, if the project meets the requirements of a transit priority project, its mobile source emissions need not be included in the assessment of GHG impacts.

Section 21155 of the California Public Resources Code defines transit priority projects as projects which:

- Contain at least 50 percent residential use, based on total building square footage and, if the project contains between 26 percent and 50 percent nonresidential uses, a floor area ratio of not less than 0.75;
- Provide a minimum net density of at least 20 dwelling units per acre; and
- Be located within one-half mile of a major transit stop or high-quality transit corridor included in a regional transportation plan. A major transit stop is as defined in Section 21064.3, except that, for purposes of this section, it also includes major transit stops that are included in the applicable regional transportation plan. For purposes of this section, a high quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours. A project shall be considered to be within one-half mile of a major transit stop or high-quality transit corridor if all parcels within the project have not more than 25 percent of their area farther than one-half mile from the stop or corridor and if not more than 10 percent of the residential units or 100 units, whichever is less, in the project are farther than one-half mile from the stop or corridor.

The project proposes an approximately 358,715 net square feet of residential uses and approximately 25,050 square feet of non-residential (commercial) use which is well over 50 percent residential use. So, the proposed project meets condition (1) above for qualification as a transit priority project. The project proposes up to 416 residential units on two parcels totaling 1.72 acres, which is equivalent to 241 dwelling units per acre. Consequently, the proposed project meets condition (2) above for qualification as a transit priority project.

Finally, a major transit stop is defined in Section 21064.3 of the California Public Resources Code as a rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute period. The 12th Street City Center BART Station entrance (12th and Broadway) is approximately one-fifth of a mile (approximately 1,000 feet) from the midpoint of the project site. An entrance to the Lake Merritt BART Station entrance is approximately 0.33 miles from the southern property boundary. Other transit lines and major transfer points are along 11th, 12th and 14th Streets within one to three blocks from the project site. Consequently, the proposed project meets all three conditions above for qualification as a transit priority project. Therefore, pursuant to Section 15183.5 (c) of the CEQA Guidelines, the mobile source emissions of the project need not be included in the assessment of GHG impacts in the environmental document.

Conclusion

Based on the analysis above, implementation of the proposed project would not result in a significant impact regarding GHG emissions or compliance with applicable plans, policies, or regulations adopted for the purposes of reducing greenhouse gas emission. Additionally, because of the size of the project, City of Oakland SCAs related to GHG emissions would be required to ensure a less-than-significant impact with the proposed project. The implementation of **SCA AES-2, Landscape Plan, SCA AIR-1, Construction-Related Air Pollution Controls (Dust and Equipment Emissions), SCA UTIL-1, Construction and Demolition Waste Reduction and Recycling, and SCA UTIL-4, Green Building Requirements** (see Attachment A), would further ensure that impacts associated with greenhouse gas emissions would be less than significant. No mitigation measures are required.

7. Hazards and Hazardous Materials

Would the project:	Equal or Less Severity of Impact Previously Identified in Previous CEQA Documents	Substantial Increase in Severity of Previously Identified Significant Impact in Previous CEQA Documents	New Significant Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment; Create a significant hazard to the public through the storage or use of acutely hazardous materials near sensitive receptors; Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (i.e., the "Cortese List") and, as a result, would create a significant hazard to the public or the environment;	☒	☐	☐
b. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;	☒	☐	☐
c. Result in less than two emergency access routes for streets exceeding 600 feet in length unless otherwise determined to be acceptable by the Fire Chief, or his/her designee, in specific instances due to climatic, geographic, topographic, or other conditions; or Fundamentally impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	☒	☐	☐

Previous CEQA Documents Findings

The Previous CEQA Documents found less-than-significant effects regarding hazards and hazardous materials including risk of upset in school proximity and emergency response/evacuation plans, with the Redevelopment Plan Amendments EIR and Housing Element Update EIR and its 2014 Addendum identifying applicable City of Oakland SCAs. The 1998 LUTE EIR identified mitigation measures to reduce potentially significant effects regarding exposing workers and the public to hazardous substances to less than significant. These mitigation measures are now incorporated into the applicable City of Oakland SCAs.

LMSAP Findings

The LMSAP EIR determined that with implementation of SCAs, impacts related to hazards and hazardous materials would be less than significant with development occurring under LMSAP.

Project Analysis

Exposure to Hazards, Hazardous Materials Use, Storage and Disposal (Criterion 7a)

A Phase 1 Environmental Site Assessment (ESA) was prepared for the proposed project site by Langan Treadwell Rollo on July 15, 2016. The following is a summary of the Phase I ESA findings.

The ESA reviewed the environmental database report prepared by Environmental Data Resources, Inc. (EDR). The EDR report contains information from the environmental databases maintained by the United States Environmental Protection Agency (USEPA), state, and local agencies within the approximate minimum search distance. The project site was listed in multiple regulatory databases searched by EDR. In addition to the regulatory databases searched by EDR, online databases operated by the California Department of Toxic Substances Control (DTSC) and California Regional Water Quality Control Board (RWQCB) were researched and inquiries were made in regard to files held at the Alameda County Department of Environmental Health (ACDEH).

The Phase I identified multiple recognized environmental conditions (RECs) at the project site and the 301 12th Street parcel is now listed as a DTSC Cleanup Site and active as of 24 May 2016 due to ongoing environmental investigations at that portion of the project site. As such, the project site is located on a site included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 (i.e., the Cortese List).[17] As described in detail in the LMSAP EIR, various federal, State, and regional regulations govern the proper storage, handling, and transport of hazardous materials. In addition, developers wishing to develop "Cortese list" sites would have to apply for permits and perform cleanup and remediation actions required by the appropriate overseeing agency—the RWQCB or the DTSC. DTSC has authority to implement hazardous waste and hazardous substance laws in the California Code of Regulations, as well as the federal equivalents of these laws. RWQCB has authority under the Porter-Cologne Water Quality Control Act to require groundwater investigations and remediation as necessary. Implementation of these regulations would reduce the potential impacts from hazardous sites to a less-than-significant level.

The transportation, use, and storage of all hazardous materials involved with the proposed project (construction and operation) would be required to follow the applicable laws and regulations adopted to safeguard workers and the general public, including preparation of a Hazardous Materials Management Plan and Hazardous Materials Business Plan, as required by Alameda County and the City of Oakland SCAs. Since development of the proposed project would be subject to the SCAs pertaining to the handling of hazardous materials related to construction activities and the remedial actions required when site contamination is encountered, consistent with the findings and conclusions of the 2014 LMSAP EIR, the potential impacts would be reduced to less-than-significant levels.

[17] The classification of the site that merits listing on the Cortese List is recent enough such that the available database may not yet reflect the status change.

Hazardous Materials within a Quarter Mile of a School (Criterion 7b)

The project site is located two blocks (approximately 400 feet) west of Lincoln Elementary School at 225 11th Street; however, the proposed project would be required to comply with existing local regulations that require hazardous material handlers within 1,000 feet of a school or other sensitive receptor to prepare a Hazardous Materials Assessment Report and Remediation Plan.

Emergency Access Routes (Criteria 7c)

The proposed project would not significantly interfere with emergency response plans or evacuation plans. Construction in the urban Downtown setting may result in temporary road closures, which would require traffic control plans to ensure at least two emergency access routes are available for streets exceeding 600 feet in length, per the City of Oakland's Ordinances and General Plan Policies; however, the proposed project would not permanently change the surrounding streets or roadways.

Conclusion

Based on an examination of the analysis, findings, and conclusions of the 2014 LMSAP EIR and the Previous CEQA Documents, implementation of the proposed project would not result in any new or more severe significant impacts related to hazards and hazardous materials than those identified in the LMSAP EIR or the Previous CEQA Documents. Implementation of **SCA HAZ-1, Hazards Materials Related to Construction, SCA HAZ-2, Site Contamination, and SCA TRA-1, Construction Activity in the Public Right-of-Way** (see Attachment A), would further ensure that potential impacts associated with hazardous conditions would be less than significant.

8. Hydrology and Water Quality

Would the project:	Equal or Less Severity of Impact Previously Identified in Previous CEQA Documents	Substantial Increase in Severity of Previously Identified Significant Impact in Previous CEQA Documents	New Significant Impact
a. Violate any water quality standards or waste discharge requirements; Result in substantial erosion or siltation on- or off-site that would affect the quality of receiving waters; Create or contribute substantial runoff which would be an additional source of polluted runoff; Otherwise substantially degrade water quality; Fundamentally conflict with the City of Oakland Creek Protection Ordinance (OMC Chapter 13.16) intended to protect hydrologic resources.	☒	☐	☐
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or proposed uses for which permits have been granted);	☒	☐	☐
c. Create or contribute substantial runoff which would exceed the capacity of existing or planned stormwater drainage systems; Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course, or increasing the rate or amount of flow, of a creek, river, or stream in a manner that would result in substantial erosion, siltation, or flooding, both on- or off-site	☒	☐	☐
d. Result in substantial flooding on- or off-site; Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, that would impede or redirect flood flows; Place within a 100-year flood hazard area structures which would impede or redirect flood flows; or Expose people or structures to a substantial risk of loss, injury, or death involving flooding.	☒	☐	☐

Previous CEQA Documents Findings

The Previous CEQA Documents found less-than-significant impacts related to hydrology or water quality, primarily given required adherence to existing regulatory requirements, many of which are incorporated in the City of Oakland's SCAs identified as applicable in the Housing Element Update EIR and its 2014 Addendum. The Redevelopment Plan Amendments EIR found less-than-significant effects regarding stormwater and 100-year with implementation of applicable City of

Oakland SCAs. The 1998 LUTE EIR acknowledged that areas considered under that EIR could potentially occur within a 100-year flood boundary. Adherence to existing regulatory requirements that are incorporated in the City of Oakland's SCAs would address potentially significant effects regarding flooding. No mitigation measures were warranted.

LMSAP Findings

The LMSAP EIR determined that with implementation of SCAs impacts related to hydrology and water quality, groundwater, and flooding would be less than significant with development occurring under the LMSAP.

Project Analysis

Water Quality, Stormwater, and Drainages and Drainage Patterns (Criteria 8a and 8c)

The project would not directly impact the water quality for receiving water bodies by generating polluted runoff or soils, particularly since the nearby water body, Lake Merritt and its Channel, are located approximately five to six blocks east of the project site. The project site is approximately 1.72 acres and the proposed development would comply with numerous SCAs relating to stormwater runoff from construction. The project site is currently entirely covered with one and two-story structures on the Full Block and asphalt pavement on the Quarter Block. Therefore, the project would not increase existing area of impervious surface on the site since the new buildings and pavement (sidewalks) would cover the entire site. A landscaped open space would be incorporated on the mezzanine and roof levels, and new street trees are proposed on street frontages around the Full Block. As identified in the LMSAP EIR, the proposed project site is not located within a flood hazard zone or tsunami-inundation zone. The proposed project would not utilize groundwater resources and would not substantially affect groundwater recharge. The proposed project also would not substantially alter existing drainage patterns. The project site is a small, flat, paved lot in an urban setting; therefore, the proposed building would essentially cover the entire site and not alter existing flows.

Use of Groundwater (Criterion 8b)

Some dewatering may be required for construction of the proposed project, but the dewatering is not anticipated to substantially lower the groundwater level. Potable water is supplied by the East Bay Municipal Utility District ("EBMUD"), and groundwater is generally not considered potable and is not utilized in the public drinking water supply. The 2014 LMSAP EIR also assumed project compliance with existing City practices, which are stated City of Oakland SCAs that address all applicable regulatory standards and regulations pertaining to remediation and grading and excavation activities. The proposed project would adhere to these SCAs and therefore would have a less-than-significant impact on water quality or groundwater supplies, as identified in the LMSAP EIR and the Previous CEQA Documents.

Flooding and Substantial Risks from Flooding (Criteria 8d)

The project site is not located in either a 100-year or 500-year flood boundary. In addition, the project site is not located near a levee or a dam. Therefore, the proposed project would not result in a significant impact with respect to flood-related risks.

Conclusion

Based on an examination of the analysis, findings, and conclusions of the 2014 LMSAP EIR and the Previous CEQA Documents, implementation of the proposed project would not would not result in any new or more severe significant impacts related to hydrology and water quality, groundwater, and flooding than those identified in the LMSAP EIR or the Previous CEQA Documents. Implementation of **SCA HYD-1, Erosion and Sedimentation Control Plan for Construction, SCA HYD-2, Site Design Measures to Reduce Stormwater Runoff, SCA HYD-3, Source Control Measures to Limit Stormwater Pollution, SCA GEO-1, Construction-Related Permit(s), SCA GEO-2, Soils Report, SCA UTIL-6, and Storm Drain System**, (see Attachment A), would ensure that potential impacts to hydrology and water quality would be less than significant. No mitigation measures are required.

9. Land Use, Plans, and Policies

Would the project:	Equal or Less Severity of Impact Previously Identified in Previous CEQA Documents	Substantial Increase in Severity of Previously Identified Significant Impact in Previous CEQA Documents	New Significant Impact
a. Physically divide an established community;	☒	☐	☐
b. Result in a fundamental conflict between adjacent or nearby land uses; or	☒	☐	☐
c. Fundamentally conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect and actually result in a physical change in the environment.	☒	☐	☐

Previous CEQA Documents Findings

The Previous CEQA Documents, including the Redevelopment Plan Amendments EIR and the Housing Element Update EIR and its 2014 Addendum, found less-than-significant impacts related to land use, plans, and policies, and no mitigation measures were warranted. The 1998 LUTE EIR, however, identified a significant and unavoidable effect associated with inconsistencies with policies in the Clean Air Plan (resulting from significant and unavoidable increases in criteria pollutants from increased traffic regionally). It identified mitigation measures, which largely align with current City of Oakland SCAs involving Transportation Demand Management ("TDM"), which apply to all projects within the City of Oakland.

LMSAP Findings

The LMSAP EIR determined that impacts related to land use and planning would be less than significant with development occurring under the LMSAP. No mitigation measures were required and no City of Oakland SCAs apply to the proposed project. Compliance with LUTE Policies Dl0.2, N5.2, and N8.2 would ensure that development under the LMSAP would not conflict with surrounding land uses, or with existing plans, policies, and regulations adopted for the purpose of mitigating an environmental effect.

Project Analysis

Division of Existing Community, Conflict with Land Uses, or Land Use Plans (Criteria 9a through 9c)

The proposed project would not physically divide an established community. The proposed project also would not result in a fundamental conflict with adjacent land uses. The proposed residential and commercial land uses proposed for the project site would be consistent and compatible with nearby commercial, office, and residential land uses. The proposed project

would not conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project. The proposed project site would redevelop a an existing single-story parking garage, two-story school building, and a paved recreation area serving the school and located wholly within the Central Business District ("CBD") General Plan land use designation and the D-LM-4 Lake Merritt Station Area Plan District Flex District, each of which support the proposed residential and ground-floor retail land uses.

Conclusion

Based on an examination of the analysis, findings, and conclusions of the 2014 LMSAP EIR and Previous CEQA Documents, the proposed project would not result in any new or more severe significant impacts related to land use and planning than those identified in the LMSAP EIR or the Previous CEQA Documents. The LMSAP EIR did not identify any mitigation measures related to land use, and no City of Oakland SCAs directly addressing land use and planning apply to the proposed project.

10. Noise

Would the project:	Equal or Less Severity of Impact Previously Identified in Previous CEQA Documents	Substantial Increase in Severity of Previously Identified Significant Impact in Previous CEQA Documents	New Significant Impact
a. Generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code Section 17.120.050) regarding construction noise, except if an acoustical analysis is performed that identifies recommend measures to reduce potential impacts. During the hours of 7 p.m. to 7 a.m. on weekdays and 8 p.m. to 9 a.m. on weekends and federal holidays, noise levels received by any land use from construction or demolition shall not exceed the applicable nighttime operational noise level standard; Generate noise in violation of the City of Oakland nuisance standards (Oakland Municipal Code Section 8.18.020) regarding persistent construction-related noise;	☒	☐	☐
b. Generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code Section 17.120.050) regarding operational noise;	☒	☐	☐
c. Generate noise resulting in a 5 dBA permanent increase in ambient noise levels in the project vicinity above levels existing without the project; or, if under a cumulative scenario where the cumulative increase results in a 5 dBA permanent increase in ambient noise levels in the project vicinity without the project (i.e., the cumulative condition including the project compared to the existing conditions) and a 3-dBA permanent increase is attributable to the project (i.e., the cumulative condition including the project compared to the cumulative baseline condition without the project);	☒	☐	☐
d. Expose persons to interior L_{dn} or CNEL greater than 45 dBA for multi-family dwellings, hotels, motels, dormitories and long-term care facilities (and may be extended by local legislative action to include single-family dwellings) per California Noise Insulation Standards (CCR Part 2, Title 24); Expose the project to community noise in conflict with the land use compatibility guidelines of the Oakland General Plan after incorporation of all applicable Standard Conditions of Approval (see Figure 1); Expose persons to or generate noise levels in excess of applicable standards established by a regulatory agency (e.g., occupational noise standards of the Occupational Safety and Health Administration [OSHA]); or	☒	☐	☐
e. During either project construction or project operation expose persons to or generate groundborne vibration that exceeds the criteria established by the Federal Transit Administration (FTA).	☒	☐	☐

Previous CEQA Documents Findings

The Redevelopment Plan EIR identified less-than-significant effects related to roadway noise and found construction and operational noise impacts would be mitigated to a less-than-significant level with incorporation of SCAs. The Housing Element Update EIR and its 2014 Addendum identified less-than-significant noise impacts with incorporation of SCAs. The 1998 LUTE EIR identified mitigation measures to address potential noise conflicts between different land uses.[18] Regarding construction noise, the 1998 LUTE EIR identified a significant and unavoidable construction noise and vibration impact in Downtown, even after the incorporation of mitigation measures.

LMSAP Findings

The LMSAP EIR determined that with implementation of SCAs construction and operation period noise would be less than significant with development occurring under the LMSAP. The LMSAP EIR determined that while activities occurring under the Plan could expose residential uses near construction to noise levels exceeding the General Plan standard of 80 and 85 dBA, construction of individual development projects implemented under the LMSAP would be temporary in nature and that associated impacts would be less than significant with implementation of applicable SCAs.

The LMSAP EIR also determined that operation-period noise associated with projects developed under the Plan would be less than significant, and that implementation of applicable SCAs would ensure that operation noise is reduced to a less-than-significant level.

Project Analysis[19]

Construction and Operational Noise and Vibration, Exposure of Receptors to Noise (Criteria 10a, 10b, 10d, and 10e)

Construction Noise

Construction activities for the proposed project would be expected to occur over approximately 18 to 24 months and would entail excavation and shoring, foundation and below-grade construction, and construction of the building and finishing interiors. Implementation of applicable City of Oakland SCAs would minimize construction noise impacts by limiting hours of construction activities, by requiring best available noise control technology and notification of any local residents of construction activities, and by tracking and responding to noise complaints. As a result, the construction noise impacts of the proposed project would be less than significant, as identified for the LMSAP EIR.

[18] The 2011 Redevelopment Plan EIR also identified significant and avoidable noise effects specifically associated with the potential development of a new baseball stadium at Victory Court, and multimodal safety at at-grade rail crossings, both near the Oakland Estuary. These effects would not pertain to the W12 Mixed-Use Project given the distance and presumably minimal contribution of multimodal trips affecting these impacts.

[19] The Noise technical analysis conducted for this CEQA Checklist conservatively assumes up to 510 residential units and 3,500 square feet of restaurant/café and 14,700 square feet of commercial use, based on a previous project proposal. The previous project proposal would yield more vehicle trips than the currently proposed project (see Appendix A) and thus, for the purposes of CEQA, the results of the Noise analysis are considered suitably conservative.

Operational Noise

The proposed project would include mechanical equipment standardized for noise reduction, as was assumed in the LMSAP EIR. The proposed project also would include an emergency generator. Development of the proposed project would incorporate all applicable SCAs to ensure a less-than-significant impact with respect to noise from stationary sources on the project site.

Traffic Noise (Criterion 10c)

For the purposes of assessing increased roadway noise as a result of the proposed project, noise levels were determined for this analysis using the Federal Highway Administration ("FHWA") Traffic Noise Prediction Model. The roadway segments analyzed and the results of the noise increases determined by modeling are shown in **Table NOI-1**, below.

TABLE NOI-1
PEAK-HOUR TRAFFIC NOISE LEVELS IN THE VICINITY OF THE PROJECT

Roadway Segment[a,b]	(A) Existing	(B) Existing Plus Project	(B-A) Difference between Existing Plus Project and Existing[c]	(C) Cumulative No Project (2035)	(D) Cumulative Plus Project (2035)	(D-A) Difference between Cumulative Plus Project and Existing	(D-C) Difference between Cumulative Plus Project and Cumulative No Project[d]
11th Street	65.0	65.2	0.2	65.9	66.1	1.1	0.2
12th Street	64.0	64.3	0.3	64.9	65.2	1.2	0.3
Webster Street	62.4	62.6	0.2	63.3	63.5	1.1	0.2
Harrison Street	64.4	64.5	0.1	65.4	65.4	1.0	0.0

[a] Road center to receptor distance is 10 meters (approximately 32 feet) for all roadway segments. Noise levels were determined using the Federal Highway Administration (FHWA) Traffic Noise Prediction Model.
[b] The analysis considered the vehicle mix based on – cars 97 percent, medium trucks two percent, and heavy trucks one percent. Traffic speeds for all vehicle classes were set at 25 mph.
[c] Considered significant if the incremental increase in noise from traffic is greater than the existing ambient noise level by 5.0 dBA Leq, per City of Oakland, CEQA Thresholds/Criteria of Significance Guidelines.
[d] Considered a cumulatively considerable contribution to a significant noise increase if the incremental increase in noise is greater than 3 dBA.

SOURCE: ESA, 2016.

As shown in Table NOI-1, the increase in traffic noise from the Existing Plus Project scenario compared to the Existing scenario would increase peak hour noise levels by less than 5.0 dBA for all roadway segments. The roadway segment of 12th Street between Webster Street and Harrison Street would experience the greatest increase in traffic noise, which would be 0.3 dBA above existing ambient noise levels. However, as the noise increase would not exceed 5.0 dBA, the noise impact on this roadway segment is not considered to be significant. Overall, traffic noise impacts associated with the proposed project at all analyzed roadway segments in the project vicinity would be less than significant at the project-level.

Cumulative Noise

Table NOI-1 shows that the increase in traffic between the Cumulative Plus Project (2035) scenario and Cumulative No Project (2035) would increase peak hour noise levels by less than 3.0 dBA at all roadway segments. Thus, the cumulative roadway noise impact would be less than significant.

The City also considers cumulative noise from all sources—mobile and stationary. The project site is located approximately 80 feet from the nearest sensitive receptors across 12th Street at Harrison Street. The Project would generate noise from heating, ventilating, and air conditioning (HVAC) mechanical equipment. HVAC equipment would operate within the restrictions of the City's Noise Ordinance. Chapter 17.120.050 of the City of Oakland Planning Code specifies the maximum sound level received at residential, public open spaces and commercial land uses. This restriction can be used in combination with the predicted roadway noise level increase presented in Table NOI-1 to estimate a worst-case prediction of cumulative noise increase from both stationary and roadway noise sources. **Table NOI-2** presents the cumulative noise increase at the existing sensitive receptor across 12th Street from the Project site from both roadway and stationary sources. These noise levels reflect evening peak hour conditions which are when peak traffic contributions would occur. Stationary source noise levels are considered in terms of the L_{33} (the noise levels exceeded 20 minutes of a one hour period) as this is the noise descriptor of the City's noise ordinance which best lends itself to addition to roadway noise estimates which are calculated in terms of a peak-hour hourly average. The roadway noise contribution is assumed to occur from the greatest cumulative increase analyzed in Table NOI-1. This analysis uses the existing monitored noise level as a baseline for comparison, unlike the analysis in Table NOI-1, which solely analyzes modeled traffic volumes, because this cumulative analysis considers multiple sources, not just vehicle traffic.

TABLE NOI-2
PEAK-HOUR CUMULATIVE NOISE LEVELS AT SENSITIVE RECEPTORS IN THE PROJECT AREA

Location	(A) Monitored Noise Level (Leq, dBA)	(B) Stationary Source Restriction (L_{33}, dBA)	(C) Cumulative Roadway only Noise Level Increase(Leq)	(D) (A+B)+C Resultant Cumulative Noise Level (Leq)	(D-A) Increase in Noise Level over Existing Monitored
655 12th Street[1]	66.8	60	1.2	68.8	2.0

[1] Monitoring was performed at the northeast corner of 12th Street at Harrison Street at the setback of 1200 Harrison Street, a three-story condominium complex above ground floor commercial. Existing monitored noise levels are greater than those predicted from roadway noise on Harrison Street as a result of contributions from traffic on 12th Street.

SOURCE: ESA, 2016.

A cumulative noise increase of less than 5.0 dBA over existing monitored conditions is predicted to occur at existing sensitive receptors across 12th Street. This determination assumes stationary source operating at an adjacent property at the maximum property line limit allowed by the noise ordinance. When the contribution from maximum allowable stationary source noise is added to cumulative traffic increase, and the Project's contribution from both stationary and mobile sources is compared to existing monitored noise levels, the cumulative increase would be 2.0 dBA and would be considered less-than-significant.

Conclusion

Based on an examination of the analysis, findings, and conclusions of the LMSAP EIR and Previous CEQA Documents, implementation of the proposed project would not substantially increase the severity of impacts identified in the LMSAP EIR or Previous CEQA Documents, nor would it result in new significant impacts related to noise that were not identified in the LMSAP EIR and Previous CEQA Documents. Implementation of **SCA NOI-1, Construction Days/Hours, SCA NOI-2, Construction Noise, SCA NOI-3, Extreme Construction Noise, SCA NOI-4, Project-Specific Construction Noise Reduction Measures, SCA NOI-5, Construction Noise Complaints, SCA NOI-6, Exposure to Community Noise, SCA NOI-7, Operational Noise, and SCA NOI-8, Vibration Impacts on Adjacent Historic Structures or Vibration-Sensitive Activities** (see Attachment A), would be applicable and would be implemented with the proposed project, and would ensure that noise-related impacts associated with the proposed project would be less than significant.

11. Population and Housing

Would the project:	Equal or Less Severity of Impact Previously Identified in Previous CEQA Documents	Substantial Increase in Severity of Previously Identified Significant Impact in Previous CEQA Documents	New Significant Impact
a. Induce substantial population growth in a manner not contemplated in the General Plan, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extensions of roads or other infrastructure), such that additional infrastructure is required but the impacts of such were not previously considered or analyzed;	☒	☐	☐
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere in excess of that contained in the City's Housing Element; or Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere in excess of that contained in the City's Housing Element.	☒	☐	☐

Previous CEQA Documents Findings

The Previous CEQA Documents, including the Redevelopment Plan Amendments EIR and the Housing Element Update EIR and its 2014 Addendum, found less-than-significant impacts related to population and housing, as well as employment. The 1998 LUTE EIR identified mitigation measures to address unanticipated employment growth (compared to regional ABAG projections), and no other mitigation measures were warranted.

LMSAP Findings

The LMSAP EIR determined that impacts related to population and housing would be less than significant with development occurring under the LMSAP. No mitigation measures or SCAs would be required. The LMSAP EIR assumes that associated growth in the number of households and population occurring from development under the LMSAP would be in line with regional growth projections, including ABAG's 2009 growth forecast for 2035 and would not result in unplanned population growth.

Project Analysis

Population Growth and Displacement of Housing and People (Criteria 11a and 11b)

The proposed project would result in an estimated 20 permanent employees on the site.[20] Construction of the proposed project also would involve temporary employees. The proposed

[20] The 2014 LMSAP EIR considered the development of approximately 21,000 square feet of retail on the project site. The retail employment density of 0.8026 employees per 1000 square feet (1,246 square feet/worker) noted in the following document was used to determine the number of employees generated by the proposed project: http://www.eia.gov/consumption/commercial/data/2003/pdf/b1-b46.pdf.

project would introduce up to 416 units and approximately 844 new residents.[21] However, the additional approximate 844 residents and 20 employees would not result in substantial growth beyond what was projected in the overall development program in the LMSAP EIR. The project site is currently a parking garage, Downtown Oakland Charter School, and paved recreation area serving the school, hence the proposed project would not displace any housing or people.

Conclusion

Based on an examination of the analysis, findings, and conclusions of the 2014 LMSAP EIR and the Previous CEQA Documents, the proposed project would not result in any new or more severe significant impacts related to population and housing than those identified in the LMSAP EIR or the Previous CEQA Documents. The LMSAP EIR did not identify any mitigation measures related to population and housing, and none would be required for the proposed project. Also no SCAs would apply.

[21] According to Table ES-1 in the LMSAP EIR, the LMSAP population analysis employed a factor of approximately 2.03 persons per residential unit.

12. Public Services, Parks and Recreation Facilities

Would the project:	Equal or Less Severity of Impact Previously Identified in Previous CEQA Documents	Substantial Increase in Severity of Previously Identified Significant Impact in Previous CEQA Documents	New Significant Impact
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: • Fire protection; • Police protection; • Schools; or • Other public facilities.	☒	☐	☐
b. Increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or Include recreational facilities or require the construction or expansion of recreational facilities which might have a substantial adverse physical effect on the environment.	☒	☐	☐

Previous CEQA Documents Findings

The Redevelopment Plan Amendments EIR found less-than-significant impacts related to public services and recreational facilities; no mitigation measures were warranted nor City of Oakland SCAs identified. The Housing Element Update EIR and its 2014 Addendum identified less-than-significant public services and recreation impacts with the exception of impacts related to police and fire protection, which were found to be less than significant with incorporation of SCAs and mitigation measures identified in the 1998 LUTE EIR. The 1998 LUTE EIR identified a significant and unavoidable impact for fire safety, with mitigation measures pertaining to the North Oakland Hills area; the 1998 LUTE EIR also identified a significant and unavoidable impact regarding increased student enrollment, particularly in Downtown (and the Waterfront), and identified mitigation measures that would not reduce the effect to less than significant. Thus the impact was significant and unavoidable.[22]

LMSAP Findings

The LMSAP EIR determined that the increase in demand for public services (i.e., fire, police, and schools) and park and recreation services from development under the LMSAP would be less

[22] The 1998 LUTE EIR addressed effects on solid waste demand and infrastructure facilities for water, sanitary sewer and stormwater drainage under *Public Services*. These topics are addressed in this document under *14. Utilities and Service Systems*, consistent with current City approach.

than significant. The Oakland Police Department and Fire Department would adjust service capacity as needed and the City is responsible for coordinating service provisions to adjust to the expected increase in demand for these services. New development, including the proposed project, is required to adhere to appropriate building and fire code requirements that would be incorporated into project construction. The Plan area is exceptionally well-served by libraries, and the LMSAP includes the creation of new parks and open spaces, and improved access to the regional parks system. Potential impacts to public services would be less than significant with implementation of SCAs. No mitigation measures or SCAs were required regarding recreation.

Project Analysis

Public Services and Parks and Recreation (Criteria 12a and 12b)

The proposed project would create demands on public services typical of a mixed-use building containing up to 416 residential units and approximately 25,050 square feet of commercial space. However, the development would occur in an urban area already served by public services and recreation facilities, and recent CEQA analyses have consistently determined that the anticipated growth would not impose a burden on existing public services to create a significant impact. Compliance with standard City practices would further ensure the less-than-significant impact. These included City practices and requirements, such as the Oakland Fire Services' review of proposed project plans, and project applicants' required contributions to school impact fees to offset any impacts to school facilities from the proposed project.

City of Oakland SCAs incorporate most of these standard practices and requirements to address potential public services and park and recreation facilities impacts. The proposed project would comply with City of Oakland SCAs related to the increased need for fire protection by requiring all projects to implement safety features, and to comply with all applicable codes and regulations. In addition, adherence to the General Plan's Open Space, Conservation and Recreation Element policies 3.1, 3.3, and 3.10 would reduce potential impacts to recreational facilities. In addition, any increases in need for police protection, fire protection, schools, or other public facilities would be mitigated by adherence to General Plan policies N.12.1, N.12.2, N.12.5, FI-1, and FI-2.

Conclusion

Based on an examination of the analysis, findings, and conclusions of the 2014 LMSAP EIR and the Previous CEQA Documents, the proposed project would not result in any new or more severe significant impacts related to public services and parks and recreation services than those identified in the LMSAP EIR and the Previous CEQA Documents.

13. Transportation and Circulation

Would the project:	Equal or Less Severity of Impact Previously Identified in Previous CEQA Documents	Substantial Increase in Severity of Previously Identified Significant Impact in Previous CEQA Documents	New Significant Impact
Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit, specifically:			
Traffic Load and Capacity Thresholds a. At a study, signalized intersection which is located **outside the Downtown area and that does not provide direct access to Downtown**, the project would cause the motor vehicle level of service (LOS) to degrade to worse than LOS D (i.e., LOS E or F) and cause the total intersection average vehicle delay to increase by four (4) or more seconds;	☒	☐	☐
b. At a study, signalized intersection which is located **within the Downtown area or that provides direct access to Downtown**, the project would cause the motor vehicle LOS to degrade to worse than LOS E (i.e., LOS F) and cause the total intersection average vehicle delay to increase by four (4) or more seconds;	☒	☐	☐
c. At a study, signalized intersection **outside the Downtown area and that does not provide direct access to Downtown** where the motor vehicle level of service is LOS E, the project would cause the total intersection average vehicle delay to increase by four (4) or more seconds;	☒	☐	☐
d. At a study, signalized intersection **outside the Downtown area and that does not provide direct access to Downtown** where the motor vehicle level of service is LOS E, the project would cause an increase in the average delay for any of the critical movements of six (6) seconds or more;	☒	☐	☐
e. At a study, signalized intersection for all areas where the level of service is LOS F, the project would cause (a) the overall volume-to-capacity ("V/C") ratio to increase 0.03 or more or (b) the critical movement V/C ratio to increase 0.05 or more;	☒	☐	☐
f. At a study, unsignalized intersection the project would add ten (10) or more vehicles to the critical movement and after project completion satisfy the California Manual on Uniform Traffic Control Devices (MUTCD) peak hour volume traffic signal warrant;	☒	☐	☐
g. For a roadway segment of the Congestion Management Program (CMP) Network, the project would cause (a) the LOS to degrade from LOS E or better to LOS F or (b) the V/C ratio to increase 0.03 or more for a roadway segment that would operate at LOS F without the project; or	☒	☐	☐
h. Cause congestion of regional significance on a roadway segment on the Metropolitan Transportation System (MTS) evaluated per the requirements of the Land Use Analysis Program of the CMP.	☒	☐	☐

Previous CEQA Documents Findings

The Prior EIRs considered for this analysis identified significant and unavoidable impacts regarding intersection and/or roadway segment operations. Various mitigation measures and City of Oakland SCAs are identified (except in the LUTE EIR, which does not identify SCAs). Other transportation/circulation effects identified in each of the document are reduced to less than significant with adherence to City of Oakland SCAs or mitigation measure, as follows.

The LUTE EIR identified SU impacts regarding degradation of the level of service (LOS) for several roadway segments citywide. A mitigation measure was identified for one Downtown intersection to reduce the intersection operations to less than significant. All other topics were found less than significant. The LUTE EIR did not identify an impact at the intersections that are affected by the proposed project.

The Housing Element EIR and Redevelopment Plan EIR and Addendum identified significant and unavoidable effects to roadway segment operations as well as railroad crossing safety, after the implementation of identified mitigation measures. Neither of these Prior EIRs identified an impact at the intersections that are affected by the proposed project.

LMSAP Findings

The LMSAP EIR evaluated 45 intersections and 10 freeway segments within the vicinity of the LMSAP Area (including within the City of Alameda) for potential LOS impacts.

Under Existing Plus Project conditions, significant impacts at a total of seven intersections were identified during either or both peak hours. Impacts at three of these intersections would be reduced to a less-than-significant level with implementation of the recommended mitigation measures. However, impacts to the First Avenue and International Boulevard, Oak Street and 10th Street, Oak Street and Sixth Street, and Jackson Street and Fifth Street intersections would be significant and unavoidable. Under Existing Plus Project conditions, impacts to the I-880 freeway segment between Oak Street and Fifth Street would be significant and unavoidable. In addition, under Existing Plus Project conditions, impacts related to pedestrian circulation at the Constitution Way and Marina Village Parkway and Constitution Way and Atlantic Avenue intersections would be significant and unavoidable because these intersections are located in the City of Alameda and the City of Oakland does not have the authority to construct recommended improvements.

Under Interim 2020 Plus Project conditions, significant unavoidable impacts were identified at a total of three intersections, including the Jackson Street and Sixth Street, Oak Street and Sixth Street, and Oak Street and Fifth Street.

Under Cumulative 2035 Plus Project conditions, significant unavoidable impacts were identified at a total of 13 intersections including: Madison Street and 14th Street; Madison Street and 11th Street; Madison Street and 10th Street; Oak Street and 10th Street; Harrison Street and Eighth Street; Jackson Street and Eighth Street; Oak Street and Eighth Street; Jackson Street and Seventh Street; Oak Street and Seventh Street; Fifth Avenue and Seventh Street/Eighth Street; Jackson Street and Sixth Street; Oak Street and Sixth Street; and Oak Street and Fifth Street. In addition,

under Cumulative 2035 Plus Project conditions impacts to the segment of Oak Street between 2nd Street and Embarcadero would also be significant and unavoidable.

Several SCAs related to transportation and circulation were identified as required to be implemented for projects developed under the LMSAP, three of which are applicable to the proposed project (see Attachment A).

Project Analysis

Trip Generation

Trip generation is the process of estimating the number of vehicles that would access the proposed project. Current accepted methodologies, such as the Institute of Transportation Engineers (ITE) Trip Generation methodology, are primarily based on data collected at single-use suburban sites. These defining characteristics limit their applicability to developments, such as the proposed project, which is in a walkable dense urban setting near frequent local and regional transit service. Therefore, the analysis adjusted the ITE-based estimates to account for the proposed project's setting and proximity to frequent transit service, in accordance with City guidelines. Since the proposed project is located about 0.2 mile from the 12th Street BART Station, this analysis reduces the ITE based trip generation by 55 percent to account for the non-automobile trips. This reduction is consistent with the 2011 American Community Survey which shows that 55 percent of Downtown City of Oakland residents travel to work by non-automobile modes.

The trip generation, as summarized in **Table TRA-1** below and used for various technical analysis conducted for this CEQA Checklist, conservatively assumes up to 510 residential units and 3,500 square feet of restaurant/café and 14,700 square feet of commercial use, based on a previous project proposal. The previous project proposal would yield more vehicle trips than the currently proposed project (see Appendix A) and thus, for the purposes of CEQA, the results of these analyses are considered suitably conservative. The previous project proposal would generate approximately 1,730 daily, 50 AM peak hour, and 141 PM peak hour trips.

In order to present a reasonable "worst case" scenario, the project trip generation presented in **Table TRA-1** does not account for the following:

> **Existing Trips.** The proposed project would eliminate the existing middle school, parking garage and recreational hardscape open space. The trip generation nets out (i.e. subtracts) the existing trips generated by the middle school. However, the trip generation estimates conservatively do not net out any the existing trips generated by the surface parking lot (that portion of the lot not used by the middle school). Although the removal of the parking spaces may eliminate some of the existing automobile trips, other off-street parking facilities in the vicinity likely provide adequate spaces to accommodate most of the motorists that currently park at the project site. Thus, many of these motorists would likely continue to travel to and from the project area via automobile after the completion of the proposed project.

TABLE TRA-1
AUTOMOBILE TRIP GENERATION SUMMARY[1]

Land Use	Units[2]	ITE Code	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Residential	510 DU	220[3]	3,391	52	208	260	205	111	316
Retail	14.7 KSF	820[4]	628	9	5	14	26	29	55
Cafe	2.0 KSF	932[5]	254	12	10	22	12	8	20
Restaurant	1.5 KSF	932[5]	191	9	7	16	9	6	15
Middle School	370 Students	522[6]	(600)	(110)	(90)	(200)	(29)	(30)	(59)
Pass-by Reduction 43% Restaurant[7]				0	0	0	(9)	(6)	(15)
Pass-by Reduction 34% Retail Use[7]				0	0	0	(9)	(10)	(19)
Subtotal					3,864	(28)	140	112	206
Non-Auto Reduction (-55%)[8]			2,215	(15)	77	62	113	59	172
Adjusted Project Trips			**1,739**	**(13)**	**63**	**50**	**92**	**49**	**141**

[1] The trip generation conservatively assumes up to 510 residential units and 3,500 square feet of restaurant/café and 14,700 square feet of commercial use, based on a previous project proposal. Because the newly proposed project, as described above, would yield fewer trips (see Appendix A), for the purposes of CEQA, the use of the original trip generation is considered suitably conservative.

[2] DU = Dwelling Units, KSF = 1,000 square feet

[3] ITE Trip Generation *(9th Edition)* land use category 220 (Apartment):
Daily: 6.65
AM Peak Hour: 0.51 (20% in, 80% out)
PM Peak Hour: 0.62 (65% in, 35% out)

[4] ITE Trip Generation *(9th Edition)* land use category 820 (Shopping Center):
Daily: 42.70
AM Peak Hour: 0.96 (62% in, 38% out)
PM Peak Hour: 3.71 (48% in, 52% out)

[5] ITE Trip Generation *(9th Edition)* land use category 932 (High Turnover Sit Down Restaurant):
Daily: 127.5
AM Peak Hour: 10.81 (55% in, 45% out)
PM Peak Hour: 9.85 (60% in, 40% out)

[6] Existing land use to be removed by project.
ITE Trip Generation (9th Edition) land use category 522 (Middle School/Junior High School):
Daily: 1.62
AM Peak Hour: 0.54 (55% in, 45% out)
PM Peak Hour: 0.16 (49% in, 51% out)

[7] PM peak hour pass-by rates based on ITE Trip Generation Handbook (3rd Edition). The weekday PM peak hour average pass-by rates for land use category 932 is 43% and for land use category 820 is 34%. A 43% and 34% pass-by rate is applied to the restaurant and the retail component respectively. Pass-by rates are not applied to the AM peak hour.

[8] Reduction of 55.0% assumed based on 2011 American Community Survey in Downtown Oakland.

SOURCE: Fehr & Peers, 2016.

Non-Vehicular Trip Generation

Consistent with the City of Oakland's Transportation Impact Analysis Guidelines and information from the 2011 American Community Survey of Downtown Oakland, **Table TRA-2** presents the estimates of project trip generation for all travel modes.

TABLE TRA-2
TRIP GENERATION BY TRAVEL MODE

Mode	Mode Share Adjustment Factors[1]	Daily	AM Peak Hour	PM Peak Hour
Automobile	45.0%	1,739	50	141
Transit	36.8%	1,421	41	115
Bike	4.7%	182	5	15
Walk	27.8%	1,075	31	87
Total Trips		**4,417**	**127**	**358**

[1] Based on *City of Oakland Transportation Impact Study Guidelines* assuming project site is in an urban environment within 0.5 miles of a BART Station.

SOURCE: Fehr & Peers, 2016.

Consistency with the LMSAP EIR

As noted in the LMSAP EIR, the Development Program represents the reasonably foreseeable development expected to occur in the next 20 to 25 years in the Plan area. The Specific Plan and the EIR intend to provide flexibility in the location, amount, and type of development. Thus, as long as the trip generation for the overall Plan area remains below the levels estimated in the EIR, the traffic impact analysis presented in the EIR continues to remain valid.

Existing Setting

In addition to evaluating how the proposed project fits into the overall development envelope analyzed in the transportation study for the LMSAP EIR, the transportation study of the proposed project evaluates traffic operations at the following seven intersections in the vicinity of the project site:

1. 12th Street/ Webster Street
2. 12th Street/ Harrison Street
3. 12th Street/ Alice Street
4. 12th Street/ Jackson Street
5. 11th Street/ Webster Street
6. 11th Street/ Harrison Street
7. 11th Street/ Franklin Street

Consistent with City of Oakland guidelines, the study intersections include locations that were not already studied in the LMSAP EIR and where the proposed project could potentially increase traffic volumes by 50 or more peak-hour trips.

Traffic data, consisting of automobile turning movement as well as pedestrian and bicycle counts, was collected from 7:00 AM to 9:00 AM (weekday AM peak hour) and from 4:00 PM to 6:00 PM (weekday PM peak hour) on November 18, 2015 (see Appendix A). For each study intersection, the peak hour (i.e., the hour with the highest traffic volumes observed in the study area) within each peak period was selected for evaluation.

Based on the volumes and roadway configurations, the Level of Service (LOS) at the study intersections using the 2010 Highway Capacity Manual (HCM) methodologies.[23] The City of Oakland considers LOS E as the threshold of significance for signalized intersections located within Downtown area or that provide direct access to Downtown, and LOS D for all other signalized intersections. All seven study intersections are signalized and located in Downtown Oakland where the threshold of significance is LOS E. All seven study intersections currently operate at LOS B or better during weekday AM and PM peak hours. **Table TRA-3** summarizes the existing intersection analysis results.

TABLE TRA-3
INTERSECTION LOS SUMMARY – EXISTING CONDITIONS

Intersection	Control[1]	Peak Hour	Delay[2] (seconds)	LOS
1. 12th Street/ Webster Street	Signal	AM	10.1	B
		PM	11.9	B
2. 12th Street/ Harrison Street	Signal	AM	10.1	B
		PM	9.7	A
3. 12th Street/ Alice Street	Signal	AM	13.1	B
		PM	12.4	B
4. 12th/ Harrison Street	Signal	AM	10.6	B
		PM	10.5	B
5. 11th Street/ Webster Street	Signal	AM	15.2	B
		PM	14.0	B
6. 11th Street/ Harrison Street	Signal	AM	17.1	B
		PM	17.3	B
7. 11th Street/ Franklin Street	Signal	AM	12.9	B
		PM	13.8	B

1 Signal = intersection is controlled by a traffic signal
2 For signalized intersections, average intersection delay and LOS based on the 2010 HCM method is shown.

SOURCE: Fehr & Peers, 2016.

Trip Distribution and Intersection Analysis

The trip distribution and assignment process is used to estimate how the trips generated by a project site would be distributed across the roadway network. Based on the trip distribution and assignment assumptions provided in the LMSAP EIR, locations of complementary land uses, and the one-way street network and turn restrictions in Downtown Oakland, the directions of approach to and departure from the project site were determined.

[23] The operations of roadway facilities are typically described with the term level of service (LOS), a qualitative description of traffic flow based on factors such as speed, travel time, delay, and freedom to maneuver. Six levels are defined from LOS A, which reflects free-flow conditions where there is very little interaction between vehicles, to LOS F, where the vehicle demand exceeds the capacity and high levels of vehicle delay result. LOS E represents "at-capacity" operations. When traffic volumes exceed the intersection capacity, stop-and-go conditions result and a vehicle may wait through multiple signal cycles before passing through the intersection; these operations are designated as LOS F.

Table TRA-4 summarizes the intersection operations results for the Existing No Project and Existing Plus Project conditions. All study intersections would continue to operate at an acceptable LOS. The proposed project would not cause a significant impact at the study intersections under Existing Plus Project conditions.

TABLE TRA-4
INTERSECTION LOS SUMMARY – EXISTING PLUS PROJECT CONDITIONS

Intersection	Control[1]	Peak Hour	Existing No Project		Existing Plus Project		Signif. Impact?
			Delay[2] (sec)	LOS	Delay[2] (sec)	LOS	
1. 12th Street/ Webster Street	Signal	AM	10.1	B	10.0	A	NO
		PM	11.9	B	11.8	B	NO
2. 12th Street/ Harrison Street	Signal	AM	10.1	B	9.2	A	NO
		PM	9.7	A	9.0	A	NO
3. 12th Street/ Alice Street	Signal	AM	13.1	B	13.0	B	NO
		PM	12.4	B	12.6	B	NO
4. 12th/ Harrison Street	Signal	AM	10.6	B	10.5	B	NO
		PM	10.5	B	10.9	B	NO
5. 11th Street/ Webster Street	Signal	AM	15.2	B	15.1	B	NO
		PM	14.0	B	18.1	B	NO
6. 11th Street/ Harrison Street	Signal	AM	17.1	B	17.2	B	NO
		PM	17.3	B	17.3	B	NO
7. 11th Street/ Franklin Street	Signal	AM	12.9	B	12.4	B	NO
		PM	13.9	B	13.4	B	NO

[1] Signal = intersection is controlled by a traffic signal
[2] For signalized intersections, average intersection delay and LOS based on the 2010 HCM method is shown.

SOURCE: Fehr & Peers, 2016.

Year 2040 traffic volumes for the study intersections are based on information from the most recent Alameda County Transportation Commission's (ACTC) Travel Demand Model (updated June 2015). The 2040 No Project and the 2040 Plus Project conditions also reflect modifications that would be made by the East Bay Rapid Transit Project which will modify the lane configurations of 12th Street and 11th Street. The implementation of this project would convert one of the through lanes to a bus only lane and restrict vehicle movements to right turns.

Table TRA-5 summarizes the intersection LOS calculations for 2040 No Project and 2040 Plus Project conditions. All study intersections would continue to operate at an acceptable LOS. The proposed project would not cause a significant adverse impact at the study intersections under 2040 Plus Project conditions.

LMSAP Cumulative Impacts

The LMSAP EIR identified 29 significant impacts at 16 intersections serving the Plan Area. All approved, proposed, and potential future projects under the LMSAP EIR and within the LMSAP Plan Area, including the proposed W12 project, would add minor amounts of traffic to each of

TABLE TRA-5
INTERSECTION LOS SUMMARY – CUMULATIVE PLUS PROJECT CONDITIONS

Intersection	Control[1]	Peak Hour	2040 No Project		2040 Plus Project		Signif. Impact?
			Delay[2] (sec)	LOS	Delay[2] (sec)	LOS	
1. 12th Street/ Webster Street	Signal	AM	11.1	B	11.0	B	NO
		PM	13.1	B	13.0	B	NO
2. 12th Street/ Harrison Street	Signal	AM	11.4	B	10.1	B	NO
		PM	10.9	B	9.7	A	NO
3. 12th Street/ Alice Street	Signal	AM	14.6	B	14.5	B	NO
		PM	13.5	B	13.8	B	NO
4. 12th/ Harrison Street	Signal	AM	11.7	B	11.5	B	NO
		PM	11.4	B	12.0	B	NO
5. 11th Street/ Webster Street	Signal	AM	15.6	B	15.4	B	NO
		PM	14.9	B	19.2	B	NO
6. 11th Street/ Harrison Street	Signal	AM	20.0	B	20.2	C	NO
		PM	21.6	C	20.7	C	NO
7. 11th Street/ Franklin Street	Signal	AM	14.1	B	13.5	B	NO
		PM	16.6	B	15.8	B	NO

[1] Signal = intersection is controlled by a traffic signal
[2] For signalized intersections, average intersection delay and LOS based on the 2010 HCM method is shown.

SOURCE: Fehr & Peers, 2016.

these 16 impacted locations. Therefore, all such projects within the LMSAP Plan Area, including the proposed W12 project, would share responsibility for implementing all of the mitigation measures (see Attachment A). To manage implementation across many individual projects, the City has adopted a citywide Transportation Impact Fee program, whereby the Project Sponsor shall pay the applicable fee in lieu of mitigating their share of the need for traffic improvements at these intersections.

The total cumulative development contemplated and approved within the LMSAP EIR is substantially larger than that which is currently proposed and under consideration within the Specific Plan Area and thus the project would not result in new or more severe cumulative impacts than those already identified in the LMSAP EIR.

Vehicle Access and On-Site Circulation Impacts

The proposed project includes two buildings, with Building A proposed for the Full Block bounded by 12th Street, 11th Street, Webster Street and Harrison Street and Building B proposed for the Quarter Block in the southeast corner of the Harrison Street/12th Street intersection. Automobile access to Building A would be provided via a full access driveway on 11th Street, about 90 feet east of Webster Street. Building B would be accessed via a driveway located on 12th street, about 90 feet east of Harrison Street. A total of up to 317 parking spaces would be provided on the two parcels.

Recommendation TRA-1: While not required to address a CEQA impact, the following should be monitored as part of the final design for the project:

Ensure that the project driveways would provide adequate sight distance between motorists exiting the driveways, pedestrians on the adjacent sidewalks and vehicles on 11th Street and 12th Street. This may require the removal of on-street parking spaces adjacent to the driveways, and redesigning and/or widening the driveway. If adequate sight distance cannot be provided, provide audio/visual warning devices at the driveway.

Bicycle Access and On-Site Circulation Impacts

The proposed project would provide 288 long-term bicycle parking spaces within the parking garage. Approximately 26 short-term bicycle parking spaces would be provided in accordance with City Code requirements.

Pedestrian Access and On-Site Circulation Impacts

The proposed project would provide adequate pedestrian facilities throughout the site. For Building A, the primary pedestrian access would be through the main lobby located at the corner of 12th and Webster, with a smaller lobby located on Harrison Street. Pedestrian access to Building B would be provided on Harrison Street. There would be continuous sidewalks on both sides of 11th Street, 12th Street, Harrison Street and Webster Street in the vicinity of the project where pedestrians can access the commercial/retail space directly. These project features ensure safe pedestrian access to and throughout the site.

The City of Oakland Pedestrian Master Plan (PMP) recommends nine foot sidewalks with five foot clear pedestrian passage zones for local streets such as 12th and Webster Streets. The existing sidewalks are approximately 12 feet wide on 11th Street, Harrison Street, 12th Street and Webster Street. With the development of the proposed project, the sidewalks along the project frontage will be wide enough to accommodate potential sidewalk encroachment (e.g. bicycle racks and planted trees) and continue to provide five feet of clear sidewalk space for pedestrians.

Recommendation TRA-2: While not required to address a CEQA impact, the following should be considered as part of the final design for the project:

a) Explore the feasibility and consider installing Accessible Pedestrian Signals (APS), at the intersections of 12th Street/Harrison Street, 11th Street/Harrison Street, 11th Street Webster Street and 12th Street/Webster Street to decrease waiting time for the pedestrian and increase pedestrian safety.

b) Explore the feasibility and consider installing pedestrian bulb outs at the four intersections adjacent to the project site to decrease crossing times and increase pedestrian safety.

c) Consider installing high visibility crosswalks at the four intersections adjacent to the project site.

d) Ensure that project entrance doors do not open outward toward the sidewalk. All entrance doors of the proposed project should open inside rather than intruding into the sidewalk area.

Transit Access Impacts

Overall, the project site is well served by transit. AC Transit provides transit service to the project site with bus stops on 12th Street, Harrison Street, 12th Street and Jackson Street. The nearest bus stops are within a block of the project site. The bus stops on 12th Street west of Jackson Street provide bus shelters and benches; however the stop at 12th Street west of Harrison Street does not provide a bus shelter or bench. The 12th Street BART station is approximately 0.2 miles from the project site. Many AC Transit routes, including 14, 18, 20, 40, 88, 801 and 840, operate within the project's vicinity. Currently, AC Transit is planning to implement a 14.4 mile long Easy Bay Bus Rapid Transit (BRT) project. The future BRT line alignment follows 11th and 12th Street from Broadway to Lake Merritt Boulevard. The BRT stops would be within easy walking distance from project site at 12th Street and Webster Street.

Loading Requirements

City Municipal Code Section 17.116.120 requires off-street loading facilities for residential uses and City Municipal Code Section 17.116.140 requires off-street loading facilities for commercial uses. The requirement for residential facilities that have between 50,000 and 399,999 square feet of floor area is three off-street loading berths. The Code requires one loading berth for commercial uses between 10,000 and 24,999 square feet. Based on City Code, the project is required to provide three off-street loading berths for the residential component of the project and one berth for the commercial component of the proposed project. The proposed project would provide four loading docks, which meets the City's loading requirement.

Emergency Access Impacts

The proposed project is not expected to result in inadequate emergency access because it would not interfere with vehicle traffic and emergency access off of the public street. Therefore, the proposed project is not expected to cause a change to the emergency access points for the project site and surrounding parcels.

Consistency with Adopted Policies, Plans, or Programs Supporting Alternative Transportation

The proposed project is consistent with applicable policies, plans and programs, and would not cause a significant impact by conflicting with adopted policies, plans, or programs supporting public transit, bicycles, or pedestrians. The LUTE, as well as the City's Public Transit and Alternative Mode and Complete Streets policies, state a strong preference for encouraging the use of non-automobile transportation modes, such as transit, bicycling, and walking. The proposed project would encourage the use of non-automobile transportation modes by providing residential and commercial uses in a dense, walkable urban environment that is well-served by local and regional transit.

The proposed project is consistent with both the City's Pedestrian Master Plan (PMP) and Bicycle Master Plan by not making major modifications to existing pedestrian or bicycle facilities in the surrounding areas and would not adversely affect installation of future facilities. Further, the proposed project would adhere to City of Oakland SCAs that would require the preparation and

implementation of a TDM Plan because the proposed project would generate more than 50 peak hour trips (see SCA TRA-3 in Attachment A to this document).

Overall, the proposed project would not conflict with adopted City policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. This is a less than significant impact; no mitigation measures are required.

Parking Considerations

Although parking is not an environmental impact required for evaluation under CEQA, this section summarizes parking requirements, supply and demand for automobiles and bicycles.

Auto Parking Requirements, Supply, and Demand

The proposed project is located within a City of Oakland Municipal Code's D-LM Zone. The D-LM Zones requires 0.75 auto parking spaces for every residential unit and no auto parking spaces for commercial uses. **Table TRA-6** presents the off-street automobile parking requirements for the project per City Code. The proposed project is required to provide a total of 312 spaces and would provide up to 317 spaces, a surplus of seven spaces.

TABLE TRA-6
AUTOMOBILE PARKING CODE REQUIREMENTS

Land Use	Size[1]	Required Parking Supply	Provided Parking Supply	Difference
Apartments/D-LM Zone[2]	417 DU	312	317	**5**
Retail[3]	25.1 KSF	0	0	**0**
	Total	**312**	**317**	**5**

[1] DU = dwelling unit; KSF = 1,000 square feet
[2] City of Oakland off-street parking requirement for residential in zone D-LM is three-quarters space per unit (section 17.116.060).
[3] City of Oakland off-street parking requirement for commercial uses in zone D-LM is zero spaces per KSF for retail (section 17.116.080).

SOURCE: Fehr & Peers, 2016; ESA, 2016

As described in the Project Description, the proposed project would provide a total of 317 parking spaces on two parcels. All parking spaces would be accessible via the garage driveways on 11th Street and 12th Street. It is expected that residential visitors and commercial space patrons would use on-street parking.

The streets adjacent to the project site provide metered on-street parking. Currently, there are 39 on-street parking spaces adjacent to the project site. It is expected that proposed project would eliminate multiple driveways on 11th Street, 12th Street, Harrison Street and Webster Street which would increase the number of on-street parking. It is expected that the overall on-street parking supply would increase by about three parking spaces.

The parking demand analysis compares proposed parking supply to project parking demand estimated using average vehicle ownership rates from American Community Survey estimates data and the parking demand rates published in the ITE 2010 Parking Generation, 4th Edition.

Table TRA-7 summarizes the parking demand of the project. The parking demand values represent average parking demand. Parking demand for the residential portions of the project was determined by using average vehicle ownership rates in downtown Oakland. According to American Community Survey estimates, average vehicle ownership in the study area is 0.63 vehicles per multi-family dwelling unit. Based on this data, residential parking demand would be about 266 parking spaces. Based on ITE data for shopping center, the adjusted shopping center parking demand would be 30 spaces. Residential visitor demand was estimated using an adjusted Urban Land Institution Shared Parking rate of 0.0675, resulting in a visitor demand of 28 spaces. National parking demand statistics for the residential visitors and commercial uses were adjusted to account for the anticipated 55 percent non-automobile use, as documented in the trip generation calculations.

TABLE TRA-7
PROJECT PARKING SUPPLY AND DEMAND

Land Use	Units[1]	Rate	Weekday
Apartment (Residents)	416DU	0.63[2]	262
Apartment (Visitors)	416 DU	0.0675[3]	28
Commercial	25.12 KSF	1.415[4]	36
Parking Demand			**324**
Parking Supply			**324**
Parking Deficit			**0**

[1] DU = dwelling unit; KSF = 1,000 square feet
[2] Based on 2013 ACS average automobile ownership of 0.63 vehicles per residential unit.
[3] Based on adjusted (using non-auto reduction of 55%) rate of 0.0675 spaces per DU using ULI Shared Parking
[4] Based on adjusted (using non-auto reduction of 55%) rate of 1.415 spaces per KSF using ITE Parking Generation (4th Edition)

SOURCE: Fehr & Peers, 2016; ESA, 2016

The parking demand estimate presents a reasonable worse-case scenario in that it assumes most of the commercial visitors would be new to the area. Although specific commercial uses have not been determined, it is likely that the commercial component of the proposed project would be local-serving with minimal new automobile trips. Further, the proposed project would adhere to City of Oakland SCAs that would require the preparation and implementation of a TDM Plan because the proposed project would generate more than 50 peak hour trips (see SCA TRA-3 in Attachment A to this document).

Bicycle Parking Requirements, Supply, and Demand

Chapter 17.117 of the Oakland Municipal Code requires long-term and short-term bicycle parking for new buildings. Long-term bicycle parking includes lockers or locked enclosures and short-term bicycle parking includes bicycle racks. The Code requires one long-term space for every four multi-family dwelling units and one short-term space for every 20 multi-family dwelling units. The Code requires one long-term space (with a minimum of one space for each 12,000 square feet of commercial floor area and one short-term space for each 5,000 square of commercial floor area.

Table TRA-8 presents the bicycle parking requirements for the proposed project. The proposed project would provide 288 bicycle parking spaces for long and 26 bicycle parking spaces short-term usage, which exceeds the minimum requirements for long-term spaces but does not meet the requirements for short-term spaces.

TABLE TRA-8
BICYCLE PARKING REQUIREMENTS

Land Use	Size[1]	Long-Term		Short-Term	
		Spaces per Unit	Spaces	Spaces per Unit	Spaces
Apartments	416 DU	1:4 DU	104	1:20 DU	21
Commercial	25.1 KSF	1:1,200 SF	2	1:5,000SF	5
Total Required Bicycle Spaces			106		26
Total Bicycle Parking Provided			312		
Bicycle Parking Surplus/Deficit			**+ 180**		

[1] DU = dwelling unit; KSF = 1,000 square feet
[2] Based on Oakland Municipal Code Sections 17.117.090 and 17.117.110

SOURCE: Fehr & Peers, 2016

Conclusion

The proposed project would not result in new or substantially more severe significant impacts to the project study intersections, either under the Existing Plus Project conditions or the Cumulative 2040 Plus Project conditions. Based on an examination of the analysis, findings, and conclusions of the LMSAP EIR and the Previous CEQA Documents, implementation of the proposed project would not increase the severity of significant impacts identified in the LMSAP EIR or the Previous CEQA Documents, nor would it result in new significant impacts related to transportation and circulation that were not identified in the LMSAP EIR or the Previous CEQA Documents, as summarized below.

The proposed project would contribute trips to the significant impacts previously identified in the LMSAP EIR. However, as noted above, the total cumulative development contemplated and approved within the LMSAP EIR is substantially larger than that which is currently proposed and under consideration within the Specific Plan Area. The impacts of the proposed project are considered equal to, or less severe than, those previously identified and disclosed in the LMSAP EIR.

The proposed project's potential impacts related to pedestrian, bicycle, transit, emergency access, and design and incompatible use considerations would be less than significant and thus consistent with that identified in the LMSAP EIR. The proposed project would not result in any other transportation related significant impacts.

Further, implementation of **SCA TRA-1, Construction Activity in the Public Right-of-Way**, **SCA TRA-2, Transportation Improvements**, and **SCA TRA-3, Transportation and Parking Demand Management** would be applicable to the proposed project and would ensure that transportation and circulation-related impacts associated with the proposed project would be less than significant (see Attachment A). No mitigation measures other than those already identified in the LMSAP EIR would be required. Overall, with implementation of applicable SCAs and LMSAP Mitigation Measures, the proposed project would not result in new or more severe significant impacts related to transportation than those already analyzed and disclosed in the LMSAP EIR.

14. Utilities and Service Systems

Would the project:	Equal or Less Severity of Impact Previously Identified in Previous CEQA Documents	Substantial Increase in Severity of Previously Identified Significant Impact in Previous CEQA Documents	New Significant Impact
a. Exceed wastewater treatment requirements of the San Francisco Bay Regional Water Quality Control Board; Require or result in construction of new storm water drainage facilities or expansion of existing facilities, construction of which could cause significant environmental effects; Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the providers' existing commitments and require or result in construction of new wastewater treatment facilities or expansion of existing facilities, construction of which could cause significant environmental effects;	☒	☐	☐
b. Exceed water supplies available to serve the project from existing entitlements and resources, and require or result in construction of water facilities or expansion of existing facilities, construction of which could cause significant environmental effects;	☒	☐	☐
c. Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs and require or result in construction of landfill facilities or expansion of existing facilities, construction of which could cause significant environmental effects; Violate applicable federal, state, and local statutes and regulations related to solid waste;	☒	☐	☐
d. Violate applicable federal, state and local statutes and regulations relating to energy standards; or Result in a determination by the energy provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the providers' existing commitments and require or result in construction of new energy facilities or expansion of existing facilities, construction of which could cause significant environmental effects.	☒	☐	☐

Previous CEQA Documents Findings

The Redevelopment Plan Amendments EIR and Housing Element Update EIR and its 2014 Addendum found less-than-significant impacts related to water, wastewater, or stormwater facilities, solid waste, and energy finding no mitigation measures were warranted but adhering to certain City of Oakland SCAs. The 1998 LUTE EIR identified significant effects regarding these topics and identified mitigation measures that reduced the effects to less than significant.

LMSAP Findings

The LMSAP EIR identified less-than-significant impacts to utilities and service systems, with the incorporation of City of Oakland SCAs in certain instances where new infrastructure would be required to be constructed. The LMSAP EIR determined that the capacity of existing service systems would meet increased service demand of development analyzed for the LMSAP; wastewater demand would not exceed wastewater treatment requirements or capacity, surface water runoff would not exceed the capacity of the storm drain system, water demand would not exceed available water supplies, and solid waste generated would not exceed landfill capacity.

Project Analysis

Water, Wastewater, and Stormwater (Criteria 14a and 14b)

As the proposed project is located in an already built out urban area, no new infrastructure would be required for the proposed project. Development of the proposed project may increase sewer demand; however, implementation of SCAs requiring stormwater control during and after construction would address any potential impacts on stormwater treatment and sanitary sewer as a result of the proposed project. Therefore, the proposed project would not result in any new or more substantial impacts on water and sewer services than those identified in the LMSAP EIR and, with the implementation of SCAs requiring stormwater control during and after construction, the impact on water and sewer services would remain less than significant.

Solid Waste Services (Criterion 14c)

As described in the LMSAP EIR, impacts associated with solid waste as a result of the proposed project would remain less than significant. Nonhazardous solid waste from the development of the proposed project would be ultimately hauled to the Altamont Landfill and Resource Facility, which has 74 percent capacity remaining and an estimated closure date of January 2025, and hence would have sufficient capacity to accept waste generated by development of the proposed project. The proposed project also would comply with City of Oakland SCAs pertaining to waste reduction and recycling. Therefore, the impact regarding solid waste services would remain less than significant as identified in the LMSAP EIR.

Energy (Criterion 14d)

The proposed project would result in less-than-significant impacts related to energy standards and use, and would comply with the standards of Title 24 of the California Code of Regulations. In addition, City of Oakland SCAs pertaining to compliance with the green building ordinance would require construction projects to incorporate energy-conserving design measures, which would ensure the proposed project's impacts on energy would remain less than significant.

Conclusion

Based on an examination of the analysis, findings, and conclusions of the 2014 LMSAP EIR and the Previous CEQA Documents, implementation of the proposed project would not substantially increase the severity of significant impacts identified in the LMSAP EIR or Previous CEQA

Documents, nor would it result in new significant impacts related to utilities and service systems that were not identified in the LMSAP EIR or the Previous CEQA Documents. The LMSAP EIR did not identify any mitigation measures related to utilities and service systems, and none would be required for the proposed project. Implementation of **SCA UTIL-1, Construction and Demolition Waste Reduction and Recycling, SCA UTIL-2, Underground Utilities, SCA UTIL-3, Recycling Collection and Storage Space, SCA UTIL-4, Green Building Requirements, SCA UTIL-5, Sanitary Sewer System, SCA UTIL-6, Storm Drain System, UTIL-7, Recycled Water, SCA HYD-1, Erosion and Sedimentation Control Plan for Construction, and SCA HYD-2, Site Design Measures to Reduce Stormwater Runoff** (see Attachment A), as well as compliance with Title 24 and CALGreen requirements would ensure that impacts to sewer capacity, stormwater drainage facilities, solid waste services, and energy would be less than significant.

VII. References

(All references cited below are available at the Oakland Bureau of Planning, Agency, 250 Frank Ogawa Plaza, Suite 3330, Oakland, California, unless specified otherwise.)

Lake Merritt Station Area Plan EIR

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Oakland Redevelopment Agency, Draft EIR for the Proposed Amendments to the Central District Urban Renewal Plan, March 2011.

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Metropolitan Transportation Commission and Association of Bay Area Governments, 2014. Plan Bay Area, Strategy for a Sustainable Region. Adopted July 18, 2014.

Oakland Planning Code

City of Oakland, 2014. City of Oakland Planning Code. CEDA: Planning and Zoning. http://www2.oaklandnet.com/oakca1/groups/ceda/documents/report/oak032032.pdf, accessed December 1, 2015.

Attachments

A. Standard Conditions of Approval and Mitigation Monitoring and Reporting Program
B. Criteria for Use of Addendum, Per CEQA Guidelines Sections 15162, 15164, and 15168
C. Project Consistency with Community Plan or Zoning, Per CEQA Guidelines Section 15183
D. Infill Performance Standards, Per CEQA Guidelines Section 15183.3

Appendices

A. Transportation Study (and LOS sheets)
B. W12 Mixed Use Project - Site Assessment for Heron Rookery

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ATTACHMENT A

Standard Conditions of Approval and Mitigation Monitoring and Reporting Program

This Standard Conditions of Approval ("SCAs") and Mitigation Monitoring and Reporting Program ("SCAMMRP") is based on the CEQA Analysis prepared for the W12 Mixed-Use Project.

This SCAMMRP is in compliance with Section 15097 of the CEQA Guidelines, which requires that the Lead Agency "adopt a program for monitoring or reporting on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects." The SCAMMRP lists mitigation measures recommended in the 2014 LMSAP EIR that apply to the proposed project. The SCAMMRP also lists other SCAs that apply to the proposed project, most of which were identified in the LMSAP EIR and some of which have been subsequently updated or otherwise modified by the City. Specifically, on July 22, 2015, the City of Oakland released a revised set of all City of Oakland SCAs, which largely still include SCAs adopted by the City in 2008, along with supplemental, modified, and new SCAs. SCAs are measures that would minimize potential adverse effects that could result from implementation of the proposed project, to ensure the conditions are implemented and monitored. The revised set of the City of Oakland SCAs includes new, modified, and reorganized SCAs; however, none of the revisions diminish or negate the ability of the SCAs considered "environmental protection measures" to minimize potential adverse environmental effects. As such, the SCAs identified in the SCAMMRP reflect the current SCAs only. Although the SCA numbers listed below may not correspond to the SCA numbers in the 2014 LMSAP EIR, all of the environmental topics and potential effects addressed by the SCAs in the LMSAP EIR are included in this SCAMMRP (as applicable to the W12 Project). This SCAMMRP also identifies the mitigation monitoring requirements for each mitigation measure and SCA.

This CEQA Analysis is also based on the analysis in the following Prior EIRs that apply to the W12 Mixed-Use Project: Oakland's 1998 General Plan Land Use and Transportation Element ("LUTE") EIR ("1998 LUTE EIR"), the 2010 General Plan Housing Element Update EIR and its 2014 Addendum, and the 2011 Central District Urban Renewal Plan Amendments EIR (or "Redevelopment Plan Amendments EIR"). None of the mitigation measures or SCAs from these EIRs are included in this SCAMMRP because they, or an updated or equally effective mitigation measure or SCA, is identified in the 2014 LMSAP EIR, its addenda, or in this CEQA Analysis for the W12 Mixed-Use Project.

To the extent that there is any inconsistency between any mitigation measures and/or SCAs, the more restrictive conditions shall govern; to the extent any mitigation measure and/or SCA identified in the CEQA Analysis were inadvertently omitted, they are automatically incorporated herein by reference.

- The first column of the SCAMMRP table identifies the mitigation measure or SCA applicable to that topic in the CEQA Analysis. While a mitigation measure or SCA can apply to more than one topic, it is listed in its entirety only under its primary topic (as indicated in the mitigation or SCA designator). The SCAs are numbered to specifically apply to the W12 Mixed-Use Project and this CEQA Analysis; however, the SCAs as presented in the City's *Standard Conditions of Approval and Uniformly Applied Development Standards* document[24] are included in parenthesis for cross-reference purposes.
- The second column identifies the monitoring schedule or timing applicable to the Project.
- The third column names the party responsible for monitoring the required action for the Project.

The Project Sponsor is responsible for compliance with any recommendations identified in City-approved technical reports, all applicable mitigation measures adopted, and with all SCAs set forth herein at its sole cost and expense, unless otherwise expressly provided in a specific mitigation measure or condition of approval, and subject to the review and approval of the City of Oakland. Overall monitoring and compliance with the mitigation measures will be the responsibility of the Bureau or Planning, Zoning Inspections Division. Prior to the issuance of a demolition, grading, and/or construction permit, the Project Sponsor shall pay the applicable mitigation and monitoring fee to the City in accordance with the City's Master Fee Schedule.

[24] Dated July 22, 2015, as amended.

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
General		
SCA GEN-1 (Standard Condition Approval 15) *Regulatory Permits and Authorizations from Other Agencies* Requirement: The project applicant shall obtain all necessary regulatory permits and authorizations from applicable resource/regulatory agencies including, but not limited to, the Regional Water Quality Control Board, Bay Area Air Quality Management District, Bay Conservation and Development Commission, California Department of Fish and Wildlife, U. S. Fish and Wildlife Service, and Army Corps of Engineers and shall comply with all requirements and conditions of the permits/authorizations. The project applicant shall submit evidence of the approved permits/authorizations to the City, along with evidence demonstrating compliance with any regulatory permit/authorization conditions of approval.	Prior to activity requiring permit/authorization from regulatory agency.	City of Oakland Bureau of Planning and Building
Aesthetics, Shadow, and Wind		
SCA AES-1 (Standard Condition of Approval 16) *Graffiti Control* a. During construction and operation of the project, the project applicant shall incorporate best management practices reasonably related to the control of graffiti and/or the mitigation of the impacts of graffiti. Such best management practices may include, without limitation: i. Installation and maintenance of landscaping to discourage defacement of and/or protect likely graffiti-attracting surfaces. ii. Installation and maintenance of lighting to protect likely graffiti-attracting surfaces. iii. Use of paint with anti-graffiti coating. iv. Incorporation of architectural or design elements or features to discourage graffiti defacement in accordance with the principles of Crime Prevention Through Environmental Design (CPTED). b. The project applicant shall remove graffiti by appropriate means within seventy-two (72) hours. Appropriate means include the following: i. Removal through scrubbing, washing, sanding, and/or scraping (or similar method) without damaging the surface and without discharging wash water or cleaning detergents into the City storm drain system. ii. Covering with new paint to match the color of the surrounding surface. iii. Replacing with new surfacing (with City permits if required).	Ongoing.	City of Oakland Bureau of Building Services Division, Zoning Inspections
SCA AES-2 (Standard Condition of Approval 17) *Landscape Plan* a. Landscape Plan Required The project applicant shall submit a final Landscape Plan for City review and approval that is consistent with the approved Landscape Plan. The Landscape Plan shall be included with the set of drawings submitted for the construction-related permit and shall comply with the landscape requirements of chapter 17.124 of the Planning Code. b. Landscape Installation The project applicant shall implement the approved Landscape Plan unless a bond, cash deposit, letter of credit, or other equivalent instrument acceptable to the Director of City Planning, is provided. The financial instrument shall equal the greater of $2,500 or the estimated cost of implementing the Landscape Plan based on a licensed contractor's bid.	a. Prior to approval of construction-related permit. b. Prior to building permit final. c. Ongoing	a. City of Oakland Bureau of Planning and Building b. City of Oakland Bureau of Building Services Division, Zoning Inspections c. City of Oakland Bureau of Building Services Division, Zoning Inspections

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Aesthetics, Shadow, and Wind (cont.)		
c. Landscape Maintenance All required planting shall be permanently maintained in good growing condition and, whenever necessary, replaced with new plant materials to ensure continued compliance with applicable landscaping requirements. The property owner shall be responsible for maintaining planting in adjacent public rights-of-way. All required fences, walls, and irrigation systems shall be permanently maintained in good condition and, whenever necessary, repaired or replaced.		
SCA AES-3 (Standard Condition of Approval 18): *Lighting* Proposed new exterior lighting fixtures shall be adequately shielded to a point below the light bulb and reflector and that prevent unnecessary glare onto adjacent properties.	Prior to building permit final.	City of Oakland Bureau of Building Services Division, Zoning Inspections
Also **SCA UTIL-2, Underground Utilities.** See *Utilities and Service Systems*, below.		
Air Quality		
SCA AIR-1 (Standard Condition of Approval 19) *Construction-Related Air Pollution Controls (Dust and Equipment Emissions)* The project applicant shall implement all of the following applicable air pollution control measures during construction of the project: a. Water all exposed surfaces of active construction areas at least twice daily (using reclaimed water if possible). Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever possible. b. Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer). c. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. d. Pave all roadways, driveways, sidewalks, etc., as soon as feasible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used. e. Enclose, cover, water twice daily or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.). f. Limit vehicle speeds on unpaved roads to 15 miles per hour. g. Idling times on all diesel-fueled commercial vehicles over 10,000 lbs. shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the California Code of Regulations). Clear signage to this effect shall be provided for construction workers at all access points. h. Idling times on all diesel-fueled off-road vehicles over 25 horsepower shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes and fleet operators must develop a written policy as required by Title 23, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations").	During construction.	City of Oakland Bureau of Planning and Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
Air Quality (cont.)		
i. All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.		
j. Portable equipment shall be powered by electricity if available. If electricity is not available, propane or natural gas shall be used if feasible. Diesel engines shall only be used if electricity is not available and it is not feasible to use propane or natural gas.		
k. All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.		
l. All excavation, grading, and demolition activities shall be suspended when average wind speeds exceed 20 mph.		
m. Install sandbags or other erosion control measures to prevent silt runoff to public roadways.		
n. Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for one month or more).		
o. Designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holidays and weekend periods when work may not be in progress.		
p. Install appropriate wind breaks (e.g., trees, fences) on the windward side(s) of actively disturbed areas of the construction site to minimize wind blown dust. Wind breaks must have a maximum 50 percent air porosity.		
q. Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.		
r. Activities such as excavation, grading, and other ground-disturbing construction activities shall be phased to minimize the amount of disturbed surface area at any one time.		
s. All trucks and equipment, including tires, shall be washed off prior to leaving the site.		
t. Site accesses to a distance of 100 feet from the paved road shall be treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel.		
u. All equipment to be used on the construction site and subject to the requirements of Title 13, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations") must meet emissions and performance requirements one year in advance of any fleet deadlines. Upon request by the City, the project applicant shall provide written documentation that fleet requirements have been met.		
v. Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., BAAQMD Regulation 8, Rule 3: Architectural Coatings).		
w. All construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technology for emission reductions of NOx and PM.		
x. Off-road heavy diesel engines shall meet the California Air Resources Board's most recent certification standard.		
y. Post a publicly-visible large on-site sign that includes the contact name and phone number for the project complaint manager responsible for responding to dust complaints and the telephone numbers of the City's Code Enforcement unit and the Bay Area Air Quality Management District. When contacted, the project complaint manager shall respond and take corrective action within 48 hours.		

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Air Quality (cont.)		
SCA AIR-2 (Standard Condition of Approval 20) *Exposure to Air Pollution (Toxic Air Contaminants)* ***a. Health Risk Reduction Measures*** Requirement: The project applicant shall incorporate appropriate measures into the project design in order to reduce the potential health risk due to exposure to toxic air contaminants. The project applicant shall choose one of the following methods: i. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment requirements to determine the health risk of exposure of project residents/occupants/users to air pollutants. The HRA shall be submitted to the City for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then health risk reduction measures are not required. If the HRA concludes that the health risk exceeds acceptable levels, health risk reduction measures shall be identified to reduce the health risk to acceptable levels. Identified risk reduction measures shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City. - or - ii. The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City: • Installation of air filtration to reduce cancer risks and Particulate Matter (PM) exposure for residents and other sensitive populations in the project that are in close proximity to sources of air pollution. Air filter devices shall be rated MERV-13 or higher. As part of implementing this measure, an ongoing maintenance plan for the building's HVAC air filtration system shall be required. • Where appropriate, install passive electrostatic filtering systems, especially those with low air velocities (i.e., 1 mph). • Phasing of residential developments when proposed within 500 feet of freeways such that homes nearest the freeway are built last, if feasible. • The project shall be designed to locate sensitive receptors as far away as feasible from the source(s) of air pollution. Operable windows, balconies, and building air intakes shall be located as far away from these sources as feasible. If near a distribution center, residents shall be located as far away as feasible from a loading dock or where trucks concentrate to deliver goods. • Sensitive receptors shall be located on the upper floors of buildings, if feasible. • Planting trees and/or vegetation between sensitive receptors and pollution source, if feasible. Trees that are best suited to trapping PM shall be planted, including one or more of the following: Pine (*Pinus nigra* var. *maritima*), Cypress (*X Cupressocyparis leylandii*), Hybrid popular (*Populus deltoids X trichocarpa*), and Redwood *(Sequoia sempervirens*). • Sensitive receptors shall be located as far away from truck activity areas, such as loading docks and delivery areas, as feasible. • Existing and new diesel generators shall meet CARB's Tier 4 emission standards, if feasible.	a. Prior to approval of construction-related permit. b. ongoing	a. City of Oakland Bureau of Planning and Building; City of Oakland Bureau of Building Services Division, Zoning Inspections b. City of Oakland Bureau of Building Services Division, Zoning Inspections

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Air Quality (cont.)		
• Emissions from diesel trucks shall be reduced through implementing the following measures, if feasible: – Installing electrical hook-ups for diesel trucks at loading docks. – Requiring trucks to use Transportation Refrigeration Units (TRU) that meet Tier 4 emission standards. – Requiring truck-intensive projects to use advanced exhaust technology (e.g., hybrid) or alternative fuels. – Prohibiting trucks from idling for more than two minutes. – Establishing truck routes to avoid sensitive receptors in the project. A truck route program, along with truck calming, parking, and delivery restrictions, shall be implemented. ***b. Maintenance of Health Risk Reduction Measures*** Requirement: The project applicant shall maintain, repair, and/or replace installed health risk reduction measures, including but not limited to the HVAC system (if applicable), on an ongoing and as-needed basis. Prior to occupancy, the project applicant shall prepare and then distribute to the building manager/operator an operation and maintenance manual for the HVAC system and filter including the maintenance and replacement schedule for the filter.		
SCA AIR-3 (Standard Condition of Approval 21) *Stationary Sources of Air Pollution (Toxic Air Contaminants)* The project applicant shall incorporate appropriate measures into the project design in order to reduce the potential health risk due to on-site stationary sources of toxic air contaminants. The project applicant shall choose one of the following methods: a. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment requirements to determine the health risk associated with proposed stationary sources of pollution in the project. The HRA shall be submitted to the City for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then health risk reduction measures are not required. If the HRA concludes the health risk exceeds acceptable levels, health risk reduction measures shall be identified to reduce the health risk to acceptable levels. Identified risk reduction measures shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City. - or – b. The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City: i. Installation of non-diesel fueled generators, if feasible, or; ii. Installation of diesel generators with an EPA-certified Tier 4 engine or engines that are retrofitted with a CARB Level 3 Verified Diesel Emissions Control Strategy, if feasible.	Prior to approval of construction-related permit.	City of Oakland Bureau of Planning and Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Biological Resources		
SCA BIO-1 (Standard Condition of Approval 26): *Tree Removal During Bird Nesting Season* To the extent feasible, removal of any tree and/or other vegetation suitable for nesting of birds shall not occur during the bird breeding season of February 1 to August 15 (or during December 15 to August 15 for trees located in or near marsh, wetland, or aquatic habitats). If tree removal must occur during the bird breeding season, all trees to be removed shall be surveyed by a qualified biologist to verify the presence or absence of nesting raptors or other birds. Pre-removal surveys shall be conducted within 15 days prior to the start of work and shall be submitted to the City for review and approval. If the survey indicates the potential presence of nesting raptors or other birds, the biologist shall determine an appropriately sized buffer around the nest in which no work will be allowed until the young have successfully fledged. The size of the nest buffer will be determined by the biologist in consultation with the California Department of Fish and Wildlife, and will be based to a large extent on the nesting species and its sensitivity to disturbance. In general, buffer sizes of 200 feet for raptors and 50 feet for other birds should suffice to prevent disturbance to birds nesting in the urban environment, but these buffers may be increased or decreased, as appropriate, depending on the bird species and the level of disturbance anticipated near the nest.	Prior to removal of trees.	City of Oakland Public Works Department, Tree Division; Bureau of Buildings
SCA BIO-2 (Standard Condition of Approval 27): *Tree Permit* ***a. Tree Permit Required*** Pursuant to the City's Tree Protection Ordinance (OMC chapter 12.36), the project applicant shall obtain a tree permit and abide by the conditions of that permit. ***b. Tree Protection During Construction*** <u>Requirement</u>: Adequate protection shall be provided during the construction period for any trees which are to remain standing, including the following, plus any recommendations of an arborist: i. Before the start of any clearing, excavation, construction, or other work on the site, every protected tree deemed to be potentially endangered by said site work shall be securely fenced off at a distance from the base of the tree to be determined by the project's consulting arborist. Such fences shall remain in place for duration of all such work. All trees to be removed shall be clearly marked. A scheme shall be established for the removal and disposal of logs, brush, earth and other debris which will avoid injury to any protected tree. ii. Where proposed development or other site work is to encroach upon the protected perimeter of any protected tree, special measures shall be incorporated to allow the roots to breathe and obtain water and nutrients. Any excavation, cutting, filing, or compaction of the existing ground surface within the protected perimeter shall be minimized. No change in existing ground level shall occur within a distance to be determined by the project's consulting arborist from the base of any protected tree at any time. No burning or use of equipment with an open flame shall occur near or within the protected perimeter of any protected tree. iii. No storage or dumping of oil, gas, chemicals, or other substances that may be harmful to trees shall occur within the distance to be determined by the project's consulting arborist from the base of any protected trees, or any other location on the site from which such substances might enter the protected perimeter. No heavy construction equipment or construction materials shall be operated or stored within a distance from the base of any protected trees to be determined by the project's consulting arborist. Wires, ropes, or other devices shall not be attached to any protected tree, except as needed for support of the tree. No sign, other than a tag showing the botanical classification, shall be attached to any protected tree.	a. Prior to approval of construction-related permit b. During construction.	a. City of Oakland Public Works Department, Tree Division; Bureau of Buildings b. City of Oakland Public Works Department, Tree Division; Bureau of Buildings

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Biological Resources (cont.)		
iv. Periodically during construction, the leaves of protected trees shall be thoroughly sprayed with water to prevent buildup of dust and other pollution that would inhibit leaf transpiration. v. If any damage to a protected tree should occur during or as a result of work on the site, the project applicant shall immediately notify the Public Works Department and the project's consulting arborist shall make a recommendation to the City Tree Reviewer as to whether the damaged tree can be preserved. If, in the professional opinion of the Tree Reviewer, such tree cannot be preserved in a healthy state, the Tree Reviewer shall require replacement of any tree removed with another tree or trees on the same site deemed adequate by the Tree Reviewer to compensate for the loss of the tree that is removed. vi. All debris created as a result of any tree removal work shall be removed by the project applicant from the property within two weeks of debris creation, and such debris shall be properly disposed of by the project applicant in accordance with all applicable laws, ordinances, and regulations.		
Recommendation BIO-1: While not required to address a CEQA impact, the following will be included as additional implementation details for **SCA BIO-1**. For all projects that propose removal of a tree[25] that is associated with a heron rookery, the project applicant shall take the following additional actions, which will require City review and approval, to implement **SCA BIO-1**: **1) Prior to tree removal:** a. *Field Survey*: The applicant shall submit the results of a field survey conducted by a qualified biologist to determine if the heron rookery shall be deemed active. An historical heron rookery must be assumed to be active unless a qualified biologist visits the rookery three times between March and July, with at least one month between visits, and does not observe any herons engaging in nesting behavior (e.g., territorial displays, courtship, nest building, food deliveries to the nest) at any time. If the rookery is deemed inactive, no further steps are necessary. If the rookery is deemed active, the applicant shall proceed with steps 1(b) through 1 (f). b. *Technical Memorandum*: The project applicant shall submit a Technical Memorandum drafted by a qualified biologist that characterizes the rookery by documenting individual tree size (i.e., diameter at breast height, vertical height); canopy width, height and depth (sq ft); distance between tree trunks or canopies, as appropriate; number of nests per tree canopy (sq ft), and overall characteristics of the existing rookery site (such as size, number of trees in rookery, noise level, substrate below trees, adjacent habitat/ building types, observations of predators or prey, etc.). Ideally, the survey is conducted during the breeding season, but it can be conducted during the non-breeding season. c. *Identification of Replacement Site*: The project applicant, in coordination with the City of Oakland and a qualified biologist, shall identify a replacement rookery site located as near as possible to the existing rookery (e.g., Lake Merritt, Oakland shoreline, estuary, parks). The applicant must demonstrate how the replacement rookery site meets the following requirements:	Prior to removal of trees.	City of Oakland Public Works Department, Tree Division; Bureau of Buildings

[25] "Tree removal" means the destruction of any tree by cutting, regrading, girdling, interfering with the water supply, or applying chemicals, or distortion of the tree's visual proportions by topping; or "Topping", which means elimination of the upper twenty-five percent or more of a tree's trunk(s) or main leader(s).

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
Biological Resources (cont.)		
i. Support an equal or greater number of nests as the existing rookery ii. Be composed of trees/ shrubs that are the same or similar (in foliage cover, canopy density, and branching structure) to those which are documented to have supported a successful rookery for BCNH and SNEG; or be a site in which such trees/ shrubs (immature or mature) can be planted in order to develop a rookery within the time frame required by the SCA (see item 1(f) below). iii. Be within 3 miles of foraging habitat iv. Be in an area of equal or less human disturbance than the existing rookery v. Not conflict with other uses in that area (e.g., presence of dogs or other domestic animals, human activity that could either cause heron nest abandonment, scheduled redevelopment projects, or nuisance problems associated with heron activity affecting humans). d. *Implementation Plan*: The applicant, in coordination with the City of Oakland and a qualified biologist, shall submit an Implementation Plan describing any enhancements to the replacement rookery site, including construction plans, landscaping plans or plant lists; detailed methods for using social attractants to attract herons to the site (e.g., number of decoy birds and nests, duration of playback recordings, etc.); and a timeline for implementation. e. *Monitoring Program*: The project applicant, in coordination with a qualified Biologist, shall submit a Monitoring Program for monitoring birds and vegetation in the replacement rookery. The Program shall include a monitoring protocol; performance criteria; and strategies for adaptive management should performance criteria not be met. Colonial nesting birds are known to take several years to reach the point of self-recruitment to a new rookery site (i.e. when social attractants are no longer needed to attract additional birds to the site), so a monitoring period of at least three heron breeding seasons is recommended. The Monitoring Program can include a provision that monitoring may be suspended if performance criteria are met within the first or second breeding season. f. *Implementation*: The project applicant, in coordination with the City of Oakland, and/or other entities, shall complete installation of any enhancements, including vegetation, and social attractants at the replacement rookery site. If new vegetation is required for rookery enhancement, it must be fully performing by the third year of monitoring. **2) Tree removal:** a. If the rookery is deemed active, tree removal can only occur during the non-nesting season, defined as October 1 through January 31. **3) Following tree removal:** a. Following tree removal and prior to the beginning of nesting season (February 1), social attractants will be activated to lure herons to the replacement rookery site. b. The Monitoring Plan will be implemented during the first nesting season following tree removal and will be implemented for at least three breeding seasons, unless otherwise stated in the approved Monitoring Plan.		

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Cultural Resources		
SCA CUL-1 (Standard Condition of Approval 29): *Archaeological and Paleontological Resources – Discovery During Construction* Requirement: Pursuant to CEQA Guidelines section 15064.5(f), in the event that any historic or prehistoric subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and the project applicant shall notify the City and consult with a qualified archaeologist or paleontologist, as applicable, to assess the significance of the find. In the case of discovery of paleontological resources, the assessment shall be done in accordance with the Society of Vertebrate Paleontology standards. If any find is determined to be significant, appropriate avoidance measures recommended by the consultant and approved by the City must be followed unless avoidance is determined unnecessary or infeasible by the City. Feasibility of avoidance shall be determined with consideration of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery, excavation) shall be instituted. Work may proceed on other parts of the project site while measures for the cultural resources are implemented. In the event of data recovery of archaeological resources, the project applicant shall submit an Archaeological Research Design and Treatment Plan (ARDTP) prepared by a qualified archaeologist for review and approval by the City. The ARDTP is required to identify how the proposed data recovery program would preserve the significant information the archaeological resource is expected to contain. The ARDTP shall identify the scientific/historic research questions applicable to the expected resource, the data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. The ARDTP shall include the analysis and specify the curation and storage methods. Data recovery, in general, shall be limited to the portions of the archaeological resource that could be impacted by the proposed project. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practicable. Because the intent of the ARDTP is to save as much of the archaeological resource as possible, including moving the resource, if feasible, preparation and implementation of the ARDTP would reduce the potential adverse impact to less than significant. The project applicant shall implement the ARDTP at his/her expense. In the event of excavation of paleontological resources, the project applicant shall submit an excavation plan prepared by a qualified paleontologist to the City for review and approval. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and/or a report prepared by a qualified paleontologist, as appropriate, according to current professional standards and at the expense of the project applicant.	During construction.	City of Oakland Bureau of Building Services Division, Zoning Inspections
SCA CUL-2 (Standard Condition of Approval 30): *Archaeologically Sensitive Areas – Pre-Construction Measures* Requirement: The project applicant shall implement either Provision A (Intensive Pre-Construction Study) or Provision B (Construction ALERT Sheet) concerning archaeological resources. ***Provision A: Intensive Pre-Construction Study.*** The project applicant shall retain a qualified archaeologist to conduct a site-specific, intensive archaeological resources study for review and approval by the City prior to soil-disturbing activities occurring on the project site. The purpose of the site-specific, intensive archaeological resources study is to identify early the potential presence of history-period archaeological resources on the project site. At a minimum, the study shall include: a. Subsurface presence/absence studies of the project site. Field studies may include, but are not limited to, auguring and other common methods used to identify the presence of archaeological resources. b. A report disseminating the results of this research. c. Recommendations for any additional measures that could be necessary to mitigate any adverse impacts to recorded and/or inadvertently discovered cultural resources.	Prior to approval of construction-related permit; during construction.	City of Oakland Bureau of Building Services Division, Zoning Inspections

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
Cultural Resources (cont.)		
If the results of the study indicate a high potential presence of historic-period archaeological resources on the project site, or a potential resource is discovered, the project applicant shall hire a qualified archaeologist to monitor any ground disturbing activities on the project site during construction and prepare an ALERT sheet pursuant to Provision B below that details what could potentially be found at the project site. Archaeological monitoring would include briefing construction personnel about the type of artifacts that may be present (as referenced in the ALERT sheet, required per Provision B below) and the procedures to follow if any artifacts are encountered, field recording and sampling in accordance with the Secretary of Interior's Standards and Guidelines for Archaeological Documentation, notifying the appropriate officials if human remains or cultural resources are discovered, and preparing a report to document negative findings after construction is completed if no archaeological resources are discovered during construction. ***Provision B: Construction ALERT Sheet.*** The project applicant shall prepare a construction "ALERT" sheet developed by a qualified archaeologist for review and approval by the City prior to soil-disturbing activities occurring on the project site. The ALERT sheet shall contain, at a minimum, visuals that depict each type of artifact that could be encountered on the project site. Training by the qualified archaeologist shall be provided to the project's prime contractor, any project subcontractor firms (including demolition, excavation, grading, foundation, and pile driving), and utility firms involved in soil- disturbing activities within the project site. The ALERT sheet shall state, in addition to the basic archaeological resource protection measures contained in other standard conditions of approval, all work must stop and the City's Environmental Review Officer contacted in the event of discovery of the following cultural materials: concentrations of shellfish remains; evidence of fire (ashes, charcoal, burnt earth, fire-cracked rocks); concentrations of bones; recognizable Native American artifacts (arrowheads, shell beads, stone mortars [bowls], humanly shaped rock); building foundation remains; trash pits, privies (outhouse holes); floor remains; wells; concentrations of bottles, broken dishes, shoes, buttons, cut animal bones, hardware, household items, barrels, etc.; thick layers of burned building debris (charcoal, nails, fused glass, burned plaster, burned dishes); wood structural remains (building, ship, wharf); clay roof/floor tiles; stone walls or footings; or gravestones. Prior to any soil-disturbing activities, each contractor shall be responsible for ensuring that the ALERT sheet is circulated to all field personnel, including machine operators, field crew, pile drivers, and supervisory personnel. The ALERT sheet shall also be posted in a visible location at the project site.		
SCA CUL-3 (Standard Condition of Approval SCA 31): *Human Remains – Discovery During Construction* Requirement: Pursuant to CEQA Guidelines section 15064.5(e)(1), in the event that human skeletal remains are uncovered at the project site during construction activities, all work shall immediately halt and the project applicant shall notify the City and the Alameda County Coroner. If the County Coroner determines that an investigation of the cause of death is required or that the remains are Native American, all work shall cease within 50 feet of the remains until appropriate arrangements are made. In the event that the remains are Native American, the City shall contact the California Native American Heritage Commission (NAHC), pursuant to subdivision (c) of section 7050.5 of the California Health and Safety Code. If the agencies determine that avoidance is not feasible, then an alternative plan shall be prepared with specific steps and timeframe required to resume construction activities. Monitoring, data recovery, determination of significance, and avoidance measures (if applicable) shall be completed expeditiously and at the expense of the project applicant.	During construction.	City of Oakland Bureau of Building Services Division, Zoning Inspections

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Geology, Soils, and Geohazards		
SCA GEO-1 (Standard Condition of Approval 33): *Construction-Related Permit(s)* Requirement: The project applicant shall obtain all required construction-related permits/approvals from the City. The project shall comply with all standards, requirements and conditions contained in construction-related codes, including but not limited to the Oakland Building Code and the Oakland Grading Regulations, to ensure structural integrity and safe construction.	Prior to approval of construction-related permit.	City of Oakland Bureau of Building Services Division, Zoning Inspections
SCA GEO-2 (Standard Condition of Approval 34): *Soils Report* Requirement: The project applicant shall submit a soils report prepared by a registered geotechnical engineer for City review and approval. The soils report shall contain, at a minimum, field test results and observations regarding the nature, distribution and strength of existing soils, and recommendations for appropriate grading practices and project design. The project applicant shall implement the recommendations contained in the approved report during project design and construction.	Prior to approval of construction-related permit.	City of Oakland Bureau of Building Services Division, Zoning Inspections
See **SCA HYD-1, Erosion and Sedimentation Control Plan for Construction**, See *Hydrology and Water Quality*, below.		
Greenhouse Gases and Climate Change		
See **SCA AES-2, Landscape Plan**. See *Aesthetics, Wind, and Shadow*, above.		
See **SCA AIR-1, Construction-Related Air Pollution Controls (Dust and Equipment Emissions)**. See *Air Quality,* above.		
See **SCA UTIL-1, Construction and Demolition Waste Reduction and Recycling**. See *Utilities and Service Systems*, below.		
See **SCA UTIL-4, Green Building Requirements**. See *Utilities and Service Systems*, below.		
Hazards and Hazardous Materials		
SCA HAZ-1 (Standard Condition of Approval 39): *Hazards Materials Related to Construction* Requirement: The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential negative effects on groundwater, soils, and human health. These shall include, at a minimum, the following: a. Follow manufacture's recommendations for use, storage, and disposal of chemical products used in construction; b. Avoid overtopping construction equipment fuel gas tanks; c. During routine maintenance of construction equipment, properly contain and remove grease and oils; d. Properly dispose of discarded containers of fuels and other chemicals; e. Implement lead-safe work practices and comply with all local, regional, state, and federal requirements concerning lead (for more information refer to the Alameda County Lead Poisoning Prevention Program); and f. If soil, groundwater, or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered), the project applicant shall cease work in the vicinity of the suspect material, the area shall be secured as necessary, and the applicant shall take all appropriate measures to protect human health and the environment. Appropriate measures shall include notifying the City and applicable regulatory agency(ies) and implementation of the actions described in the City's Standard Conditions of Approval, as necessary, to identify the nature and extent of contamination. Work shall not resume in the area(s) affected until the measures have been implemented under the oversight of the City or regulatory agency, as appropriate.	During construction.	City of Oakland Bureau of Building Services Division, Zoning Inspections

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Hazards and Hazardous Materials (cont.)		
SCA HAZ-2 (Standard Condition of Approval 40): *Site Contamination* ***a. Environmental Site Assessment Required*** Requirement: The project applicant shall submit a Phase I Environmental Site Assessment report, and Phase II Environmental Site Assessment report if warranted by the Phase I report, for the project site for review and approval by the City. The report(s) shall be prepared by a qualified environmental assessment professional and include recommendations for remedial action, as appropriate, for hazardous materials. The project applicant shall implement the approved recommendations and submit to the City evidence of approval for any proposed remedial action and required clearances by the applicable local, state, or federal regulatory agency. ***b. Health and Safety Plan Required*** Requirement: The project applicant shall submit a Health and Safety Plan for the review and approval by the City in order to protect project construction workers from risks associated with hazardous materials. The project applicant shall implement the approved Plan. ***c. Best Management Practices (BMPs) Required for Contaminated Sites*** Requirement: The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential soil and groundwater hazards. These shall include the following: i. Soil generated by construction activities shall be stockpiled on-site in a secure and safe manner. All contaminated soils determined to be hazardous or non-hazardous waste must be adequately profiled (sampled) prior to acceptable reuse or disposal at an appropriate off-site facility. Specific sampling and handling and transport procedures for reuse or disposal shall be in accordance with applicable local, state, and federal requirements. ii. Groundwater pumped from the subsurface shall be contained on-site in a secure and safe manner, prior to treatment and disposal, to ensure environmental and health issues are resolved pursuant to applicable laws and policies. Engineering controls shall be utilized, which include impermeable barriers to prohibit groundwater and vapor intrusion into the building.	a. Prior to approval of construction-related permit b. Prior to approval of construction-related permit c. During Construction	a. Oakland Fire Department b. City of Oakland Bureau of Building Services Division, Zoning Inspections c. City of Oakland Bureau of Building Services Division, Zoning Inspections
See **SCA TRA-1, Construction Activity in the Public Right-of-Way**. See *Transportation and Traffic*, below.		
Hydrology and Water Quality		
SCA HYD-1 (Standard Condition of Approval 45): *Erosion and Sedimentation Control Plan for Construction* ***a. Erosion and Sedimentation Control Plan Required*** Requirement: The project applicant shall submit an Erosion and Sedimentation Control Plan to the City for review and approval. The Erosion and Sedimentation Control Plan shall include all necessary measures to be taken to prevent excessive stormwater runoff or carrying by stormwater runoff of solid materials on to lands of adjacent property owners, public streets, or to creeks as a result of conditions created by grading and/or construction operations. The Plan shall include, but not be limited to, such measures as short-term erosion control planting, waterproof slope covering, check dams, interceptor ditches, benches, storm drains, dissipation structures, diversion dikes, retarding berms and barriers, devices to trap, store and filter out sediment, and stormwater retention basins. Off-site work by the project applicant may be necessary. The project applicant shall obtain permission or easements necessary for off-site work. There shall be a clear notation that the plan is subject to	a. Prior to approval of construction-related permit. b. During construction.	City of Oakland Bureau of Building Services Division, Zoning Inspections

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Hydrology and Water Quality (cont.)		
changes as changing conditions occur. Calculations of anticipated stormwater runoff and sediment volumes shall be included, if required by the City. The Plan shall specify that, after construction is complete, the project applicant shall ensure that the storm drain system shall be inspected and that the project applicant shall clear the system of any debris or sediment. ***b. Erosion and Sedimentation Control During Construction*** Requirement: The project applicant shall implement the approved Erosion and Sedimentation Control Plan. No grading shall occur during the wet weather season (October 15 through April 15) unless specifically authorized in writing by the Bureau of Building.		
SCA HYD-2 (Standard Condition of Approval 48): *Site Design Measures to Reduce Stormwater Runoff* Pursuant to Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES), the project applicant is encouraged to incorporate appropriate site design measures into the project to reduce the amount of stormwater runoff. These measures may include, but are not limited to, the following: a. Minimize impervious surfaces, especially directly connected impervious surfaces and surface parking areas; b. Utilize permeable paving in place of impervious paving where appropriate; c. Cluster structures; d. Direct roof runoff to vegetated areas; e. Preserve quality open space; and f. Establish vegetated buffer areas.	Ongoing.	N/A
SCA HYD-3 (Standard Condition of Approval 50): *NPDES C.3 Stormwater Requirements for Regulated Projects* ***a. Post-Construction Stormwater Management Plan Required*** Requirement: The project applicant shall comply with the requirements of Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES). The project applicant shall submit a Post-Construction Stormwater Management Plan to the City for review and approval with the project drawings submitted for site improvements, and shall implement the approved Plan during construction. The Post-Construction Stormwater Management Plan shall include and identify the following: i. Location and size of new and replaced impervious surface; ii. Directional surface flow of stormwater runoff; iii. Location of proposed on-site storm drain lines; iv. Site design measures to reduce the amount of impervious surface area; v. Source control measures to limit stormwater pollution; vi. Stormwater treatment measures to remove pollutants from stormwater runoff, including the method used to hydraulically size the treatment measures; and vii. Hydromodification management measures, if required by Provision C.3, so that post-project stormwater runoff flow and duration match pre-project runoff.	a. Prior to approval of construction-related permit. b. Prior to building permit final.	a. City of Oakland Bureau of Building Services Division, Zoning Inspections; City of Oakland Bureau of Planning and Building b. City of Oakland Bureau of Building Services Division, Zoning Inspections

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Hydrology and Water Quality (cont.)		
b. Maintenance Agreement Required Requirement: The project applicant shall enter into a maintenance agreement with the City, based on the Standard City of Oakland Stormwater Treatment Measures Maintenance Agreement, in accordance with Provision C.3, which provides, in part, for the following: i. The project applicant accepting responsibility for the adequate installation/construction, operation, maintenance, inspection, and reporting of any on-site stormwater treatment measures being incorporated into the project until the responsibility is legally transferred to another entity; and ii. Legal access to the on-site stormwater treatment measures for representatives of the City, the local vector control district, and staff of the Regional Water Quality Control Board, San Francisco Region, for the purpose of verifying the implementation, operation, and maintenance of the on-site stormwater treatment measures and to take corrective action if necessary. The maintenance agreement shall be recorded at the County Recorder's Office at the applicant's expense.		
Also **SCA GEO-1, Construction-Related Permit(s).** See *Geology, Soils, and Geohazards*, above.		
Also **SCA GEO-2, Soils Report.** See *Geology, Soils, and Geohazards*, above.		
Also **SCA UTIL-6, Storm Drain System**. See *Utilities and Service Systems*, below.		
Noise		
SCA NOI-1 (Standard Condition of Approval 58) *Construction Days/Hours* Requirement: The project applicant shall comply with the following restrictions concerning construction days and hours: a. Construction activities are limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday, except that pier drilling and/or other extreme noise generating activities greater than 90 dBA shall be limited to between 8:00 a.m. and 4:00 p.m. b. Construction activities are limited to between 9:00 a.m. and 5:00 p.m. on Saturday. In residential zones and within 300 feet of a residential zone, construction activities are allowed from 9:00 a.m. to 5:00 p.m. only within the interior of the building with the doors and windows closed. No pier drilling or other extreme noise generating activities greater than 90 dBA are allowed on Saturday. c. No construction is allowed on Sunday or federal holidays. Construction activities include, but are not limited to, truck idling, moving equipment (including trucks, elevators, etc.) or materials, deliveries, and construction meetings held on-site in a non- enclosed area. Any construction activity proposed outside of the above days and hours for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case-by-case basis by the City, with criteria including the urgency/emergency nature of the work, the proximity of residential or other sensitive uses, and a consideration of nearby residents'/occupants' preferences. The project applicant shall notify property owners and occupants located within 300 feet at least 14 calendar days prior to construction activity proposed outside of the above days/hours. When submitting a request to the City to allow construction activity outside of the above days/hours, the project applicant shall submit information concerning the type and duration of proposed construction activity and the draft public notice for City review and approval prior to distribution of the public notice.	During construction.	City of Oakland Bureau of Building Services Division, Zoning Inspections

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Noise (cont.)		
SCA NOI-2: (Standard Condition of Approval 59) *Construction Noise* Requirement: The project applicant shall implement noise reduction measures to reduce noise impacts due to construction. Noise reduction measures include, but are not limited to, the following**:** a. Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds) wherever feasible. b. Except as provided herein, impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used, if such jackets are commercially available, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures. c. Applicant shall use temporary power poles instead of generators where feasible. d. Stationary noise sources shall be located as far from adjacent properties as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or use other measures as determined by the City to provide equivalent noise reduction. e. The noisiest phases of construction shall be limited to less than 10 days at a time. Exceptions may be allowed if the City determines an extension is necessary and all available noise reduction controls are implemented.	During construction.	City of Oakland Bureau of Building Services Division, Zoning Inspections
SCA NOI-3 (Standard Condition of Approval 60) *Extreme Construction Noise* ***a. Construction Noise Management Plan Required*** Requirement: Prior to any extreme noise generating construction activities (e.g., pier drilling, pile driving and other activities generating greater than 90dBA), the project applicant shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for City review and approval that contains a set of site-specific noise attenuation measures to further reduce construction impacts associated with extreme noise generating activities. The project applicant shall implement the approved Plan during construction. Potential attenuation measures include, but are not limited to, the following: i. Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings; ii. Implement "quiet" pile driving technology (such as pre-drilling of piles, the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions; iii. Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site; iv. Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by the use of sound blankets for example and implement such measure if such measures are feasible and would noticeably reduce noise impacts; and v. Monitor the effectiveness of noise attenuation measures by taking noise measurements.	a. Prior to approval of construction-related permit. b. During construction.	City of Oakland Bureau of Building Services Division, Zoning Inspections

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Noise (cont.)		
b. Public Notification Required Requirement: The project applicant shall notify property owners and occupants located within 300 feet of the construction activities at least 14 calendar days prior to commencing extreme noise generating activities. Prior to providing the notice, the project applicant shall submit to the City for review and approval the proposed type and duration of extreme noise generating activities and the proposed public notice. The public notice shall provide the estimated start and end dates of the extreme noise generating activities and describe noise attenuation measures to be implemented.		
SCA NOI-4 (Standard Condition of Approval 61) *Project-Specific Construction Noise Reduction Measures* Requirement: The project applicant shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for City review and approval that contains a set of site- specific noise attenuation measures to further reduce construction noise impacts. The project applicant shall implement the approved Plan during construction	Prior to approval of construction-related permit.	City of Oakland Bureau of Building Services Division, Zoning Inspections
SCA NOI-5 (Standard Condition of Approval 62) *Construction Noise Complaints* Requirement: The project applicant shall submit to the City for review and approval a set of procedures for responding to and tracking complaints received pertaining to construction noise, and shall implement the procedures during construction. At a minimum, the procedures shall include: a. Designation of an on-site construction complaint and enforcement manager for the project; b. A large on-site sign near the public right-of-way containing permitted construction days/hours, complaint procedures, and phone numbers for the project complaint manager and City Code Enforcement unit; c. Protocols for receiving, responding to, and tracking received complaints; and d. Maintenance of a complaint log that records received complaints and how complaints were addressed, which shall be submitted to the City for review upon the City's request.	Prior to approval of construction-related permit.	City of Oakland Bureau of Building Services Division, Zoning Inspections
SCA NOI-6 (Standard Condition of Approval 63) *Exposure to Community Noise* Requirement: The project applicant shall submit a Noise Reduction Plan prepared by a qualified acoustical engineer for City review and approval that contains noise reduction measures (e.g., sound-rated window, wall, and door assemblies) to achieve an acceptable interior noise level in accordance with the land use compatibility guidelines of the Noise Element of the Oakland General Plan. The applicant shall implement the approved Plan during construction. To the maximum extent practicable, interior noise levels shall not exceed the following: a. 45 dBA: Residential activities, civic activities, hotels b. 50 dBA: Administrative offices; group assembly activities c. 55 dBA: Commercial activities d. 65 dBA: Industrial activities	Prior to approval of construction-related permit.	City of Oakland Bureau of Building Services Division, Zoning Inspections
SCA NOI-7 (Standard Condition of Approval 64) *Operational Noise* Requirement: Noise levels from the project site after completion of the project (i.e., during project operation) shall comply with the performance standards of chapter 17.120 of the Oakland Planning Code and chapter 8.18 of the Oakland Municipal Code. If noise levels exceed these standards, the activity causing the noise shall be abated until appropriate noise reduction measures have been installed and compliance verified by the City.	Ongoing.	City of Oakland Bureau of Building Services Division, Zoning Inspections

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Noise (cont.)		
SCA NOI-8 (Standard Condition of Approval 66) *Vibration Impacts on Adjacent Historic Structures or Vibration-Sensitive Activities* *Requirement*: The project applicant shall submit a Vibration Analysis prepared by an acoustical and/or structural engineer or other appropriate qualified professional for City review and approval that establishes pre-construction baseline conditions and threshold levels of vibration that could damage the structure and/or substantially interfere with activities located at 260 13th Street and 274 14th Street. The Vibration Analysis shall identify design means and methods of construction that shall be utilized in order to not exceed the thresholds. The applicant shall implement the recommendations during construction.	Prior to construction.	City of Oakland Bureau of Building Services Division, Zoning Inspections
Transportation and Circulation		
SCA TRA-1 (Standard Condition of Approval 68) *Construction Activity in the Public Right-of-Way* ***a. Obstruction Permit Required*** Requirement: The project applicant shall obtain an obstruction permit from the City prior to placing any temporary construction-related obstruction in the public right-of-way, including City streets and sidewalks. ***b. Traffic Control Plan Required*** Requirement: In the event of obstructions to vehicle or bicycle travel lanes, the project applicant shall submit a Traffic Control Plan to the City for review and approval prior to obtaining an obstruction permit. The project applicant shall submit evidence of City approval of the Traffic Control Plan with the application for an obstruction permit. The Traffic Control Plan shall contain a set of comprehensive traffic control measures for auto, transit, bicycle, and pedestrian detours, including detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes. The project applicant shall implement the approved Plan during construction. ***c. Repair of City Streets*** Requirement: The project applicant shall repair any damage to the public right-of way, including streets and sidewalks caused by project construction at his/her expense within one week of the occurrence of the damage (or excessive wear), unless further damage/excessive wear may continue; in such case, repair shall occur prior to approval of the final inspection of the construction-related permit. All damage that is a threat to public health or safety shall be repaired immediately.	a. Prior to approval of construction-related permit. b. Prior to approval of construction-related permit. c. Prior to building permit final.	a. City of Oakland Bureau of Building Services Division, Zoning Inspections b. Public Works Department, Transportation Services Division c. City of Oakland Bureau of Building Services Division, Zoning Inspections
SCA TRA-2 (Standard Condition of Approval 69) *Bicycle Parking* Requirement: The project applicant shall comply with the City of Oakland Bicycle Parking Requirements (chapter 17.118 of the Oakland Planning Code). The project drawings submitted for construction-related permits shall demonstrate compliance with the requirements.	Prior to approval of construction-related permit.	City of Oakland Bureau of Building Services Division, Zoning Inspections
SCA TRA-3 (Standard Condition of Approval 71) *Transportation and Parking Demand Management* ***a. Transportation and Parking Demand Management (TDM) Plan Required*** Requirement: The project applicant shall submit a Transportation and Parking Demand Management (TDM) Plan for review and approval by the City. i. The goals of the TDM Plan shall be the following: • Reduce vehicle traffic and parking demand generated by the project to the maximum extent practicable, consistent with the potential traffic and parking impacts of the project.	a. Prior to building permit final. b. Prior to building permit final c. Ongoing	a. City of Oakland Bureau of Planning and Building b. City of Oakland Bureau of Building Services Division, Zoning Inspections c. City of Oakland Bureau of Planning and Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
Transportation and Circulation (cont.)		
• Achieve the following project vehicle trip reductions (VTR): – Projects generating 50-99 net new a.m. or p.m. peak hour vehicle trips: 10 percent VTR – Projects generating 100 or more net new a.m. or p.m. peak hour vehicle trips: 20 percent VTR • Increase pedestrian, bicycle, transit, and carpool/vanpool modes of travel. All four modes of travel shall be considered, as appropriate. • Enhance the City's transportation system, consistent with City policies and programs. ii. TDM strategies to consider include, but are not limited to, the following: • Inclusion of additional long-term and short-term bicycle parking that meets the design standards set forth in chapter five of the Bicycle Master Plan and the Bicycle Parking Ordinance (chapter 17.117 of the Oakland Planning Code), and shower and locker facilities in commercial developments that exceed the requirement. • Construction of and/or access to bikeways per the Bicycle Master Plan; construction of priority bikeways, on-site signage and bike lane striping. • Installation of safety elements per the Pedestrian Master Plan (such as crosswalk striping, curb ramps, count down signals, bulb outs, etc.) to encourage convenient and safe crossing at arterials, in addition to safety elements required to address safety impacts of the project. • Installation of amenities such as lighting, street trees, and trash receptacles per the Pedestrian Master Plan and any applicable streetscape plan. • Construction and development of transit stops/shelters, pedestrian access, way finding signage, and lighting around transit stops per transit agency plans or negotiated improvements. • Direct on-site sales of transit passes purchased and sold at a bulk group rate (through programs such as AC Transit Easy Pass or a similar program through another transit agency). • Provision of a transit subsidy to employees or residents, determined by the project applicant and subject to review by the City, if employees or residents use transit or commute by other alternative modes. • Provision of an ongoing contribution to transit service to the area between the project and nearest mass transit station prioritized as follows: 1) Contribution to AC Transit bus service; 2) Contribution to an existing area shuttle service; and 3) Establishment of new shuttle service. The amount of contribution (for any of the above scenarios) would be based upon the cost of establishing new shuttle service (Scenario 3). • Guaranteed ride home program for employees, either through 511.org or through separate program. • Pre-tax commuter benefits (commuter checks) for employees. • Free designated parking spaces for on-site car-sharing program (such as City Car Share, Zip Car, etc.) and/or car-share membership for employees or tenants. • On-site carpooling and/or vanpool program that includes preferential (discounted or free) parking for carpools and vanpools. • Distribution of information concerning alternative transportation options. • Parking spaces sold/leased separately for residential units. Charge employees for parking, or provide a cash incentive or transit pass alternative to a free parking space in commercial properties.		

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
Transportation and Circulation (cont.)		
• Parking management strategies including attendant/valet parking and shared parking spaces. • Requiring tenants to provide opportunities and the ability to work off-site. • Allow employees or residents to adjust their work schedule in order to complete the basic work requirement of five eight-hour workdays by adjusting their schedule to reduce vehicle trips to the worksite (e.g., working four, ten-hour days; allowing employees to work from home two days per week). • Provide or require tenants to provide employees with staggered work hours involving a shift in the set work hours of all employees at the workplace or flexible work hours involving individually determined work hours. The TDM Plan shall indicate the estimated VTR for each strategy, based on published research or guidelines where feasible. For TDM Plans containing ongoing operational VTR strategies, the Plan shall include an ongoing monitoring and enforcement program to ensure the Plan is implemented on an ongoing basis during project operation. If an annual compliance report is required, as explained below, the TDM Plan shall also specify the topics to be addressed in the annual report. ***b. TDM Implementation – Physical Improvements*** Requirement: For VTR strategies involving physical improvements, the project applicant shall obtain the necessary permits/approvals from the City and install the improvements prior to the completion of the project. ***c. TDM Implementation – Operational Strategies*** Requirement: For projects that generate 100 or more net new a.m. or p.m. peak hour vehicle trips and contain ongoing operational VTR strategies, the project applicant shall submit an annual compliance report for the first five years following completion of the project (or completion of each phase for phased projects) for review and approval by the City. The annual report shall document the status and effectiveness of the TDM program, including the actual VTR achieved by the project during operation. If deemed necessary, the City may elect to have a peer review consultant, paid for by the project applicant, review the annual report. If timely reports are not submitted and/or the annual reports indicate that the project applicant has failed to implement the TDM Plan, the project will be considered in violation of the Conditions of Approval and the City may initiate enforcement action as provided for in these Conditions of Approval. The project shall not be considered in violation of this Condition if the TDM Plan is implemented but the VTR goal is not achieved.		
TRA-1 (LMSAP Mitigation Measure TRAN-1) Requirement: Implement the following measures: • Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection) for the PM peak hour. • Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group. To implement this measure, the individual project applicant shall submit the following to City of Oakland's Transportation Services Division for review and approval: • Signal timing plans for the signals in the coordination group. • Plans, Specifications, and Estimates (PS&E) to modify intersection. All elements shall be designed to City and Caltrans standards in effect at the time of construction and all new or upgraded signals should include these enhancements. All other facilities supporting vehicle travel and alternative modes through the intersection should be brought up to both City standards	Investigation of the need for this mitigation shall be studied and submitted for review and approval to the City of Oakland, at the time when about 50 percent of the Project is operational and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first. The City of Oakland will notify the Project Sponsor when this threshold is reached.	City of Oakland, Planning and Zoning Division City of Oakland - Building Services Division, Zoning Inspection City of Oakland, Transportation Services Division

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Transportation and Circulation (cont.)		
and Americans with Disabilities Act (ADA) standards (according to Federal and State Access Board guidelines) at the time of construction. Current City Standards call for the elements listed below: — 2070L Type Controller with cabinet assembly — GPS communications (clock) — Accessible pedestrian crosswalks according to Federal and State Access Board guidelines with signals (audible and tactile) — Countdown pedestrian head module switch out — City standard ADA wheelchair ramps — Video detection on existing (or new, if required) — Mast arm poles, full actuation (where applicable) — Polara push buttons (full actuation) — Bicycle detection (full actuation) — Pull boxes — Signal interconnect and communication with trenching (where applicable), or through (E) conduit (where applicable)- 600 feet maximum — Conduit replacement contingency — Fiber Switch — PTZ Camera (where applicable) — Transit Signal Priority (TSP) equipment consistent with other signals along corridor The individual project applicant shall fund the cost of preparing and implementing the mitigation measures. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the individual project applicant shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall mitigate the impact to less than significant. A straight line interpolation of intersection delay between Existing and Existing Plus Project conditions indicates that mitigation at this intersection may be required when about 50 percent of the Project is developed. Investigation of the need for this mitigation shall be studied at the time when this threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.	If investigations at the required intervals show this mitigation is still required, the Project Sponsor will submit Plans, Specifications, and Estimates (PS&E) for review and approval by the City for implementation of this mitigation. This requirement may be requested at an earlier date than listed if the improvements are needed as reasonably determined by the City.	
TRA-2 (LMSAP Mitigation Measure TRAN-3) Requirement: Implement the following measures: • Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection) for the AM peak hour. • Coordinate this signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group. To implement this measure, the individual project applicant shall submit the following to City of Oakland's Transportation Services Division for review and approval:	Investigation of the need for this mitigation shall be studied and submitted for review and approval to the City of Oakland, at the time when about 75 percent of the Project is operational and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first. The City of	City of Oakland, Planning and Zoning Division City of Oakland - Building Services Division, Zoning Inspection City of Oakland, Transportation Services Division

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Transportation and Circulation (cont.)		
• Signal timing plans for the signals in the coordination group. • Plans, Specifications, and Estimates (PS&E) as detailed in Mitigation Measure TRAN- 1. The individual project applicant shall fund the cost of preparing and implementing the mitigation measures. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the individual project applicant shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall mitigate the impact to less than significant. A straight line interpolation of intersection delay between Existing and Existing Plus Project conditions indicates that mitigation at this intersection may be required when about 75 percent of the Project is developed. Investigation of the need for this mitigation shall be studied at the time when this threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.	Oakland will notify the Project Sponsor when this threshold is reached. If investigations at the required intervals show this mitigation is still required, the Project Sponsor will submit Plans, Specifications, and Estimates (PS&E) for review and approval by the City for implementation of this mitigation. This requirement may be requested at an earlier date than listed if the improvements are needed as reasonably determined by the City.	
TRA-3 (LMSAP Mitigation Measure TRAN-5) Requirement: Implement the following measures: • Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection). • Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group. To implement this measure, the individual project applicant shall submit the following to City of Oakland's Transportation Services Division for review and approval: • Signal timing plans for the signals in the coordination group. • Plans, Specifications, and Estimates (PS&E) as detailed in Mitigation Measure TRAN- 1. The individual project applicant shall fund the cost of preparing and implementing the mitigation measures. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the individual project applicant shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall mitigate the impact to less than significant. A straight line interpolation of intersection delay between Existing and Existing Plus Project conditions indicates that mitigation at this intersection may be required when about 54 percent of the Project is developed. Investigation of the need for this mitigation shall be studied at the time when this threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.	Investigation of the need for this mitigation shall be studied and submitted for review and approval to the City of Oakland, at the time when about 54 percent of the Project is operational and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first. The City of Oakland will notify the Project Sponsor when this threshold is reached. If investigations at the required intervals show this mitigation is still required, the Project Sponsor will submit Plans, Specifications, and Estimates (PS&E) for review and approval by the City for implementation of this mitigation. This requirement may be requested at an earlier date than listed if the improvements are needed as reasonably determined by the City.	City of Oakland, Planning and Zoning Division City of Oakland - Building Services Division, Zoning Inspection City of Oakland, Transportation Services Division

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Transportation and Circulation (cont.)		
TRA-4 (LMSAP Mitigation Measure TRAN-10) Requirement: Implement the following measures: • Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection) for the PM peak hour. • Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.	Investigation of the need for this mitigation shall be studied and submitted for review and approval to the City of Oakland, in 2017 (one year prior to the horizon date), and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first. The City of Oakland will notify the Project Sponsor when this threshold is reached. If investigations at the required intervals show this mitigation is still required, the Project Sponsor will submit Plans, Specifications, and Estimates (PS&E) for review and approval by the City for implementation of this mitigation. This requirement may be requested at an earlier date than listed if the improvements are needed as reasonably determined by the City.	City of Oakland, Planning and Zoning Division City of Oakland - Building Services Division, Zoning Inspection City of Oakland, Transportation Services Division
TRA-5 (LMSAP Mitigation Measure TRAN-11) Requirement: Implement the following measures: • Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection). • Create an interconnected corridor along Oak Street from 5th to 14th Streets, and coordinate the signal timing changes at this intersection with the coordination group.	Investigation of the need for this mitigation shall be studied and submitted for review and approval to the City of Oakland, in 2014 (one year prior to the horizon date), and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first. The City of Oakland will notify the Project Sponsor when this threshold is reached. If investigations at the required intervals show this mitigation is still required, the Project Sponsor will submit Plans, Specifications,	City of Oakland, Planning and Zoning Division City of Oakland - Building Services Division, Zoning Inspection City of Oakland, Transportation Services Division

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Transportation and Circulation (cont.)		
	and Estimates (PS&E) for review and approval by the City for implementation of this mitigation. This requirement may be requested at an earlier date than listed if the improvements are needed as reasonably determined by the City.	
TRA-6 (LMSAP Mitigation Measure TRAN-12) Requirement: Implement Mitigation Measure TRAN-11: • Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection). • Create an interconnected corridor along Oak Street from 5th to 14th Streets, and coordinate the signal timing changes at this intersection with the coordination group.		
TRA-7 (LMSAP Mitigation Measure TRAN-13) Requirement: Implement the following measures: • Provide permitted-protected left-turn phasing for the northbound and southbound approaches. • Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection). • Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.	Investigation of the need for this mitigation shall be studied and submitted for review and approval to the City of Oakland, in 2015 (one year prior to the horizon date), and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first. The City of Oakland will notify the Project Sponsor when this threshold is reached. If investigations at the required intervals show this mitigation is still required, the Project Sponsor will submit Plans, Specifications, and Estimates (PS&E) for review and approval by the City for implementation of this mitigation. This requirement may be requested at an earlier date than listed if the improvements are needed as reasonably determined by the City.	City of Oakland, Planning and Zoning Division City of Oakland - Building Services Division, Zoning Inspection City of Oakland, Transportation Services Division

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Transportation and Circulation (cont.)		
TRA-8 (LMSAP Mitigation Measure TRAN-14) Requirement: Implement the following measures: • Optimize the signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection). • Create an interconnected corridor along Madison Street from 5th to 14th Streets, and coordinate the signal timing changes at this intersection with the coordination group.	Investigation of the need for this mitigation shall be studied and submitted for review and approval to the City of Oakland, in 2016 (one year prior to the horizon date), and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first. The City of Oakland will notify the Project Sponsor when this threshold is reached. If investigations at the required intervals show this mitigation is still required, the Project Sponsor will submit Plans, Specifications, and Estimates (PS&E) for review and approval by the City for implementation of this mitigation. This requirement may be requested at an earlier date than listed if the improvements are needed as reasonably determined by the City.	City of Oakland, Planning and Zoning Division City of Oakland - Building Services Division, Zoning Inspection City of Oakland, Transportation Services Division
TRA-9 (LMSAP Mitigation Measure TRAN-15) Requirement: Implement Mitigation Measure TRAN-14: • Optimize the signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection). • Create an interconnected corridor along Madison Street from 5th to 14th Streets, and coordinate the signal timing changes at this intersection with the coordination group.		
TRA-10 (LMSAP Mitigation Measure TRAN-16) Requirement: Implement Mitigation Measure TRAN-14: • Optimize the signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection). • Create an interconnected corridor along Madison Street from 5th to 14th Streets, and coordinate the signal timing changes at this intersection with the coordination group.		

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Transportation and Circulation (cont.)		
TRA-11 (LMSAP Mitigation Measure TRAN-17) Requirement: Implement the following measures: • Optimize the signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection) • Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group within the Oak Street interconnect corridor (5th to 14th Streets).	Investigation of the need for this mitigation shall be studied and submitted for review and approval to the City of Oakland, in 2015 (one year prior to the horizon date), and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first. The City of Oakland will notify the Project Sponsor when this threshold is reached. If investigations at the required intervals show this mitigation is still required, the Project Sponsor will submit Plans, Specifications, and Estimates (PS&E) for review and approval by the City for implementation of this mitigation. This requirement may be requested at an earlier date than listed if the improvements are needed as reasonably determined by the City.	City of Oakland, Planning and Zoning Division City of Oakland - Building Services Division, Zoning Inspection City of Oakland, Transportation Services Division
TRA-12 (LMSAP Mitigation Measure TRAN-19) Requirement: Implement the following measures: • Optimize the signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection) for the AM peak hour. • Coordinate the signal timing changes at this intersection with the adjacent intersections.	Investigation of the need for this mitigation shall be studied and submitted for review and approval to the City of Oakland, in 2018 (one year prior to the horizon date), and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first. The City of Oakland will notify the Project Sponsor when this threshold is reached. If investigations at the required intervals show this mitigation is still required, the Project Sponsor	City of Oakland, Planning and Zoning Division City of Oakland - Building Services Division, Zoning Inspection City of Oakland, Transportation Services Division

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Transportation and Circulation (cont.)		
	will submit Plans, Specifications, and Estimates (PS&E) for review and approval by the City for implementation of this mitigation. This requirement may be requested at an earlier date than listed if the improvements are needed as reasonably determined by the City.	
TRA-13 (LMSAP Mitigation Measure TRAN-20) Requirement: Implement Mitigation Measure TRAN-17: • Optimize the signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection) • Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group within the Oak Street interconnect corridor (5th to 14th Streets).		
TRA-14 (LMSAP Mitigation Measure TRAN-22) Requirement: Implement Mitigation Measure TRAN-17: • Optimize the signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection) • Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group within the Oak Street interconnect corridor (5th to 14th Streets).		
TRA-15 (LMSAP Mitigation Measure TRAN-25) Requirement: Implement Mitigation Measure TRAN-17: • Optimize the signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection) • Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group within the Oak Street interconnect corridor (5th to 14th Streets).		
TRA-16 (LMSAP Mitigation Measure TRAN-26) Requirement: Implement Mitigation Measure TRAN-17: • Optimize the signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection) • Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group within the Oak Street interconnect corridor (5th to 14th Streets).		

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Utilities and Service Systems		
SCA UTIL-1 (Standard Condition of Approval 74) *Construction and Demolition Waste Reduction and Recycling* Requirement: The project applicant shall comply with the City of Oakland Construction and Demolition Waste Reduction and Recycling Ordinance (chapter 15.34 of the Oakland Municipal Code) by submitting a Construction and Demolition Waste Reduction and Recycling Plan (WRRP) for City review and approval, and shall implement the approved WRRP. Projects subject to these requirements include all new construction, renovations/alterations/modifications with construction values of $50,000 or more (except R-3 type construction), and all demolition (including soft demolition) except demolition of type R-3 construction. The WRRP must specify the methods by which the project will divert construction and demolition debris waste from landfill disposal in accordance with current City requirements. The WRRP may be submitted electronically at www.greenhalosystems.com or manually at the City's Green Building Resource Center. Current standards, FAQs, and forms are available on the City's website and in the Green Building Resource Center.	Prior to approval of construction-related permit	City of Oakland Public Works Department, Environmental Services Division
SCA UTIL-2 (Standard Condition of Approval 75) *Underground Utilities* Requirement: The project applicant shall place underground all new utilities serving the project and under the control of the project applicant and the City, including all new gas, electric, cable, and telephone facilities, fire alarm conduits, street light wiring, and other wiring, conduits, and similar facilities. The new facilities shall be placed underground along the project's street frontage and from the project structures to the point of service. Utilities under the control of other agencies, such as PG&E, shall be placed underground if feasible. All utilities shall be installed in accordance with standard specifications of the serving utilities.	During construction.	City of Oakland Bureau of Building Services Division, Zoning Inspections
SCA UTIL-3 (Standard Condition of Approval 76) *Recycling Collection and Storage Space* Requirement: The project applicant shall comply with the City of Oakland Recycling Space Allocation Ordinance (chapter 17.118 of the Oakland Planning Code). The project drawings submitted for construction-related permits shall contain recycling collection and storage areas in compliance with the Ordinance. For residential projects, at least two cubic feet of storage and collection space per residential unit is required, with a minimum of ten cubic feet. For nonresidential projects, at least two cubic feet of storage and collection space per 1,000 square feet of building floor area is required, with a minimum of ten cubic feet.	Prior to approval of construction-related permit.	City of Oakland Bureau of Building Services Division, Zoning Inspections
SCA UTIL-4 (Standard Condition of Approval 77) *Green Building Requirements* ***a. Compliance with Green Building Requirements During Plan-Check*** Requirement: The project applicant shall comply with the requirements of the California Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the City of Oakland Green Building Ordinance (chapter 18.02 of the Oakland Municipal Code). i. The following information shall be submitted to the City for review and approval with the application for a building permit: • Documentation showing compliance with Title 24 of the current version of the California Building Energy Efficiency Standards. • Completed copy of the final green building checklist approved during the review of the Planning and Zoning permit. • Copy of the Unreasonable Hardship Exemption, if granted, during the review of the Planning and Zoning permit. • Permit plans that show, in general notes, detailed design drawings, and specifications as necessary, compliance with the items listed in subsection (ii) below.	a. Prior to approval of construction-related permit. b. During construction. c. After project completion as specified.	a. City of Oakland Bureau of Building Services Division, Zoning Inspections b. City of Oakland Bureau of Building Services Division, Zoning Inspections c. City of Oakland Bureau of Planning and Building

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	Responsibility
Utilities and Service Systems (cont.)		
• Copy of the signed statement by the Green Building Certifier approved during the review of the Planning and Zoning permit that the project complied with the requirements of the Green Building Ordinance. • Signed statement by the Green Building Certifier that the project still complies with the requirements of the Green Building Ordinance, unless an Unreasonable Hardship Exemption was granted during the review of the Planning and Zoning permit. • Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance. ii. The set of plans in subsection (i) shall demonstrate compliance with the following: • CALGreen mandatory measures. • All pre-requisites per the green building checklist approved during the review of the Planning and Zoning permit, or, if applicable, all the green building measures approved as part of the Unreasonable Hardship Exemption granted during the review of the Planning and Zoning permit. • [INSERT: Green building point level/certification requirement: (See Green Building Summary Table; for New Construction of Residential or Non- residential projects that remove a Historic Resource (as defined by the Green Building Ordinance) the point level certification requirement is 53 points for residential and LEED Gold for non-residential)] per the appropriate checklist approved during the Planning entitlement process. • All green building points identified on the checklist approved during review of the Planning and Zoning permit, unless a Request for Revision Plan-check application is submitted and approved by the Bureau of Planning that shows the previously approved points that will be eliminated or substituted. • The required green building point minimums in the appropriate credit categories. ***b. Compliance with Green Building Requirements During Construction*** Requirement: The project applicant shall comply with the applicable requirements of CALGreen and the Oakland Green Building Ordinance during construction of the project. The following information shall be submitted to the City for review and approval: i. Completed copies of the green building checklists approved during the review of the Planning and Zoning permit and during the review of the building permit. ii. Signed statement(s) by the Green Building Certifier during all relevant phases of construction that the project complies with the requirements of the Green Building Ordinance. iii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance. ***c. Compliance with Green Building Requirements After Construction*** Requirement: Within sixty (60) days of the final inspection of the building permit for the project, the Green Building Certifier shall submit the appropriate documentation to Build It Green or Green Building Certification Institute and attain the minimum required certification/point level. Within one year of the final inspection of the building permit for the project, the applicant shall submit to the Bureau of Planning the Certificate from the organization listed above demonstrating certification and compliance with the minimum point/certification level noted above.		

Standard Conditions of Approval/Mitigation Measures	Mitigation Implementation/ Monitoring	
	Schedule	**Responsibility**
Utilities and Service Systems (cont.)		
SCA UTIL-5 (Standard Condition of Approval 79) *Sanitary Sewer System* Requirement: The project applicant shall prepare and submit a Sanitary Sewer Impact Analysis to the City for review and approval in accordance with the City of Oakland Sanitary Sewer Design Guidelines. The Impact Analysis shall include an estimate of pre-project and post-project wastewater flow from the project site. In the event that the Impact Analysis indicates that the net increase in project wastewater flow exceeds City-projected increases in wastewater flow in the sanitary sewer system, the project applicant shall pay the Sanitary Sewer Impact Fee in accordance with the City's Master Fee Schedule for funding improvements to the sanitary sewer system.	Prior to approval of construction-related permit.	City of Oakland Public Works Department, Department of Engineering and Construction
SCA UTIL-6 (Standard Condition of Approval 80) *Storm Drain System* Requirement: The project storm drainage system shall be designed in accordance with the City of Oakland's Storm Drainage Design Guidelines. To the maximum extent practicable, peak stormwater runoff from the project site shall be reduced by at least 25 percent compared to the pre-project condition.	Prior to approval of construction-related permit.	City of Oakland Bureau of Building Services Division, Zoning Inspections
SCA UTIL-7 (Standard Condition of Approval 81) *Recycled Water* Requirement: Pursuant to section 16.08.030 of the Oakland Municipal Code, the project applicant shall provide for the use of recycled water in the project for landscape irrigation purposes unless the City determines that there is a higher and better use for the recycled water, the use of recycled water is not economically justified for the project, or the use of recycled water is not financially or technically feasible for the project. The project applicant shall contact the New Business Office of the East Bay Municipal Utility District (EBMUD) for a recycled water feasibility assessment by the Office of Water Recycling. If recycled water is to be provided in the project, the project drawings submitted for construction-related permits shall include the proposed recycled water system and the project applicant shall install the recycled water system during construction.	Prior to approval of construction-related permit.	City of Oakland Bureau of Planning and Building ; City of Oakland Bureau of Building Services Division, Zoning Inspections
Also **SCA HYD-1, Erosion and Sedimentation Control Plan for Construction**. See *Hydrology and Water Quality*, above.		
Also **SCA HYD-2, Site Design Measures to Reduce Stormwater Runoff**. See *Hydrology and Water Quality*, above.		

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ATTACHMENT B

Criteria for Use of Addendum, per CEQA Guidelines Sections 15162, 15164 and 15168

Section 15164(a) of the California Environmental Quality Act (CEQA) Guidelines states that "a lead agency or responsible agency shall prepare an addendum to a previously certified EIR [Environmental Impact Report] if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred." Section 15164(e) states that "a brief explanation of the decision not to prepare a subsequent EIR pursuant to Section 15162 should be included in an addendum to an EIR."

As discussed in detail in Section III of this document, the analysis in the 2014 LMSAP EIR is considered for this assessment under Sections 15162 and 15164. The 1998 LUTE EIR, and for the housing components of the proposed project, the 2010 General Plan Housing Element Update EIR and its 2014 Addendum are Prior EIRs considered for this assessment of an Addendum, pursuant to Section 15162 and 15164. The 2011 Redevelopment Plan Amendments EIR analysis is a Prior EIR specifically considered for this assessment, pursuant to CEQA Guidelines Section 15168 and Section 15180.

Project Modifications

In November 2014, the Oakland Planning Commission certified the LMSAP EIR. The LMSAP EIR analyzed the LMSAP "Development Program," which was the assumed future development for the Plan with up to 4,900 new housing units, 4,100 new jobs, 404,000 square feet of retail use, and l.3 million square feet of office uses. Although Development Program was analyzed, project specific details for each potential development project in the LMSAP Area were not known, and could not have been known, at the time the LMSAP EIR was certified. Therefore, an Addendum is required to evaluate the W12 project details would not result in new or more severe significant environmental effects than those analyzed in the LMSAP EIR.

Conditions for Addendum

As demonstrated in the CEQA checklist, none of the following conditions for preparation of a subsequent EIR per Sections 15162(a) and 15168 apply to the proposed project:

(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

(2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:

(A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

Project Consistency with Sections 15162 and 15168 of the CEQA Guidelines

Since certification of the 2014 LMSAP EIR, no changes have occurred in the circumstances under which the proposed project would be implemented that would change the severity of the proposed project's physical impacts, as explained in the CEQA Checklist in Section VI of this document. No new information has emerged that would substantially change the analyses or conclusions set forth in the LMSAP EIR.

Furthermore, as demonstrated in the CEQA Checklist, the proposed project would not result in any new significant environmental impacts, result in any substantial increases in the significance of previously identified effects, or necessitate implementation of additional or considerably different mitigation measures than those identified in the 2014 LMSAP EIR, nor render any mitigation measures or alternatives found not to be feasible, feasible. The effects of the proposed project would be substantially the same as those reported in the 2014 LMSAP EIR.

The analysis presented in this CEQA Checklist, combined with the prior 2014 LMSAP EIR analysis and other previous CEQA documents, demonstrates that the proposed project would not result in significant impacts that were not previously identified in the LMSAP EIR. The proposed project would not result in a substantial increase in the significance of impacts, nor would the proposed project contribute considerably to cumulative effects that were not already accounted for in the certified 2014 LMSAP EIR or other previous CEQA documents. Overall, the proposed project's impacts are similar to those identified and discussed in the 2014 LMSAP EIR and other previous CEQA documents, as described in the CEQA Checklist, and the findings reached in the LMSAP EIR and other previous CEQA documents are applicable.

ATTACHMENT C

Project Consistency with Community Plan or Zoning, Per CEQA Guidelines Section 15183

Section 15183(a) of the California Environmental Quality Act (CEQA) Guidelines states that "…projects which are consistent with the development density established by the existing zoning, community plan, or general plan policies for which an Environmental Impact Report (EIR) was certified shall not require additional environmental review, except as may be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site."

As discussed in detail in Section III of this document, the analysis in the 2011 Redevelopment Plan Amendments EIR, the 1998 LUTE EIR and, for only the residential components of the proposed project, the 2010 Housing Element Update EIR and its 2014 Addendum, are considered the qualified planning level CEQA documents for this assessment, pursuant to CEQA Guidelines Section 15183.

Proposed Project

The proposed project would be located in developed, urbanized Downtown Oakland. The proposed project would develop two seven-story, approximately 87-foot-tall building with up to 416 residential units and approximately 25,050 square feet of commercial space. Approximately 317 vehicle parking spaces for residents of the building would be provided onsite. The project site is currently a covered parking garage and two-story school building on the Full Block and a paved recreation area associated with the school on the Quarter Block. Four existing street trees along the frontages of the Quarter Block would either be protected or removed and replaces according to the requirements of the City's SCAs

Project Consistency

As determined by the City of Oakland Bureau of Planning, the proposed land uses are permitted in the zoning district in which the project is located, and land uses envisioned for the project site in Downtown Oakland, as outlined below.

- The General Plan land use designation for the site is Central Business District (CBD). This designation applies to areas suitable for high density mixed-use urban center with a mix of large-scale offices, commercial, urban (high-rise) residential, and infill hotel uses, among many others, in the central Downtown core of the city. The proposed residential mixed-use project would be consistent with this designation.

- The site is zoned both Lake Merritt Station Area Plan District Flex Zone (LM-4). The proposed project would be consistent with the purposes of the LM-4 district, which is generally intended to support the development residential and ground-floor retail land uses. The proposed project would develop ground-floor commercial space with upper level residential use.

Therefore, the proposed project is eligible for consideration of an exemption under California Public Resources Code Section 21083.3, and Section 15183 of the CEQA Guidelines.

ATTACHMENT D

Infill Performance Standards, Per CEQA Guidelines Section 15183.3

California Environmental Quality Act (CEQA) Guidelines Section 15183.3(b) and CEQA Guidelines Appendix M establish eligibility requirements for projects to qualify as infill projects. Table D-1, below, shows how the proposed project satisfies each of the applicable requirements.

As discussed in detail in Section III of this document, the analysis in the 2011 Redevelopment Plan Amendments EIR, the 1998 LUTE EIR and, for only the residential components of the proposed project, the 2010 Housing Element Update EIR and its 2014 Addendum, are considered the Prior EIRs for this assessment, pursuant to CEQA Guidelines Section 15183.3.

TABLE D-1
PROJECT INFILL ELIGIBILITY

	CEQA Eligibility Criteria	Eligible?/Notes for Proposed Project
1.	Be located in an urban area on a site that either has been previously developed or that adjoins existing qualified urban uses on at least seventy-five percent of the site's perimeter. For the purpose of this subdivision "adjoin" means the infill project is immediately adjacent to qualified urban uses or is only separated from such uses by an improved right-of-way. (CEQA Guidelines Section 15183.3[b][1])	Yes. The project site has been previously developed as a covered parking garage, school building, and paved recreation area, with various surrounding uses including commercial service and institutional uses. The project site adjoins existing urban uses, including commercial buildings, as described in the Project Description, (Section IV).
2.	Satisfy the performance Standards provided in Appendix M (CEQA Guidelines Section 15183.3[b][2]) as presented in 2a and 2b below:	
	2a. *Performance Standards Related to Project Design.* All projects must implement **all** of the following:	
	Renewable Energy. *Non-Residential Projects.* All nonresidential projects shall include onsite renewable power generation, such as solar photovoltaic, solar thermal, and wind power generation, or clean back-up power supplies, where feasible. *Residential Projects.* Residential projects are also encouraged to include such on site renewable power generation.	Yes. The project sponsor intends to meet LEED Silver standards and comply with the Green Building ordinance and requirements. The proposed project would optimize the efficiency of its building envelope, and through the use of efficient lighting and HVAC systems it would reduce domestic energy use. The proposed project would meet the newly implemented Building Energy Efficiency Standards and would exceed these standards as prerequisite and additional points for LEED.

TABLE D-1
PROJECT INFILL ELIGIBILITY

	CEQA Eligibility Criteria	Eligible?/Notes for Proposed Project
	Soil and Water Remediation. If the project site is included on any list compiled pursuant to Section 65962.5 of the Government Code, the project shall document how it has remediated the site, if remediation is completed. Alternatively, the project shall implement the recommendations provided in a preliminary endangerment assessment or comparable document that identifies remediation appropriate for the site.	A Phase 1 Environmental Site Assessment was prepared for the project site by Langan Treadwell Rollo on July 15, 2016. The assessment revealed a number of issues at the Full Block which warrant additional investigation and preparation of a Phase II Environmental Site Assessment report. This task is currently underway and required by the City's SCA HAZ-2.
	Residential Units Near High-Volume Roadways and Stationary Sources. If a project includes residential units located within 500 feet, or other distance determined to be appropriate by the local agency or air district based on local conditions, of a high volume roadway or other significant sources of air pollution, the project shall comply with any policies and standards identified in the local general plan, specific plan, zoning code, or community risk reduction plan for the protection of public health from such sources of air pollution. If the local government has not adopted such plans or policies, the project shall include measures, such as enhanced air filtration and project design, that the lead agency finds, based on substantial evidence, will promote the protection of public health from sources of air pollution. Those measures may include, among others, the recommendations of the California Air Resources Board, air districts, and the California Air Pollution Control Officers Association.	Yes. As discussed in Section 2. Air Quality of the CEQA Checklist, an air quality screening was prepared for the proposed project. According to BAAQMD's conservative screening-level tool for Alameda County, there are 10 stationary TAC sources within 1,000 feet of the project site, one of which are dry cleaning businesses that no longer use perchloroethylene (as verified in the latest BAAQMD air toxic inventory) and hence no longer represent source of localized TAC contributions. Factoring in allowable refinements to these the screening values to account for distance between the W12 project site and the nearby stationary TAC sources, and considering risks posed by roadway traffic on Broadway and the proposed project's backup diesel generator, the cumulative cancer risks at the project site would be below the significance criterion of 100 in one million. Therefore a health risk was neither required nor conducted. No air pollution standards are required to be implemented for the proposed project. The nearest "high-volume roadway" with 100,000 vehicles per day, as defined by Section II of CEQA Appendix M, is Interstate 980 (I-980). I 980 is approximately 8 blocks west of the project site.
	2b. *Additional Performance Standards by Project Type.* In addition to implementing all the features described in 2a above, the project must meet eligibility requirements provided below by project type.	
	Residential. A residential project must meet **<u>one</u>** of the following: A. *Projects achieving below average regional per capita vehicle miles traveled (VMT).* A residential project is eligible if it is located in a "low vehicle travel area" within the region; B. *Projects located within ½ mile of an Existing Major Transit Stop or High Quality Transit Corridor.* A residential project is eligible if it is located within	Yes. The proposed project is eligible under Section (B). The proposed project site is well-served by multiple transit providers. Transit service providers in the project vicinity include Bay Area Rapid Transit (BART) and AC Transit. The nearest BART station to project site is the 12th Street BART Station, about one-fifth of a mile from the project site and the Lake Merritt BART station which is approximately half of one mile from the project site. AC Transit operates multiple major bus routes on 11th, 12th, and 14th Street adjacent to the project site and along Broadway within two blocks of the project site.

TABLE D-1
PROJECT INFILL ELIGIBILITY

CEQA Eligibility Criteria	Eligible?/Notes for Proposed Project
½ mile of an existing major transit stop or an existing stop along a high quality transit corridor; **or** C. *Low - Income Housing.* A residential or mixed-use project consisting of 300 or fewer residential units all of which are affordable to low income households is eligible if the developer of the development project provides sufficient legal commitments to the lead agency to ensure the continued availability and use of the housing units for lower income households, as defined in Section 50079.5 of the Health and Safety Code, for a period of at least 30 years, at monthly housing costs, as determined pursuant to Section 50053 of the Health and Safety Code.	Broadway also qualifies as a "High Quality Transit Corridor," as defined by Section II of CEQA, with fixed route bus service at intervals no longer than 15 minutes during peak commute hours. The AC Transit Line 51A runs along Broadway in the project vicinity, and has service intervals no longer than 15 minutes during peak commute hours. Other bus routes in the project vicinity further satisfy this criterion.
Commercial/Retail. A commercial/retail project must meet **one** of the following: A. *Regional Location.* A commercial project with no single-building floor-plate greater than 50,000 square feet is eligible if it locates in a "low vehicle travel area"; **or** B. *Proximity to Households.* A project with no single-building floor-plate greater than 50,000 square feet located within ½ mile of 1,800 households is eligible.	Not Applicable. Building A has a floor-plate greater than 50,000 square feet.
Office Building. An office building project must meeting **one** of the following: A. *Regional Location.* Office buildings, both commercial and public, are eligible if they locate in a low vehicle travel area; **or** B. *Proximity to a Major Transit Stop.* Office buildings, both commercial and public, within ½ mile of an existing major transit stop, or ¼ mile of an existing stop along a high quality transit corridor, are eligible.	Not Applicable. The proposed project is not an office building.
Schools. Elementary schools within 1 mile of 50 percent of the projected student population are eligible. Middle schools and high schools within 2 miles of 50 percent of the projected student population are eligible. Alternatively, any school within ½ mile of an existing major transit stop or an existing stop along a high quality transit corridor is eligible. Additionally, to be eligible, all schools shall provide parking and storage for bicycles and scooters, and shall comply with the requirements of Sections 17213, 17213.1, and 17213.2 of the California Education Code.	Not Applicable.
Transit. Transit stations, as defined in Section 15183.3(e)(1), are eligible.	Not Applicable

TABLE D-1
PROJECT INFILL ELIGIBILITY

	CEQA Eligibility Criteria	Eligible?/Notes for Proposed Project
	Small Walkable Community Projects. Small walkable community projects, as defined in Section 15183.3, subdivision (f)(5), that implement the project features in 2a above are eligible.	Not Applicable
3.	Be consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in either a sustainable communities strategy or an alternative planning strategy, **except** as provided in CEQA Guidelines Sections 15183.3(b)(3)(A) or (b)(3)(B) below: (b)(3)(A). Only where an infill project is proposed within the boundaries of a metropolitan planning organization for which a sustainable communities strategy or an alternative planning strategy will be, but is not yet in effect, a residential infill project must have a density of at least 20 units per acre, and a retail or commercial infill project must have a floor area ratio of at least 0.75; **or** (b)(3)(B). Where an infill project is proposed outside of the boundaries of a metropolitan planning organization, the infill project must meet the definition of a "small walkable community project" in CEQA Guidelines §15183.3(f)(5). (CEQA Guidelines Section 15183.3[b][3])	Yes (see explanation below table)

NOTE:

[a] Where a project includes some combination of residential, commercial and retail, office building, transit station, and/or schools, the performance standards in this section that apply to the predominant use shall govern the entire project.

Explanation for Eligibility Criterion 3 (from Table D-1 above)

The adopted Plan Bay Area (2014) serves as the sustainable communities strategy for the Bay Area, per Senate Bill 375. As defined by the Plan, Priority Development Areas (PDAs) are areas where new development will support the needs of residents and workers in a pedestrian-friendly environment served by transit. The W12 Mixed-Use Project is located within the "Oakland Downtown & Jack London Square" PDA – the area bounded generally by 28th Street on the north, I-980 on the west, the Oakland Estuary on the south, and Lake Merritt on the east, excepting the Chinatown area between 6th and 11th Streets east of Franklin Street. The proposed project is consistent with the Oakland General Plan and the Planning Code, as discussed in Attachment C and noted below.

- The General Plan land use designation for the site is Central Business District (CBD). This designation applies to areas suitable for high density mixed use urban center with a mix of large-scale offices, commercial, urban (high-rise) residential, and infill hotel uses, among many others, in the central Downtown core of the city. The proposed residential or residential-commercial mixed use project would be consistent with this designation.

- The site is zoned Lake Merritt Station Area Plan District Flex Zone (D-LM-4). The proposed project would be consistent with the purposes of this district, which is generally intended to support a wide range of upper story and ground level residential, commercial, and compatible light industrial uses. The proposed project would develop ground-floor commercial space with upper level residential use.

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APPENDIX A

Transportation Impact Analysis and Detail

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FEHR PEERS

MEMORANDUM

Date: July 1, 2016

To: Elizabeth Kanner

From: Bill Burton, Ron Ramos and Priyoti Ahmed

Subject: 12th and Webster Street Residential Project – Transportation Assessment

OK15-0087

This memorandum summarizes the results of the transportation impact analysis completed by Fehr & Peers for the proposed 12th and Webster Street Mixed-Use Project. Fehr & Peers reviewed the proposed project for consistency with the assumptions contained in the Lake Merritt Station Area Plan (LMSAP) Draft EIR for the project site, assessed the project site plan for potential impacts on safety, and evaluated potential project impacts at seven intersections that were not analyzed in the LMSAP Draft EIR. Fehr & Peers also reviewed the project site plan, and recommendations to improve transportation circulation and safety are provided.

INTRODUCTION

The project site is bordered by 12th Street, 11th Street, Webster Street, and Harrison Street in Oakland. The project proposes two buildings, with the first structure being constructed on the full block bounded by 12th Street, 11th Street, Webster Street and Harrison Street and second building being built on a smaller adjacent parcel in the southeast corner of the Harrison Street/12th Street intersection. **Figure 1** illustrates the location of the project within the local and regional street system. The project site is currently occupied by a middle school, parking garage and recreational hardscaped open space.

Figures 2 shows the project's conceptual site plan including the ground floor driveways and parking spaces. Based on site plans, dated December 3rd, 2015, the project proposes to replace the existing middle school, parking garage and recreational hardscaped open space with 26,200 square-feet of retail space and up to 422 multi-family apartment units.

The analysis evaluates the transportation-related impacts of the project during the weekday morning and evening peak hours. This analysis complies with the City of Oakland's *Transportation Impact Study Guidelines*. The following four scenarios are included in the analysis:

- ***Existing*** – Represents existing 2015 conditions
- ***Existing Plus Project*** – Existing conditions plus traffic generated by the project
- ***2040 No Project*** – Future conditions with planned population and employment growth and planned transportation system changes for the year 2040
- ***2040 Plus Project***– 2040 conditions plus traffic generated by the project.

CONSISTENCY WITH LMSAP

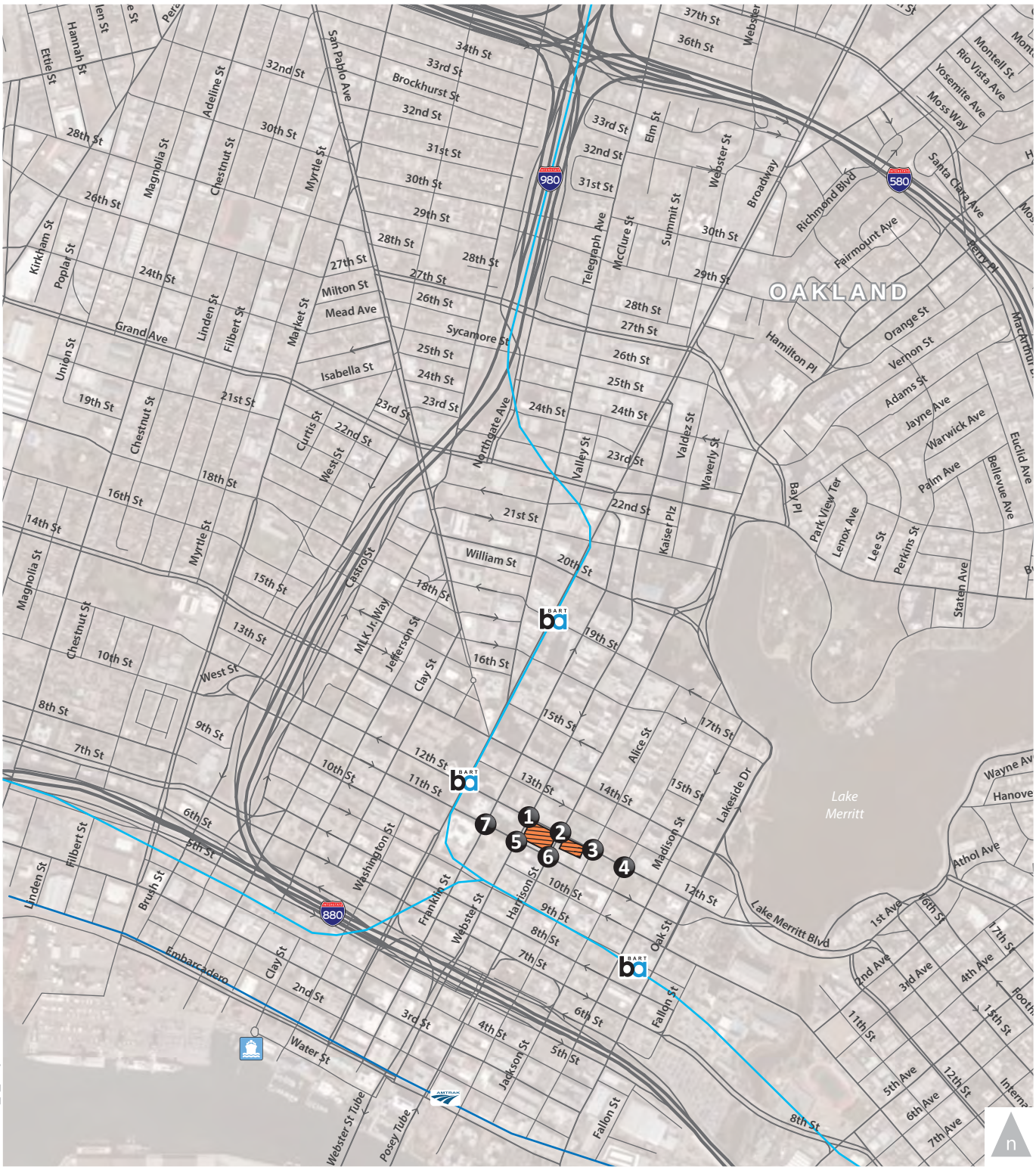
The proposed project site is located within the LMSAP and the LMSAP Draft EIR included development on the project site as part of the project. Since the approval of the LMSAP Draft EIR, the following developments have been proposed and are in some stage of the City's approval process at this time:

- 226 13th Street (Opportunity Site 6): This project is located in the block bordered by 14th Street, 13th Street, Alice Street and Jackson Street. It proposes to replace the existing off-street parking lot with 262 multi-family apartment units and 12,090 square-feet of retail space.
- 14th Street and Alice Street (Opportunity Site 3): This project is located at the northeast corner of 14th and Alice Street in Oakland. The proposed project is a mixed-use development with 174 multi-family apartment units and 3,200 square-feet of retail space.
- Hampton Inn (not included in LMSAP Draft EIR): The project is located at northeast corner of Franklin Street and 11th Street in Oakland. The project proposes to build 114 hotel rooms at this location.
- Lake Merritt Boulevard Apartments (Opportunity Site 44): The project site is located at 1st Avenue and 12th Street in Oakland. The project proposes 298 multi-family dwelling units and 2,000 square-feet of restaurant space.

The total cumulative development contemplated and approved within the LMSAP Draft EIR is substantially larger than that which is currently proposed and under consideration within the Specific Plan Area.

The LMSAP Draft EIR identified the following 29 significant impacts at transportation facilities serving the Plan Area:

- TRAN-1 – Lake Merritt Blvd/11th St, Existing Plus Project, Less than Significant with mitigation
- TRAN-2 – 1st Ave/International Blvd, Existing Plus Project, Significant and Unavoidable
- TRAN-3 – Madison St/10th St, Existing Plus Project, Less than Significant with mitigation
- TRAN-4 – Oak St/10th St, Existing Plus Project, Significant and Unavoidable
- TRAN-5 – Jackson St/7th St, Existing Plus Project, Less than Significant with mitigation
- TRAN-6 – Oak St/6th St, Existing Plus Project, Significant and Unavoidable
- TRAN-7 – Jackson St/5th St, Existing Plus Project, Significant and Unavoidable
- TRAN-8 – I-880 – Oak St to 5th Avenue, Existing Plus Project, Significant and Unavoidable
- TRAN-9 – Brush St/12th St, 2020 Plus Project, Significant and Unavoidable
- TRAN-10 – Jackson St/6th St, 2020 Plus Project, Significant and Unavoidable
- TRAN-11 – Oak St/6th St, 2020 Plus Project, Significant and Unavoidable
- TRAN-12 – Oak St/5th St, 2020 Plus Project, Significant and Unavoidable
- TRAN-13 – Grand Ave/Broadway, 2035 Plus Project, Less than Significant with mitigation
- TRAN-14 – Madison St/14th St, 2035 Plus Project, Significant and Unavoidable
- TRAN-15 – Madison St/11th St, 2035 Plus Project, Significant and Unavoidable
- TRAN-16 – Madison St/10th St, 2035 Plus Project, Significant and Unavoidable
- TRAN-17 – Oak St/10th St, 2035 Plus Project, Significant and Unavoidable
- TRAN-18 – Harrison St/8th St, 2035 Plus Project, Significant and Unavoidable
- TRAN-19 – Jackson St/8th St, 2035 Plus Project, Significant and Unavoidable
- TRAN-20 – Oak St/8th St, 2035 Plus Project, Significant and Unavoidable
- TRAN-21 – Jackson St/7th St, 2035 Plus Project, Significant and Unavoidable
- TRAN-22 – Oak St/7th St, 2035 Plus Project, Significant and Unavoidable
- TRAN-23 – 5th Ave/7th St/8th St, 2035 Plus Project, Significant and Unavoidable
- TRAN-24 – Jackson St/6th St, 2035 Plus Project, Significant and Unavoidable
- TRAN-25 – Oak St/6th St, 2035 Plus Project, Significant and Unavoidable
- TRAN-26 – Oak St/5th St, 2035 Plus Project, Significant and Unavoidable
- TRAN-27 – Oak St – 2nd Street to Embarcadero - 2035 Plus Project, Significant and Unavoidable
- TRAN-28 – Constitution Way/Marina Village Pkwy - Existing Plus Project, Significant and Unavoidable
- TRAN-29 – Constitution Way/Atlantic Ave - Existing Plus Project, Significant and Unavoidable



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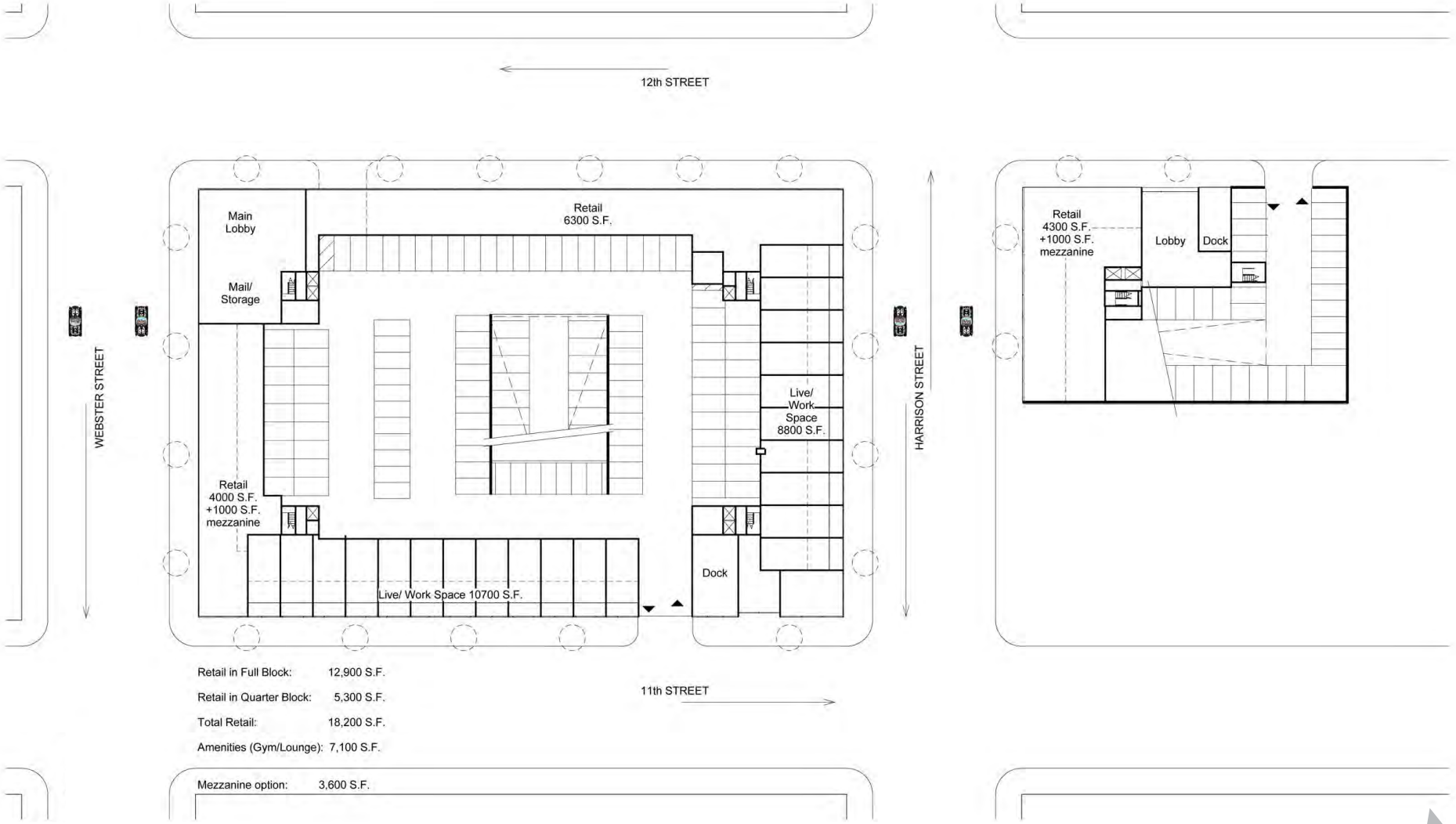
LEGEND

Project Site

Study Intersection

Figure 1

Project Location and Study Intersections



Site Plan Source: FORMA

Figure 2

Conceptual Project Site Plan

The 12th and Webster project would add small amounts of traffic to each of these 29 impacted locations.

EXISTING TRAFFIC CONDITIONS

In addition to evaluating how the proposed project fits into the overall development envelope analyzed in the transportation study for the LMSAP Draft EIR, the transportation study for the proposed project evaluates traffic operations at the following seven intersections in the vicinity of the project site, as shown on Figure 1**:**

1. 12th Street/ Webster Street
2. 12th Street/ Harrison Street
3. 12th Street/ Alice Street
4. 12th Street/ Jackson Street
5. 11th Street/ Webster Street
6. 11th Street/ Harrison Street
7. 11th Street/ Franklin Street

Consistent with City of Oakland guidelines, the study intersections include locations that were not already studied in the LMSAP Draft EIR and where the project could potentially increase traffic volumes by 50 or more peak-hour trips.

Traffic data, consisting of automobile turning movement as well as pedestrian and bicycle counts, was collected from 7:00 AM to 9:00 AM (weekday AM peak hour) and from 4:00 PM to 6:00 PM (weekday PM peak hour) on November 18, 2015. **Appendix A** presents the existing traffic volume counts. For each study intersection, the peak hour (i.e., the hour with the highest traffic volumes observed in the study area) within each peak period was selected for evaluation.

Figure 3 presents existing intersection lane configurations, traffic control devices, and peak hour traffic volumes, and **Figure 4** presents peak hour pedestrian and bicycle volumes at the study intersections.

Based on the volumes and roadway configurations presented in Figure 3, Fehr & Peers calculated the Level of Service (LOS)[1] at the study intersections using the 2010 *Highway Capacity Manual*

[1] The operations of roadway facilities are typically described with the term level of service (LOS), a qualitative description of traffic flow based on factors such as speed, travel time, delay, and freedom to maneuver. Six levels are defined from LOS A, which reflects free-flow conditions where there is very little interaction between vehicles, to LOS F, where the vehicle demand exceeds the capacity and high levels of vehicle delay result. LOS E represents "at-capacity" operations.

(HCM) methodologies. The City of Oakland considers LOS E as the threshold of significance for signalized intersections located within Downtown area or that provide direct access to Downtown[2], and LOS D for all other signalized intersections. All seven study intersections signalized and located in Downtown Oakland where the threshold of significance is LOS E.

Study intersections currently operate at LOS B or better during weekday AM and PM peak hours. **Table 1** summarizes the existing intersection analysis results. **Appendix B** provides the detailed LOS calculation sheets.

TABLE 1: EXISTING INTERSECTION LEVELS OF SERVICE SUMMARY

Intersection	Control[1]	Peak Hour	Delay (seconds)	LOS
1. 12th Street/ Webster Street	Signal	AM	10.1	B
		PM	11.9	B
2. 12th Street/ Harrison Street	Signal	AM	10.1	B
		PM	9.7	A
3. 12th Street/ Alice Street	Signal	AM	13.1	B
		PM	12.4	B
4. 12th/ Harrison Street	Signal	AM	10.6	B
		PM	10.5	B
5. 11th Street/ Webster Street	Signal	AM	15.2	B
		PM	14.0	B
6. 11th Street/ Harrison Street	Signal	AM	17.1	B
		PM	17.3	B
7. 11th Street/ Franklin Street	Signal	AM	12.9	B
		PM	13.8	B

1. Signal = intersection is controlled by a traffic signal
2. For signalized intersections, average intersection delay and LOS based on the 2010 HCM method is shown.

Source: Fehr & Peers, 2016

When traffic volumes exceed the intersection capacity, stop-and-go conditions result and a vehicle may wait through multiple signal cycles before passing through the intersection; these operations are designated as LOS F.

[2] Intersections that provide direct access to downtown are generally defined as principal arterials within two miles of Downtown and minor arterials within one mile of Downtown, provided that the street connects directly to Downtown.

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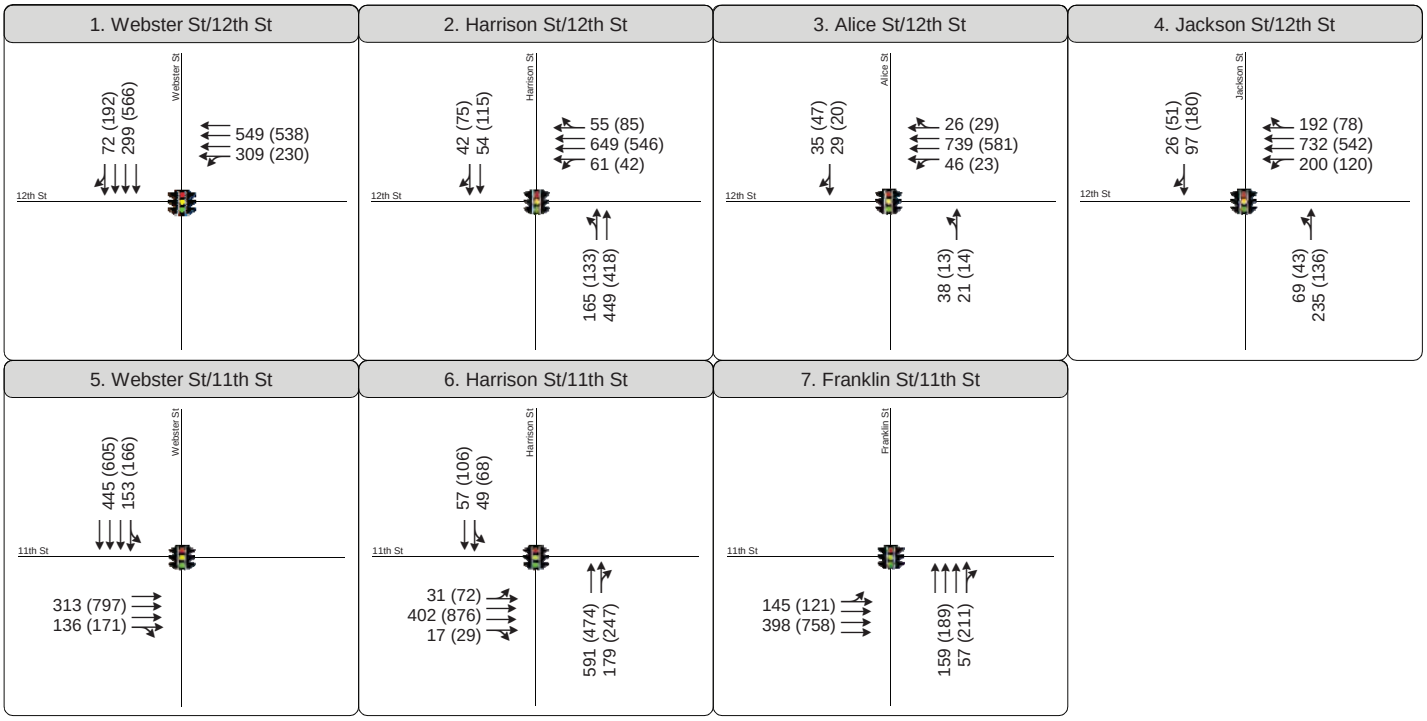

LEGEND

XX (YY) AM (PM) Peak Hour Traffic Volume

Signalized Intersection

Project Site

Study Intersection

Figure 3

Existing
Peak Hour Traffic Volumes, Lane Configurations and Traffic Control

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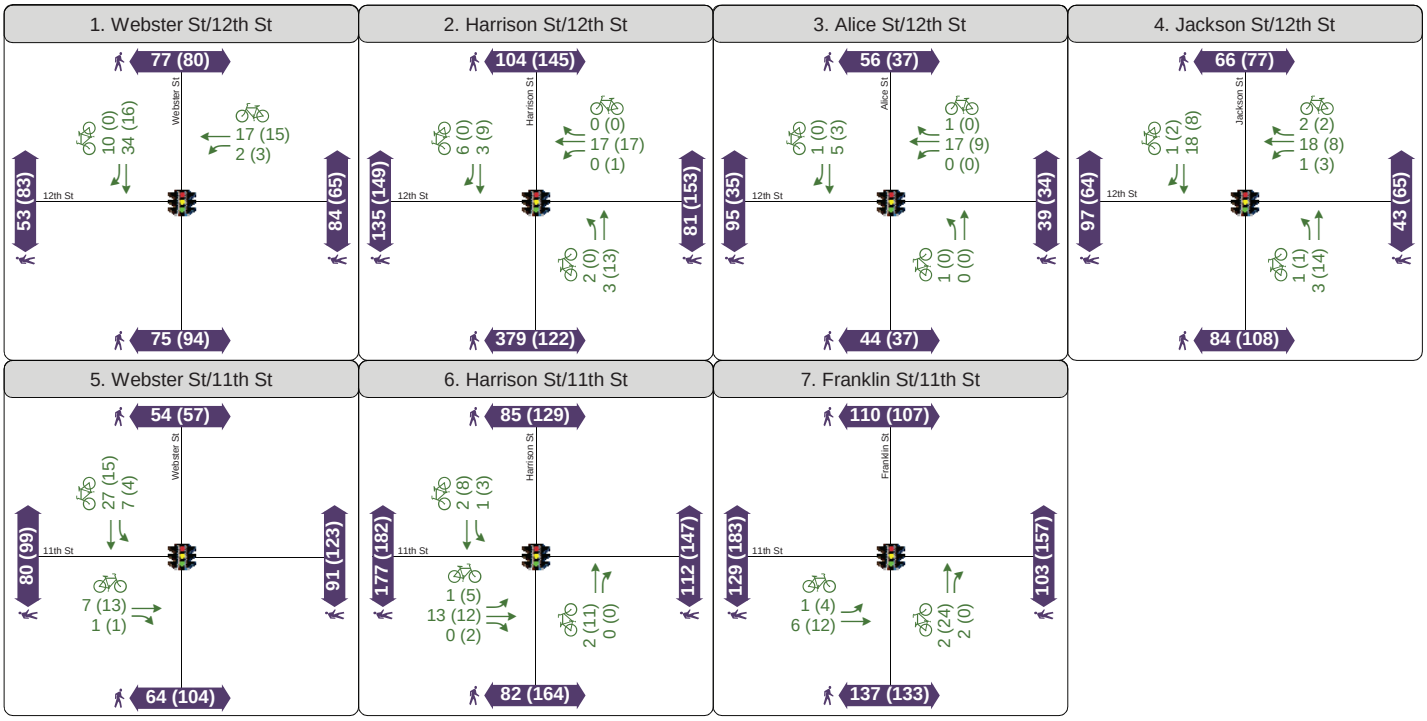


LEGEND

- x (y) — AM (PM) Peak Hour Pedestrian Volumes
- x (y) — AM (PM) Peak Hour Bicycle Volumes
- Signalized Intersection
- Project Site
- # — Study Intersection

Figure 4

Existing Peak Hour Pedestrian and Bicycle Volumes

TRIP GENERATION

Vehicular Trip Generation

Trip generation is the process of estimating the number of vehicles that would likely access the project. Current accepted methodologies, such as the Institute of Transportation Engineers (ITE) *Trip Generation* methodology, are primarily based on data collected at single-use suburban sites. These defining characteristics limit their applicability to developments, such as the proposed project, which is in a walkable dense urban setting near frequent local and regional transit service. Fehr & Peers adjusted the ITE-based estimates to account for the project's setting and proximity to frequent transit service, in accordance with City guidelines. Since the proposed project is about 0.2 mile from the 12th Street BART Station, this analysis reduces the ITE based trip generation by 55 percent to account for the non-automobile trips. This reduction is consistent with the 2011 American Community Survey which shows that 55 percent of Downtown City of Oakland residents travel to work by non-automobile modes.

Table 2 summarizes the trip generation for the project. The project would generate approximately 1,496 daily, 17 AM peak hour, and 120 PM peak hour trips.

TABLE 2: VEHICLE TRIP GENERATION SUMMARY – PROPOSED PROJECT

Land Use	Units[1]	ITE Code	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Residential	422 DU	220[2]	2,806	43	172	215	170	92	262
Retail	26.2 KSF	820[3]	1,119	16	10	25	47	50	97
Middle School	370 Students	522[4]	(600)	(110)	(90)	(200)	(29)	(30)	(59)
	Pass-by Reduction 34% Retail Use[5]			0	0	0	(16)	(17)	(33)
Subtotal			3,325	(51)	91	39	171	95	267
Non-Auto Reduction (-55%)[7]			1,829	(28)	50	22	94	52	147
Adjusted Project Trips			**1,496**	**(23)**	**41**	**17**	**76**	**44**	**120**

1. DU = Dwelling Units, KSF = 1,000 square feet.
2. ITE Trip Generation (9th Edition) land use category 220 (Apartment):
   Daily: 6.65
   AM Peak Hour: 0.51 (20% in, 80% out)
   PM Peak Hour: 0.62 (65% in, 35% out)
3. ITE Trip Generation (9th Edition) land use category 820 (Shopping Center):
   Daily: 42.70
   AM Peak Hour: 0.96 (62% in, 38% out)
   PM Peak Hour: 3.71 (48% in, 52% out)
4. Existing land use to be removed by project.
   ITE Trip Generation (9th Edition) land use category 522 (Middle School/Junior High School):
   Daily: 1.62
   AM Peak Hour: 0.54 (55% in, 45% out)
   PM Peak Hour: 0.16 (49% in, 51% out)
5. PM peak hour pass-by rates based on ITE *Trip Generation Handbook* (3rd Edition). The weekday PM peak hour average pass-by rates for land use category 932 is 43% and for land use category 820 is 34%. A 43% and 34% pass-by rate is applied to the restaurant and the retail component respectively. Pass-by rates are not applied to the AM peak hour.
6. Reduction of 55.0% assumed based on 2011 American Community Survey in Downtown Oakland.

Source: Fehr & Peers, 2016.

In addition, the project trip generation presented in Table 2 does not account for the following in order to present a reasonable "worst case" scenario:

- ***Existing Trips*** - The project would eliminate the existing middle school, parking garage and recreational hardscape open space. The trip generation nets out (i.e. subtracts) the existing trips generated by the middle school. However, the trip generation estimates conservatively do not net out any the existing trips generated by the surface parking lot (that portion of the lot not used by the middle school). Although the removal of the parking spaces may eliminate some of the existing automobile trips, other off-street parking facilities in the vicinity likely provide adequate spaces to accommodate most of the motorists that currently park at the project site. Thus, many of these motorists would likely

continue to travel to and from the project area via automobile after the completion of the project.

Non-Vehicular Trip Generation

Consistent with the City of Oakland's Transportation Impact Analysis Guidelines and information from the 2011 American Community Survey of Downtown Oakland, **Table 3** presents the estimates of project trip generation for all travel modes.

TABLE 3: TRIP GENERATION BY TRAVEL MODE

Mode	Mode Share Adjustment Factors[1]	Daily	Weekday AM Peak Hour	Weekday PM Peak Hour
Automobile	45.0%	1,496	18	120
Transit	36.8%	1,222	14	98
Bike	4.7%	157	2	13
Walk	27.8%	925	11	74
Total Trips		**3,800**	**45**	**305**

1. Based on the City of Oakland's Transportation Impact Analysis Guidelines and the *2011 American Community Survey of Downtown Oakland* on *City of Oakland*.

Source: Fehr & Peers, 2016.

The traffic analysis which follows is based on a previous, larger version of proposed project which was originally proposed. In its original form, the project was to develop 510 dwelling units, 14,700 square feet of retail space, 2,000 square feet of café space and 1,500 square feet of restaurant space. The project was later downsized to its current proposal. **Table 4** presents the vehicular trip generation characteristics of previously proposed project. As presented in Table 4, the prior proposal would result in additional trips being generated on a daily, AM peak hour and PM peak hour basis. As the traffic analysis is based on a more intensive, higher generating set of land uses, it can be considered conservative with respect to its evaluation of transportation impacts.

TABLE 4: VEHICLE TRIP GENERATION SUMMARY – PREVIOUSLY PROPOSED PROJECT

Land Use	Units[1]	ITE Code	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Residential	510 DU	220[2]	3,391	52	208	260	205	111	316
Retail	14.7 KSF	820[3]	628	9	5	14	26	29	55
Cafe	2.0 KSF	932[4]	254	12	10	22	12	8	20
Restaurant	1.5 KSF	932[4]	191	9	7	16	9	6	15
Middle School	370 Students	522[5]	(600)	(110)	(90)	(200)	(29)	(30)	(59)
	Pass-by Reduction 43% Restaurant[6]			0	0	0	(9)	(6)	(15)
	Pass-by Reduction 34% Retail Use[6]			0	0	0	(9)	(10)	(19)
Subtotal			3,864	(28)	140	112	206	107	313
Non-Auto Reduction (-55%)[7]			2,215	(15)	77	62	113	59	172
Adjusted Project Trips			**1,739**	**(13)**	**63**	**50**	**92**	**49**	**141**

1. DU = Dwelling Units, KSF = 1,000 square feet.
2. ITE Trip Generation (9th Edition) land use category 220 (Apartment):
   Daily: 6.65
   AM Peak Hour: 0.51 (20% in, 80% out)
   PM Peak Hour: 0.62 (65% in, 35% out)
3. ITE Trip Generation (9th Edition) land use category 820 (Shopping Center):
   Daily: 42.70
   AM Peak Hour: 0.96 (62% in, 38% out)
   PM Peak Hour: 3.71 (48% in, 52% out)
4. ITE Trip Generation (9th Edition) land use category 932 (High Turnover Sit Down Restaurant):
   Daily: 127.15
   AM Peak Hour: 10.81 (55% in, 45% out)
   PM Peak Hour: 9.85 (60% in, 40% out)
5. Existing land use to be removed by project.
   ITE Trip Generation (9th Edition) land use category 522 (Middle School/Junior High School):
   Daily: 1.62
   AM Peak Hour: 0.54 (55% in, 45% out)
   PM Peak Hour: 0.16 (49% in, 51% out)
6. PM peak hour pass-by rates based on ITE *Trip Generation Handbook* (3rd Edition). The weekday PM peak hour average pass-by rates for land use category 932 is 43% and for land use category 820 is 34%. A 43% and 34% pass-by rate is applied to the restaurant and the retail component respectively. Pass-by rates are not applied to the AM peak hour.
7. Reduction of 55.0% assumed based on 2011 American Community Survey in Downtown Oakland.

Source: Fehr & Peers, 2016.

Since the traffic analysis was complete, a newly proposed project would include only 416 residential units and approximately 25,050 square feet of commercial space. As shown in **Table 5** below, the further downsized project proposal would result in fewer trips than the previous, larger version of

the project and the basis for this analysis. As such, the previous, larger version of the project still can be considered conservative with respect to its evaluation of transportation impacts.

TABLE 5: VEHICLE TRIP GENERATION SUMMARY – PROPOSED PROJECT

Land Use	Units[1]	ITE Code	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Residential	416 DU	220[2]	2,766	42	170	212	168	90	258
Retail	25.05 KSF	820[3]	1,070	15	9	24	45	48	93
Middle School	370 Students	522[4]	(600)	(110)	(90)	(200)	(29)	(30)	(59)
	Pass-by Reduction 34% Retail Use[5]			0	0	0	(15)	(16)	(31)
Subtotal			3,236	(53)	89	36	169	92	261
Non-Auto Reduction (-55%)[7]			(1,780)	(29)	49	20	93	51	144
Adjusted Project Trips			**1,456**	**(24)**	**40**	**16**	**76**	**41**	**117**

1. DU = Dwelling Units, KSF = 1,000 square feet.
2. ITE Trip Generation (9th Edition) land use category 220 (Apartment):
   Daily: 6.65
   AM Peak Hour: 0.51 (20% in, 80% out)
   PM Peak Hour: 0.62 (65% in, 35% out)
3. ITE Trip Generation (9th Edition) land use category 820 (Shopping Center):
   Daily: 42.70
   AM Peak Hour: 0.96 (62% in, 38% out)
   PM Peak Hour: 3.71 (48% in, 52% out)
4. Existing land use to be removed by project.
   ITE Trip Generation (9th Edition) land use category 522 (Middle School/Junior High School):
   Daily: 1.62
   AM Peak Hour: 0.54 (55% in, 45% out)
   PM Peak Hour: 0.16 (49% in, 51% out)
5. PM peak hour pass-by rates based on ITE *Trip Generation Handbook* (3rd Edition). The weekday PM peak hour average pass-by rates for land use category 932 is 43% and for land use category 820 is 34%. A 43% and 34% pass-by rate is applied to the restaurant and the retail component respectively. Pass-by rates are not applied to the AM peak hour.
6. Reduction of 55.0% assumed based on 2011 American Community Survey in Downtown Oakland.

Source: Fehr & Peers, 2016.

TRIP DISTRIBUTION AND ASSIGNMENT

The trip distribution and assignment process is used to estimate how the trips generated by a project site would be distributed across the roadway network. Based on the trip distribution and assignment assumptions provided in the Lake Merritt Station Area Plan DEIR, locations of complementary land uses, and the one-way street network and turn restrictions in Downtown Oakland, the directions of approach to and departure from the project site were determined. **Figure 5** shows the resulting trip distribution.

Trips generated by the proposed project, as shown in Table 2, were assigned to the roadway network according to the trip distribution shown on Figure 4. **Figure 6** shows the project trip assignment for the weekday AM and PM peak hours at the study intersections.

INTERSECTION ANALYSIS

This section discusses the impacts of the proposed project on traffic operations under Existing and 2040 conditions based on the City of Oakland's Transportation Impact Study Guidelines.

Existing Plus Project Intersection Analysis

Figure 7 shows traffic volumes under Existing Plus Project conditions, which consists of Existing traffic volumes (shown on Figure 3) plus added traffic volumes generated by the project (shown on Figure 5).

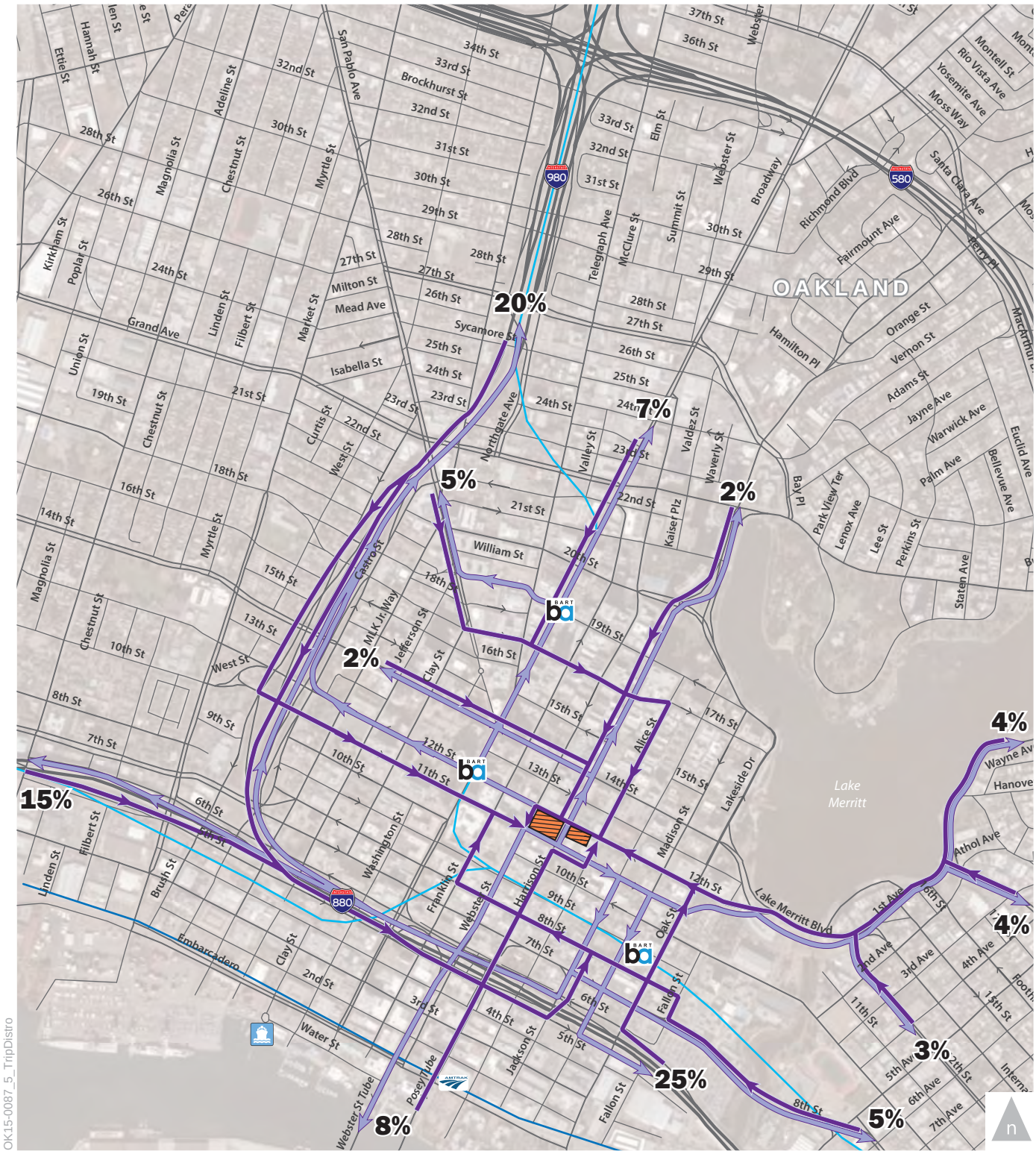
Table 6 summarizes the intersection operations results for the Existing No Project and Existing Plus Project conditions. All study intersections would continue to operate at an acceptable LOS. The proposed project would not cause a significant impact at the study intersections under Existing Plus Project conditions.

TABLE 6: EXISTING NO PROJECT AND EXISITNG PLUS PROJECT INTERSECTION LEVELS OF SERVICE SUMMARY

Intersection	Control	Peak Hour	Existing No Project		Existing Plus Project		Significant Impact
			Delay	LOS	Delay	LOS	
1. 12th Street/ Webster Street	Signal	AM	10.1	B	10.0	A	No
		PM	11.9	B	11.8	B	No
2. 12th Street/ Harrison Street	Signal	AM	10.1	B	9.2	A	No
		PM	9.7	A	9.0	A	No
3. 12th Street/ Alice Street	Signal	AM	13.1	B	13.0	B	No
		PM	12.4	B	12.6	B	No
4. 12th Street and Jackson Street	Signal	AM	10.6	B	10.5	B	No
		PM	10.5	B	10.9	B	No
5. 11th Street and Webster Street	Signal	AM	15.2	B	15,1	B	No
		PM	14.0	B	18.1	B	No
6. 11th Street and Harrison Street	Signal	AM	17.1	B	17.2	B	No
		PM	17.3	B	17.3	B	No
7. 11th Street and Franklin Street	Signal	AM	12.9	B	12.4	B	No
		PM	13.9	B	13.4	B	No

Notes:
1. Signal = intersection is controlled by a traffic signal
2. For signalized intersections, average intersection delay and LOS based on the 2010 HCM method is shown.

Source: Fehr & Peers, 2016



OK15-0087_5_TripDistro

LEGEND

Inbound Routes

Outbound Routes

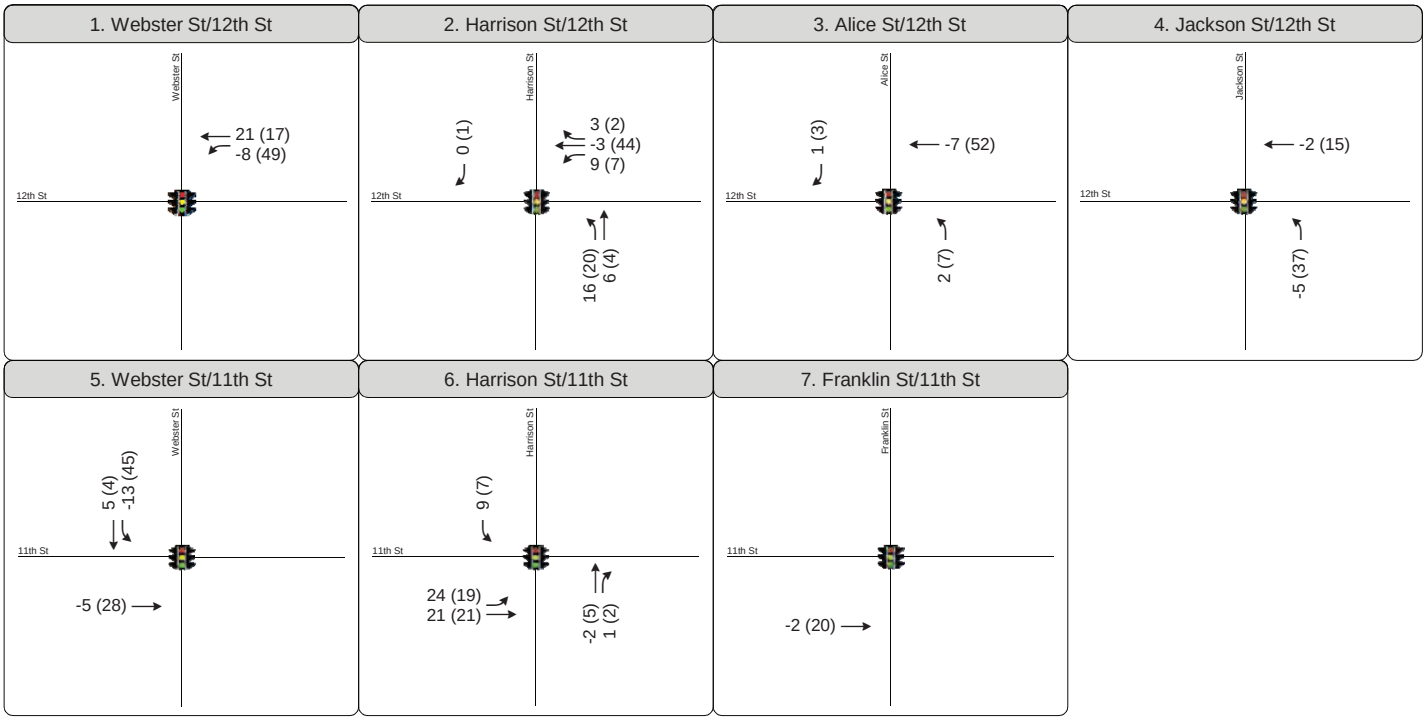
XX% Trip Distribution

Project Site

Figure 5

Project Trip Distribution

OK15-0087_6_PTA



LEGEND

XX (YY) AM (PM) Peak Hour Traffic Volume

Signalized Intersection

Project Site

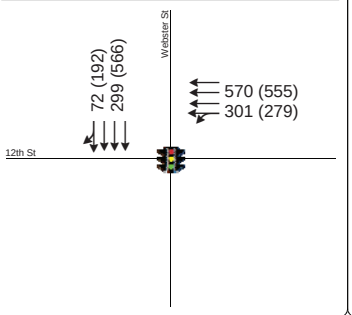
Study Intersection

Figure 6

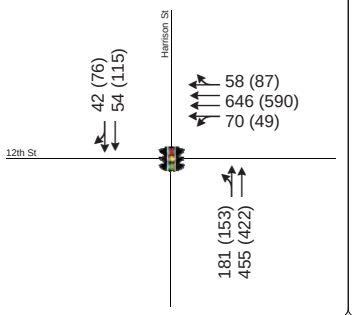
Project Trip Assignment

OK15-0087_7_Ex+ProjVol

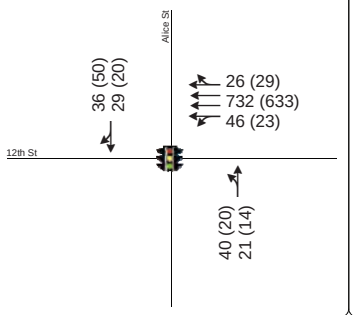
1. Webster St/12th St



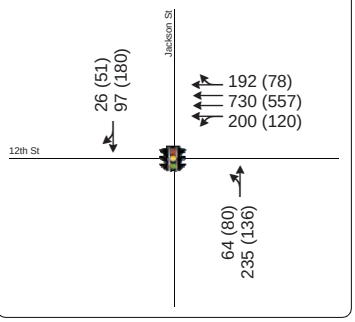
2. Harrison St/12th St



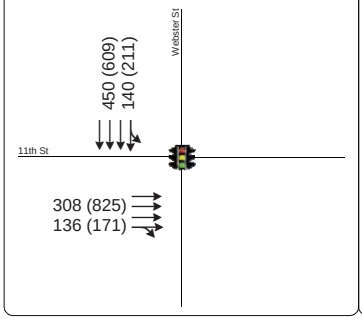
3. Alice St/12th St



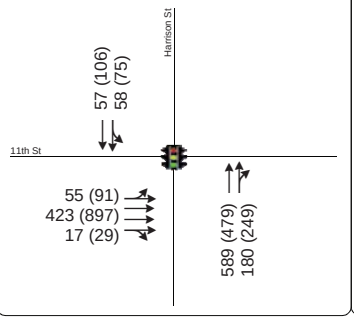
4. Jackson St/12th St



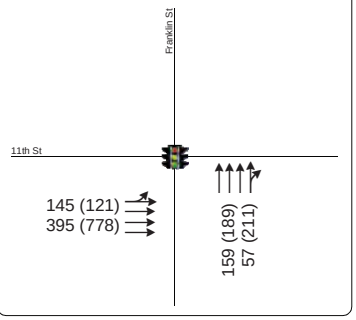
5. Webster St/11th St



6. Harrison St/11th St



7. Franklin St/11th St



LEGEND

XX (YY) AM (PM) Peak Hour Traffic Volume

Signalized Intersection

Project Site

Study Intersection

Figure 7

Existing Plus Project
Peak Hour Traffic Volumes, Lane Configurations and Traffic Control

2040 Intersection Analysis

Year 2040 traffic volumes for the study intersections are based on information from the most recent Alameda County Transportation Commission's (ACTC) Travel Demand Model (updated June 2015). **Figure 8** shows the traffic volumes for the 2040 No Project and **Figure 9** 2040 Plus Project scenarios.

The 2040 No Project and the 2040 Plus Project conditions also reflect modifications that would be made by the East Bay Rapid Transit Project which will modify the lane configurations of 12th Street and 11th Street. The implementation of this project would convert one of the through lanes to a bus only lane and restrict vehicle movements to right turns.

Table 7 summarizes the intersection LOS calculations for 2040 No Project and 2040 Plus Project conditions. All study intersections would continue to operate at an acceptable LOS. The proposed project would not cause a significant adverse impact at the study intersections under 2040 Plus Project conditions.

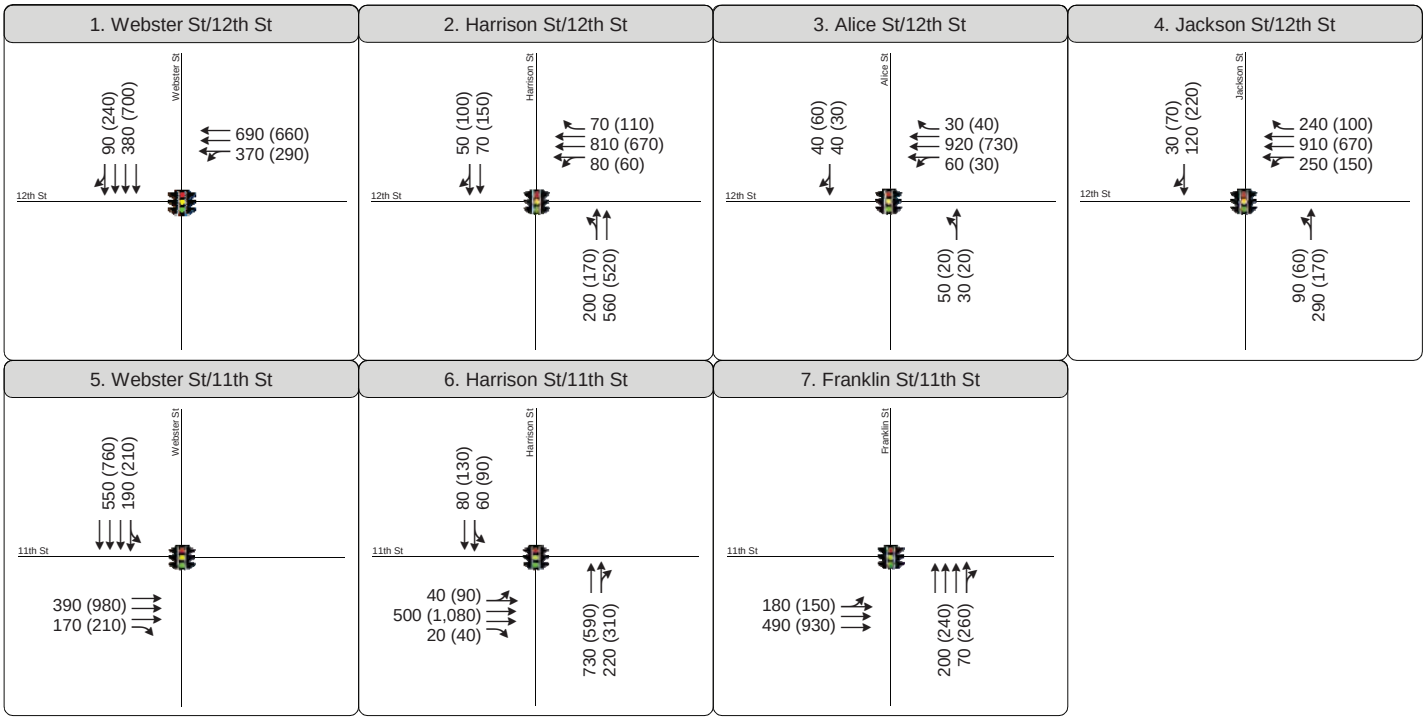
TABLE 7: 2040 NO PROJECT AND 2040 PLUS PROJECT INTERSECTION LEVELS OF SERVICE SUMMARY

Intersection	Control	Peak Hour	2040 No Project		2040 Plus Project		Significant Impact
			Delay	LOS	Delay	LOS	
1. 12th Street/ Webster Street	Signal	AM PM	11.1 13.1	B B	11.0 13.0	B B	No No
2. 12th Street/ Harrison Street	Signal	AM PM	11.4 10.9	B B	10.1 9.7	B A	No No
3. 12th Street/ Alice Street	Signal	AM PM	14.6 13.5	B B	14.5 13.8	B B	No No
4. 12th Street and Jackson Street	Signal	AM PM	11.7 11.4	B B	11.5 12.0	B B	No No
5. 11th Street and Webster Street	Signal	AM PM	15.6 14.9	B B	15,4 19.2	B B	No No
6. 11th Street and Harrison	Signal	AM PM	20.0 21.6	B C	20.2 20.7	C C	No No
7. 11th Street and Franklin Street	Signal	AM PM	14.1 16.6	B B	13.5 15.8	B B	No No

Notes:
1. Signal = intersection is controlled by a traffic signal
2. For signalized intersections, average intersection delay and LOS based on the 2010 HCM method is shown.

Source: Fehr & Peers, 2016

OK15-0087_8_CumuVol



LEGEND

XX (YY) AM (PM) Peak Hour Traffic Volume

Signalized Intersection

Project Site

Study Intersection

Figure 8

Cumulative Peak Hour Traffic Volumes, Lane Configurations and Traffic Control

OK15-0087_9_Cumu+ProjVol

1. Webster St/12th St	2. Harrison St/12th St	3. Alice St/12th St	4. Jackson St/12th St
90 (240) 380 (700) 711 (677) 362 (339)	50 (101) 70 (150) 73 (112) 807 (714) 89 (67) 216 (190) 566 (524)	41 (63) 40 (30) 30 (40) 913 (782) 60 (30) 52 (27) 30 (20)	30 (70) 120 (220) 240 (100) 908 (685) 250 (150) 85 (97) 290 (170)

5. Webster St/11th St	6. Harrison St/11th St	7. Franklin St/11th St
555 (764) 177 (255) 385 (1,008) 170 (210)	80 (130) 69 (97) 64 (109) 521 (1,101) 20 (40) 728 (595) 221 (312)	180 (150) 487 (950) 200 (240) 70 (260)

LEGEND

XX (YY) AM (PM) Peak Hour Traffic Volume

Signalized Intersection

Project Site

Study Intersection

Figure 9

Cumulative Plus Project
Peak Hour Traffic Volumes, Lane Configurations and Traffic Control

VEHICLE, BICYCLE, AND PEDESTRIAN ACCESS

This section evaluates access and circulation of all travel modes within the proposed site, based on the site plans dated December 3, 2015.

Vehicle Access and On-Site Circulation

The project proposes two buildings, with the first structure being constructed on the full block bounded by 12th Street, 11th Street, Webster Street and Harrison Street and second building being built on a smaller adjacent parcel in the southeast corner of the Harrison Street/12th Street intersection. Automobile access to the larger parcel would be provided via a full access driveway on 11th Street, about 200 feet east of Webster Street. The smaller parcel would be accessed via a driveway located on 12th street, about 50 feet east of Harrison Street. A total of 324 parking spaces would be provided on the two parcels.

The internal aisles within the garage, as shown on the site plan, would be 22 feet wide, meeting the City of Oakland's minimum required width of 21 feet (17.116.210). The 22-foot driveway meets the minimum required width of 12 feet for commercial zones (12.04.270).

Recommendation 1: While not required to address a CEQA impact, the following should be monitored as part of the final design for the project:

- Ensure that the project driveway would provide adequate sight distance between motorists exiting the driveway and pedestrians on the adjacent sidewalks. This may require redesigning and/or widening the driveway. If adequate sight distance cannot be provided, provide audio/visual warning devices at the driveway.

Bicycle Access and On-Site Circulation

The proposed project would provide 255 bicycle parking spaces on the ground floor. Long-term bicycle spaces would be provided within the parking garage. Short-term bicycle parking spaces would be provided in accordance with City Code requirements.

Pedestrian Access and On-Site Circulation

The project would provide adequate pedestrian facilities throughout the site. For the larger parcel, the primary pedestrian access would be through the main lobby located at the corner of 12th and Webster. Pedestrian access to the building on the smaller parcel would be provided at the northeast corner of 12th Street and Harrison Street. The site plan shows that there would be

continuous sidewalks on both sides of 11th Street, 12th Street, Harrison Street and Webster Street in the vicinity of the project where pedestrians can access the residential units and commercial space directly. The retail spaces would have their own unique access points on 12th Street and Webster Street. These project features ensure safe pedestrian access to and throughout the site.

The City of Oakland *Pedestrian Master Plan* (PMP) recommends nine foot sidewalks with five foot clear pedestrian passage zones for local streets such as 12th and Webster Streets. The existing sidewalks are approximately 12 feet wide on 11th Street, Harrison Street, 12th Street and Webster Street. With the development of the project, the sidewalks along the project frontage will be wide enough to accommodate potential sidewalk encroachment (e.g. bicycle racks and planted trees) and continue to provide five feet of clear sidewalk space for pedestrians.

Recommendation 2: While not required to address a CEQA impact, the following should be considered as part of the final design for the project:

- Explore the feasibility and consider installing Accessible Pedestrian Signals (APS), at the intersections of 12th Street/Harrison Street, 11th Street/Harrison Street, 11th Street Webster Street and 12th Street/Webster Street to decrease waiting time for the pedestrian and increase pedestrian safety.
- Explore the feasibility and consider installing pedestrian bulb outs at the four intersections adjacent to the project site to decrease crossing times and increase pedestrian safety.
- Consider installing high visibility crosswalks at the four intersections adjacent to the project site.
- Ensure that project entrance doors do not open outward toward the sidewalk. All entrance doors of the proposed project should open inside rather than intruding into the sidewalk area.

Transit Access

AC Transit provides transit service to the project site with bus stops on 12th Street, Harrison Street, 12th Street and Jackson Street. The nearest bus stops are within a block of the project site. The bus stops on 12th Street west of Jackson Street provide bus shelters and benches; however the stop at 12th Street west of Harrison Street does not provide a bus shelter or bench. The 12th Street BART station is approximately 0.2 miles from the project site. Many AC Transit routes, including 14, 18, 20, 40, 88, 801 and 840, operate within the project's vicinity. Currently, AC Transit is planning to implement a 14.4 mile long Easy Bay Bus Rapid Transit (BRT) project. The future BRT line alignment

follows 11th and 12th Street from Broadway to Lake Merritt Boulevard. The BRT stops would be within easy walking distance from project at 12th Street and Webster Street.

PARKING CONSIDERATIONS

This section discusses parking supply and demand for the project.

Project Automobile Parking Supply

Based on the proposed site plan, the project would provide 324 parking spaces. All parking spaces would be accessible via the garage driveways on 11th Street and 12th Street. It is expected that residential visitors and retail patrons would use on-street parking.

The streets adjacent to the project site provide metered on-street parking. Currently, there are 39 on-street parking spaces adjacent to the project site. It is expected that proposed project would eliminate multiple driveways on 11th Street, 12th Street, Harrison Street and Webster Street which would increase the number of on-street parking. It is expected that the overall on-street parking supply would increase by about three parking spaces.

City Code Automobile Parking Requirements

The proposed project is located within a City of Oakland Municipal Code's Zone D-LM Zone. The D-LM Zones requires 0.75 automobile parking spaces for every residential unit and no automobile parking spaces for commercial uses. **Table 8** presents the off-street automobile parking requirements for the project per City Code. The proposed project is required to provide a total of 317 spaces and would provide up to 324 spaces, a surplus of seven spaces.

TABLE 8: AUTOMOBILE PARKING REQUIREMENTS

Land Use	Size[1]	Required Parking Supply	Provided Parking Supply	Difference
Apartments/D-LM Zone[2]	422 DU	317	324	**7**
Retail[3]	26.2 KSF	0	0	**0**
Total		**317**	**324**	**7**

1. DU = dwelling unit; KSF = 1,000 square feet
2. City of Oakland off-street parking requirement for residential in zone D-LM is three-quarters space per unit (section 17.116.060).
3. City of Oakland off-street parking requirement for commercial uses in zone D-LM is zero spaces per KSF for retail (section 17.116.080).

Source: Fehr & Peers, 2016

Automobile Parking Demand

This analysis compares proposed parking supply to project parking demand estimated using average vehicle ownership rates from American Community Survey estimates data and the parking demand rates published in *Parking Generation, 4th Edition* (ITE, 2010).

Table 9 summarizes the parking demand of the project. The parking demand values represent average parking demand. Parking demand for the residential portions of the project was determined by using average vehicle ownership rates in downtown Oakland. According to American Community Survey estimates[3], average vehicle ownership in the study area is 0.63 vehicles per multi-family dwelling unit. Based on this data, residential parking demand would be about 266 parking spaces. Based on ITE data for shopping center the adjusted shopping center parking demand would be 30 spaces. Residential visitor demand was estimated using an adjusted Urban Land Institution Shared Parking rate of 0.0675, resulting in a visitor demand of 28 spaces. National parking demand statistics for the residential visitors and commercial uses were adjusted to account for the anticipated 55 percent non-automobile use, as documented in the trip generation calculations.

The parking demand for the retail component of the project was estimated using published data in *Parking Generation* (ITE, 4th Edition). This estimate presents a worse-case scenario in that it assumes most of the retail visitors would be new to the area. Although specific retail tenants have not been determined, it is likely that the retail component of the project would be local-serving with minimal new automobile trips.

[3] Source: American Community Survey 5-Year Estimates, 2013.

TABLE 9: PROJECT PARKING SUPPLY AND DEMAND

Land Use	Units[1]	Rate	Weekday
Apartment (Residents)	422 DU	0.63[2]	266
Apartment (Visitors)	422 DU	0.0675[3]	28
Retail	26.2 KSF	1.15[4]	30
Parking Demand			**324**
Parking Supply			**324**
Parking Deficit			**-**

1. DU = dwelling unit; KSF = 1,000 square feet
2. Based on 2013 ACS average automobile ownership of 0.63 vehicles per residential unit.
3. Based on adjusted (using non-auto reduction of 55%) rate of 0.0675 spaces per DU using ULI Shared Parking
4. Based on adjusted (using non-auto reduction of 55%) rate of 1.15 spaces per KSF using ITE *Parking Generation* (4th Edition

Source: Fehr & Peers, 2016

Recommendation 3: While not required to address a CEQA impact, the following should be considered as part of the final design and implementation of the project:

- Implement a Transportation Demand Management (TDM) plan to encourage employees and residents to use other travel modes and reduce parking demand.

City Code Bicycle Parking Requirements

Chapter 17.117 of the Oakland Municipal Code requires long-term and short-term bicycle parking for new buildings. Long-term bicycle parking includes lockers or locked enclosures and short-term bicycle parking includes bicycle racks. The Code requires one long-term space for every four multi-family dwelling units and one short-term space for every 20 multi-family dwelling units. The Code requires two long and short-term spaces, for the commercial component of the project.

Table 10 presents the bicycle parking requirements for the project. The project would provide 255 bicycle parking spaces for long and short-term usage which exceeds the minimum requirements.

TABLE 10: BICYCLE PARKING REQUIREMENTS

Land Use	Size[1]	Long-Term		Short-Term	
		Spaces per Unit	Spaces	Spaces per Unit	Spaces
Apartments	422 DU	1:4 DU	106	1:20 DU	21
Commercial	26.2 KSF	Min.	2	Min.	2
Total Required Bicycle Spaces			108		23
Total Bicycle Parking Provided			255		
Bicycle Parking Surplus/Deficit			**124 (surplus)**		

1. DU = dwelling unit; KSF = 1,000 square feet
2. Based on Oakland Municipal Code Sections 17.117.090 and 17.117.110

Source: Fehr & Peers, 2016

Loading

City Municipal Code Section 17.116.120 requires off-street loading facilities for residential uses and City Municipal Code Section 17.116.140 requires off-street loading facilities for commercial uses. The requirement for residential facilities that have between 50,000 and 399,999 square feet of floor area is three off-street loading berths. The Code requires one loading berth for commercial uses between 10,000 and 24,999 square feet. Based on City Code, the project is required to provide three off-street loading berths for the residential component of the project and one berth for the commercial component of the project. The proposed project provides two loading docks which does not meets the City's loading requirement.

Appendix A

Intersection Turning Movement Counts

FEHR PEERS

ALL TRAFFIC DATA

City of Oakland
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7921-001 Webster Street & 12th Street
Date : 11/18/2015

Unshifted Count = All Vehicles & Uturns

	Webster Street Southbound					12th Street Westbound					Webster Street Northbound					12th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	0	29	6	0	35	21	59	0	0	80	0	0	0	0	0	0	0	0	0	0	115	0
7:15	0	41	21	0	62	24	93	0	0	117	0	0	0	0	0	0	0	0	0	0	179	0
7:30	0	61	13	0	74	53	77	0	0	130	0	0	0	0	0	0	0	0	0	0	204	0
7:45	0	71	17	0	88	89	119	0	0	208	0	0	0	0	0	0	0	0	0	0	296	0
Total	0	202	57	0	259	187	348	0	0	535	0	0	0	0	0	0	0	0	0	0	794	0
8:00	0	63	17	0	80	84	130	0	0	214	0	0	0	0	0	0	0	0	0	0	294	0
8:15	0	83	23	0	106	83	150	0	0	233	0	0	0	0	0	0	0	0	0	0	339	0
8:30	0	82	15	0	97	53	150	0	0	203	0	0	0	0	0	0	0	0	0	0	300	0
8:45	0	61	27	0	88	46	132	0	0	178	0	0	0	0	0	0	0	0	0	0	266	0
Total	0	289	82	0	371	266	562	0	0	828	0	0	0	0	0	0	0	0	0	0	1199	0
16:00	0	113	23	0	136	70	113	0	0	183	0	0	0	0	0	0	0	0	0	0	319	0
16:15	0	114	40	0	154	37	114	0	0	151	0	0	0	0	0	0	0	0	0	0	305	0
16:30	0	120	36	0	156	56	113	0	0	169	0	0	0	0	0	0	0	0	0	0	325	0
16:45	0	126	29	0	155	69	132	0	0	201	0	0	0	0	0	0	0	0	0	0	356	0
Total	0	473	128	0	601	232	472	0	0	704	0	0	0	0	0	0	0	0	0	0	1305	0
17:00	0	184	52	0	236	64	140	0	0	204	0	0	0	0	0	0	0	0	0	0	440	0
17:15	0	135	47	0	182	53	137	0	0	190	0	0	0	0	0	0	0	0	0	0	372	0
17:30	0	121	64	0	185	44	129	0	0	173	0	0	0	0	0	0	0	0	0	0	358	0
17:45	0	105	27	0	132	40	135	0	0	175	0	0	0	0	0	0	0	0	0	0	307	0
Total	0	545	190	0	735	201	541	0	0	742	0	0	0	0	0	0	0	0	0	0	1477	0
Grand Total	0	1509	457	0	1966	886	1923	0	0	2809	0	0	0	0	0	0	0	0	0	0	4775	0
Apprch %	0.0%	76.8%	23.2%	0.0%		31.5%	68.5%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%			
Total %	0.0%	31.6%	9.6%	0.0%	41.2%	18.6%	40.3%	0.0%	0.0%	58.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

AM PEAK HOUR	Webster Street Southbound					12th Street Westbound					Webster Street Northbound					12th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	0	71	17	0	88	89	119	0	0	208	0	0	0	0	0	0	0	0	0	0	296
8:00	0	63	17	0	80	84	130	0	0	214	0	0	0	0	0	0	0	0	0	0	294
8:15	0	83	23	0	106	83	150	0	0	233	0	0	0	0	0	0	0	0	0	0	339
8:30	0	82	15	0	97	53	150	0	0	203	0	0	0	0	0	0	0	0	0	0	300
Total Volume	0	299	72	0	371	309	549	0	0	858	0	0	0	0	0	0	0	0	0	0	1229
% App Total	0.0%	80.6%	19.4%	0.0%		36.0%	64.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.901	.783	.000	.875	.868	.915	.000	.000	.921	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.906

PM PEAK HOUR	Webster Street Southbound					12th Street Westbound					Webster Street Northbound					12th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	126	29	0	155	69	132	0	0	201	0	0	0	0	0	0	0	0	0	0	356
17:00	0	184	52	0	236	64	140	0	0	204	0	0	0	0	0	0	0	0	0	0	440
17:15	0	135	47	0	182	53	137	0	0	190	0	0	0	0	0	0	0	0	0	0	372
17:30	0	121	64	0	185	44	129	0	0	173	0	0	0	0	0	0	0	0	0	0	358
Total Volume	0	566	192	0	758	230	538	0	0	768	0	0	0	0	0	0	0	0	0	0	1526
% App Total	0.0%	74.7%	25.3%	0.0%		29.9%	70.1%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.769	.750	.000	.803	.833	.961	.000	.000	.941	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.867

ALL TRAFFIC DATA

City of Oakland
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7921-001 Webster Street & 12th Street
Date : 11/18/2015

Bank 1 Count = Bikes & Peds

	Webster Street Southbound					12th Street Westbound					Webster Street Northbound					12th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	5	2	8	7	1	2	1	5	4	0	0	0	3	0	0	0	0	8	0	11	24
7:15	0	6	0	14	6	0	1	0	17	1	0	0	0	12	0	0	0	1	7	1	8	50
7:30	0	5	0	23	5	0	4	0	21	4	0	0	0	32	0	0	0	0	21	0	9	97
7:45	0	7	2	25	9	0	5	0	18	5	0	0	0	23	0	0	0	0	9	0	14	75
Total	0	23	4	70	27	1	12	1	61	14	0	0	0	70	0	0	0	1	45	1	42	246
8:00	0	11	2	18	13	0	2	0	20	2	0	0	0	23	0	0	0	0	19	0	15	80
8:15	0	8	3	12	11	1	3	0	12	4	0	0	0	22	0	0	0	0	11	0	15	57
8:30	0	9	2	22	11	0	3	0	34	3	0	0	0	7	0	0	0	0	14	0	14	77
8:45	1	6	3	12	10	1	9	1	15	11	0	0	0	13	0	0	0	0	10	0	21	50
Total	1	34	10	64	45	2	17	1	81	20	0	0	0	65	0	0	0	0	54	0	65	264
16:00	0	2	1	12	3	2	2	0	21	4	0	0	0	29	0	0	2	0	14	2	9	76
16:15	0	5	1	16	6	0	4	0	19	4	0	0	2	12	2	0	0	0	13	0	12	60
16:30	1	2	0	10	3	0	1	0	25	1	0	0	0	23	0	0	0	0	11	0	4	69
16:45	0	3	0	23	3	1	4	0	19	5	1	0	0	27	1	0	1	0	16	1	10	85
Total	1	12	2	61	15	3	11	0	84	14	1	0	2	91	3	0	3	0	54	3	35	290
17:00	0	5	0	24	5	0	6	1	27	7	1	1	0	24	2	0	0	0	25	0	14	100
17:15	0	6	0	15	6	2	4	0	12	6	0	2	0	29	2	0	0	0	23	0	14	79
17:30	0	3	0	18	3	0	1	0	7	1	0	1	0	14	1	0	0	0	19	0	5	58
17:45	0	2	2	9	4	0	0	0	6	0	0	0	0	15	0	0	0	0	14	0	4	44
Total	0	16	2	66	18	2	11	1	52	14	1	4	0	82	5	0	0	0	81	0	37	281
Grand Total	2	85	18	261	105	8	51	3	278	62	2	4	2	308	8	0	3	1	234	4	179	1081
Apprch %	1.9%	81.0%	17.1%			12.9%	82.3%	4.8%			25.0%	50.0%	25.0%			0.0%	75.0%	25.0%				
Total %	1.1%	47.5%	10.1%		58.7%	4.5%	28.5%	1.7%		34.6%	1.1%	2.2%	1.1%		4.5%	0.0%	1.7%	0.6%		2.2%	100.0%	

AM PEAK HOUR	Webster Street Southbound					12th Street Westbound					Webster Street Northbound					12th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	0	7	2	25	9	0	5	0	18	5	0	0	0	23	0	0	0	0	9	0	14
8:00	0	11	2	18	13	0	2	0	20	2	0	0	0	23	0	0	0	0	19	0	15
8:15	0	8	3	12	11	1	3	0	12	4	0	0	0	22	0	0	0	0	11	0	15
8:30	0	9	2	22	11	0	3	0	34	3	0	0	0	7	0	0	0	0	14	0	14
Total Volume	0	35	9	77	44	1	13	0	84	14	0	0	0	75	0	0	0	0	53	0	58
% App Total	0.0%	79.5%	20.5%			7.1%	92.9%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.795	.750		.846	.250	.650	.000		.700	.000	.000	.000		.000	.000	.000	.000		.000	.967

PM PEAK HOUR	Webster Street Southbound					12th Street Westbound					Webster Street Northbound					12th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	3	0	23	3	1	4	0	19	5	1	0	0	27	1	0	1	0	16	1	10
17:00	0	5	0	24	5	0	6	1	27	7	1	1	0	24	2	0	0	0	25	0	14
17:15	0	6	0	15	6	2	4	0	12	6	0	2	0	29	2	0	0	0	23	0	14
17:30	0	3	0	18	3	0	1	0	7	1	0	1	0	14	1	0	0	0	19	0	5
Total Volume	0	17	0	80	17	3	15	1	65	19	2	4	0	94	6	0	1	0	83	1	43
% App Total	0.0%	100.0%	0.0%			15.8%	78.9%	5.3%			33.3%	66.7%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.708	.000		.708	.375	.625	.250		.679	.500	.500	.000		.750	.000	.250	.000		.250	.768

ALL TRAFFIC DATA

City of Oakland
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7921-002 Harrison Street & 12th Street
Date : 11/18/2015

Unshifted Count = All Vehicles & Uturns

	Harrison Street Southbound					12th Street Westbound					Harrison Street Northbound					12th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	0	5	6	0	11	4	53	8	0	65	22	42	0	0	64	0	0	0	0	0	140	0
7:15	0	8	2	0	10	4	83	10	0	97	24	85	0	0	109	0	0	0	0	0	216	0
7:30	0	5	5	0	10	17	110	11	0	138	23	92	0	0	115	0	0	0	0	0	263	0
7:45	0	15	11	0	26	24	151	13	0	188	45	98	0	0	143	0	0	0	0	0	357	0
Total	0	33	24	0	57	49	397	42	0	488	114	317	0	0	431	0	0	0	0	0	976	0
8:00	0	12	10	0	22	21	165	10	0	196	44	119	0	0	163	0	0	0	0	0	381	0
8:15	0	18	15	0	33	9	171	16	0	196	43	117	0	0	160	0	0	0	0	0	389	0
8:30	0	9	6	0	15	7	162	16	0	185	33	115	0	0	148	0	0	0	0	0	348	0
8:45	0	8	4	0	12	2	146	13	0	161	37	111	0	0	148	0	0	0	0	0	321	0
Total	0	47	35	0	82	39	644	55	0	738	157	462	0	0	619	0	0	0	0	0	1439	0
16:00	0	17	16	0	33	10	125	12	0	147	33	93	0	0	126	0	0	0	0	0	306	0
16:15	0	18	8	0	26	6	117	14	0	137	29	99	0	0	128	0	0	0	0	0	291	0
16:30	0	14	12	0	26	3	130	18	0	151	31	88	0	0	119	0	0	0	0	0	296	0
16:45	0	22	15	0	37	8	145	21	0	174	34	98	0	0	132	0	0	0	0	0	343	0
Total	0	71	51	0	122	27	517	65	0	609	127	378	0	0	505	0	0	0	0	0	1236	0
17:00	0	34	18	0	52	16	153	26	0	195	37	91	0	0	128	0	0	0	0	0	375	0
17:15	0	35	27	0	62	7	135	17	0	159	32	119	0	0	151	0	0	0	0	0	372	0
17:30	0	24	15	0	39	11	113	21	0	145	30	110	0	0	140	0	0	0	0	0	324	0
17:45	0	20	12	0	32	7	120	15	0	142	41	98	0	0	139	0	0	0	0	0	313	0
Total	0	113	72	0	185	41	521	79	0	641	140	418	0	0	558	0	0	0	0	0	1384	0
Grand Total	0	264	182	0	446	156	2079	241	0	2476	538	1575	0	0	2113	0	0	0	0	0	5035	0
Apprch %	0.0%	59.2%	40.8%	0.0%		6.3%	84.0%	9.7%	0.0%		25.5%	74.5%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%			
Total %	0.0%	5.2%	3.6%	0.0%	8.9%	3.1%	41.3%	4.8%	0.0%	49.2%	10.7%	31.3%	0.0%	0.0%	42.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

AM PEAK HOUR	Harrison Street Southbound					12th Street Westbound					Harrison Street Northbound					12th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	0	15	11	0	26	24	151	13	0	188	45	98	0	0	143	0	0	0	0	0	357
8:00	0	12	10	0	22	21	165	10	0	196	44	119	0	0	163	0	0	0	0	0	381
8:15	0	18	15	0	33	9	171	16	0	196	43	117	0	0	160	0	0	0	0	0	389
8:30	0	9	6	0	15	7	162	16	0	185	33	115	0	0	148	0	0	0	0	0	348
Total Volume	0	54	42	0	96	61	649	55	0	765	165	449	0	0	614	0	0	0	0	0	1475
% App Total	0.0%	56.3%	43.8%	0.0%		8.0%	84.8%	7.2%	0.0%		26.9%	73.1%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.750	.700	.000	.727	.635	.949	.859	.000	.976	.917	.943	.000	.000	.942	.000	.000	.000	.000	.000	.948

PM PEAK HOUR	Harrison Street Southbound					12th Street Westbound					Harrison Street Northbound					12th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	22	15	0	37	8	145	21	0	174	34	98	0	0	132	0	0	0	0	0	343
17:00	0	34	18	0	52	16	153	26	0	195	37	91	0	0	128	0	0	0	0	0	375
17:15	0	35	27	0	62	7	135	17	0	159	32	119	0	0	151	0	0	0	0	0	372
17:30	0	24	15	0	39	11	113	21	0	145	30	110	0	0	140	0	0	0	0	0	324
Total Volume	0	115	75	0	190	42	546	85	0	673	133	418	0	0	551	0	0	0	0	0	1414
% App Total	0.0%	60.5%	39.5%	0.0%		6.2%	81.1%	12.6%	0.0%		24.1%	75.9%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.821	.694	.000	.766	.656	.892	.817	.000	.863	.899	.878	.000	.000	.912	.000	.000	.000	.000	.000	.943

ALL TRAFFIC DATA

City of Oakland
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7921-002 Harrison Street & 12th Street
Date : 11/18/2015

Bank 1 Count = Bikes & Peds

	Harrison Street Southbound					12th Street Westbound					Harrison Street Northbound					12th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	3	0	6	3	0	1	0	5	1	0	0	0	4	0	0	0	1	14	1	5	29
7:15	0	0	0	23	0	0	0	0	8	0	2	0	0	7	2	0	0	0	32	0	2	70
7:30	0	0	0	19	0	0	1	0	11	1	3	3	0	9	6	0	0	0	52	0	7	91
7:45	0	1	0	22	1	0	6	1	18	7	0	0	0	14	0	0	0	0	31	0	8	85
Total	0	4	0	70	4	0	8	1	42	9	5	3	0	34	8	0	0	1	129	1	22	275
8:00	0	0	0	25	0	0	4	0	21	4	0	0	0	20	0	0	0	0	30	0	4	96
8:15	0	2	3	32	5	0	3	0	26	3	0	0	0	25	0	0	0	0	35	0	8	118
8:30	0	0	1	25	1	0	2	0	16	2	1	0	0	320	1	0	0	0	39	0	4	400
8:45	0	1	2	28	3	0	8	0	36	8	1	3	0	251	4	0	0	0	33	0	15	348
Total	0	3	6	110	9	0	17	0	99	17	2	3	0	616	5	0	0	0	137	0	31	962
16:00	0	0	0	27	0	0	4	0	34	4	0	1	0	45	1	0	1	0	34	1	6	140
16:15	0	1	0	26	1	1	3	0	18	4	0	1	1	20	2	0	0	0	15	0	7	79
16:30	1	1	0	27	2	1	2	0	30	3	0	2	0	18	2	0	1	1	33	2	9	108
16:45	0	4	0	31	4	0	5	0	27	5	0	2	3	17	5	0	0	1	35	1	15	110
Total	1	6	0	111	7	2	14	0	109	16	0	6	4	100	10	0	2	2	117	4	37	437
17:00	0	1	0	42	1	0	4	0	42	4	0	4	0	28	4	0	1	0	38	1	10	150
17:15	0	3	0	54	3	0	6	0	47	6	0	5	0	48	5	0	0	0	58	0	14	207
17:30	0	5	0	18	5	0	1	0	37	1	0	2	0	29	2	0	0	0	18	0	8	102
17:45	0	1	0	18	1	0	0	0	18	0	0	1	0	8	1	0	1	0	16	1	3	60
Total	0	10	0	132	10	0	11	0	144	11	0	12	0	113	12	0	2	0	130	2	35	519
Grand Total	1	23	6	423	30	2	50	1	394	53	7	24	4	863	35	0	4	3	513	7	125	2193
Apprch %	3.3%	76.7%	20.0%			3.8%	94.3%	1.9%			20.0%	68.6%	11.4%			0.0%	57.1%	42.9%				
Total %	0.8%	18.4%	4.8%		24.0%	1.6%	40.0%	0.8%		42.4%	5.6%	19.2%	3.2%		28.0%	0.0%	3.2%	2.4%		5.6%	100.0%	

AM PEAK HOUR	Harrison Street Southbound					12th Street Westbound					Harrison Street Northbound					12th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	0	1	0	22	1	0	6	1	18	7	0	0	0	14	0	0	0	0	31	0	8
8:00	0	0	0	25	0	0	4	0	21	4	0	0	0	20	0	0	0	0	30	0	4
8:15	0	2	3	32	5	0	3	0	26	3	0	0	0	25	0	0	0	0	35	0	8
8:30	0	0	1	25	1	0	2	0	16	2	1	0	0	320	1	0	0	0	39	0	4
Total Volume	0	3	4	104	7	0	15	1	81	16	1	0	0	379	1	0	0	0	135	0	24
% App Total	0.0%	42.9%	57.1%			0.0%	93.8%	6.3%			100.0%	0.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.375	.333		.350	.000	.625	.250		.571	.250	.000	.000		.250	.000	.000	.000		.000	.750

PM PEAK HOUR	Harrison Street Southbound					12th Street Westbound					Harrison Street Northbound					12th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	4	0	31	4	0	5	0	27	5	0	2	3	17	5	0	0	1	35	1	15
17:00	0	1	0	42	1	0	4	0	42	4	0	4	0	28	4	0	1	0	38	1	10
17:15	0	3	0	54	3	0	6	0	47	6	0	5	0	48	5	0	0	0	58	0	14
17:30	0	5	0	18	5	0	1	0	37	1	0	2	0	29	2	0	0	0	18	0	8
Total Volume	0	13	0	145	13	0	16	0	153	16	0	13	3	122	16	0	1	1	149	2	47
% App Total	0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			0.0%	81.3%	18.8%			0.0%	50.0%	50.0%			
PHF	.000	.650	.000		.650	.000	.667	.000		.667	.000	.650	.250		.800	.000	.250	.250		.500	.783

ALL TRAFFIC DATA

City of Oakland
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7921-003 Alice Street & 12th Street
Date : 11/18/2015

Unshifted Count = All Vehicles & Uturns

	Alice Street Southbound					12th Street Westbound					Alice Street Northbound					12th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	0	0	4	0	4	2	59	3	0	64	0	2	0	0	2	0	0	0	0	0	70	0
7:15	0	3	2	0	5	0	94	5	0	99	1	1	0	0	2	0	0	0	0	0	106	0
7:30	0	1	5	0	6	5	134	9	0	148	3	5	0	0	8	0	0	0	0	0	162	0
7:45	0	5	4	0	9	4	183	5	0	192	9	3	0	0	12	0	0	0	0	0	213	0
Total	0	9	15	0	24	11	470	22	0	503	13	11	0	0	24	0	0	0	0	0	551	0
8:00	0	8	13	0	21	12	186	6	0	204	8	7	0	0	15	0	0	0	0	0	240	0
8:15	0	8	11	0	19	20	186	7	0	213	12	8	0	0	20	0	0	0	0	0	252	0
8:30	0	8	7	0	15	10	184	8	0	202	9	3	0	0	12	0	0	0	0	0	229	0
8:45	0	3	13	0	16	3	160	11	0	174	8	4	0	0	12	0	0	0	0	0	202	0
Total	0	27	44	0	71	45	716	32	0	793	37	22	0	0	59	0	0	0	0	0	923	0
16:00	0	5	10	0	15	3	125	18	0	146	6	4	0	0	10	0	0	0	0	0	171	0
16:15	0	7	9	0	16	4	117	14	0	135	3	4	0	0	7	0	0	0	0	0	158	0
16:30	0	5	17	0	22	6	127	7	0	140	4	2	0	0	6	0	0	0	0	0	168	0
16:45	0	5	12	0	17	8	148	10	0	166	2	3	0	0	5	0	0	0	0	0	188	0
Total	0	22	48	0	70	21	517	49	0	587	15	13	0	0	28	0	0	0	0	0	685	0
17:00	0	6	10	0	16	8	166	7	0	181	4	6	0	0	10	0	0	0	0	0	207	0
17:15	0	4	8	0	12	1	140	5	0	146	3	3	0	0	6	0	0	0	0	0	164	0
17:30	0	6	12	0	18	11	118	0	0	129	2	7	0	0	9	0	0	0	0	0	156	0
17:45	0	3	9	0	12	4	120	7	0	131	3	1	0	0	4	0	0	0	0	0	147	0
Total	0	19	39	0	58	24	544	19	0	587	12	17	0	0	29	0	0	0	0	0	674	0
Grand Total	0	77	146	0	223	101	2247	122	0	2470	77	63	0	0	140	0	0	0	0	0	2833	0
Apprch %	0.0%	34.5%	65.5%	0.0%		4.1%	91.0%	4.9%	0.0%		55.0%	45.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%			
Total %	0.0%	2.7%	5.2%	0.0%	7.9%	3.6%	79.3%	4.3%	0.0%	87.2%	2.7%	2.2%	0.0%	0.0%	4.9%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

AM PEAK HOUR	Alice Street Southbound					12th Street Westbound					Alice Street Northbound					12th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	0	5	4	0	9	4	183	5	0	192	9	3	0	0	12	0	0	0	0	0	213
8:00	0	8	13	0	21	12	186	6	0	204	8	7	0	0	15	0	0	0	0	0	240
8:15	0	8	11	0	19	20	186	7	0	213	12	8	0	0	20	0	0	0	0	0	252
8:30	0	8	7	0	15	10	184	8	0	202	9	3	0	0	12	0	0	0	0	0	229
Total Volume	0	29	35	0	64	46	739	26	0	811	38	21	0	0	59	0	0	0	0	0	934
% App Total	0.0%	45.3%	54.7%	0.0%		5.7%	91.1%	3.2%	0.0%		64.4%	35.6%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.906	.673	.000	.762	.575	.993	.813	.000	.952	.792	.656	.000	.000	.738	.000	.000	.000	.000	.000	.927

PM PEAK HOUR	Alice Street Southbound					12th Street Westbound					Alice Street Northbound					12th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	5	17	0	22	6	127	7	0	140	4	2	0	0	6	0	0	0	0	0	168
16:45	0	5	12	0	17	8	148	10	0	166	2	3	0	0	5	0	0	0	0	0	188
17:00	0	6	10	0	16	8	166	7	0	181	4	6	0	0	10	0	0	0	0	0	207
17:15	0	4	8	0	12	1	140	5	0	146	3	3	0	0	6	0	0	0	0	0	164
Total Volume	0	20	47	0	67	23	581	29	0	633	13	14	0	0	27	0	0	0	0	0	727
% App Total	0.0%	29.9%	70.1%	0.0%		3.6%	91.8%	4.6%	0.0%		48.1%	51.9%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.833	.691	.000	.761	.719	.875	.725	.000	.874	.813	.583	.000	.000	.675	.000	.000	.000	.000	.000	.878

ALL TRAFFIC DATA

City of Oakland
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7921-003 Alice Street & 12th Street
Date : 11/18/2015

Bank 1 Count = Bikes & Peds

	Alice Street Southbound					12th Street Westbound					Alice Street Northbound					12th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	0	0	4	0	0	1	0	4	1	0	0	0	1	0	0	0	0	7	0	1	16
7:15	0	0	0	7	0	0	0	0	4	0	0	1	0	7	1	0	0	0	3	0	1	21
7:30	0	0	0	9	0	0	1	0	5	1	0	0	0	8	0	0	0	0	7	0	1	29
7:45	0	1	0	15	1	0	6	0	3	6	0	1	0	6	1	0	0	0	14	0	8	38
Total	0	1	0	35	1	0	8	0	16	8	0	2	0	22	2	0	0	0	31	0	11	104
8:00	0	2	1	12	3	0	2	0	11	2	0	0	0	9	0	0	0	0	24	0	5	56
8:15	0	1	0	12	1	0	4	1	14	5	0	0	0	20	0	0	0	0	31	0	6	77
8:30	0	1	0	17	1	0	2	0	11	2	0	0	0	9	0	0	0	0	26	0	3	63
8:45	0	1	0	17	1	0	9	0	6	9	1	0	1	4	2	0	0	0	14	0	12	41
Total	0	5	1	58	6	0	17	1	42	18	1	0	1	42	2	0	0	0	95	0	26	237
16:00	0	1	1	13	2	1	2	0	8	3	0	1	0	27	1	1	0	0	24	1	7	72
16:15	0	0	0	10	0	0	4	0	7	4	0	2	0	11	2	0	0	0	24	0	6	52
16:30	0	0	0	2	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	5
16:45	0	1	0	16	1	0	3	0	11	3	0	0	0	9	0	2	1	0	12	3	7	48
Total	0	2	1	41	3	1	9	0	27	10	0	3	0	49	3	3	1	0	60	4	20	177
17:00	0	1	0	6	1	0	3	0	15	3	0	0	0	14	0	1	0	0	12	1	5	47
17:15	0	1	0	13	1	0	3	0	7	3	0	0	0	12	0	0	1	0	11	1	5	43
17:30	0	0	0	7	0	1	1	0	4	2	1	0	0	13	1	0	1	0	11	1	4	35
17:45	0	0	0	8	0	1	1	0	10	2	0	0	0	5	0	0	1	0	4	1	3	27
Total	0	2	0	34	2	2	8	0	36	10	1	0	0	44	1	1	3	0	38	4	17	152
Grand Total	0	10	2	168	12	3	42	1	121	46	2	5	1	157	8	4	4	0	224	8	74	670
Apprch %	0.0%	83.3%	16.7%			6.5%	91.3%	2.2%			25.0%	62.5%	12.5%			50.0%	50.0%	0.0%				
Total %	0.0%	13.5%	2.7%		16.2%	4.1%	56.8%	1.4%		62.2%	2.7%	6.8%	1.4%		10.8%	5.4%	5.4%	0.0%		10.8%	100.0%	

AM PEAK HOUR	Alice Street Southbound					12th Street Westbound					Alice Street Northbound					12th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	0	1	0	15	1	0	6	0	3	6	0	1	0	6	1	0	0	0	14	0	8
8:00	0	2	1	12	3	0	2	0	11	2	0	0	0	9	0	0	0	0	24	0	5
8:15	0	1	0	12	1	0	4	1	14	5	0	0	0	20	0	0	0	0	31	0	6
8:30	0	1	0	17	1	0	2	0	11	2	0	0	0	9	0	0	0	0	26	0	3
Total Volume	0	5	1	56	6	0	14	1	39	15	0	1	0	44	1	0	0	0	95	0	22
% App Total	0.0%	83.3%	16.7%			0.0%	93.3%	6.7%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.625	.250		.500	.000	.583	.250		.625	.000	.250	.000		.250	.000	.000	.000		.000	.688

PM PEAK HOUR	Alice Street Southbound					12th Street Westbound					Alice Street Northbound					12th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	0	0	2	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0
16:45	0	1	0	16	1	0	3	0	11	3	0	0	0	9	0	2	1	0	12	3	7
17:00	0	1	0	6	1	0	3	0	15	3	0	0	0	14	0	1	0	0	12	1	5
17:15	0	1	0	13	1	0	3	0	7	3	0	0	0	12	0	0	1	0	11	1	5
Total Volume	0	3	0	37	3	0	9	0	34	9	0	0	0	37	0	3	2	0	35	5	17
% App Total	0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			60.0%	40.0%	0.0%			
PHF	.000	.750	.000		.750	.000	.750	.000		.750	.000	.000	.000		.000	.375	.500	.000		.417	.607

ALL TRAFFIC DATA

City of Oakland
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7921-004 Jackson Street & 12th Street
Date : 11/18/2015

Unshifted Count = All Vehicles & Uturns

	Jackson Street Southbound					12th Street Westbound					Jackson Street Northbound					12th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	0	15	1	0	16	5	60	35	0	100	0	14	0	0	14	0	0	0	0	0	130	0
7:15	0	24	1	0	25	28	95	32	0	155	8	23	0	0	31	0	0	0	0	0	211	0
7:30	0	26	2	0	28	23	138	44	0	205	13	40	0	1	54	0	0	0	0	0	287	1
7:45	0	26	7	0	33	64	177	49	0	290	15	59	0	1	75	0	0	0	0	0	398	1
Total	0	91	11	0	102	120	470	160	0	750	36	136	0	2	174	0	0	0	0	0	1026	2
8:00	0	20	6	0	26	66	185	56	0	307	17	61	0	0	78	0	0	0	0	0	411	0
8:15	0	34	8	0	42	49	200	40	0	289	23	58	0	0	81	0	0	0	0	0	412	0
8:30	0	17	5	0	22	21	170	47	0	238	13	57	0	0	70	0	0	0	0	0	330	0
8:45	0	23	5	0	28	16	143	35	0	194	17	50	0	0	67	0	0	0	0	0	289	0
Total	0	94	24	0	118	152	698	178	0	1028	70	226	0	0	296	0	0	0	0	0	1442	0
16:00	0	21	10	0	31	23	119	14	0	156	10	28	0	0	38	0	0	0	0	0	225	0
16:15	0	32	13	0	45	40	111	16	0	167	14	37	0	0	51	0	0	0	0	0	263	0
16:30	0	38	12	0	50	42	120	19	0	181	7	35	0	0	42	0	0	0	0	0	273	0
16:45	0	45	11	0	56	27	146	22	0	195	14	32	0	0	46	0	0	0	0	0	297	0
Total	0	136	46	0	182	132	496	71	0	699	45	132	0	0	177	0	0	0	0	0	1058	0
17:00	0	47	15	0	62	27	145	17	0	189	12	37	0	0	49	0	0	0	0	0	300	0
17:15	0	50	13	0	63	24	131	20	0	175	10	32	0	0	42	0	0	0	0	0	280	0
17:30	0	47	9	0	56	12	122	15	0	149	8	37	0	0	45	0	0	0	0	0	250	0
17:45	0	37	6	0	43	9	109	14	0	132	11	45	0	0	56	0	0	0	0	0	231	0
Total	0	181	43	0	224	72	507	66	0	645	41	151	0	0	192	0	0	0	0	0	1061	0
Grand Total	0	502	124	0	626	476	2171	475	0	3122	192	645	0	2	839	0	0	0	0	0	4587	2
Apprch %	0.0%	80.2%	19.8%	0.0%		15.2%	69.5%	15.2%	0.0%		22.9%	76.9%	0.0%	0.2%		0.0%	0.0%	0.0%	0.0%			
Total %	0.0%	10.9%	2.7%	0.0%	13.6%	10.4%	47.3%	10.4%	0.0%	68.1%	4.2%	14.1%	0.0%	0.0%	18.3%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

AM PEAK HOUR	Jackson Street Southbound					12th Street Westbound					Jackson Street Northbound					12th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	0	26	7	0	33	64	177	49	0	290	15	59	0	1	75	0	0	0	0	0	398
8:00	0	20	6	0	26	66	185	56	0	307	17	61	0	0	78	0	0	0	0	0	411
8:15	0	34	8	0	42	49	200	40	0	289	23	58	0	0	81	0	0	0	0	0	412
8:30	0	17	5	0	22	21	170	47	0	238	13	57	0	0	70	0	0	0	0	0	330
Total Volume	0	97	26	0	123	200	732	192	0	1124	68	235	0	1	304	0	0	0	0	0	1551
% App Total	0.0%	78.9%	21.1%	0.0%		17.8%	65.1%	17.1%	0.0%		22.4%	77.3%	0.0%	0.3%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.713	.813	.000	.732	.758	.915	.857	.000	.915	.739	.963	.000	.250	.938	.000	.000	.000	.000	.000	.941

PM PEAK HOUR	Jackson Street Southbound					12th Street Westbound					Jackson Street Northbound					12th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	38	12	0	50	42	120	19	0	181	7	35	0	0	42	0	0	0	0	0	273
16:45	0	45	11	0	56	27	146	22	0	195	14	32	0	0	46	0	0	0	0	0	297
17:00	0	47	15	0	62	27	145	17	0	189	12	37	0	0	49	0	0	0	0	0	300
17:15	0	50	13	0	63	24	131	20	0	175	10	32	0	0	42	0	0	0	0	0	280
Total Volume	0	180	51	0	231	120	542	78	0	740	43	136	0	0	179	0	0	0	0	0	1150
% App Total	0.0%	77.9%	22.1%	0.0%		16.2%	73.2%	10.5%	0.0%		24.0%	76.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.900	.850	.000	.917	.714	.928	.886	.000	.949	.768	.919	.000	.000	.913	.000	.000	.000	.000	.000	.958

ALL TRAFFIC DATA

City of Oakland
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7921-004 Jackson Street & 12th Street
Date : 11/18/2015

Bank 1 Count = Bikes & Peds

	Jackson Street Southbound					12th Street Westbound					Jackson Street Northbound					12th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	5	0	9	5	1	1	0	8	2	0	0	0	3	0	0	1	0	7	1	8	27
7:15	0	3	0	10	3	2	0	0	8	2	0	1	0	13	1	0	0	0	10	0	6	41
7:30	0	6	0	12	6	0	1	0	8	1	0	1	0	11	1	0	0	0	8	0	8	39
7:45	0	2	0	16	2	0	4	0	15	4	1	2	0	25	3	0	0	0	19	0	9	75
Total	0	16	0	47	16	3	6	0	39	9	1	4	0	52	5	0	1	0	44	1	31	182
8:00	0	3	0	15	3	0	3	1	8	4	0	1	1	24	2	0	0	0	28	0	9	75
8:15	0	6	1	18	7	0	3	0	12	3	0	0	0	28	0	0	0	0	35	0	10	93
8:30	0	5	0	17	5	1	2	0	8	3	0	1	0	7	1	0	0	0	15	0	9	47
8:45	0	4	0	18	4	0	10	1	13	11	1	1	0	14	2	0	1	0	9	1	18	54
Total	0	18	1	68	19	1	18	2	41	21	1	3	1	73	5	0	1	0	87	1	46	269
16:00	0	0	1	23	1	1	3	1	16	5	2	2	0	34	4	0	0	0	20	0	10	93
16:15	0	2	0	13	2	1	2	0	21	3	1	4	0	26	5	0	0	0	6	0	10	66
16:30	1	3	1	20	5	2	3	0	16	5	0	2	0	37	2	0	2	0	13	2	14	86
16:45	0	4	0	20	4	1	2	1	18	4	0	3	0	27	3	0	0	1	12	1	12	77
Total	1	9	2	76	12	5	10	2	71	17	3	11	0	124	14	0	2	1	51	3	46	322
17:00	0	1	1	10	2	0	2	0	10	2	0	4	0	19	4	0	0	0	18	0	8	57
17:15	0	0	0	27	0	0	1	1	21	2	1	5	0	25	6	0	1	0	21	1	9	94
17:30	0	0	0	4	0	0	2	0	5	2	0	2	0	8	2	0	0	0	10	0	4	27
17:45	1	0	0	13	1	1	0	1	18	2	0	6	0	4	6	0	1	0	14	1	10	49
Total	1	1	1	54	3	1	5	2	54	8	1	17	0	56	18	0	2	0	63	2	31	227
Grand Total	2	44	4	245	50	10	39	6	205	55	6	35	1	305	42	0	6	1	245	7	154	1000
Apprch %	4.0%	88.0%	8.0%			18.2%	70.9%	10.9%			14.3%	83.3%	2.4%			0.0%	85.7%	14.3%				
Total %	1.3%	28.6%	2.6%		32.5%	6.5%	25.3%	3.9%		35.7%	3.9%	22.7%	0.6%		27.3%	0.0%	3.9%	0.6%		4.5%	100.0%	

AM PEAK HOUR	Jackson Street Southbound					12th Street Westbound					Jackson Street Northbound					12th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	0	2	0	16	2	0	4	0	15	4	1	2	0	25	3	0	0	0	19	0	9
8:00	0	3	0	15	3	0	3	1	8	4	0	1	1	24	2	0	0	0	28	0	9
8:15	0	6	1	18	7	0	3	0	12	3	0	0	0	28	0	0	0	0	35	0	10
8:30	0	5	0	17	5	1	2	0	8	3	0	1	0	7	1	0	0	0	15	0	9
Total Volume	0	16	1	66	17	1	12	1	43	14	1	4	1	84	6	0	0	0	97	0	37
% App Total	0.0%	94.1%	5.9%			7.1%	85.7%	7.1%			16.7%	66.7%	16.7%			0.0%	0.0%	0.0%			
PHF	.000	.667	.250		.607	.250	.750	.250		.875	.250	.500	.250		.500	.000	.000	.000		.000	.925

PM PEAK HOUR	Jackson Street Southbound					12th Street Westbound					Jackson Street Northbound					12th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	1	3	1	20	5	2	3	0	16	5	0	2	0	37	2	0	2	0	13	2	14
16:45	0	4	0	20	4	1	2	1	18	4	0	3	0	27	3	0	0	1	12	1	12
17:00	0	1	1	10	2	0	2	0	10	2	0	4	0	19	4	0	0	0	18	0	8
17:15	0	0	0	27	0	0	1	1	21	2	1	5	0	25	6	0	1	0	21	1	9
Total Volume	1	8	2	77	11	3	8	2	65	13	1	14	0	108	15	0	3	1	64	4	43
% App Total	9.1%	72.7%	18.2%			23.1%	61.5%	15.4%			6.7%	93.3%	0.0%			0.0%	75.0%	25.0%			
PHF	.250	.500	.500		.550	.375	.667	.500		.650	.250	.700	.000		.625	.000	.375	.250		.500	.768

ALL TRAFFIC DATA

City of Oakland
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7921-005 Webster Street & 11th Street
Date : 11/18/2015

Unshifted Count = All Vehicles & Uturns

	Webster Street Southbound					11th Street Westbound					Webster Street Northbound					11th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	5	43	0	0	48	0	0	0	0	0	0	0	0	0	0	0	32	22	0	54	102	0
7:15	8	55	0	0	63	0	0	0	0	0	0	0	0	0	0	0	31	39	0	70	133	0
7:30	30	87	0	0	117	0	0	0	0	0	0	0	0	0	0	0	44	34	0	78	195	0
7:45	60	91	0	0	151	0	0	0	0	0	0	0	0	0	0	0	80	33	0	113	264	0
Total	103	276	0	0	379	0	0	0	0	0	0	0	0	0	0	0	187	128	0	315	694	0
8:00	43	108	0	0	151	0	0	0	0	0	0	0	0	0	0	0	89	40	0	129	280	0
8:15	35	124	0	0	159	0	0	0	0	0	0	0	0	0	0	0	86	42	0	128	287	0
8:30	15	122	0	0	137	0	0	0	0	0	0	0	0	0	0	0	58	21	0	79	216	0
8:45	12	89	0	0	101	0	0	0	0	0	0	0	0	0	0	0	57	30	0	87	188	0
Total	105	443	0	0	548	0	0	0	0	0	0	0	0	0	0	0	290	133	0	423	971	0
16:00	42	146	0	0	188	0	0	0	0	0	0	0	0	0	0	0	101	44	0	145	333	0
16:15	30	124	0	0	154	0	0	0	0	0	0	0	0	0	0	0	112	44	0	156	310	0
16:30	28	153	0	0	181	0	0	0	0	0	0	0	0	0	0	0	130	46	0	176	357	0
16:45	47	154	0	0	201	0	0	0	0	0	0	0	0	0	0	0	159	44	0	203	404	0
Total	147	577	0	0	724	0	0	0	0	0	0	0	0	0	0	0	502	178	0	680	1404	0
17:00	35	178	0	0	213	0	0	0	0	0	0	0	0	0	0	0	225	51	0	276	489	0
17:15	39	156	0	0	195	0	0	0	0	0	0	0	0	0	0	0	207	44	0	251	446	0
17:30	45	117	0	0	162	0	0	0	0	0	0	0	0	0	0	0	206	32	0	238	400	0
17:45	31	124	0	0	155	0	0	0	0	0	0	0	0	0	0	0	182	31	0	213	368	0
Total	150	575	0	0	725	0	0	0	0	0	0	0	0	0	0	0	820	158	0	978	1703	0
Grand Total	505	1871	0	0	2376	0	0	0	0	0	0	0	0	0	0	0	1799	597	0	2396	4772	0
Apprch %	21.3%	78.7%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	75.1%	24.9%	0.0%			
Total %	10.6%	39.2%	0.0%	0.0%	49.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	37.7%	12.5%	0.0%	50.2%	100.0%	

AM PEAK HOUR	Webster Street Southbound					11th Street Westbound					Webster Street Northbound					11th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	60	91	0	0	151	0	0	0	0	0	0	0	0	0	0	0	80	33	0	113	264
8:00	43	108	0	0	151	0	0	0	0	0	0	0	0	0	0	0	89	40	0	129	280
8:15	35	124	0	0	159	0	0	0	0	0	0	0	0	0	0	0	86	42	0	128	287
8:30	15	122	0	0	137	0	0	0	0	0	0	0	0	0	0	0	58	21	0	79	216
Total Volume	153	445	0	0	598	0	0	0	0	0	0	0	0	0	0	0	313	136	0	449	1047
% App Total	25.6%	74.4%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	69.7%	30.3%	0.0%		
PHF	.638	.897	.000	.000	.940	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.879	.810	.000	.870	.912

PM PEAK HOUR	Webster Street Southbound					11th Street Westbound					Webster Street Northbound					11th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	47	154	0	0	201	0	0	0	0	0	0	0	0	0	0	0	159	44	0	203	404
17:00	35	178	0	0	213	0	0	0	0	0	0	0	0	0	0	0	225	51	0	276	489
17:15	39	156	0	0	195	0	0	0	0	0	0	0	0	0	0	0	207	44	0	251	446
17:30	45	117	0	0	162	0	0	0	0	0	0	0	0	0	0	0	206	32	0	238	400
Total Volume	166	605	0	0	771	0	0	0	0	0	0	0	0	0	0	0	797	171	0	968	1739
% App Total	21.5%	78.5%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	82.3%	17.7%	0.0%		
PHF	.883	.850	.000	.000	.905	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.886	.838	.000	.877	.889

ALL TRAFFIC DATA

City of Oakland
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7921-005 Webster Street & 11th Street
Date : 11/18/2015

Bank 1 Count = Bikes & Peds

	Webster Street Southbound					11th Street Westbound					Webster Street Northbound					11th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	2	5	0	11	7	0	0	0	3	0	0	0	0	7	0	0	1	0	18	1	8	39
7:15	0	6	0	8	6	0	0	0	13	0	0	0	0	13	0	0	2	1	13	3	9	47
7:30	0	6	0	7	6	0	0	0	16	0	0	0	0	24	0	0	0	0	10	0	6	57
7:45	1	6	0	13	7	0	0	0	19	0	0	1	0	12	1	0	1	1	13	2	10	57
Total	3	23	0	39	26	0	0	0	51	0	0	1	0	56	1	0	4	2	54	6	33	200
8:00	3	6	0	14	9	0	0	0	22	0	0	0	0	17	0	0	3	0	29	3	12	82
8:15	2	6	0	18	8	0	0	0	20	0	0	0	0	9	0	0	0	0	14	0	8	61
8:30	2	7	0	9	9	0	1	0	30	1	0	0	0	26	0	0	0	0	24	0	10	89
8:45	0	8	0	13	8	0	0	0	27	0	0	0	0	28	0	0	4	1	15	5	13	83
Total	7	27	0	54	34	0	1	0	99	1	0	0	0	80	0	0	7	1	82	8	43	315
16:00	0	5	0	9	5	0	2	0	32	2	0	0	0	21	0	0	1	0	25	1	8	87
16:15	0	5	1	10	6	0	0	0	35	0	0	2	1	37	3	0	1	0	32	1	10	114
16:30	0	3	0	8	3	0	0	0	30	0	1	0	1	29	2	0	5	0	24	5	10	91
16:45	1	3	0	17	4	0	0	0	24	0	1	1	0	21	2	0	3	1	27	4	10	89
Total	1	16	1	44	18	0	2	0	121	2	2	3	2	108	7	0	10	1	108	11	38	381
17:00	1	3	0	12	4	0	0	0	38	0	5	1	1	34	7	0	4	0	30	4	15	114
17:15	2	6	0	12	8	0	0	0	27	0	0	1	0	19	1	1	1	0	21	2	11	79
17:30	0	1	0	16	1	0	1	0	34	1	0	1	0	30	1	0	2	0	21	2	5	101
17:45	0	3	1	20	4	0	1	0	29	1	0	2	0	20	2	0	4	2	11	6	13	80
Total	3	13	1	60	17	0	2	0	128	2	5	5	1	103	11	1	11	2	83	14	44	374
Grand Total	14	79	2	197	95	0	5	0	399	5	7	9	3	347	19	1	32	6	327	39	158	1270
Apprch %	14.7%	83.2%	2.1%			0.0%	100.0%	0.0%			36.8%	47.4%	15.8%			2.6%	82.1%	15.4%				
Total %	8.9%	50.0%	1.3%		60.1%	0.0%	3.2%	0.0%		3.2%	4.4%	5.7%	1.9%		12.0%	0.6%	20.3%	3.8%		24.7%	100.0%	

AM PEAK HOUR	Webster Street Southbound					11th Street Westbound					Webster Street Northbound					11th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	1	6	0	13	7	0	0	0	19	0	0	1	0	12	1	0	1	1	13	2	10
8:00	3	6	0	14	9	0	0	0	22	0	0	0	0	17	0	0	3	0	29	3	12
8:15	2	6	0	18	8	0	0	0	20	0	0	0	0	9	0	0	0	0	14	0	8
8:30	2	7	0	9	9	0	1	0	30	1	0	0	0	26	0	0	0	0	24	0	10
Total Volume	8	25	0	54	33	0	1	0	91	1	0	1	0	64	1	0	4	1	80	5	40
% App Total	24.2%	75.8%	0.0%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			0.0%	80.0%	20.0%			
PHF	.667	.893	.000		.917	.000	.250	.000		.250	.000	.250	.000		.250	.000	.333	.250		.417	.833

PM PEAK HOUR	Webster Street Southbound					11th Street Westbound					Webster Street Northbound					11th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	1	3	0	17	4	0	0	0	24	0	1	1	0	21	2	0	3	1	27	4	10
17:00	1	3	0	12	4	0	0	0	38	0	5	1	1	34	7	0	4	0	30	4	15
17:15	2	6	0	12	8	0	0	0	27	0	0	1	0	19	1	1	1	0	21	2	11
17:30	0	1	0	16	1	0	1	0	34	1	0	1	0	30	1	0	2	0	21	2	5
Total Volume	4	13	0	57	17	0	1	0	123	1	6	4	1	104	11	1	10	1	99	12	41
% App Total	23.5%	76.5%	0.0%			0.0%	100.0%	0.0%			54.5%	36.4%	9.1%			8.3%	83.3%	8.3%			
PHF	.500	.542	.000		.531	.000	.250	.000		.250	.300	1.000	.250		.393	.250	.625	.250		.750	.683

ALL TRAFFIC DATA

City of Oakland
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7921-006 Harrison Street & 11th Street
Date : 11/18/2015

Unshifted Count = All Vehicles & Uturns

	Harrison Street Southbound					11th Street Westbound					Harrison Street Northbound					11th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	3	5	0	0	8	0	0	0	0	0	0	59	9	0	68	9	27	0	0	36	112	0
7:15	5	3	0	0	8	0	0	0	0	0	0	103	8	0	111	7	31	0	0	38	157	0
7:30	6	10	0	0	16	0	0	0	0	0	0	113	15	0	128	5	62	4	0	71	215	0
7:45	13	20	0	0	33	0	0	0	0	0	0	136	34	0	170	14	110	9	0	133	336	0
Total	27	38	0	0	65	0	0	0	0	0	0	411	66	0	477	35	230	13	0	278	820	0
8:00	14	18	0	0	32	0	0	0	0	0	0	154	57	0	211	6	119	3	0	128	371	0
8:15	15	13	0	0	28	0	0	0	0	0	0	158	47	0	205	4	109	2	0	115	348	0
8:30	7	6	0	0	13	0	0	0	0	0	0	143	41	0	184	7	64	3	0	74	271	0
8:45	2	9	0	0	11	0	0	0	0	0	0	140	31	0	171	9	55	0	0	64	246	0
Total	38	46	0	0	84	0	0	0	0	0	0	595	176	0	771	26	347	8	0	381	1236	0
16:00	15	17	0	0	32	0	0	0	0	0	0	114	43	0	157	12	129	1	0	142	331	0
16:15	10	18	0	0	28	0	0	0	0	0	0	105	45	0	150	22	116	0	0	138	316	0
16:30	9	9	0	0	18	0	0	0	0	0	0	101	50	0	151	17	138	4	0	159	328	0
16:45	14	18	0	0	32	0	0	0	0	0	0	115	49	0	164	15	187	8	0	210	406	0
Total	48	62	0	0	110	0	0	0	0	0	0	435	187	0	622	66	570	13	0	649	1381	0
17:00	23	26	0	0	49	0	0	0	0	0	0	105	62	0	167	19	232	4	0	255	471	0
17:15	17	34	0	0	51	0	0	0	0	0	0	136	71	0	207	17	217	9	0	243	501	0
17:30	19	25	0	0	44	0	0	0	0	0	0	120	63	0	183	16	234	11	0	261	488	0
17:45	9	21	0	0	30	0	0	0	0	0	0	113	51	0	164	20	193	5	0	218	412	0
Total	68	106	0	0	174	0	0	0	0	0	0	474	247	0	721	72	876	29	0	977	1872	0
Grand Total	181	252	0	0	433	0	0	0	0	0	0	1915	676	0	2591	199	2023	63	0	2285	5309	0
Apprch %	41.8%	58.2%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	73.9%	26.1%	0.0%		8.7%	88.5%	2.8%	0.0%			
Total %	3.4%	4.7%	0.0%	0.0%	8.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	36.1%	12.7%	0.0%	48.8%	3.7%	38.1%	1.2%	0.0%	43.0%	100.0%	

AM PEAK HOUR	Harrison Street Southbound					11th Street Westbound					Harrison Street Northbound					11th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	13	20	0	0	33	0	0	0	0	0	0	136	34	0	170	14	110	9	0	133	336
8:00	14	18	0	0	32	0	0	0	0	0	0	154	57	0	211	6	119	3	0	128	371
8:15	15	13	0	0	28	0	0	0	0	0	0	158	47	0	205	4	109	2	0	115	348
8:30	7	6	0	0	13	0	0	0	0	0	0	143	41	0	184	7	64	3	0	74	271
Total Volume	49	57	0	0	106	0	0	0	0	0	0	591	179	0	770	31	402	17	0	450	1326
% App Total	46.2%	53.8%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	76.8%	23.2%	0.0%		6.9%	89.3%	3.8%	0.0%		
PHF	.817	.713	.000	.000	.803	.000	.000	.000	.000	.000	.000	.935	.785	.000	.912	.554	.845	.472	.000	.846	.894

PM PEAK HOUR	Harrison Street Southbound					11th Street Westbound					Harrison Street Northbound					11th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	23	26	0	0	49	0	0	0	0	0	0	105	62	0	167	19	232	4	0	255	471
17:15	17	34	0	0	51	0	0	0	0	0	0	136	71	0	207	17	217	9	0	243	501
17:30	19	25	0	0	44	0	0	0	0	0	0	120	63	0	183	16	234	11	0	261	488
17:45	9	21	0	0	30	0	0	0	0	0	0	113	51	0	164	20	193	5	0	218	412
Total Volume	68	106	0	0	174	0	0	0	0	0	0	474	247	0	721	72	876	29	0	977	1872
% App Total	39.1%	60.9%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	65.7%	34.3%	0.0%		7.4%	89.7%	3.0%	0.0%		
PHF	.739	.779	.000	.000	.853	.000	.000	.000	.000	.000	.000	.871	.870	.000	.871	.900	.936	.659	.000	.936	.934

ALL TRAFFIC DATA

City of Oakland
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7921-006 Harrison Street & 11th Street
Date : 11/18/2015

Bank 1 Count = Bikes & Peds

	Harrison Street Southbound					11th Street Westbound					Harrison Street Northbound					11th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	1	2	0	9	3	0	0	0	7	0	0	1	1	5	2	0	3	0	7	3	8	28
7:15	0	0	0	12	0	0	0	0	15	0	0	0	0	8	0	0	0	2	31	2	2	66
7:30	0	0	0	9	0	0	0	0	14	0	0	6	0	19	6	0	0	0	38	0	6	80
7:45	0	0	0	19	0	0	0	0	17	0	0	1	0	22	1	0	3	0	46	3	4	104
Total	1	2	0	49	3	0	0	0	53	0	0	8	1	54	9	0	6	2	122	8	20	278
8:00	0	0	0	21	0	0	0	0	38	0	0	0	0	16	0	0	6	0	57	6	6	132
8:15	0	1	0	25	1	0	0	0	27	0	0	0	0	26	0	1	3	0	37	4	5	115
8:30	0	1	0	20	1	0	1	0	30	1	0	0	0	18	0	0	2	0	37	2	4	105
8:45	1	0	0	18	1	0	0	0	60	0	0	2	0	21	2	0	2	0	88	2	5	187
Total	1	2	0	84	3	0	1	0	155	1	0	2	0	81	2	1	13	0	219	14	20	539
16:00	0	0	0	35	0	0	0	0	43	0	1	1	0	46	2	0	1	0	61	1	3	185
16:15	0	1	1	14	2	0	0	0	26	0	0	0	3	23	3	0	2	0	23	2	7	86
16:30	1	2	0	16	3	0	0	0	27	0	0	4	0	35	4	1	4	0	48	5	12	126
16:45	2	3	0	17	5	1	0	0	30	1	0	3	0	31	3	1	3	0	50	4	13	128
Total	3	6	1	82	10	1	0	0	126	1	1	8	3	135	12	2	10	0	182	12	35	525
17:00	0	0	0	21	0	0	0	0	34	0	0	0	0	38	0	3	2	2	55	7	7	148
17:15	0	3	0	23	3	0	0	0	50	0	0	4	0	33	4	0	3	0	55	3	10	161
17:30	1	4	0	51	5	0	0	0	49	0	0	2	1	33	3	0	3	0	46	3	11	179
17:45	1	0	0	12	1	0	1	0	24	1	0	2	0	29	2	0	4	0	27	4	8	92
Total	2	7	0	107	9	0	1	0	157	1	0	8	1	133	9	3	12	2	183	17	36	580
Grand Total	7	17	1	322	25	1	2	0	491	3	1	26	5	403	32	6	41	4	706	51	111	1922
Apprch %	28.0%	68.0%	4.0%			33.3%	66.7%	0.0%			3.1%	81.3%	15.6%			11.8%	80.4%	7.8%				
Total %	6.3%	15.3%	0.9%		22.5%	0.9%	1.8%	0.0%		2.7%	0.9%	23.4%	4.5%		28.8%	5.4%	36.9%	3.6%		45.9%	100.0%	

AM PEAK HOUR	Harrison Street Southbound					11th Street Westbound					Harrison Street Northbound					11th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	0	0	0	19	0	0	0	0	17	0	0	1	0	22	1	0	3	0	46	3	4
8:00	0	0	0	21	0	0	0	0	38	0	0	0	0	16	0	0	6	0	57	6	6
8:15	0	1	0	25	1	0	0	0	27	0	0	0	0	26	0	1	3	0	37	4	5
8:30	0	1	0	20	1	0	1	0	30	1	0	0	0	18	0	0	2	0	37	2	4
Total Volume	0	2	0	85	2	0	1	0	112	1	0	1	0	82	1	1	14	0	177	15	19
% App Total	0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			6.7%	93.3%	0.0%			
PHF	.000	.500	.000		.500	.000	.250	.000		.250	.000	.250	.000		.250	.250	.583	.000		.625	.792

PM PEAK HOUR	Harrison Street Southbound					11th Street Westbound					Harrison Street Northbound					11th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	0	0	21	0	0	0	0	34	0	0	0	0	38	0	3	2	2	55	7	7
17:15	0	3	0	23	3	0	0	0	50	0	0	4	0	33	4	0	3	0	55	3	10
17:30	1	4	0	51	5	0	0	0	49	0	0	2	1	33	3	0	3	0	46	3	11
17:45	1	0	0	12	1	0	1	0	24	1	0	2	0	29	2	0	4	0	27	4	8
Total Volume	2	7	0	107	9	0	1	0	157	1	0	8	1	133	9	3	12	2	183	17	36
% App Total	22.2%	77.8%	0.0%			0.0%	100.0%	0.0%			0.0%	88.9%	11.1%			17.6%	70.6%	11.8%			
PHF	.500	.438	.000		.450	.000	.250	.000		.250	.000	.500	.250		.563	.250	.750	.250		.607	.818

ALL TRAFFIC DATA

City of Oakland
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7921-007 Franklin Street & 11th Street
Date : 11/18/2015

Unshifted Count = All Vehicles & Uturns

	Franklin Street Southbound					11th Street Westbound					Franklin Street Northbound					11th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	0	0	0	0	0	0	0	0	0	0	0	5	4	0	9	15	51	0	0	66	75	0
7:15	0	0	0	0	0	0	0	0	0	0	0	20	16	0	36	28	53	0	0	81	117	0
7:30	0	0	0	0	0	0	0	0	0	0	0	23	12	0	35	35	69	0	0	104	139	0
7:45	0	0	0	0	0	0	0	0	0	0	0	40	15	0	55	35	97	0	0	132	187	0
Total	0	0	0	0	0	0	0	0	0	0	0	88	47	0	135	113	270	0	0	383	518	0
8:00	0	0	0	0	0	0	0	0	0	0	0	29	18	0	47	38	112	0	0	150	197	0
8:15	0	0	0	0	0	0	0	0	0	0	0	34	14	0	48	41	118	0	0	159	207	0
8:30	0	0	0	0	0	0	0	0	0	0	0	56	10	0	66	31	71	0	0	102	168	0
8:45	0	0	0	0	0	0	0	0	0	0	0	33	15	0	48	45	73	0	0	118	166	0
Total	0	0	0	0	0	0	0	0	0	0	0	152	57	0	209	155	374	0	0	529	738	0
16:00	0	0	0	0	0	0	0	0	0	0	0	45	35	0	80	26	115	0	0	141	221	0
16:15	0	0	0	0	0	0	0	0	0	0	0	35	33	0	68	31	120	0	0	151	219	0
16:30	0	0	0	0	0	0	0	0	0	0	0	51	31	0	82	33	145	0	0	178	260	0
16:45	0	0	0	0	0	0	0	0	0	0	0	32	43	0	75	36	156	0	0	192	267	0
Total	0	0	0	0	0	0	0	0	0	0	0	163	142	0	305	126	536	0	0	662	967	0
17:00	0	0	0	0	0	0	0	0	0	0	0	42	54	0	96	30	212	0	0	242	338	0
17:15	0	0	0	0	0	0	0	0	0	0	0	49	64	0	113	39	190	0	0	229	342	0
17:30	0	0	0	0	0	0	0	0	0	0	0	57	49	0	106	24	194	0	0	218	324	0
17:45	0	0	0	0	0	0	0	0	0	0	0	41	44	0	85	28	162	0	0	190	275	0
Total	0	0	0	0	0	0	0	0	0	0	0	189	211	0	400	121	758	0	0	879	1279	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	592	457	0	1049	515	1938	0	0	2453	3502	0
Apprch %	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	56.4%	43.6%	0.0%		21.0%	79.0%	0.0%	0.0%			
Total %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.9%	13.0%	0.0%	30.0%	14.7%	55.3%	0.0%	0.0%	70.0%	100.0%	

AM PEAK HOUR	Franklin Street Southbound					11th Street Westbound					Franklin Street Northbound					11th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	0	0	0	0	0	0	0	0	0	0	0	40	15	0	55	35	97	0	0	132	187
8:00	0	0	0	0	0	0	0	0	0	0	0	29	18	0	47	38	112	0	0	150	197
8:15	0	0	0	0	0	0	0	0	0	0	0	34	14	0	48	41	118	0	0	159	207
8:30	0	0	0	0	0	0	0	0	0	0	0	56	10	0	66	31	71	0	0	102	168
Total Volume	0	0	0	0	0	0	0	0	0	0	0	159	57	0	216	145	398	0	0	543	759
% App Total	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	73.6%	26.4%	0.0%		26.7%	73.3%	0.0%	0.0%		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.710	.792	.000	.818	.884	.843	.000	.000	.854	.917

PM PEAK HOUR	Franklin Street Southbound					11th Street Westbound					Franklin Street Northbound					11th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	0	0	0	0	0	0	0	0	0	0	42	54	0	96	30	212	0	0	242	338
17:15	0	0	0	0	0	0	0	0	0	0	0	49	64	0	113	39	190	0	0	229	342
17:30	0	0	0	0	0	0	0	0	0	0	0	57	49	0	106	24	194	0	0	218	324
17:45	0	0	0	0	0	0	0	0	0	0	0	41	44	0	85	28	162	0	0	190	275
Total Volume	0	0	0	0	0	0	0	0	0	0	0	189	211	0	400	121	758	0	0	879	1279
% App Total	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	47.3%	52.8%	0.0%		13.8%	86.2%	0.0%	0.0%		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.829	.824	.000	.885	.776	.894	.000	.000	.908	.935

ALL TRAFFIC DATA

City of Oakland
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7921-007 Franklin Street & 11th Street
Date : 11/18/2015

Bank 1 Count = Bikes & Peds

	Franklin Street Southbound					11th Street Westbound					Franklin Street Northbound					11th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	0	0	21	0	0	0	0	18	0	0	1	0	22	1	0	1	1	17	2	3	78
7:15	0	0	0	30	0	0	0	0	24	0	0	0	0	35	0	0	3	0	28	3	3	117
7:30	0	1	0	42	1	0	0	0	30	0	0	0	0	30	0	0	0	0	29	0	1	131
7:45	0	0	1	29	1	1	0	0	29	1	0	1	0	41	1	0	4	0	35	4	7	134
Total	0	1	1	122	2	1	0	0	101	1	0	2	0	128	2	0	8	1	109	9	14	460
8:00	0	1	1	28	2	0	0	0	21	0	0	0	0	33	0	0	3	0	29	3	5	111
8:15	0	2	0	25	2	0	0	0	27	0	0	2	0	24	2	0	0	0	31	0	4	107
8:30	0	1	1	28	2	0	1	0	26	1	0	0	0	39	0	1	0	0	34	1	4	127
8:45	0	0	0	34	0	1	0	0	35	1	0	0	2	29	2	0	3	0	27	3	6	125
Total	0	4	2	115	6	1	1	0	109	2	0	2	2	125	4	1	6	0	121	7	19	470
16:00	0	0	0	24	0	0	0	2	30	2	0	6	0	34	6	2	1	0	37	3	11	125
16:15	0	1	0	39	1	0	0	0	22	0	0	3	0	42	3	1	1	0	31	2	6	134
16:30	0	1	0	34	1	0	1	0	39	1	0	3	0	57	3	0	5	0	39	5	10	169
16:45	0	1	1	36	2	1	0	0	37	1	0	4	0	59	4	1	3	0	53	4	11	185
Total	0	3	1	133	4	1	1	2	128	4	0	16	0	192	16	4	10	0	160	14	38	613
17:00	0	1	0	33	1	0	3	1	46	4	0	16	0	58	16	3	3	0	64	6	27	201
17:15	0	3	0	28	3	0	0	0	37	0	0	1	0	29	1	0	1	0	42	1	5	136
17:30	0	0	0	35	0	0	1	0	39	1	1	3	0	47	4	0	2	0	41	2	7	162
17:45	1	1	0	33	2	0	1	0	25	1	0	3	2	30	5	0	3	0	35	3	11	123
Total	1	5	0	129	6	0	5	1	147	6	1	23	2	164	26	3	9	0	182	12	50	622
Grand Total	1	13	4	499	18	3	7	3	485	13	1	43	4	609	48	8	33	1	572	42	121	2165
Apprch %	5.6%	72.2%	22.2%			23.1%	53.8%	23.1%			2.1%	89.6%	8.3%			19.0%	78.6%	2.4%				
Total %	0.8%	10.7%	3.3%		14.9%	2.5%	5.8%	2.5%		10.7%	0.8%	35.5%	3.3%		39.7%	6.6%	27.3%	0.8%		34.7%	100.0%	

AM PEAK HOUR	Franklin Street Southbound					11th Street Westbound					Franklin Street Northbound					11th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	0	0	1	29	1	1	0	0	29	1	0	1	0	41	1	0	4	0	35	4	7
8:00	0	1	1	28	2	0	0	0	21	0	0	0	0	33	0	0	3	0	29	3	5
8:15	0	2	0	25	2	0	0	0	27	0	0	2	0	24	2	0	0	0	31	0	4
8:30	0	1	1	28	2	0	1	0	26	1	0	0	0	39	0	1	0	0	34	1	4
Total Volume	0	4	3	110	7	1	1	0	103	2	0	3	0	137	3	1	7	0	129	8	20
% App Total	0.0%	57.1%	42.9%			50.0%	50.0%	0.0%			0.0%	100.0%	0.0%			12.5%	87.5%	0.0%			
PHF	.000	.500	.750		.875	.250	.250	.000		.500	.000	.375	.000		.375	.250	.438	.000		.500	.714

PM PEAK HOUR	Franklin Street Southbound					11th Street Westbound					Franklin Street Northbound					11th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	1	0	33	1	0	3	1	46	4	0	16	0	58	16	3	3	0	64	6	27
17:15	0	3	0	28	3	0	0	0	37	0	0	1	0	29	1	0	1	0	42	1	5
17:30	0	0	0	35	0	0	1	0	39	1	1	3	0	47	4	0	2	0	41	2	7
17:45	1	1	0	33	2	0	1	0	25	1	0	3	2	30	5	0	3	0	35	3	11
Total Volume	1	5	0	129	6	0	5	1	147	6	1	23	2	164	26	3	9	0	182	12	50
% App Total	16.7%	83.3%	0.0%			0.0%	83.3%	16.7%			3.8%	88.5%	7.7%			25.0%	75.0%	0.0%			
PHF	.250	.417	.000		.500	.000	.417	.250		.375	.250	.359	.250		.406	.250	.750	.000		.500	.463

Appendix B

Synchro Output Reports

FEHR PEERS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	309	549	0	0	0	0	0	299	72
Number				1	6	16				7	4	14
Initial Q (Qb), veh				0	0	0				0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00				1.00		0.91
Parking Bus, Adj				1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	0				0	1863	1900
Adj Flow Rate, veh/h				309	549	0				0	299	22
Adj No. of Lanes				0	4	0				0	4	0
Peak Hour Factor				1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %				2	2	0				0	2	2
Cap, veh/h				885	2369	0				0	1883	133
Arrive On Green				0.54	0.54	0.00				0.00	0.31	0.31
Sat Flow, veh/h				1412	4611	0				0	6369	433
Grp Volume(v), veh/h				309	549	0				0	233	88
Grp Sat Flow(s),veh/h/ln				1412	1458	0				0	1602	1735
Q Serve(g_s), s				7.7	3.9	0.0				0.0	2.1	2.2
Cycle Q Clear(g_c), s				7.7	3.9	0.0				0.0	2.1	2.2
Prop In Lane				1.00		0.00				0.00		0.25
Lane Grp Cap(c), veh/h				885	2369	0				0	1482	535
V/C Ratio(X)				0.35	0.23	0.00				0.00	0.16	0.16
Avail Cap(c_a), veh/h				885	2369	0				0	1482	535
HCM Platoon Ratio				1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	0.00				0.00	1.00	1.00
Uniform Delay (d), s/veh				8.1	7.2	0.0				0.0	15.1	15.1
Incr Delay (d2), s/veh				1.1	0.2	0.0				0.0	0.2	0.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.2	1.6	0.0				0.0	1.0	1.2
LnGrp Delay(d),s/veh				9.2	7.4	0.0				0.0	15.3	15.8
LnGrp LOS				A	A						B	B
Approach Vol, veh/h					858						321	
Approach Delay, s/veh					8.1						15.4	
Approach LOS					A						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		
Phs Duration (G+Y+Rc), s				23.0		37.0		
Change Period (Y+Rc), s				4.5		4.5		
Max Green Setting (Gmax), s				18.5		32.5		
Max Q Clear Time (g_c+I1), s				4.2		9.7		
Green Ext Time (p_c), s				1.2		4.2		

Intersection Summary	
HCM 2010 Ctrl Delay	10.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	61	649	55	165	449	0	0	54	42
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.74	0.91		1.00	1.00		0.88
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1900	1900	1863	0	0	1863	1900
Adj Flow Rate, veh/h				61	649	29	165	449	0	0	54	16
Adj No. of Lanes				0	4	0	0	2	0	0	2	0
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				0	2	0	2	2	0	0	2	2
Cap, veh/h				238	2714	121	386	941	0	0	1035	284
Arrive On Green				0.46	0.46	0.46	0.39	0.39	0.00	0.00	0.39	0.39
Sat Flow, veh/h				523	5958	266	680	2505	0	0	2753	729
Grp Volume(v), veh/h				214	338	186	315	299	0	0	34	36
Grp Sat Flow(s),veh/h/ln				1837	1602	1706	1490	1610	0	0	1770	1620
Q Serve(g_s), s				3.2	2.9	3.0	5.2	6.3	0.0	0.0	0.5	0.6
Cycle Q Clear(g_c), s				3.2	2.9	3.0	7.0	6.3	0.0	0.0	0.5	0.6
Prop In Lane				0.28		0.16	0.52		0.00	0.00		0.45
Lane Grp Cap(c), veh/h				837	1460	777	701	626	0	0	688	630
V/C Ratio(X)				0.26	0.23	0.24	0.45	0.48	0.00	0.00	0.05	0.06
Avail Cap(c_a), veh/h				837	1460	777	701	626	0	0	688	630
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				7.6	7.5	7.5	10.4	10.3	0.0	0.0	8.6	8.6
Incr Delay (d2), s/veh				0.7	0.4	0.7	2.1	2.6	0.0	0.0	0.1	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.8	1.3	1.6	3.4	3.2	0.0	0.0	0.3	0.3
LnGrp Delay(d),s/veh				8.3	7.8	8.2	12.5	12.9	0.0	0.0	8.7	8.8
LnGrp LOS				A	A	A	B	B			A	A
Approach Vol, veh/h					739			614			70	
Approach Delay, s/veh					8.1			12.7			8.7	
Approach LOS					A			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				21.0		24.0		21.0
Change Period (Y+Rc), s				3.5		3.5		3.5
Max Green Setting (Gmax), s				17.5		20.5		17.5
Max Q Clear Time (g_c+I1), s				2.6		5.2		9.0
Green Ext Time (p_c), s				2.7		3.0		2.1

Intersection Summary	
HCM 2010 Ctrl Delay	10.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	46	739	26	38	21	0	0	29	35
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.92	0.90		1.00	1.00		0.88
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1900	1900	1863	0	0	1863	1900
Adj Flow Rate, veh/h				46	739	19	38	21	0	0	29	9
Adj No. of Lanes				0	4	0	0	1	0	0	1	0
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				0	2	0	2	2	0	0	2	2
Cap, veh/h				217	3747	98	315	154	0	0	340	105
Arrive On Green				0.20	0.20	0.20	0.26	0.26	0.00	0.00	0.26	0.26
Sat Flow, veh/h				367	6333	166	836	595	0	0	1315	408
Grp Volume(v), veh/h				231	364	208	59	0	0	0	0	38
Grp Sat Flow(s),veh/h/ln				1844	1602	1818	1431	0	0	0	0	1723
Q Serve(g_s), s				6.3	5.7	5.8	0.5	0.0	0.0	0.0	0.0	1.0
Cycle Q Clear(g_c), s				6.3	5.7	5.8	1.6	0.0	0.0	0.0	0.0	1.0
Prop In Lane				0.20		0.09	0.64		0.00	0.00		0.24
Lane Grp Cap(c), veh/h				1091	1896	1075	468	0	0	0	0	445
V/C Ratio(X)				0.21	0.19	0.19	0.13	0.00	0.00	0.00	0.00	0.09
Avail Cap(c_a), veh/h				1091	1896	1075	468	0	0	0	0	445
HCM Platoon Ratio				0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				12.4	12.2	12.2	17.1	0.0	0.0	0.0	0.0	16.9
Incr Delay (d2), s/veh				0.4	0.2	0.4	0.6	0.0	0.0	0.0	0.0	0.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.4	2.6	3.0	0.8	0.0	0.0	0.0	0.0	0.5
LnGrp Delay(d),s/veh				12.8	12.4	12.6	17.6	0.0	0.0	0.0	0.0	17.3
LnGrp LOS				B	B	B	B					B
Approach Vol, veh/h					804			59			38	
Approach Delay, s/veh					12.6			17.6			17.3	
Approach LOS					B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				20.0		40.0		20.0
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				15.5		35.5		15.5
Max Q Clear Time (g_c+I1), s				3.0		8.3		3.6
Green Ext Time (p_c), s				0.2		3.8		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	13.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	200	732	192	69	235	0	0	97	26
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.90	0.93		1.00	1.00		0.90
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1900	1900	1863	0	0	1870	1900
Adj Flow Rate, veh/h				200	732	130	69	235	0	0	97	10
Adj No. of Lanes				0	4	0	0	1	0	0	1	0
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				0	2	0	2	2	0	0	2	2
Cap, veh/h				632	2510	442	164	495	0	0	563	58
Arrive On Green				0.54	0.54	0.54	0.34	0.34	0.00	0.00	0.34	0.34
Sat Flow, veh/h				1167	4633	815	265	1450	0	0	1647	170
Grp Volume(v), veh/h				309	496	256	304	0	0	0	0	107
Grp Sat Flow(s),veh/h/ln				1804	1602	1607	1715	0	0	0	0	1817
Q Serve(g_s), s				5.7	5.0	5.2	1.9	0.0	0.0	0.0	0.0	2.5
Cycle Q Clear(g_c), s				5.7	5.0	5.2	8.0	0.0	0.0	0.0	0.0	2.5
Prop In Lane				0.65		0.51	0.23		0.00	0.00		0.09
Lane Grp Cap(c), veh/h				977	1735	870	659	0	0	0	0	621
V/C Ratio(X)				0.32	0.29	0.29	0.46	0.00	0.00	0.00	0.00	0.17
Avail Cap(c_a), veh/h				977	1735	870	659	0	0	0	0	621
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				7.6	7.5	7.5	15.6	0.0	0.0	0.0	0.0	13.8
Incr Delay (d2), s/veh				0.9	0.4	0.9	2.3	0.0	0.0	0.0	0.0	0.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.0	2.3	2.5	4.4	0.0	0.0	0.0	0.0	1.3
LnGrp Delay(d),s/veh				8.5	7.9	8.4	17.9	0.0	0.0	0.0	0.0	14.4
LnGrp LOS				A	A	A	B					B
Approach Vol, veh/h					1062			304			107	
Approach Delay, s/veh					8.2			17.9			14.4	
Approach LOS					A			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				24.0		36.0		24.0
Change Period (Y+Rc), s				3.5		3.5		3.5
Max Green Setting (Gmax), s				20.5		32.5		20.5
Max Q Clear Time (g_c+I1), s				4.5		7.7		10.0
Green Ext Time (p_c), s				1.6		5.4		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	10.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	313	136	0	0	0	0	0	0	153	445	0
Number	5	2	12							7	4	14
Initial Q (Qb), veh	0	0	0							0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95							1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00							1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900							1900	1863	0
Adj Flow Rate, veh/h	0	313	88							153	445	0
Adj No. of Lanes	0	4	0							0	4	0
Peak Hour Factor	1.00	1.00	1.00							1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2							2	2	0
Cap, veh/h	0	2750	698							525	1584	0
Arrive On Green	0.00	0.54	0.54							0.11	0.11	0.00
Sat Flow, veh/h	0	5337	1288							1213	4873	0
Grp Volume(v), veh/h	0	295	106							182	416	0
Grp Sat Flow(s),veh/h/ln	0	1602	1558							1475	1458	0
Q Serve(g_s), s	0.0	1.8	2.0							6.4	5.2	0.0
Cycle Q Clear(g_c), s	0.0	1.8	2.0							6.8	5.2	0.0
Prop In Lane	0.00		0.83							0.84		0.00
Lane Grp Cap(c), veh/h	0	2603	844							615	1494	0
V/C Ratio(X)	0.00	0.11	0.13							0.30	0.28	0.00
Avail Cap(c_a), veh/h	0	2603	844							615	1494	0
HCM Platoon Ratio	1.00	1.00	1.00							0.33	0.33	1.00
Upstream Filter(I)	0.00	1.00	1.00							1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	6.7	6.8							20.5	19.8	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.3							1.2	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0							0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.8	0.9							3.0	2.2	0.0
LnGrp Delay(d),s/veh	0.0	6.8	7.1							21.7	20.3	0.0
LnGrp LOS		A	A							C	C	
Approach Vol, veh/h		401									598	
Approach Delay, s/veh		6.9									20.7	
Approach LOS		A									C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				
Phs Duration (G+Y+Rc), s		36.0		24.0				
Change Period (Y+Rc), s		3.5		3.5				
Max Green Setting (Gmax), s		32.5		20.5				
Max Q Clear Time (g_c+I1), s		4.0		8.8				
Green Ext Time (p_c), s		2.0		2.2				

Intersection Summary	
HCM 2010 Ctrl Delay	15.2
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	31	402	17	0	0	0	0	591	179	49	57	0
Number	5	2	12				3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93				1.00		0.90	0.98		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900				0	1863	1900	1900	1863	0
Adj Flow Rate, veh/h	31	402	9				0	591	131	49	57	0
Adj No. of Lanes	0	4	0				0	2	0	0	2	0
Peak Hour Factor	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	2	0				0	2	2	2	2	0
Cap, veh/h	228	3191	72				0	1033	228	261	590	0
Arrive On Green	0.17	0.17	0.17				0.00	0.37	0.37	0.37	0.37	0.00
Sat Flow, veh/h	449	6278	143				0	2911	622	385	1695	0
Grp Volume(v), veh/h	127	200	115				0	370	352	49	57	0
Grp Sat Flow(s),veh/h/ln	1840	1602	1825				0	1770	1670	385	1610	0
Q Serve(g_s), s	3.5	3.2	3.2				0.0	10.1	10.1	3.5	1.4	0.0
Cycle Q Clear(g_c), s	3.5	3.2	3.2				0.0	10.1	10.1	13.7	1.4	0.0
Prop In Lane	0.24		0.08				0.00		0.37	1.00		0.00
Lane Grp Cap(c), veh/h	935	1629	928				0	649	612	261	590	0
V/C Ratio(X)	0.14	0.12	0.12				0.00	0.57	0.57	0.19	0.10	0.00
Avail Cap(c_a), veh/h	935	1629	928				0	649	612	261	590	0
HCM Platoon Ratio	0.33	0.33	0.33				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	13.7	13.6	13.6				0.0	15.2	15.2	20.7	12.5	0.0
Incr Delay (d2), s/veh	0.3	0.2	0.3				0.0	3.6	3.9	1.6	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	1.4	1.7				0.0	5.5	5.3	0.8	0.7	0.0
LnGrp Delay(d),s/veh	14.0	13.8	13.9				0.0	18.8	19.1	22.3	12.8	0.0
LnGrp LOS	B	B	B					B	B	C	B	
Approach Vol, veh/h		442						722			106	
Approach Delay, s/veh		13.9						19.0			17.2	
Approach LOS		B						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		34.5		25.5				25.5
Change Period (Y+Rc), s		4.0		3.5				3.5
Max Green Setting (Gmax), s		30.5		22.0				22.0
Max Q Clear Time (g_c+I1), s		5.5		15.7				12.1
Green Ext Time (p_c), s		1.9		2.2				2.9

Intersection Summary	
HCM 2010 Ctrl Delay	17.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	145	398	0	0	0	0	0	159	57	0	0	0
Number	5	2	12				7	4	14			
Initial Q (Qb), veh	0	0	0				0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.88			
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1863	0				0	1863	1900			
Adj Flow Rate, veh/h	145	398	0				0	159	30			
Adj No. of Lanes	0	4	0				0	4	0			
Peak Hour Factor	1.00	1.00	1.00				1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	0				0	2	2			
Cap, veh/h	540	1567	0				0	2864	477			
Arrive On Green	0.34	0.34	0.00				0.00	0.52	0.52			
Sat Flow, veh/h	1251	4822	0				0	5717	909			
Grp Volume(v), veh/h	166	377	0				0	138	51			
Grp Sat Flow(s),veh/h/ln	1463	1458	0				0	1602	1559			
Q Serve(g_s), s	4.7	3.7	0.0				0.0	0.8	1.0			
Cycle Q Clear(g_c), s	5.0	3.7	0.0				0.0	0.8	1.0			
Prop In Lane	0.87		0.00				0.00		0.58			
Lane Grp Cap(c), veh/h	612	1494	0				0	2523	819			
V/C Ratio(X)	0.27	0.25	0.00				0.00	0.05	0.06			
Avail Cap(c_a), veh/h	612	1494	0				0	2523	819			
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00				0.00	1.00	1.00			
Uniform Delay (d), s/veh	14.6	14.2	0.0				0.0	7.0	7.0			
Incr Delay (d2), s/veh	1.1	0.4	0.0				0.0	0.0	0.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.2	1.6	0.0				0.0	0.4	0.4			
LnGrp Delay(d),s/veh	15.7	14.6	0.0				0.0	7.0	7.1			
LnGrp LOS	B	B						A	A			
Approach Vol, veh/h		543						189				
Approach Delay, s/veh		15.0						7.0				
Approach LOS		B						A				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				
Phs Duration (G+Y+Rc), s		24.0		36.0				
Change Period (Y+Rc), s		3.5		4.5				
Max Green Setting (Gmax), s		20.5		31.5				
Max Q Clear Time (g_c+I1), s		7.0		3.0				
Green Ext Time (p_c), s		2.2		0.9				

Intersection Summary	
HCM 2010 Ctrl Delay	12.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	230	538	0	0	0	0	0	566	192
Number				1	6	16				7	4	14
Initial Q (Qb), veh				0	0	0				0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00				1.00		0.90
Parking Bus, Adj				1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	0				0	1863	1900
Adj Flow Rate, veh/h				230	538	0				0	566	90
Adj No. of Lanes				0	4	0				0	4	0
Peak Hour Factor				1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %				2	2	0				0	2	2
Cap, veh/h				885	2369	0				0	1717	259
Arrive On Green				0.54	0.54	0.00				0.00	0.31	0.31
Sat Flow, veh/h				1412	4611	0				0	5831	839
Grp Volume(v), veh/h				230	538	0				0	484	172
Grp Sat Flow(s),veh/h/ln				1412	1458	0				0	1602	1603
Q Serve(g_s), s				5.4	3.9	0.0				0.0	4.6	5.0
Cycle Q Clear(g_c), s				5.4	3.9	0.0				0.0	4.6	5.0
Prop In Lane				1.00		0.00				0.00		0.52
Lane Grp Cap(c), veh/h				885	2369	0				0	1482	494
V/C Ratio(X)				0.26	0.23	0.00				0.00	0.33	0.35
Avail Cap(c_a), veh/h				885	2369	0				0	1482	494
HCM Platoon Ratio				1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	0.00				0.00	1.00	1.00
Uniform Delay (d), s/veh				7.5	7.2	0.0				0.0	16.0	16.1
Incr Delay (d2), s/veh				0.7	0.2	0.0				0.0	0.6	1.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.2	1.6	0.0				0.0	2.1	2.5
LnGrp Delay(d),s/veh				8.2	7.4	0.0				0.0	16.5	18.0
LnGrp LOS				A	A						B	B
Approach Vol, veh/h					768						656	
Approach Delay, s/veh					7.7						16.9	
Approach LOS					A						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		
Phs Duration (G+Y+Rc), s				23.0		37.0		
Change Period (Y+Rc), s				4.5		4.5		
Max Green Setting (Gmax), s				18.5		32.5		
Max Q Clear Time (g_c+I1), s				7.0		7.4		
Green Ext Time (p_c), s				2.6		3.8		

Intersection Summary	
HCM 2010 Ctrl Delay	11.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	42	546	85	133	418	0	0	115	75
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.89	0.91		1.00	1.00		0.87
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1900	1900	1872	0	0	1863	1900
Adj Flow Rate, veh/h				42	546	39	133	418	0	0	115	29
Adj No. of Lanes				0	4	0	0	2	0	0	2	0
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				0	2	0	2	2	0	0	2	2
Cap, veh/h				194	2698	192	347	978	0	0	1069	254
Arrive On Green				0.46	0.46	0.46	0.39	0.39	0.00	0.00	0.39	0.39
Sat Flow, veh/h				426	5923	422	590	2599	0	0	2842	653
Grp Volume(v), veh/h				182	286	159	281	270	0	0	72	72
Grp Sat Flow(s),veh/h/ln				1841	1602	1726	1486	1618	0	0	1770	1632
Q Serve(g_s), s				2.7	2.4	2.5	3.7	5.5	0.0	0.0	1.2	1.3
Cycle Q Clear(g_c), s				2.7	2.4	2.5	5.9	5.5	0.0	0.0	1.2	1.3
Prop In Lane				0.23		0.24	0.47		0.00	0.00		0.40
Lane Grp Cap(c), veh/h				839	1460	786	696	629	0	0	688	635
V/C Ratio(X)				0.22	0.20	0.20	0.40	0.43	0.00	0.00	0.10	0.11
Avail Cap(c_a), veh/h				839	1460	786	696	629	0	0	688	635
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				7.4	7.3	7.3	10.1	10.1	0.0	0.0	8.8	8.8
Incr Delay (d2), s/veh				0.6	0.3	0.6	1.7	2.1	0.0	0.0	0.3	0.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.5	1.1	1.3	2.9	2.8	0.0	0.0	0.6	0.6
LnGrp Delay(d),s/veh				8.0	7.6	7.9	11.8	12.2	0.0	0.0	9.1	9.2
LnGrp LOS				A	A	A	B	B			A	A
Approach Vol, veh/h					627			551			144	
Approach Delay, s/veh					7.8			12.0			9.1	
Approach LOS					A			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				21.0		24.0		21.0
Change Period (Y+Rc), s				3.5		3.5		3.5
Max Green Setting (Gmax), s				17.5		20.5		17.5
Max Q Clear Time (g_c+I1), s				3.3		4.7		7.9
Green Ext Time (p_c), s				2.7		2.5		2.3

Intersection Summary	
HCM 2010 Ctrl Delay	9.7
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	23	581	29	13	14	0	0	20	47
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.94	0.96		1.00	1.00		0.95
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1900	1900	1863	0	0	1863	1900
Adj Flow Rate, veh/h				23	581	18	13	14	0	0	20	12
Adj No. of Lanes				0	4	0	0	1	0	0	1	0
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				0	2	0	2	2	0	0	2	2
Cap, veh/h				141	3803	120	256	246	0	0	276	165
Arrive On Green				0.20	0.20	0.20	0.26	0.26	0.00	0.00	0.26	0.26
Sat Flow, veh/h				238	6428	202	645	952	0	0	1067	640
Grp Volume(v), veh/h				179	281	161	27	0	0	0	0	32
Grp Sat Flow(s),veh/h/ln				1851	1602	1813	1598	0	0	0	0	1707
Q Serve(g_s), s				4.8	4.4	4.4	0.0	0.0	0.0	0.0	0.0	0.9
Cycle Q Clear(g_c), s				4.8	4.4	4.4	0.7	0.0	0.0	0.0	0.0	0.9
Prop In Lane				0.13		0.11	0.48		0.00	0.00		0.37
Lane Grp Cap(c), veh/h				1095	1896	1073	502	0	0	0	0	441
V/C Ratio(X)				0.16	0.15	0.15	0.05	0.00	0.00	0.00	0.00	0.07
Avail Cap(c_a), veh/h				1095	1896	1073	502	0	0	0	0	441
HCM Platoon Ratio				0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				11.8	11.6	11.6	16.7	0.0	0.0	0.0	0.0	16.8
Incr Delay (d2), s/veh				0.3	0.2	0.3	0.2	0.0	0.0	0.0	0.0	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.6	2.0	2.3	0.4	0.0	0.0	0.0	0.0	0.4
LnGrp Delay(d),s/veh				12.1	11.8	11.9	16.9	0.0	0.0	0.0	0.0	17.1
LnGrp LOS				B	B	B	B					B
Approach Vol, veh/h					622			27			32	
Approach Delay, s/veh					11.9			16.9			17.1	
Approach LOS					B			B			B	

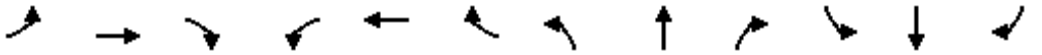
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				20.0		40.0		20.0
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				15.5		35.5		15.5
Max Q Clear Time (g_c+I1), s				2.9		6.8		2.7
Green Ext Time (p_c), s				0.1		2.8		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	12.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	120	542	78	43	136	0	0	180	51
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.87	0.97		1.00	1.00		0.93
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1900	1900	1863	0	0	1863	1900
Adj Flow Rate, veh/h				120	542	44	43	136	0	0	180	34
Adj No. of Lanes				0	4	0	0	1	0	0	1	0
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				0	2	0	2	2	0	0	2	2
Cap, veh/h				579	2838	228	168	481	0	0	513	97
Arrive On Green				0.54	0.54	0.54	0.34	0.34	0.00	0.00	0.34	0.34
Sat Flow, veh/h				1068	5240	422	274	1408	0	0	1502	284
Grp Volume(v), veh/h				203	324	179	179	0	0	0	0	214
Grp Sat Flow(s),veh/h/ln				1809	1602	1717	1682	0	0	0	0	1786
Q Serve(g_s), s				3.5	3.1	3.2	0.0	0.0	0.0	0.0	0.0	5.4
Cycle Q Clear(g_c), s				3.5	3.1	3.2	4.2	0.0	0.0	0.0	0.0	5.4
Prop In Lane				0.59		0.25	0.24		0.00	0.00		0.16
Lane Grp Cap(c), veh/h				980	1735	930	649	0	0	0	0	610
V/C Ratio(X)				0.21	0.19	0.19	0.28	0.00	0.00	0.00	0.00	0.35
Avail Cap(c_a), veh/h				980	1735	930	649	0	0	0	0	610
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				7.1	7.0	7.0	14.4	0.0	0.0	0.0	0.0	14.8
Incr Delay (d2), s/veh				0.5	0.2	0.5	1.1	0.0	0.0	0.0	0.0	1.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.8	1.4	1.6	2.3	0.0	0.0	0.0	0.0	2.9
LnGrp Delay(d),s/veh				7.6	7.2	7.5	15.4	0.0	0.0	0.0	0.0	16.4
LnGrp LOS				A	A	A	B					B
Approach Vol, veh/h					706			179			214	
Approach Delay, s/veh					7.4			15.4			16.4	
Approach LOS					A			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				24.0		36.0		24.0
Change Period (Y+Rc), s				3.5		3.5		3.5
Max Green Setting (Gmax), s				20.5		32.5		20.5
Max Q Clear Time (g_c+I1), s				7.4		5.5		6.2
Green Ext Time (p_c), s				1.4		3.3		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	10.5
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	797	171	0	0	0	0	0	0	166	605	0
Number	5	2	12							7	4	14
Initial Q (Qb), veh	0	0	0							0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93							1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00							1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900							1900	1863	0
Adj Flow Rate, veh/h	0	797	150							166	605	0
Adj No. of Lanes	0	4	0							0	4	0
Peak Hour Factor	1.00	1.00	1.00							1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2							2	2	0
Cap, veh/h	0	2935	534							464	1655	0
Arrive On Green	0.00	0.54	0.54							0.11	0.11	0.00
Sat Flow, veh/h	0	5679	986							1054	5083	0
Grp Volume(v), veh/h	0	704	243							229	542	0
Grp Sat Flow(s),veh/h/ln	0	1602	1598							1526	1458	0
Q Serve(g_s), s	0.0	4.7	4.9							7.5	6.9	0.0
Cycle Q Clear(g_c), s	0.0	4.7	4.9							8.3	6.9	0.0
Prop In Lane	0.00		0.62							0.72		0.00
Lane Grp Cap(c), veh/h	0	2603	865							625	1494	0
V/C Ratio(X)	0.00	0.27	0.28							0.37	0.36	0.00
Avail Cap(c_a), veh/h	0	2603	865							625	1494	0
HCM Platoon Ratio	1.00	1.00	1.00							0.33	0.33	1.00
Upstream Filter(I)	0.00	1.00	1.00							1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	7.4	7.4							21.1	20.6	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.8							1.7	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0							0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.1	2.4							3.8	2.9	0.0
LnGrp Delay(d),s/veh	0.0	7.6	8.2							22.8	21.3	0.0
LnGrp LOS		A	A							C	C	
Approach Vol, veh/h		947									771	
Approach Delay, s/veh		7.8									21.7	
Approach LOS		A									C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				
Phs Duration (G+Y+Rc), s		36.0		24.0				
Change Period (Y+Rc), s		3.5		3.5				
Max Green Setting (Gmax), s		32.5		20.5				
Max Q Clear Time (g_c+I1), s		6.9		10.3				
Green Ext Time (p_c), s		5.1		2.8				

Intersection Summary	
HCM 2010 Ctrl Delay	14.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	72	876	29	0	0	0	0	474	247	68	106	0
Number	5	2	12				3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.90				1.00		0.86	0.97		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900				0	1863	1900	1900	1863	0
Adj Flow Rate, veh/h	72	876	22				0	474	213	68	106	0
Adj No. of Lanes	0	4	0				0	2	0	0	2	0
Peak Hour Factor	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	2	0				0	2	2	2	2	0
Cap, veh/h	242	3164	81				0	828	367	254	606	0
Arrive On Green	0.17	0.17	0.17				0.00	0.37	0.37	0.37	0.37	0.00
Sat Flow, veh/h	475	6224	159				0	2352	1001	378	1738	0
Grp Volume(v), veh/h	279	440	251				0	370	317	73	101	0
Grp Sat Flow(s),veh/h/ln	1839	1602	1815				0	1770	1491	421	1610	0
Q Serve(g_s), s	8.0	7.2	7.2				0.0	10.0	10.3	4.7	2.5	0.0
Cycle Q Clear(g_c), s	8.0	7.2	7.2				0.0	10.0	10.3	15.0	2.5	0.0
Prop In Lane	0.26		0.09				0.00		0.67	0.93		0.00
Lane Grp Cap(c), veh/h	935	1629	923				0	649	547	270	590	0
V/C Ratio(X)	0.30	0.27	0.27				0.00	0.57	0.58	0.27	0.17	0.00
Avail Cap(c_a), veh/h	935	1629	923				0	649	547	270	590	0
HCM Platoon Ratio	0.33	0.33	0.33				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	15.6	15.3	15.3				0.0	15.2	15.3	20.5	12.8	0.0
Incr Delay (d2), s/veh	0.8	0.4	0.7				0.0	3.6	4.4	2.5	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	3.3	3.8				0.0	5.5	4.8	1.2	1.2	0.0
LnGrp Delay(d),s/veh	16.4	15.7	16.0				0.0	18.8	19.7	22.9	13.5	0.0
LnGrp LOS	B	B	B					B	B	C	B	
Approach Vol, veh/h		970						687			174	
Approach Delay, s/veh		16.0						19.2			17.5	
Approach LOS		B						B			B	

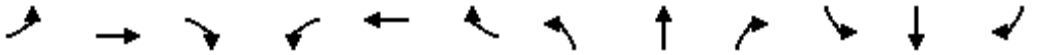
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		34.5		25.5				25.5
Change Period (Y+Rc), s		4.0		3.5				3.5
Max Green Setting (Gmax), s		30.5		22.0				22.0
Max Q Clear Time (g_c+I1), s		10.0		17.0				12.3
Green Ext Time (p_c), s		4.5		2.0				3.1

Intersection Summary	
HCM 2010 Ctrl Delay	17.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	121	758	0	0	0	0	0	189	211	0	0	0
Number	5	2	12				7	4	14			
Initial Q (Qb), veh	0	0	0				0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.83			
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1863	0				0	1863	1900			
Adj Flow Rate, veh/h	121	758	0				0	189	204			
Adj No. of Lanes	0	4	0				0	4	0			
Peak Hour Factor	1.00	1.00	1.00				1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	0				0	2	2			
Cap, veh/h	318	1827	0				0	2523	687			
Arrive On Green	0.34	0.34	0.00				0.00	0.52	0.52			
Sat Flow, veh/h	673	5585	0				0	5067	1309			
Grp Volume(v), veh/h	259	620	0				0	189	204			
Grp Sat Flow(s),veh/h/ln	1648	1458	0				0	1602	1309			
Q Serve(g_s), s	4.8	6.5	0.0				0.0	1.2	5.3			
Cycle Q Clear(g_c), s	7.1	6.5	0.0				0.0	1.2	5.3			
Prop In Lane	0.47		0.00				0.00		1.00			
Lane Grp Cap(c), veh/h	651	1494	0				0	2523	687			
V/C Ratio(X)	0.40	0.41	0.00				0.00	0.07	0.30			
Avail Cap(c_a), veh/h	651	1494	0				0	2523	687			
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00				0.00	1.00	1.00			
Uniform Delay (d), s/veh	15.3	15.1	0.0				0.0	7.0	8.0			
Incr Delay (d2), s/veh	1.8	0.9	0.0				0.0	0.1	1.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.6	2.7	0.0				0.0	0.5	2.1			
LnGrp Delay(d),s/veh	17.1	16.0	0.0				0.0	7.1	9.1			
LnGrp LOS	B	B						A	A			
Approach Vol, veh/h		879						393				
Approach Delay, s/veh		16.3						8.1				
Approach LOS		B						A				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				
Phs Duration (G+Y+Rc), s		24.0		36.0				
Change Period (Y+Rc), s		3.5		4.5				
Max Green Setting (Gmax), s		20.5		31.5				
Max Q Clear Time (g_c+I1), s		9.1		7.3				
Green Ext Time (p_c), s		3.4		2.1				

Intersection Summary	
HCM 2010 Ctrl Delay	13.8
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	301	570	0	0	0	0	0	299	72
Number				1	6	16				7	4	14
Initial Q (Qb), veh				0	0	0				0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00				1.00		0.91
Parking Bus, Adj				1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1900	0				0	1900	1900
Adj Flow Rate, veh/h				301	570	0				0	299	22
Adj No. of Lanes				0	4	0				0	4	0
Peak Hour Factor				1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %				0	0	0				0	0	0
Cap, veh/h				900	2416	0				0	1921	136
Arrive On Green				0.54	0.54	0.00				0.00	0.31	0.31
Sat Flow, veh/h				1440	4703	0				0	6497	441
Grp Volume(v), veh/h				301	570	0				0	233	88
Grp Sat Flow(s),veh/h/ln				1440	1487	0				0	1634	1770
Q Serve(g_s), s				7.3	4.0	0.0				0.0	2.1	2.2
Cycle Q Clear(g_c), s				7.3	4.0	0.0				0.0	2.1	2.2
Prop In Lane				1.00		0.00				0.00		0.25
Lane Grp Cap(c), veh/h				900	2416	0				0	1511	546
V/C Ratio(X)				0.33	0.24	0.00				0.00	0.15	0.16
Avail Cap(c_a), veh/h				900	2416	0				0	1511	546
HCM Platoon Ratio				1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	0.00				0.00	1.00	1.00
Uniform Delay (d), s/veh				8.0	7.2	0.0				0.0	15.1	15.1
Incr Delay (d2), s/veh				1.0	0.2	0.0				0.0	0.2	0.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.1	1.7	0.0				0.0	1.0	1.2
LnGrp Delay(d),s/veh				9.0	7.5	0.0				0.0	15.3	15.7
LnGrp LOS				A	A						B	B
Approach Vol, veh/h					871						321	
Approach Delay, s/veh					8.0						15.4	
Approach LOS					A						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		
Phs Duration (G+Y+Rc), s				23.0		37.0		
Change Period (Y+Rc), s				4.5		4.5		
Max Green Setting (Gmax), s				18.5		32.5		
Max Q Clear Time (g_c+I1), s				4.2		9.3		
Green Ext Time (p_c), s				1.2		4.0		

Intersection Summary	
HCM 2010 Ctrl Delay	10.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	70	646	58	181	455	0	0	54	42
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.74	0.91		1.00	1.00		0.88
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				70	646	30	181	455	0	0	54	16
Adj No. of Lanes				0	4	0	0	2	0	0	2	0
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				276	2729	126	411	933	0	0	1055	289
Arrive On Green				0.46	0.46	0.46	0.39	0.39	0.00	0.00	0.39	0.39
Sat Flow, veh/h				605	5991	277	738	2486	0	0	2808	744
Grp Volume(v), veh/h				216	342	188	325	311	0	0	34	36
Grp Sat Flow(s),veh/h/ln				1870	1634	1736	1495	1643	0	0	1805	1652
Q Serve(g_s), s				3.2	2.9	3.0	5.7	6.4	0.0	0.0	0.5	0.6
Cycle Q Clear(g_c), s				3.2	2.9	3.0	7.3	6.4	0.0	0.0	0.5	0.6
Prop In Lane				0.32		0.16	0.56		0.00	0.00		0.45
Lane Grp Cap(c), veh/h				852	1489	791	706	639	0	0	702	643
V/C Ratio(X)				0.25	0.23	0.24	0.46	0.49	0.00	0.00	0.05	0.06
Avail Cap(c_a), veh/h				852	1489	791	706	639	0	0	702	643
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				0.99	0.99	0.99	0.76	0.76	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				7.5	7.4	7.5	10.5	10.4	0.0	0.0	8.6	8.6
Incr Delay (d2), s/veh				0.7	0.4	0.7	0.1	0.2	0.0	0.0	0.1	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.8	1.4	1.6	3.1	2.9	0.0	0.0	0.3	0.3
LnGrp Delay(d),s/veh				8.2	7.8	8.2	10.6	10.5	0.0	0.0	8.7	8.8
LnGrp LOS				A	A	A	B	B			A	A
Approach Vol, veh/h					746			636			70	
Approach Delay, s/veh					8.0			10.6			8.7	
Approach LOS					A			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				21.0		24.0		21.0
Change Period (Y+Rc), s				3.5		3.5		3.5
Max Green Setting (Gmax), s				17.5		20.5		17.5
Max Q Clear Time (g_c+I1), s				2.6		5.2		9.3
Green Ext Time (p_c), s				2.8		2.9		2.1

Intersection Summary	
HCM 2010 Ctrl Delay	9.2
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	46	732	26	40	21	0	0	29	36
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.92	0.90		1.00	1.00		0.88
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				46	732	19	40	21	0	0	29	9
Adj No. of Lanes				0	4	0	0	1	0	0	1	0
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				223	3819	101	324	151	0	0	346	108
Arrive On Green				0.20	0.20	0.20	0.26	0.26	0.00	0.00	0.26	0.26
Sat Flow, veh/h				377	6455	170	868	584	0	0	1341	416
Grp Volume(v), veh/h				229	361	207	61	0	0	0	0	38
Grp Sat Flow(s),veh/h/ln				1881	1634	1854	1452	0	0	0	0	1757
Q Serve(g_s), s				6.1	5.5	5.6	0.6	0.0	0.0	0.0	0.0	1.0
Cycle Q Clear(g_c), s				6.1	5.5	5.6	1.6	0.0	0.0	0.0	0.0	1.0
Prop In Lane				0.20		0.09	0.66		0.00	0.00		0.24
Lane Grp Cap(c), veh/h				1113	1934	1097	474	0	0	0	0	454
V/C Ratio(X)				0.21	0.19	0.19	0.13	0.00	0.00	0.00	0.00	0.08
Avail Cap(c_a), veh/h				1113	1934	1097	474	0	0	0	0	454
HCM Platoon Ratio				0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				0.95	0.95	0.95	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				12.3	12.1	12.1	17.1	0.0	0.0	0.0	0.0	16.9
Incr Delay (d2), s/veh				0.4	0.2	0.4	0.6	0.0	0.0	0.0	0.0	0.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.3	2.6	3.0	0.9	0.0	0.0	0.0	0.0	0.5
LnGrp Delay(d),s/veh				12.7	12.3	12.5	17.6	0.0	0.0	0.0	0.0	17.2
LnGrp LOS				B	B	B	B					B
Approach Vol, veh/h					797			61			38	
Approach Delay, s/veh					12.5			17.6			17.2	
Approach LOS					B			B			B	

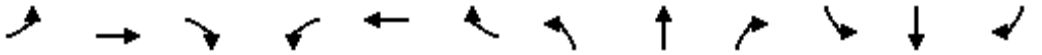
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				20.0		40.0		20.0
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				15.5		35.5		15.5
Max Q Clear Time (g_c+I1), s				3.0		8.1		3.6
Green Ext Time (p_c), s				0.2		3.5		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	13.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	200	730	192	64	235	0	0	97	26
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.90	0.93		1.00	1.00		0.90
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				200	730	130	64	235	0	0	97	10
Adj No. of Lanes				0	4	0	0	1	0	0	1	0
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				646	2557	451	158	516	0	0	572	59
Arrive On Green				0.54	0.54	0.54	0.34	0.34	0.00	0.00	0.34	0.34
Sat Flow, veh/h				1192	4722	833	250	1510	0	0	1673	173
Grp Volume(v), veh/h				309	496	256	299	0	0	0	0	107
Grp Sat Flow(s),veh/h/ln				1840	1634	1638	1760	0	0	0	0	1846
Q Serve(g_s), s				5.5	4.9	5.1	1.2	0.0	0.0	0.0	0.0	2.4
Cycle Q Clear(g_c), s				5.5	4.9	5.1	7.5	0.0	0.0	0.0	0.0	2.4
Prop In Lane				0.65		0.51	0.21		0.00	0.00		0.09
Lane Grp Cap(c), veh/h				997	1770	887	674	0	0	0	0	631
V/C Ratio(X)				0.31	0.28	0.29	0.44	0.00	0.00	0.00	0.00	0.17
Avail Cap(c_a), veh/h				997	1770	887	674	0	0	0	0	631
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				7.6	7.4	7.5	15.4	0.0	0.0	0.0	0.0	13.8
Incr Delay (d2), s/veh				0.8	0.4	0.8	2.1	0.0	0.0	0.0	0.0	0.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.0	2.3	2.5	4.2	0.0	0.0	0.0	0.0	1.3
LnGrp Delay(d),s/veh				8.4	7.8	8.3	17.5	0.0	0.0	0.0	0.0	14.4
LnGrp LOS				A	A	A	B					B
Approach Vol, veh/h					1060			299			107	
Approach Delay, s/veh					8.1			17.5			14.4	
Approach LOS					A			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				24.0		36.0		24.0
Change Period (Y+Rc), s				3.5		3.5		3.5
Max Green Setting (Gmax), s				20.5		32.5		20.5
Max Q Clear Time (g_c+I1), s				4.4		7.5		9.5
Green Ext Time (p_c), s				1.4		5.0		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	10.5
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	308	136	0	0	0	0	0	0	140	450	0
Number	5	2	12							7	4	14
Initial Q (Qb), veh	0	0	0							0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95							1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00							1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1900	1900							1900	1900	0
Adj Flow Rate, veh/h	0	308	89							140	450	0
Adj No. of Lanes	0	4	0							0	4	0
Peak Hour Factor	1.00	1.00	1.00							1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0							0	0	0
Cap, veh/h	0	2788	725							503	1650	0
Arrive On Green	0.00	0.54	0.54							0.11	0.11	0.00
Sat Flow, veh/h	0	5414	1338							1160	5073	0
Grp Volume(v), veh/h	0	292	105							178	412	0
Grp Sat Flow(s),veh/h/ln	0	1634	1583							1529	1487	0
Q Serve(g_s), s	0.0	1.7	2.0							5.8	5.1	0.0
Cycle Q Clear(g_c), s	0.0	1.7	2.0							6.4	5.1	0.0
Prop In Lane	0.00		0.84							0.78		0.00
Lane Grp Cap(c), veh/h	0	2655	858							630	1524	0
V/C Ratio(X)	0.00	0.11	0.12							0.28	0.27	0.00
Avail Cap(c_a), veh/h	0	2655	858							630	1524	0
HCM Platoon Ratio	1.00	1.00	1.00							0.33	0.33	1.00
Upstream Filter(I)	0.00	1.00	1.00							1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	6.7	6.8							20.3	19.8	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.3							1.1	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0							0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.8	0.9							2.9	2.1	0.0
LnGrp Delay(d),s/veh	0.0	6.8	7.0							21.4	20.2	0.0
LnGrp LOS		A	A							C	C	
Approach Vol, veh/h		397									590	
Approach Delay, s/veh		6.9									20.6	
Approach LOS		A									C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				
Phs Duration (G+Y+Rc), s		36.0		24.0				
Change Period (Y+Rc), s		3.5		3.5				
Max Green Setting (Gmax), s		32.5		20.5				
Max Q Clear Time (g_c+I1), s		4.0		8.4				
Green Ext Time (p_c), s		2.0		2.2				

Intersection Summary	
HCM 2010 Ctrl Delay	15.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	55	423	17	0	0	0	0	589	180	58	57	0
Number	5	2	12				3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93				1.00		0.90	0.98		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	55	423	9				0	589	132	58	57	0
Adj No. of Lanes	0	4	0				0	2	0	0	2	0
Peak Hour Factor	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	379	3167	68				0	1027	229	259	589	0
Arrive On Green	0.17	0.17	0.17				0.00	0.36	0.36	0.36	0.36	0.00
Sat Flow, veh/h	734	6131	132				0	2960	639	389	1729	0
Grp Volume(v), veh/h	140	220	127				0	370	351	58	57	0
Grp Sat Flow(s),veh/h/ln	1863	1634	1866				0	1805	1700	389	1643	0
Q Serve(g_s), s	3.8	3.4	3.5				0.0	9.9	10.0	4.2	1.4	0.0
Cycle Q Clear(g_c), s	3.8	3.4	3.5				0.0	9.9	10.0	14.2	1.4	0.0
Prop In Lane	0.39		0.07				0.00		0.38	1.00		0.00
Lane Grp Cap(c), veh/h	963	1688	964				0	647	609	259	589	0
V/C Ratio(X)	0.14	0.13	0.13				0.00	0.57	0.58	0.22	0.10	0.00
Avail Cap(c_a), veh/h	963	1688	964				0	647	609	259	589	0
HCM Platoon Ratio	0.33	0.33	0.33				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	13.6	13.5	13.5				0.0	15.5	15.6	21.3	12.8	0.0
Incr Delay (d2), s/veh	0.3	0.2	0.3				0.0	3.7	3.9	2.0	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	1.6	1.9				0.0	5.6	5.3	1.0	0.7	0.0
LnGrp Delay(d),s/veh	13.9	13.6	13.7				0.0	19.2	19.5	23.3	13.1	0.0
LnGrp LOS	B	B	B					B	B	C	B	
Approach Vol, veh/h		487						721			115	
Approach Delay, s/veh		13.7						19.3			18.3	
Approach LOS		B						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		35.0		25.0				25.0
Change Period (Y+Rc), s		4.0		3.5				3.5
Max Green Setting (Gmax), s		31.0		21.5				21.5
Max Q Clear Time (g_c+I1), s		5.8		16.2				12.0
Green Ext Time (p_c), s		2.0		2.0				2.9

Intersection Summary	
HCM 2010 Ctrl Delay	17.2
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	145	395	0	0	0	0	0	159	57	0	0	0
Number	5	2	12				7	4	14			
Initial Q (Qb), veh	0	0	0				0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.88			
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1900	0				0	1900	1900			
Adj Flow Rate, veh/h	145	395	0				0	159	29			
Adj No. of Lanes	0	4	0				0	4	0			
Peak Hour Factor	1.00	1.00	1.00				1.00	1.00	1.00			
Percent Heavy Veh, %	0	0	0				0	0	0			
Cap, veh/h	575	1669	0				0	2843	459			
Arrive On Green	0.36	0.36	0.00				0.00	0.51	0.51			
Sat Flow, veh/h	1290	4901	0				0	5859	903			
Grp Volume(v), veh/h	165	375	0				0	137	51			
Grp Sat Flow(s),veh/h/ln	1488	1487	0				0	1634	1594			
Q Serve(g_s), s	4.5	3.5	0.0				0.0	0.8	1.0			
Cycle Q Clear(g_c), s	4.7	3.5	0.0				0.0	0.8	1.0			
Prop In Lane	0.88		0.00				0.00		0.57			
Lane Grp Cap(c), veh/h	646	1598	0				0	2492	810			
V/C Ratio(X)	0.25	0.23	0.00				0.00	0.05	0.06			
Avail Cap(c_a), veh/h	646	1598	0				0	2492	810			
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00				0.00	1.00	1.00			
Uniform Delay (d), s/veh	13.8	13.5	0.0				0.0	7.5	7.5			
Incr Delay (d2), s/veh	0.9	0.3	0.0				0.0	0.0	0.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.1	1.5	0.0				0.0	0.4	0.5			
LnGrp Delay(d),s/veh	14.8	13.8	0.0				0.0	7.5	7.6			
LnGrp LOS	B	B						A	A			
Approach Vol, veh/h		540						188				
Approach Delay, s/veh		14.1						7.5				
Approach LOS		B						A				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				
Phs Duration (G+Y+Rc), s		25.0		35.0				
Change Period (Y+Rc), s		3.5		4.5				
Max Green Setting (Gmax), s		21.5		30.5				
Max Q Clear Time (g_c+I1), s		6.7		3.0				
Green Ext Time (p_c), s		2.1		0.8				

Intersection Summary	
HCM 2010 Ctrl Delay	12.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	279	555	0	0	0	0	0	566	192
Number				1	6	16				7	4	14
Initial Q (Qb), veh				0	0	0				0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00				1.00		0.90
Parking Bus, Adj				1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1900	0				0	1900	1900
Adj Flow Rate, veh/h				279	555	0				0	566	90
Adj No. of Lanes				0	4	0				0	4	0
Peak Hour Factor				1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %				0	0	0				0	0	0
Cap, veh/h				900	2416	0				0	1752	264
Arrive On Green				0.54	0.54	0.00				0.00	0.31	0.31
Sat Flow, veh/h				1440	4703	0				0	5947	856
Grp Volume(v), veh/h				279	555	0				0	484	172
Grp Sat Flow(s),veh/h/ln				1440	1487	0				0	1634	1635
Q Serve(g_s), s				6.6	3.9	0.0				0.0	4.5	4.9
Cycle Q Clear(g_c), s				6.6	3.9	0.0				0.0	4.5	4.9
Prop In Lane				1.00		0.00				0.00		0.52
Lane Grp Cap(c), veh/h				900	2416	0				0	1511	504
V/C Ratio(X)				0.31	0.23	0.00				0.00	0.32	0.34
Avail Cap(c_a), veh/h				900	2416	0				0	1511	504
HCM Platoon Ratio				1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	0.00				0.00	1.00	1.00
Uniform Delay (d), s/veh				7.8	7.2	0.0				0.0	15.9	16.0
Incr Delay (d2), s/veh				0.9	0.2	0.0				0.0	0.6	1.8
Initial Q Delay(d3),s/veh				0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.8	1.6	0.0				0.0	2.1	2.5
LnGrp Delay(d),s/veh				8.7	7.4	0.0				0.0	16.5	17.9
LnGrp LOS				A	A						B	B
Approach Vol, veh/h					834						656	
Approach Delay, s/veh					7.9						16.8	
Approach LOS					A						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		
Phs Duration (G+Y+Rc), s				23.0		37.0		
Change Period (Y+Rc), s				4.5		4.5		
Max Green Setting (Gmax), s				18.5		32.5		
Max Q Clear Time (g_c+I1), s				6.9		8.6		
Green Ext Time (p_c), s				2.4		3.8		

Intersection Summary	
HCM 2010 Ctrl Delay	11.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	49	590	87	153	422	0	0	115	76
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.89	0.91		1.00	1.00		0.87
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				49	590	40	153	422	0	0	115	30
Adj No. of Lanes				0	4	0	0	2	0	0	2	0
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				213	2749	186	381	949	0	0	1082	265
Arrive On Green				0.46	0.46	0.46	0.39	0.39	0.00	0.00	0.39	0.39
Sat Flow, veh/h				468	6034	409	666	2527	0	0	2877	682
Grp Volume(v), veh/h				197	310	173	291	284	0	0	72	73
Grp Sat Flow(s),veh/h/ln				1877	1634	1767	1464	1643	0	0	1805	1659
Q Serve(g_s), s				2.9	2.6	2.7	4.5	5.7	0.0	0.0	1.1	1.3
Cycle Q Clear(g_c), s				2.9	2.6	2.7	6.4	5.7	0.0	0.0	1.1	1.3
Prop In Lane				0.25		0.23	0.53		0.00	0.00		0.41
Lane Grp Cap(c), veh/h				855	1489	805	691	639	0	0	702	645
V/C Ratio(X)				0.23	0.21	0.21	0.42	0.44	0.00	0.00	0.10	0.11
Avail Cap(c_a), veh/h				855	1489	805	691	639	0	0	702	645
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				0.99	0.99	0.99	0.76	0.76	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				7.4	7.4	7.4	10.2	10.2	0.0	0.0	8.8	8.8
Incr Delay (d2), s/veh				0.6	0.3	0.6	0.1	0.1	0.0	0.0	0.3	0.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.6	1.2	1.4	2.7	2.6	0.0	0.0	0.6	0.6
LnGrp Delay(d),s/veh				8.1	7.7	8.0	10.3	10.3	0.0	0.0	9.0	9.1
LnGrp LOS				A	A	A	B	B			A	A
Approach Vol, veh/h					679			575			145	
Approach Delay, s/veh					7.9			10.3			9.1	
Approach LOS					A			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				21.0		24.0		21.0
Change Period (Y+Rc), s				3.5		3.5		3.5
Max Green Setting (Gmax), s				17.5		20.5		17.5
Max Q Clear Time (g_c+I1), s				3.3		4.9		8.4
Green Ext Time (p_c), s				2.9		2.6		2.3

Intersection Summary	
HCM 2010 Ctrl Delay	9.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	23	633	29	20	14	0	0	20	50
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.94	0.96		1.00	1.00		0.95
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				23	633	22	20	14	0	0	20	23
Adj No. of Lanes				0	4	0	0	1	0	0	1	0
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				131	3873	137	306	192	0	0	202	232
Arrive On Green				0.20	0.20	0.20	0.26	0.26	0.00	0.00	0.26	0.26
Sat Flow, veh/h				222	6547	231	814	741	0	0	782	899
Grp Volume(v), veh/h				196	307	175	34	0	0	0	0	43
Grp Sat Flow(s),veh/h/ln				1889	1634	1843	1556	0	0	0	0	1681
Q Serve(g_s), s				5.2	4.7	4.7	0.0	0.0	0.0	0.0	0.0	1.2
Cycle Q Clear(g_c), s				5.2	4.7	4.7	0.8	0.0	0.0	0.0	0.0	1.2
Prop In Lane				0.12		0.13	0.59		0.00	0.00		0.53
Lane Grp Cap(c), veh/h				1118	1934	1090	497	0	0	0	0	434
V/C Ratio(X)				0.17	0.16	0.16	0.07	0.00	0.00	0.00	0.00	0.10
Avail Cap(c_a), veh/h				1118	1934	1090	497	0	0	0	0	434
HCM Platoon Ratio				0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				0.98	0.98	0.98	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				11.9	11.7	11.8	16.8	0.0	0.0	0.0	0.0	16.9
Incr Delay (d2), s/veh				0.3	0.2	0.3	0.3	0.0	0.0	0.0	0.0	0.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.8	2.2	2.5	0.5	0.0	0.0	0.0	0.0	0.6
LnGrp Delay(d),s/veh				12.3	11.9	12.1	17.1	0.0	0.0	0.0	0.0	17.4
LnGrp LOS				B	B	B	B					B
Approach Vol, veh/h					678			34			43	
Approach Delay, s/veh					12.1			17.1			17.4	
Approach LOS					B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				20.0		40.0		20.0
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				15.5		35.5		15.5
Max Q Clear Time (g_c+I1), s				3.2		7.2		2.8
Green Ext Time (p_c), s				0.2		2.9		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	12.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	120	557	78	80	136	0	0	180	51
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.87	0.97		1.00	1.00		0.93
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				120	557	16	80	136	0	0	180	35
Adj No. of Lanes				0	4	0	0	1	0	0	1	0
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				606	3073	89	226	350	0	0	521	101
Arrive On Green				0.54	0.54	0.54	0.34	0.34	0.00	0.00	0.34	0.34
Sat Flow, veh/h				1119	5673	164	420	1026	0	0	1524	296
Grp Volume(v), veh/h				198	315	180	216	0	0	0	0	215
Grp Sat Flow(s),veh/h/ln				1844	1634	1843	1445	0	0	0	0	1820
Q Serve(g_s), s				3.3	2.9	3.0	2.5	0.0	0.0	0.0	0.0	5.3
Cycle Q Clear(g_c), s				3.3	2.9	3.0	7.8	0.0	0.0	0.0	0.0	5.3
Prop In Lane				0.61		0.09	0.37		0.00	0.00		0.16
Lane Grp Cap(c), veh/h				999	1770	998	576	0	0	0	0	622
V/C Ratio(X)				0.20	0.18	0.18	0.38	0.00	0.00	0.00	0.00	0.35
Avail Cap(c_a), veh/h				999	1770	998	576	0	0	0	0	622
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				7.1	7.0	7.0	15.3	0.0	0.0	0.0	0.0	14.7
Incr Delay (d2), s/veh				0.4	0.2	0.4	1.9	0.0	0.0	0.0	0.0	1.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.8	1.4	1.6	3.1	0.0	0.0	0.0	0.0	2.9
LnGrp Delay(d),s/veh				7.5	7.2	7.4	17.1	0.0	0.0	0.0	0.0	16.3
LnGrp LOS				A	A	A	B					B
Approach Vol, veh/h					693			216			215	
Approach Delay, s/veh					7.3			17.1			16.3	
Approach LOS					A			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				24.0		36.0		24.0
Change Period (Y+Rc), s				3.5		3.5		3.5
Max Green Setting (Gmax), s				20.5		32.5		20.5
Max Q Clear Time (g_c+I1), s				7.3		5.3		9.8
Green Ext Time (p_c), s				1.5		3.0		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	10.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	825	171	0	0	0	0	0	0	211	609	0
Number	5	2	12							7	4	14
Initial Q (Qb), veh	0	0	0							0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93							1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00							1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1900	1900							1900	1900	0
Adj Flow Rate, veh/h	0	825	124							211	609	0
Adj No. of Lanes	0	4	0							0	4	0
Peak Hour Factor	1.00	1.00	1.00							1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0							0	0	0
Cap, veh/h	0	3108	455							545	1602	0
Arrive On Green	0.00	0.18	0.18							0.11	0.11	0.00
Sat Flow, veh/h	0	6003	839							1267	4932	0
Grp Volume(v), veh/h	0	702	247							244	576	0
Grp Sat Flow(s),veh/h/ln	0	1634	1674							1495	1487	0
Q Serve(g_s), s	0.0	7.4	7.7							8.8	7.2	0.0
Cycle Q Clear(g_c), s	0.0	7.4	7.7							9.1	7.2	0.0
Prop In Lane	0.00		0.50							0.86		0.00
Lane Grp Cap(c), veh/h	0	2655	907							623	1524	0
V/C Ratio(X)	0.00	0.26	0.27							0.39	0.38	0.00
Avail Cap(c_a), veh/h	0	2655	907							623	1524	0
HCM Platoon Ratio	1.00	0.33	0.33							0.33	0.33	1.00
Upstream Filter(I)	0.00	1.00	1.00							1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	14.3	14.4							21.5	20.7	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.7							1.9	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0							0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.4	3.7							4.1	3.1	0.0
LnGrp Delay(d),s/veh	0.0	14.6	15.2							23.4	21.4	0.0
LnGrp LOS		B	B							C	C	
Approach Vol, veh/h		949									820	
Approach Delay, s/veh		14.7									22.0	
Approach LOS		B									C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				
Phs Duration (G+Y+Rc), s		36.0		24.0				
Change Period (Y+Rc), s		3.5		3.5				
Max Green Setting (Gmax), s		32.5		20.5				
Max Q Clear Time (g_c+I1), s		9.7		11.1				
Green Ext Time (p_c), s		4.9		2.8				

Intersection Summary	
HCM 2010 Ctrl Delay	18.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	91	897	29	0	0	0	0	479	249	75	106	0
Number	5	2	12				3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.91				1.00		0.85	0.97		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	91	897	21				0	479	201	75	106	0
Adj No. of Lanes	0	4	0				0	2	0	0	2	0
Peak Hour Factor	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	304	3233	77				0	846	350	262	592	0
Arrive On Green	0.17	0.17	0.17				0.00	0.36	0.36	0.36	0.36	0.00
Sat Flow, veh/h	589	6257	149				0	2455	977	398	1740	0
Grp Volume(v), veh/h	289	458	262				0	365	315	76	105	0
Grp Sat Flow(s),veh/h/ln	1871	1634	1856				0	1805	1532	409	1643	0
Q Serve(g_s), s	8.1	7.3	7.4				0.0	9.8	10.0	5.3	2.6	0.0
Cycle Q Clear(g_c), s	8.1	7.3	7.4				0.0	9.8	10.0	15.3	2.6	0.0
Prop In Lane	0.31		0.08				0.00		0.64	0.98		0.00
Lane Grp Cap(c), veh/h	966	1688	959				0	647	549	266	589	0
V/C Ratio(X)	0.30	0.27	0.27				0.00	0.56	0.57	0.29	0.18	0.00
Avail Cap(c_a), veh/h	966	1688	959				0	647	549	266	589	0
HCM Platoon Ratio	0.33	0.33	0.33				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	15.4	15.1	15.1				0.0	15.5	15.6	21.5	13.2	0.0
Incr Delay (d2), s/veh	0.8	0.4	0.7				0.0	3.5	4.3	2.7	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	3.4	4.0				0.0	5.4	4.9	1.3	1.3	0.0
LnGrp Delay(d),s/veh	16.2	15.5	15.8				0.0	19.0	19.9	24.3	13.9	0.0
LnGrp LOS	B	B	B					B	B	C	B	
Approach Vol, veh/h		1009						680			181	
Approach Delay, s/veh		15.8						19.4			18.2	
Approach LOS		B						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		35.0		25.0				25.0
Change Period (Y+Rc), s		4.0		3.5				3.5
Max Green Setting (Gmax), s		31.0		21.5				21.5
Max Q Clear Time (g_c+I1), s		10.1		17.3				12.0
Green Ext Time (p_c), s		4.4		1.7				3.1

Intersection Summary	
HCM 2010 Ctrl Delay	17.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	121	778	0	0	0	0	0	189	211	8	0	0
Number	5	2	12				7	4	14			
Initial Q (Qb), veh	0	0	0				0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.82			
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1900	0				0	1900	1900			
Adj Flow Rate, veh/h	121	778	0				0	189	183			
Adj No. of Lanes	0	4	0				0	4	0			
Peak Hour Factor	1.00	1.00	1.00				1.00	1.00	1.00			
Percent Heavy Veh, %	0	0	0				0	0	0			
Cap, veh/h	330	1959	0				0	2492	675			
Arrive On Green	0.36	0.36	0.00				0.00	0.51	0.51			
Sat Flow, veh/h	677	5710	0				0	5168	1328			
Grp Volume(v), veh/h	264	635	0				0	189	183			
Grp Sat Flow(s),veh/h/ln	1684	1487	0				0	1634	1328			
Q Serve(g_s), s	4.5	6.4	0.0				0.0	1.2	4.7			
Cycle Q Clear(g_c), s	6.9	6.4	0.0				0.0	1.2	4.7			
Prop In Lane	0.46		0.00				0.00		1.00			
Lane Grp Cap(c), veh/h	691	1598	0				0	2492	675			
V/C Ratio(X)	0.38	0.40	0.00				0.00	0.08	0.27			
Avail Cap(c_a), veh/h	691	1598	0				0	2492	675			
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00				0.00	1.00	1.00			
Uniform Delay (d), s/veh	14.5	14.4	0.0				0.0	7.5	8.4			
Incr Delay (d2), s/veh	1.6	0.7	0.0				0.0	0.1	1.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.6	2.7	0.0				0.0	0.5	1.9			
LnGrp Delay(d),s/veh	16.1	15.1	0.0				0.0	7.6	9.4			
LnGrp LOS	B	B						A	A			
Approach Vol, veh/h		899						372				
Approach Delay, s/veh		15.4						8.5				
Approach LOS		B						A				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				
Phs Duration (G+Y+Rc), s		25.0		35.0				
Change Period (Y+Rc), s		3.5		4.5				
Max Green Setting (Gmax), s		21.5		30.5				
Max Q Clear Time (g_c+I1), s		8.9		6.7				
Green Ext Time (p_c), s		3.4		1.8				

Intersection Summary	
HCM 2010 Ctrl Delay	13.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	370	690	0	0	0	0	0	380	90
Number				1	6	16				7	4	14
Initial Q (Qb), veh				0	0	0				0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00				1.00		0.91
Parking Bus, Adj				1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	0				0	1863	1900
Adj Flow Rate, veh/h				370	690	0				0	380	40
Adj No. of Lanes				0	3	0				0	4	0
Peak Hour Factor				1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %				2	2	0				0	2	2
Cap, veh/h				883	1673	0				0	1820	183
Arrive On Green				0.54	0.54	0.00				0.00	0.31	0.31
Sat Flow, veh/h				1410	3240	0				0	6163	592
Grp Volume(v), veh/h				371	689	0				0	306	114
Grp Sat Flow(s),veh/h/ln				1412	1543	0				0	1602	1688
Q Serve(g_s), s				9.8	7.9	0.0				0.0	2.8	3.0
Cycle Q Clear(g_c), s				9.8	7.9	0.0				0.0	2.8	3.0
Prop In Lane				1.00		0.00				0.00		0.35
Lane Grp Cap(c), veh/h				885	1671	0				0	1482	520
V/C Ratio(X)				0.42	0.41	0.00				0.00	0.21	0.22
Avail Cap(c_a), veh/h				885	1671	0				0	1482	520
HCM Platoon Ratio				1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	0.00				0.00	1.00	1.00
Uniform Delay (d), s/veh				8.5	8.1	0.0				0.0	15.3	15.4
Incr Delay (d2), s/veh				1.5	0.8	0.0				0.0	0.3	1.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.1	3.5	0.0				0.0	1.3	1.5
LnGrp Delay(d),s/veh				10.0	8.9	0.0				0.0	15.6	16.4
LnGrp LOS				B	A						B	B
Approach Vol, veh/h					1060						420	
Approach Delay, s/veh					9.3						15.8	
Approach LOS					A						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		
Phs Duration (G+Y+Rc), s				23.0		37.0		
Change Period (Y+Rc), s				4.5		4.5		
Max Green Setting (Gmax), s				18.5		32.5		
Max Q Clear Time (g_c+I1), s				5.0		11.8		
Green Ext Time (p_c), s				1.7		5.2		

Intersection Summary	
HCM 2010 Ctrl Delay	11.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	80	810	70	200	560	0	0	70	50
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.74	0.91		1.00	1.00		0.88
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1900	1863	0	0	1863	1900
Adj Flow Rate, veh/h				80	810	44	200	560	0	0	70	24
Adj No. of Lanes				0	3	1	0	2	0	0	2	0
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				202	2181	533	392	924	0	0	995	313
Arrive On Green				0.46	0.46	0.46	0.39	0.39	0.00	0.00	0.39	0.39
Sat Flow, veh/h				442	4788	1171	696	2460	0	0	2651	806
Grp Volume(v), veh/h				333	557	44	383	377	0	0	47	47
Grp Sat Flow(s),veh/h/ln				1841	1695	1171	1461	1610	0	0	1770	1594
Q Serve(g_s), s				5.4	4.8	1.0	8.4	8.4	0.0	0.0	0.7	0.8
Cycle Q Clear(g_c), s				5.4	4.8	1.0	9.6	8.4	0.0	0.0	0.7	0.8
Prop In Lane				0.24		1.00	0.52		0.00	0.00		0.51
Lane Grp Cap(c), veh/h				839	1544	533	690	626	0	0	688	620
V/C Ratio(X)				0.40	0.36	0.08	0.56	0.60	0.00	0.00	0.07	0.08
Avail Cap(c_a), veh/h				839	1544	533	690	626	0	0	688	620
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				8.1	8.0	6.9	11.2	11.0	0.0	0.0	8.6	8.7
Incr Delay (d2), s/veh				1.4	0.7	0.3	3.2	4.2	0.0	0.0	0.2	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.0	2.4	0.4	4.4	4.4	0.0	0.0	0.4	0.4
LnGrp Delay(d),s/veh				9.5	8.6	7.2	14.4	15.2	0.0	0.0	8.8	8.9
LnGrp LOS				A	A	A	B	B			A	A
Approach Vol, veh/h					934			760			94	
Approach Delay, s/veh					8.9			14.8			8.9	
Approach LOS					A			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				21.0		24.0		21.0
Change Period (Y+Rc), s				3.5		3.5		3.5
Max Green Setting (Gmax), s				17.5		20.5		17.5
Max Q Clear Time (g_c+I1), s				2.8		7.4		11.6
Green Ext Time (p_c), s				3.5		3.7		2.1

Intersection Summary	
HCM 2010 Ctrl Delay	11.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	60	920	30	50	30	0	0	40	40
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.92	0.91		1.00	1.00		0.88
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1900	1863	0	0	1863	1900
Adj Flow Rate, veh/h				60	920	23	50	30	0	0	40	14
Adj No. of Lanes				0	3	1	0	1	0	0	1	0
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				179	2920	866	302	160	0	0	327	115
Arrive On Green				0.20	0.20	0.20	0.26	0.26	0.00	0.00	0.26	0.26
Sat Flow, veh/h				302	4936	1464	793	620	0	0	1267	443
Grp Volume(v), veh/h				367	613	23	80	0	0	0	0	54
Grp Sat Flow(s),veh/h/ln				1848	1695	1464	1412	0	0	0	0	1710
Q Serve(g_s), s				10.3	9.3	0.8	1.1	0.0	0.0	0.0	0.0	1.5
Cycle Q Clear(g_c), s				10.3	9.3	0.8	2.5	0.0	0.0	0.0	0.0	1.5
Prop In Lane				0.16		1.00	0.62		0.00	0.00		0.26
Lane Grp Cap(c), veh/h				1093	2006	866	462	0	0	0	0	442
V/C Ratio(X)				0.34	0.31	0.03	0.17	0.00	0.00	0.00	0.00	0.12
Avail Cap(c_a), veh/h				1093	2006	866	462	0	0	0	0	442
HCM Platoon Ratio				0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				14.0	13.6	10.2	17.4	0.0	0.0	0.0	0.0	17.0
Incr Delay (d2), s/veh				0.8	0.4	0.1	0.8	0.0	0.0	0.0	0.0	0.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.5	4.5	0.3	1.1	0.0	0.0	0.0	0.0	0.7
LnGrp Delay(d),s/veh				14.8	14.0	10.2	18.2	0.0	0.0	0.0	0.0	17.6
LnGrp LOS				B	B	B	B					B
Approach Vol, veh/h					1003			80			54	
Approach Delay, s/veh					14.2			18.2			17.6	
Approach LOS					B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				20.0		40.0		20.0
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				15.5		35.5		15.5
Max Q Clear Time (g_c+I1), s				3.5		12.3		4.5
Green Ext Time (p_c), s				0.4		4.9		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	14.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	250	910	240	90	290	0	0	120	30
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.90	0.94		1.00	1.00		0.90
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1900	1863	0	0	1870	1900
Adj Flow Rate, veh/h				250	910	178	90	290	0	0	120	14
Adj No. of Lanes				0	3	1	0	1	0	0	1	0
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				571	2245	768	176	475	0	0	554	65
Arrive On Green				0.54	0.54	0.54	0.34	0.34	0.00	0.00	0.34	0.34
Sat Flow, veh/h				1055	4145	1417	297	1390	0	0	1621	189
Grp Volume(v), veh/h				429	731	178	380	0	0	0	0	134
Grp Sat Flow(s),veh/h/ln				1810	1695	1417	1687	0	0	0	0	1811
Q Serve(g_s), s				8.5	7.6	3.9	6.3	0.0	0.0	0.0	0.0	3.2
Cycle Q Clear(g_c), s				8.5	7.6	3.9	11.1	0.0	0.0	0.0	0.0	3.2
Prop In Lane				0.58		1.00	0.24		0.00	0.00		0.10
Lane Grp Cap(c), veh/h				980	1836	768	651	0	0	0	0	619
V/C Ratio(X)				0.44	0.40	0.23	0.58	0.00	0.00	0.00	0.00	0.22
Avail Cap(c_a), veh/h				980	1836	768	651	0	0	0	0	619
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				8.3	8.0	7.2	16.5	0.0	0.0	0.0	0.0	14.0
Incr Delay (d2), s/veh				1.4	0.6	0.7	3.8	0.0	0.0	0.0	0.0	0.8
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.6	3.6	1.7	6.0	0.0	0.0	0.0	0.0	1.7
LnGrp Delay(d),s/veh				9.7	8.7	7.9	20.3	0.0	0.0	0.0	0.0	14.8
LnGrp LOS				A	A	A	C					B
Approach Vol, veh/h					1338			380			134	
Approach Delay, s/veh					8.9			20.3			14.8	
Approach LOS					A			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				24.0		36.0		24.0
Change Period (Y+Rc), s				3.5		3.5		3.5
Max Green Setting (Gmax), s				20.5		32.5		20.5
Max Q Clear Time (g_c+I1), s				5.2		10.5		13.1
Green Ext Time (p_c), s				2.0		6.5		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	11.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	390	170	0	0	0	0	0	0	190	550	0
Number	5	2	12							7	4	14
Initial Q (Qb), veh	0	0	0							0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95							1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00							1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863							1900	1863	0
Adj Flow Rate, veh/h	0	390	122							190	550	0
Adj No. of Lanes	0	3	1							0	4	0
Peak Hour Factor	1.00	1.00	1.00							1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2							2	2	0
Cap, veh/h	0	2755	816							532	1576	0
Arrive On Green	0.00	0.54	0.54							0.11	0.11	0.00
Sat Flow, veh/h	0	5253	1506							1230	4850	0
Grp Volume(v), veh/h	0	390	122							222	518	0
Grp Sat Flow(s),veh/h/ln	0	1695	1506							1470	1458	0
Q Serve(g_s), s	0.0	2.3	2.4							8.1	6.6	0.0
Cycle Q Clear(g_c), s	0.0	2.3	2.4							8.4	6.6	0.0
Prop In Lane	0.00		1.00							0.85		0.00
Lane Grp Cap(c), veh/h	0	2755	816							613	1494	0
V/C Ratio(X)	0.00	0.14	0.15							0.36	0.35	0.00
Avail Cap(c_a), veh/h	0	2755	816							613	1494	0
HCM Platoon Ratio	1.00	1.00	1.00							0.33	0.33	1.00
Upstream Filter(I)	0.00	1.00	1.00							1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	6.8	6.9							21.2	20.4	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.4							1.7	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0							0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.1	1.1							3.7	2.7	0.0
LnGrp Delay(d),s/veh	0.0	6.9	7.2							22.9	21.1	0.0
LnGrp LOS		A	A							C	C	
Approach Vol, veh/h		512									740	
Approach Delay, s/veh		7.0									21.6	
Approach LOS		A									C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				
Phs Duration (G+Y+Rc), s		36.0		24.0				
Change Period (Y+Rc), s		3.5		3.5				
Max Green Setting (Gmax), s		32.5		20.5				
Max Q Clear Time (g_c+I1), s		4.4		10.4				
Green Ext Time (p_c), s		2.2		2.6				

Intersection Summary	
HCM 2010 Ctrl Delay	15.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	500	20	0	0	0	0	730	220	60	80	0
Number	5	2	12				3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93				1.00		0.90	0.99		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1900	1900	1863	0
Adj Flow Rate, veh/h	40	500	12				0	730	172	60	80	0
Adj No. of Lanes	0	3	1				0	2	0	0	2	0
Peak Hour Factor	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	185	2476	751				0	1018	240	206	590	0
Arrive On Green	0.17	0.17	0.17				0.00	0.37	0.37	0.37	0.37	0.00
Sat Flow, veh/h	364	4870	1477				0	2869	654	233	1695	0
Grp Volume(v), veh/h	203	337	12				0	465	437	60	80	0
Grp Sat Flow(s),veh/h/ln	1845	1695	1477				0	1770	1660	233	1610	0
Q Serve(g_s), s	5.7	5.1	0.4				0.0	13.6	13.6	5.6	2.0	0.0
Cycle Q Clear(g_c), s	5.7	5.1	0.4				0.0	13.6	13.6	19.2	2.0	0.0
Prop In Lane	0.20		1.00				0.00		0.39	1.00		0.00
Lane Grp Cap(c), veh/h	938	1723	751				0	649	609	206	590	0
V/C Ratio(X)	0.22	0.20	0.02				0.00	0.72	0.72	0.29	0.14	0.00
Avail Cap(c_a), veh/h	938	1723	751				0	649	609	206	590	0
HCM Platoon Ratio	0.33	0.33	0.33				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	14.6	14.4	12.4				0.0	16.3	16.3	24.6	12.7	0.0
Incr Delay (d2), s/veh	0.5	0.3	0.0				0.0	6.7	7.1	3.6	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	2.5	0.2				0.0	7.8	7.4	1.2	0.9	0.0
LnGrp Delay(d),s/veh	15.2	14.7	12.5				0.0	23.0	23.4	28.2	13.1	0.0
LnGrp LOS	B	B	B					C	C	C	B	
Approach Vol, veh/h		552						902			140	
Approach Delay, s/veh		14.8						23.2			19.6	
Approach LOS		B						C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		34.5		25.5				25.5
Change Period (Y+Rc), s		4.0		3.5				3.5
Max Green Setting (Gmax), s		30.5		22.0				22.0
Max Q Clear Time (g_c+I1), s		7.7		21.2				15.6
Green Ext Time (p_c), s		2.5		0.5				2.9

Intersection Summary	
HCM 2010 Ctrl Delay	20.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	180	490	0	0	0	0	0	200	70	0	0	0
Number	5	2	12				7	4	14			
Initial Q (Qb), veh	0	0	0				0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.88			
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1863	0				0	1863	1900			
Adj Flow Rate, veh/h	180	490	0				0	200	43			
Adj No. of Lanes	0	3	0				0	4	0			
Peak Hour Factor	1.00	1.00	1.00				1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	0				0	2	2			
Cap, veh/h	463	1217	0				0	2798	527			
Arrive On Green	0.34	0.34	0.00				0.00	0.52	0.52			
Sat Flow, veh/h	1051	3713	0				0	5591	1004			
Grp Volume(v), veh/h	249	421	0				0	178	65			
Grp Sat Flow(s),veh/h/ln	1527	1543	0				0	1602	1528			
Q Serve(g_s), s	6.8	6.2	0.0				0.0	1.1	1.3			
Cycle Q Clear(g_c), s	7.6	6.2	0.0				0.0	1.1	1.3			
Prop In Lane	0.72		0.00				0.00		0.66			
Lane Grp Cap(c), veh/h	625	1054	0				0	2523	802			
V/C Ratio(X)	0.40	0.40	0.00				0.00	0.07	0.08			
Avail Cap(c_a), veh/h	625	1054	0				0	2523	802			
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00				0.00	1.00	1.00			
Uniform Delay (d), s/veh	15.4	15.1	0.0				0.0	7.0	7.1			
Incr Delay (d2), s/veh	1.9	1.1	0.0				0.0	0.1	0.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.5	2.8	0.0				0.0	0.5	0.6			
LnGrp Delay(d),s/veh	17.3	16.2	0.0				0.0	7.1	7.3			
LnGrp LOS	B	B						A	A			
Approach Vol, veh/h		670						243				
Approach Delay, s/veh		16.6						7.1				
Approach LOS		B						A				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				
Phs Duration (G+Y+Rc), s		24.0		36.0				
Change Period (Y+Rc), s		3.5		4.5				
Max Green Setting (Gmax), s		20.5		31.5				
Max Q Clear Time (g_c+I1), s		9.6		3.3				
Green Ext Time (p_c), s		2.4		1.2				

Intersection Summary	
HCM 2010 Ctrl Delay	14.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	290	660	0	0	0	0	0	700	240
Number				1	6	16				7	4	14
Initial Q (Qb), veh				0	0	0				0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00				1.00		0.90
Parking Bus, Adj				1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	0				0	1863	1900
Adj Flow Rate, veh/h				290	660	0				0	700	137
Adj No. of Lanes				0	3	0				0	4	0
Peak Hour Factor				1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %				2	2	0				0	2	2
Cap, veh/h				794	1780	0				0	1653	308
Arrive On Green				0.54	0.54	0.00				0.00	0.31	0.31
Sat Flow, veh/h				1259	3439	0				0	5622	998
Grp Volume(v), veh/h				335	615	0				0	624	213
Grp Sat Flow(s),veh/h/ln				1461	1543	0				0	1602	1553
Q Serve(g_s), s				8.0	6.8	0.0				0.0	6.2	6.6
Cycle Q Clear(g_c), s				8.1	6.8	0.0				0.0	6.2	6.6
Prop In Lane				0.87		0.00				0.00		0.64
Lane Grp Cap(c), veh/h				903	1671	0				0	1482	479
V/C Ratio(X)				0.37	0.37	0.00				0.00	0.42	0.44
Avail Cap(c_a), veh/h				903	1671	0				0	1482	479
HCM Platoon Ratio				1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	0.00				0.00	1.00	1.00
Uniform Delay (d), s/veh				8.2	7.9	0.0				0.0	16.5	16.6
Incr Delay (d2), s/veh				1.2	0.6	0.0				0.0	0.9	3.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.5	3.1	0.0				0.0	2.8	3.2
LnGrp Delay(d),s/veh				9.3	8.5	0.0				0.0	17.4	19.6
LnGrp LOS				A	A						B	B
Approach Vol, veh/h					950						837	
Approach Delay, s/veh					8.8						17.9	
Approach LOS					A						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		
Phs Duration (G+Y+Rc), s				23.0		37.0		
Change Period (Y+Rc), s				4.5		4.5		
Max Green Setting (Gmax), s				18.5		32.5		
Max Q Clear Time (g_c+I1), s				8.6		10.1		
Green Ext Time (p_c), s				3.1		4.7		

Intersection Summary	
HCM 2010 Ctrl Delay	13.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	60	670	110	170	520	0	0	150	100
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	0.92		1.00	1.00		0.87
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1900	1872	0	0	1863	1900
Adj Flow Rate, veh/h				60	670	0	170	520	0	0	150	60
Adj No. of Lanes				0	3	1	0	2	0	0	2	0
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				184	2200	721	354	945	0	0	942	348
Arrive On Green				0.46	0.46	0.00	0.39	0.39	0.00	0.00	0.39	0.39
Sat Flow, veh/h				404	4828	1583	602	2516	0	0	2515	895
Grp Volume(v), veh/h				273	457	0	344	346	0	0	106	104
Grp Sat Flow(s),veh/h/ln				1843	1695	1583	1415	1618	0	0	1770	1547
Q Serve(g_s), s				4.3	3.8	0.0	6.5	7.5	0.0	0.0	1.8	2.0
Cycle Q Clear(g_c), s				4.3	3.8	0.0	8.5	7.5	0.0	0.0	1.8	2.0
Prop In Lane				0.22		1.00	0.49		0.00	0.00		0.58
Lane Grp Cap(c), veh/h				839	1544	721	670	629	0	0	688	601
V/C Ratio(X)				0.33	0.30	0.00	0.51	0.55	0.00	0.00	0.15	0.17
Avail Cap(c_a), veh/h				839	1544	721	670	629	0	0	688	601
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				7.8	7.7	0.0	10.8	10.7	0.0	0.0	8.9	9.0
Incr Delay (d2), s/veh				1.0	0.5	0.0	2.8	3.4	0.0	0.0	0.5	0.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.4	1.9	0.0	3.9	3.9	0.0	0.0	0.9	0.9
LnGrp Delay(d),s/veh				8.9	8.2	0.0	13.6	14.1	0.0	0.0	9.4	9.6
LnGrp LOS				A	A		B	B			A	A
Approach Vol, veh/h					730			690			210	
Approach Delay, s/veh					8.4			13.9			9.5	
Approach LOS					A			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				21.0		24.0		21.0
Change Period (Y+Rc), s				3.5		3.5		3.5
Max Green Setting (Gmax), s				17.5		20.5		17.5
Max Q Clear Time (g_c+I1), s				4.0		6.3		10.5
Green Ext Time (p_c), s				3.6		3.0		2.5

Intersection Summary	
HCM 2010 Ctrl Delay	10.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	30	730	40	20	20	0	0	30	60
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.94	0.96		1.00	1.00		0.95
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1900	1863	0	0	1863	1900
Adj Flow Rate, veh/h				30	730	24	20	20	0	0	30	15
Adj No. of Lanes				0	3	1	0	1	0	0	1	0
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				115	2987	884	263	235	0	0	297	148
Arrive On Green				0.20	0.20	0.20	0.26	0.26	0.00	0.00	0.26	0.26
Sat Flow, veh/h				195	5048	1495	669	909	0	0	1148	574
Grp Volume(v), veh/h				285	475	24	40	0	0	0	0	45
Grp Sat Flow(s),veh/h/ln				1853	1695	1495	1578	0	0	0	0	1723
Q Serve(g_s), s				7.8	7.1	0.8	0.0	0.0	0.0	0.0	0.0	1.2
Cycle Q Clear(g_c), s				7.8	7.1	0.8	1.0	0.0	0.0	0.0	0.0	1.2
Prop In Lane				0.11		1.00	0.50		0.00	0.00		0.33
Lane Grp Cap(c), veh/h				1096	2006	884	498	0	0	0	0	445
V/C Ratio(X)				0.26	0.24	0.03	0.08	0.00	0.00	0.00	0.00	0.10
Avail Cap(c_a), veh/h				1096	2006	884	498	0	0	0	0	445
HCM Platoon Ratio				0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				13.0	12.7	10.2	16.9	0.0	0.0	0.0	0.0	16.9
Incr Delay (d2), s/veh				0.6	0.3	0.1	0.3	0.0	0.0	0.0	0.0	0.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.2	3.4	0.3	0.5	0.0	0.0	0.0	0.0	0.6
LnGrp Delay(d),s/veh				13.6	13.0	10.2	17.2	0.0	0.0	0.0	0.0	17.4
LnGrp LOS				B	B	B	B					B
Approach Vol, veh/h					784			40			45	
Approach Delay, s/veh					13.1			17.2			17.4	
Approach LOS					B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				20.0		40.0		20.0
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				15.5		35.5		15.5
Max Q Clear Time (g_c+I1), s				3.2		9.8		3.0
Green Ext Time (p_c), s				0.2		3.7		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	13.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	150	670	100	60	170	0	0	220	70
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.87	0.97		1.00	1.00		0.93
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1900	1863	0	0	1863	1900
Adj Flow Rate, veh/h				150	670	54	60	170	0	0	220	51
Adj No. of Lanes				0	3	1	0	1	0	0	1	0
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				485	2336	750	166	425	0	0	492	114
Arrive On Green				0.54	0.54	0.54	0.34	0.34	0.00	0.00	0.34	0.34
Sat Flow, veh/h				895	4313	1384	266	1245	0	0	1439	334
Grp Volume(v), veh/h				305	515	54	230	0	0	0	0	271
Grp Sat Flow(s),veh/h/ln				1818	1695	1384	1511	0	0	0	0	1773
Q Serve(g_s), s				5.5	4.9	1.1	0.5	0.0	0.0	0.0	0.0	7.1
Cycle Q Clear(g_c), s				5.5	4.9	1.1	7.6	0.0	0.0	0.0	0.0	7.1
Prop In Lane				0.49		1.00	0.26		0.00	0.00		0.19
Lane Grp Cap(c), veh/h				985	1836	750	592	0	0	0	0	606
V/C Ratio(X)				0.31	0.28	0.07	0.39	0.00	0.00	0.00	0.00	0.45
Avail Cap(c_a), veh/h				985	1836	750	592	0	0	0	0	606
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				7.6	7.4	6.6	14.9	0.0	0.0	0.0	0.0	15.3
Incr Delay (d2), s/veh				0.8	0.4	0.2	1.9	0.0	0.0	0.0	0.0	2.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.9	2.4	0.5	3.1	0.0	0.0	0.0	0.0	3.9
LnGrp Delay(d),s/veh				8.4	7.8	6.7	16.8	0.0	0.0	0.0	0.0	17.7
LnGrp LOS				A	A	A	B					B
Approach Vol, veh/h					874			230			271	
Approach Delay, s/veh					7.9			16.8			17.7	
Approach LOS					A			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				24.0		36.0		24.0
Change Period (Y+Rc), s				3.5		3.5		3.5
Max Green Setting (Gmax), s				20.5		32.5		20.5
Max Q Clear Time (g_c+I1), s				9.1		7.5		9.6
Green Ext Time (p_c), s				1.7		4.2		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	11.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	980	210	0	0	0	0	0	0	210	760	0
Number	5	2	12							7	4	14
Initial Q (Qb), veh	0	0	0							0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93							1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00							1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863							1900	1863	0
Adj Flow Rate, veh/h	0	980	199							210	760	0
Adj No. of Lanes	0	3	1							0	4	0
Peak Hour Factor	1.00	1.00	1.00							1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2							2	2	0
Cap, veh/h	0	2755	795							478	1637	0
Arrive On Green	0.00	0.54	0.54							0.11	0.11	0.00
Sat Flow, veh/h	0	5253	1468							1094	5030	0
Grp Volume(v), veh/h	0	980	199							284	686	0
Grp Sat Flow(s),veh/h/ln	0	1695	1468							1513	1458	0
Q Serve(g_s), s	0.0	6.6	4.3							10.3	8.8	0.0
Cycle Q Clear(g_c), s	0.0	6.6	4.3							10.6	8.8	0.0
Prop In Lane	0.00		1.00							0.74		0.00
Lane Grp Cap(c), veh/h	0	2755	795							621	1494	0
V/C Ratio(X)	0.00	0.36	0.25							0.46	0.46	0.00
Avail Cap(c_a), veh/h	0	2755	795							621	1494	0
HCM Platoon Ratio	1.00	1.00	1.00							0.33	0.33	1.00
Upstream Filter(I)	0.00	1.00	1.00							1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	7.8	7.3							22.2	21.4	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.8							2.4	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0							0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.1	1.9							4.9	3.7	0.0
LnGrp Delay(d),s/veh	0.0	8.2	8.0							24.6	22.4	0.0
LnGrp LOS		A	A							C	C	
Approach Vol, veh/h		1179									970	
Approach Delay, s/veh		8.1									23.1	
Approach LOS		A									C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				
Phs Duration (G+Y+Rc), s		36.0		24.0				
Change Period (Y+Rc), s		3.5		3.5				
Max Green Setting (Gmax), s		32.5		20.5				
Max Q Clear Time (g_c+I1), s		8.6		12.6				
Green Ext Time (p_c), s		5.9		3.0				

Intersection Summary	
HCM 2010 Ctrl Delay	14.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	90	1080	40	0	0	0	0	590	310	90	130	0
Number	5	2	12				3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.90				1.00		0.86	0.99		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1900	1900	1863	0
Adj Flow Rate, veh/h	90	1080	3				0	590	307	90	130	0
Adj No. of Lanes	0	3	1				0	2	0	0	2	0
Peak Hour Factor	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	193	2468	728				0	778	404	195	590	0
Arrive On Green	0.17	0.17	0.17				0.00	0.37	0.37	0.37	0.37	0.00
Sat Flow, veh/h	379	4855	1432				0	2214	1102	203	1695	0
Grp Volume(v), veh/h	438	732	3				0	492	405	90	130	0
Grp Sat Flow(s),veh/h/ln	1844	1695	1432				0	1770	1453	203	1610	0
Q Serve(g_s), s	12.9	11.6	0.1				0.0	14.6	14.7	7.3	3.3	0.0
Cycle Q Clear(g_c), s	12.9	11.6	0.1				0.0	14.6	14.7	22.0	3.3	0.0
Prop In Lane	0.21		1.00				0.00		0.76	1.00		0.00
Lane Grp Cap(c), veh/h	937	1723	728				0	649	533	195	590	0
V/C Ratio(X)	0.47	0.42	0.00				0.00	0.76	0.76	0.46	0.22	0.00
Avail Cap(c_a), veh/h	937	1723	728				0	649	533	195	590	0
HCM Platoon Ratio	0.33	0.33	0.33				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	17.6	17.1	12.3				0.0	16.7	16.7	27.0	13.1	0.0
Incr Delay (d2), s/veh	1.7	0.8	0.0				0.0	8.1	9.8	7.7	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	5.6	0.0				0.0	8.6	7.3	1.9	1.6	0.0
LnGrp Delay(d),s/veh	19.3	17.9	12.3				0.0	24.8	26.5	34.7	13.9	0.0
LnGrp LOS	B	B	B					C	C	C	B	
Approach Vol, veh/h		1173						897			220	
Approach Delay, s/veh		18.4						25.5			22.4	
Approach LOS		B						C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		34.5		25.5				25.5
Change Period (Y+Rc), s		4.0		3.5				3.5
Max Green Setting (Gmax), s		30.5		22.0				22.0
Max Q Clear Time (g_c+I1), s		14.9		24.0				16.7
Green Ext Time (p_c), s		5.3		0.0				2.8

Intersection Summary	
HCM 2010 Ctrl Delay	21.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	150	930	0	0	0	0	0	240	260	0	0	0
Number	5	2	12				7	4	14			
Initial Q (Qb), veh	0	0	0				0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.83			
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1863	0				0	1863	1900			
Adj Flow Rate, veh/h	150	930	0				0	240	257			
Adj No. of Lanes	0	3	0				0	4	0			
Peak Hour Factor	1.00	1.00	1.00				1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	0				0	2	2			
Cap, veh/h	280	1430	0				0	2523	687			
Arrive On Green	0.34	0.34	0.00				0.00	0.52	0.52			
Sat Flow, veh/h	577	4339	0				0	5067	1309			
Grp Volume(v), veh/h	395	685	0				0	240	257			
Grp Sat Flow(s),veh/h/ln	1678	1543	0				0	1602	1309			
Q Serve(g_s), s	10.3	11.3	0.0				0.0	1.5	7.0			
Cycle Q Clear(g_c), s	12.1	11.3	0.0				0.0	1.5	7.0			
Prop In Lane	0.38		0.00				0.00		1.00			
Lane Grp Cap(c), veh/h	656	1054	0				0	2523	687			
V/C Ratio(X)	0.60	0.65	0.00				0.00	0.10	0.37			
Avail Cap(c_a), veh/h	656	1054	0				0	2523	687			
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00				0.00	1.00	1.00			
Uniform Delay (d), s/veh	16.9	16.7	0.0				0.0	7.1	8.4			
Incr Delay (d2), s/veh	4.1	3.1	0.0				0.0	0.1	1.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	6.3	5.2	0.0				0.0	0.7	2.8			
LnGrp Delay(d),s/veh	21.0	19.8	0.0				0.0	7.2	10.0			
LnGrp LOS	C	B						A	A			
Approach Vol, veh/h		1080						497				
Approach Delay, s/veh		20.2						8.6				
Approach LOS		C						A				

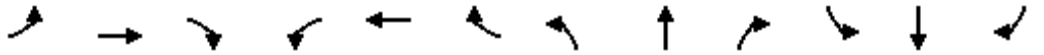
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				
Phs Duration (G+Y+Rc), s		24.0		36.0				
Change Period (Y+Rc), s		3.5		4.5				
Max Green Setting (Gmax), s		20.5		31.5				
Max Q Clear Time (g_c+I1), s		14.1		9.0				
Green Ext Time (p_c), s		2.9		2.7				

Intersection Summary	
HCM 2010 Ctrl Delay	16.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	362	711	0	0	0	0	0	380	90
Number				1	6	16				7	4	14
Initial Q (Qb), veh				0	0	0				0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00				1.00		0.91
Parking Bus, Adj				1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1900	0				0	1900	1900
Adj Flow Rate, veh/h				362	711	0				0	380	28
Adj No. of Lanes				0	3	0				0	4	0
Peak Hour Factor				1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %				0	0	0				0	0	0
Cap, veh/h				878	1731	0				0	1920	137
Arrive On Green				0.54	0.54	0.00				0.00	0.31	0.31
Sat Flow, veh/h				1403	3351	0				0	6494	443
Grp Volume(v), veh/h				374	699	0				0	296	112
Grp Sat Flow(s),veh/h/ln				1452	1573	0				0	1634	1769
Q Serve(g_s), s				9.6	7.8	0.0				0.0	2.7	2.8
Cycle Q Clear(g_c), s				9.6	7.8	0.0				0.0	2.7	2.8
Prop In Lane				0.97		0.00				0.00		0.25
Lane Grp Cap(c), veh/h				904	1705	0				0	1511	546
V/C Ratio(X)				0.41	0.41	0.00				0.00	0.20	0.20
Avail Cap(c_a), veh/h				904	1705	0				0	1511	546
HCM Platoon Ratio				1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	0.00				0.00	1.00	1.00
Uniform Delay (d), s/veh				8.5	8.1	0.0				0.0	15.3	15.3
Incr Delay (d2), s/veh				1.4	0.7	0.0				0.0	0.3	0.8
Initial Q Delay(d3),s/veh				0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.1	3.6	0.0				0.0	1.2	1.5
LnGrp Delay(d),s/veh				9.9	8.8	0.0				0.0	15.6	16.2
LnGrp LOS				A	A						B	B
Approach Vol, veh/h					1073						408	
Approach Delay, s/veh					9.2						15.7	
Approach LOS					A						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		
Phs Duration (G+Y+Rc), s				23.0		37.0		
Change Period (Y+Rc), s				4.5		4.5		
Max Green Setting (Gmax), s				18.5		32.5		
Max Q Clear Time (g_c+I1), s				4.8		11.6		
Green Ext Time (p_c), s				1.5		5.0		

Intersection Summary	
HCM 2010 Ctrl Delay	11.0
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	89	807	73	216	566	0	0	70	50
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.74	0.91		1.00	1.00		0.88
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				89	807	33	216	566	0	0	70	19
Adj No. of Lanes				0	3	1	0	2	0	0	2	0
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				227	2203	544	417	917	0	0	1077	273
Arrive On Green				0.46	0.46	0.46	0.39	0.39	0.00	0.00	0.39	0.39
Sat Flow, veh/h				498	4835	1194	754	2444	0	0	2864	702
Grp Volume(v), veh/h				335	561	33	393	389	0	0	44	45
Grp Sat Flow(s),veh/h/ln				1875	1729	1194	1469	1643	0	0	1805	1666
Q Serve(g_s), s				5.3	4.7	0.7	9.0	8.5	0.0	0.0	0.7	0.8
Cycle Q Clear(g_c), s				5.3	4.7	0.7	9.9	8.5	0.0	0.0	0.7	0.8
Prop In Lane				0.27		1.00	0.55		0.00	0.00		0.42
Lane Grp Cap(c), veh/h				854	1575	544	695	639	0	0	702	648
V/C Ratio(X)				0.39	0.36	0.06	0.56	0.61	0.00	0.00	0.06	0.07
Avail Cap(c_a), veh/h				854	1575	544	695	639	0	0	702	648
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				0.96	0.96	0.96	0.57	0.57	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				8.1	8.0	6.9	11.3	11.0	0.0	0.0	8.6	8.6
Incr Delay (d2), s/veh				1.3	0.6	0.2	0.4	0.7	0.0	0.0	0.2	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.0	2.4	0.3	4.0	3.9	0.0	0.0	0.4	0.4
LnGrp Delay(d),s/veh				9.4	8.6	7.1	11.7	11.7	0.0	0.0	8.8	8.8
LnGrp LOS				A	A	A	B	B			A	A
Approach Vol, veh/h					929			782			89	
Approach Delay, s/veh					8.8			11.7			8.8	
Approach LOS					A			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				21.0		24.0		21.0
Change Period (Y+Rc), s				3.5		3.5		3.5
Max Green Setting (Gmax), s				17.5		20.5		17.5
Max Q Clear Time (g_c+I1), s				2.8		7.3		11.9
Green Ext Time (p_c), s				3.6		3.5		2.1

Intersection Summary	
HCM 2010 Ctrl Delay	10.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	60	913	30	52	30	0	0	40	41
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.92	0.90		1.00	1.00		0.88
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				60	913	18	52	30	0	0	40	11
Adj No. of Lanes				0	3	1	0	1	0	0	1	0
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				183	2978	884	311	160	0	0	358	99
Arrive On Green				0.20	0.20	0.20	0.26	0.26	0.00	0.00	0.26	0.26
Sat Flow, veh/h				310	5032	1493	826	618	0	0	1387	382
Grp Volume(v), veh/h				365	608	18	82	0	0	0	0	51
Grp Sat Flow(s),veh/h/ln				1884	1729	1493	1443	0	0	0	0	1769
Q Serve(g_s), s				10.0	9.0	0.6	1.2	0.0	0.0	0.0	0.0	1.3
Cycle Q Clear(g_c), s				10.0	9.0	0.6	2.5	0.0	0.0	0.0	0.0	1.3
Prop In Lane				0.16		1.00	0.63		0.00	0.00		0.22
Lane Grp Cap(c), veh/h				1115	2046	884	471	0	0	0	0	457
V/C Ratio(X)				0.33	0.30	0.02	0.17	0.00	0.00	0.00	0.00	0.11
Avail Cap(c_a), veh/h				1115	2046	884	471	0	0	0	0	457
HCM Platoon Ratio				0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				0.90	0.90	0.90	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				13.9	13.5	10.1	17.4	0.0	0.0	0.0	0.0	17.0
Incr Delay (d2), s/veh				0.7	0.3	0.0	0.8	0.0	0.0	0.0	0.0	0.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.4	4.4	0.3	1.2	0.0	0.0	0.0	0.0	0.7
LnGrp Delay(d),s/veh				14.6	13.8	10.1	18.2	0.0	0.0	0.0	0.0	17.5
LnGrp LOS				B	B	B	B					B
Approach Vol, veh/h					991			82			51	
Approach Delay, s/veh					14.0			18.2			17.5	
Approach LOS					B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				20.0		40.0		20.0
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				15.5		35.5		15.5
Max Q Clear Time (g_c+I1), s				3.3		12.0		4.5
Green Ext Time (p_c), s				0.4		4.6		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	14.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	250	908	240	85	290	0	0	120	30
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.90	0.94		1.00	1.00		0.90
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				250	908	130	85	290	0	0	120	15
Adj No. of Lanes				0	3	1	0	1	0	0	1	0
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				584	2289	783	172	493	0	0	558	70
Arrive On Green				0.54	0.54	0.54	0.34	0.34	0.00	0.00	0.34	0.34
Sat Flow, veh/h				1078	4226	1446	287	1444	0	0	1632	204
Grp Volume(v), veh/h				428	730	130	375	0	0	0	0	135
Grp Sat Flow(s),veh/h/ln				1846	1729	1446	1731	0	0	0	0	1836
Q Serve(g_s), s				8.3	7.4	2.7	5.5	0.0	0.0	0.0	0.0	3.1
Cycle Q Clear(g_c), s				8.3	7.4	2.7	10.5	0.0	0.0	0.0	0.0	3.1
Prop In Lane				0.58		1.00	0.23		0.00	0.00		0.11
Lane Grp Cap(c), veh/h				1000	1873	783	665	0	0	0	0	627
V/C Ratio(X)				0.43	0.39	0.17	0.56	0.00	0.00	0.00	0.00	0.22
Avail Cap(c_a), veh/h				1000	1873	783	665	0	0	0	0	627
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				8.2	8.0	6.9	16.3	0.0	0.0	0.0	0.0	14.0
Incr Delay (d2), s/veh				1.3	0.6	0.5	3.4	0.0	0.0	0.0	0.0	0.8
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.5	3.6	1.2	5.7	0.0	0.0	0.0	0.0	1.7
LnGrp Delay(d),s/veh				9.5	8.6	7.4	19.8	0.0	0.0	0.0	0.0	14.8
LnGrp LOS				A	A	A	B					B
Approach Vol, veh/h					1288			375			135	
Approach Delay, s/veh					8.8			19.8			14.8	
Approach LOS					A			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				24.0		36.0		24.0
Change Period (Y+Rc), s				3.5		3.5		3.5
Max Green Setting (Gmax), s				20.5		32.5		20.5
Max Q Clear Time (g_c+I1), s				5.1		10.3		12.5
Green Ext Time (p_c), s				1.9		5.9		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	11.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	385	170	0	0	0	0	0	0	177	555	0
Number	5	2	12							7	4	14
Initial Q (Qb), veh	0	0	0							0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95							1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00							1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1900	1900							1900	1900	0
Adj Flow Rate, veh/h	0	385	139							177	555	0
Adj No. of Lanes	0	3	1							0	4	0
Peak Hour Factor	1.00	1.00	1.00							1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0							0	0	0
Cap, veh/h	0	2810	832							516	1636	0
Arrive On Green	0.00	0.54	0.54							0.11	0.11	0.00
Sat Flow, veh/h	0	5358	1536							1192	5029	0
Grp Volume(v), veh/h	0	385	139							219	513	0
Grp Sat Flow(s),veh/h/ln	0	1729	1536							1519	1487	0
Q Serve(g_s), s	0.0	2.2	2.7							7.5	6.4	0.0
Cycle Q Clear(g_c), s	0.0	2.2	2.7							8.0	6.4	0.0
Prop In Lane	0.00		1.00							0.81		0.00
Lane Grp Cap(c), veh/h	0	2810	832							628	1524	0
V/C Ratio(X)	0.00	0.14	0.17							0.35	0.34	0.00
Avail Cap(c_a), veh/h	0	2810	832							628	1524	0
HCM Platoon Ratio	1.00	1.00	1.00							0.33	0.33	1.00
Upstream Filter(I)	0.00	1.00	1.00							1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	6.8	6.9							21.0	20.3	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.4							1.5	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0							0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.1	1.3							3.7	2.7	0.0
LnGrp Delay(d),s/veh	0.0	6.9	7.4							22.5	20.9	0.0
LnGrp LOS		A	A							C	C	
Approach Vol, veh/h		524									732	
Approach Delay, s/veh		7.0									21.4	
Approach LOS		A									C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				
Phs Duration (G+Y+Rc), s		36.0		24.0				
Change Period (Y+Rc), s		3.5		3.5				
Max Green Setting (Gmax), s		32.5		20.5				
Max Q Clear Time (g_c+I1), s		4.7		10.0				
Green Ext Time (p_c), s		2.2		2.7				

Intersection Summary	
HCM 2010 Ctrl Delay	15.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	64	521	20	0	0	0	0	728	221	69	80	0
Number	5	2	12				3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93				1.00		0.90	0.99		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	64	521	12				0	728	174	69	80	0
Adj No. of Lanes	0	3	1				0	2	0	0	2	0
Peak Hour Factor	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	283	2471	779				0	1010	241	204	589	0
Arrive On Green	0.17	0.17	0.17				0.00	0.36	0.36	0.36	0.36	0.00
Sat Flow, veh/h	547	4783	1508				0	2915	674	234	1729	0
Grp Volume(v), veh/h	219	366	12				0	466	436	69	80	0
Grp Sat Flow(s),veh/h/ln	1873	1729	1508				0	1805	1689	234	1643	0
Q Serve(g_s), s	6.1	5.5	0.4				0.0	13.4	13.4	6.5	2.0	0.0
Cycle Q Clear(g_c), s	6.1	5.5	0.4				0.0	13.4	13.4	19.9	2.0	0.0
Prop In Lane	0.29		1.00				0.00		0.40	1.00		0.00
Lane Grp Cap(c), veh/h	968	1787	779				0	647	605	204	589	0
V/C Ratio(X)	0.23	0.20	0.02				0.00	0.72	0.72	0.34	0.14	0.00
Avail Cap(c_a), veh/h	968	1787	779				0	647	605	204	589	0
HCM Platoon Ratio	0.33	0.33	0.33				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	14.5	14.3	12.2				0.0	16.6	16.7	25.3	13.0	0.0
Incr Delay (d2), s/veh	0.5	0.3	0.0				0.0	6.8	7.3	4.5	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	2.7	0.2				0.0	7.8	7.4	1.4	1.0	0.0
LnGrp Delay(d),s/veh	15.1	14.6	12.2				0.0	23.4	23.9	29.7	13.5	0.0
LnGrp LOS	B	B	B					C	C	C	B	
Approach Vol, veh/h		597						902			149	
Approach Delay, s/veh		14.7						23.7			21.0	
Approach LOS		B						C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		35.0		25.0				25.0
Change Period (Y+Rc), s		4.0		3.5				3.5
Max Green Setting (Gmax), s		31.0		21.5				21.5
Max Q Clear Time (g_c+I1), s		8.1		21.9				15.4
Green Ext Time (p_c), s		2.5		0.0				2.8

Intersection Summary	
HCM 2010 Ctrl Delay	20.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	180	487	0	0	0	0	0	200	70	0	0	0
Number	5	2	12				7	4	14			
Initial Q (Qb), veh	0	0	0				0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.88			
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1900	0				0	1900	1900			
Adj Flow Rate, veh/h	180	487	0				0	200	39			
Adj No. of Lanes	0	3	0				0	4	0			
Peak Hour Factor	1.00	1.00	1.00				1.00	1.00	1.00			
Percent Heavy Veh, %	0	0	0				0	0	0			
Cap, veh/h	492	1296	0				0	2809	484			
Arrive On Green	0.36	0.36	0.00				0.00	0.51	0.51			
Sat Flow, veh/h	1084	3773	0				0	5792	953			
Grp Volume(v), veh/h	247	420	0				0	174	65			
Grp Sat Flow(s),veh/h/ln	1554	1573	0				0	1634	1577			
Q Serve(g_s), s	6.4	5.9	0.0				0.0	1.1	1.3			
Cycle Q Clear(g_c), s	7.1	5.9	0.0				0.0	1.1	1.3			
Prop In Lane	0.73		0.00				0.00		0.60			
Lane Grp Cap(c), veh/h	660	1128	0				0	2492	802			
V/C Ratio(X)	0.37	0.37	0.00				0.00	0.07	0.08			
Avail Cap(c_a), veh/h	660	1128	0				0	2492	802			
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00				0.00	1.00	1.00			
Uniform Delay (d), s/veh	14.6	14.3	0.0				0.0	7.5	7.6			
Incr Delay (d2), s/veh	1.6	0.9	0.0				0.0	0.1	0.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.4	2.7	0.0				0.0	0.5	0.6			
LnGrp Delay(d),s/veh	16.2	15.2	0.0				0.0	7.6	7.8			
LnGrp LOS	B	B						A	A			
Approach Vol, veh/h		667						239				
Approach Delay, s/veh		15.6						7.6				
Approach LOS		B						A				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				
Phs Duration (G+Y+Rc), s		25.0		35.0				
Change Period (Y+Rc), s		3.5		4.5				
Max Green Setting (Gmax), s		21.5		30.5				
Max Q Clear Time (g_c+I1), s		9.1		3.3				
Green Ext Time (p_c), s		2.4		1.1				

Intersection Summary	
HCM 2010 Ctrl Delay	13.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	339	677	0	0	0	0	0	700	240
Number				1	6	16				7	4	14
Initial Q (Qb), veh				0	0	0				0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00				1.00		0.90
Parking Bus, Adj				1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1900	0				0	1900	1900
Adj Flow Rate, veh/h				339	677	0				0	700	142
Adj No. of Lanes				0	3	0				0	4	0
Peak Hour Factor				1.00	1.00	1.00				1.00	1.00	1.00
Percent Heavy Veh, %				0	0	0				0	0	0
Cap, veh/h				869	1741	0				0	1674	323
Arrive On Green				0.54	0.54	0.00				0.00	0.31	0.31
Sat Flow, veh/h				1388	3371	0				0	5697	1047
Grp Volume(v), veh/h				356	660	0				0	628	214
Grp Sat Flow(s),veh/h/ln				1456	1573	0				0	1634	1576
Q Serve(g_s), s				8.9	7.3	0.0				0.0	6.1	6.5
Cycle Q Clear(g_c), s				8.9	7.3	0.0				0.0	6.1	6.5
Prop In Lane				0.95		0.00				0.00		0.66
Lane Grp Cap(c), veh/h				906	1705	0				0	1511	486
V/C Ratio(X)				0.39	0.39	0.00				0.00	0.42	0.44
Avail Cap(c_a), veh/h				906	1705	0				0	1511	486
HCM Platoon Ratio				1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	0.00				0.00	1.00	1.00
Uniform Delay (d), s/veh				8.3	8.0	0.0				0.0	16.5	16.6
Incr Delay (d2), s/veh				1.3	0.7	0.0				0.0	0.8	2.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.9	3.3	0.0				0.0	2.9	3.2
LnGrp Delay(d),s/veh				9.6	8.6	0.0				0.0	17.3	19.5
LnGrp LOS				A	A						B	B
Approach Vol, veh/h					1016						842	
Approach Delay, s/veh					9.0						17.9	
Approach LOS					A						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		
Phs Duration (G+Y+Rc), s				23.0		37.0		
Change Period (Y+Rc), s				4.5		4.5		
Max Green Setting (Gmax), s				18.5		32.5		
Max Q Clear Time (g_c+I1), s				8.5		10.9		
Green Ext Time (p_c), s				3.0		4.7		

Intersection Summary	
HCM 2010 Ctrl Delay	13.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	67	714	112	190	524	0	0	150	101
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.89	0.92		1.00	1.00		0.87
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				67	714	78	190	524	0	0	150	66
Adj No. of Lanes				0	3	1	0	2	0	0	2	0
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				196	2235	653	375	912	0	0	932	376
Arrive On Green				0.46	0.46	0.46	0.39	0.39	0.00	0.00	0.39	0.39
Sat Flow, veh/h				431	4906	1434	648	2431	0	0	2491	968
Grp Volume(v), veh/h				292	489	78	351	363	0	0	110	106
Grp Sat Flow(s),veh/h/ln				1878	1729	1434	1350	1643	0	0	1805	1558
Q Serve(g_s), s				4.5	4.0	1.4	7.7	7.8	0.0	0.0	1.8	2.0
Cycle Q Clear(g_c), s				4.5	4.0	1.4	9.7	7.8	0.0	0.0	1.8	2.0
Prop In Lane				0.23		1.00	0.54		0.00	0.00		0.62
Lane Grp Cap(c), veh/h				856	1575	653	648	639	0	0	702	606
V/C Ratio(X)				0.34	0.31	0.12	0.54	0.57	0.00	0.00	0.16	0.18
Avail Cap(c_a), veh/h				856	1575	653	648	639	0	0	702	606
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				0.97	0.97	0.97	0.54	0.54	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				7.9	7.8	7.1	11.3	10.8	0.0	0.0	8.9	9.0
Incr Delay (d2), s/veh				1.1	0.5	0.4	0.3	0.4	0.0	0.0	0.5	0.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.5	2.0	0.6	3.6	3.6	0.0	0.0	1.0	1.0
LnGrp Delay(d),s/veh				9.0	8.3	7.4	11.6	11.2	0.0	0.0	9.4	9.6
LnGrp LOS				A	A	A	B	B			A	A
Approach Vol, veh/h					859			714			216	
Approach Delay, s/veh					8.4			11.4			9.5	
Approach LOS					A			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				21.0		24.0		21.0
Change Period (Y+Rc), s				3.5		3.5		3.5
Max Green Setting (Gmax), s				17.5		20.5		17.5
Max Q Clear Time (g_c+I1), s				4.0		6.5		11.7
Green Ext Time (p_c), s				3.8		3.2		2.3

Intersection Summary	
HCM 2010 Ctrl Delay	9.7
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	30	782	40	27	20	0	0	30	63
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.94	0.97		1.00	1.00		0.95
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				30	782	6	27	20	0	0	30	28
Adj No. of Lanes				0	3	1	0	1	0	0	1	0
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				110	3055	902	297	197	0	0	227	212
Arrive On Green				0.20	0.20	0.20	0.26	0.26	0.00	0.00	0.26	0.26
Sat Flow, veh/h				186	5163	1524	783	761	0	0	879	821
Grp Volume(v), veh/h				305	507	6	47	0	0	0	0	58
Grp Sat Flow(s),veh/h/ln				1891	1729	1524	1544	0	0	0	0	1700
Q Serve(g_s), s				8.2	7.4	0.2	0.0	0.0	0.0	0.0	0.0	1.6
Cycle Q Clear(g_c), s				8.2	7.4	0.2	1.6	0.0	0.0	0.0	0.0	1.6
Prop In Lane				0.10		1.00	0.57		0.00	0.00		0.48
Lane Grp Cap(c), veh/h				1119	2046	902	493	0	0	0	0	439
V/C Ratio(X)				0.27	0.25	0.01	0.10	0.00	0.00	0.00	0.00	0.13
Avail Cap(c_a), veh/h				1119	2046	902	493	0	0	0	0	439
HCM Platoon Ratio				0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				0.96	0.96	0.96	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				13.2	12.9	9.9	16.9	0.0	0.0	0.0	0.0	17.1
Incr Delay (d2), s/veh				0.6	0.3	0.0	0.4	0.0	0.0	0.0	0.0	0.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.5	3.6	0.1	0.6	0.0	0.0	0.0	0.0	0.8
LnGrp Delay(d),s/veh				13.7	13.1	9.9	17.3	0.0	0.0	0.0	0.0	17.7
LnGrp LOS				B	B	A	B					B
Approach Vol, veh/h					818			47			58	
Approach Delay, s/veh					13.3			17.3			17.7	
Approach LOS					B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				20.0		40.0		20.0
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				15.5		35.5		15.5
Max Q Clear Time (g_c+I1), s				3.6		10.2		3.6
Green Ext Time (p_c), s				0.2		3.7		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	13.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	150	685	100	97	170	0	0	220	70
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.87	0.97		1.00	1.00		0.93
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1900	1900	1900	1900	0	0	1900	1900
Adj Flow Rate, veh/h				150	685	54	97	170	0	0	220	51
Adj No. of Lanes				0	3	1	0	1	0	0	1	0
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				0	0	0	0	0	0	0	0	0
Cap, veh/h				486	2392	765	205	325	0	0	502	116
Arrive On Green				0.54	0.54	0.54	0.34	0.34	0.00	0.00	0.34	0.34
Sat Flow, veh/h				897	4417	1412	359	952	0	0	1468	340
Grp Volume(v), veh/h				310	525	54	267	0	0	0	0	271
Grp Sat Flow(s),veh/h/ln				1855	1729	1412	1311	0	0	0	0	1808
Q Serve(g_s), s				5.5	4.9	1.1	4.7	0.0	0.0	0.0	0.0	7.0
Cycle Q Clear(g_c), s				5.5	4.9	1.1	11.7	0.0	0.0	0.0	0.0	7.0
Prop In Lane				0.48		1.00	0.36		0.00	0.00		0.19
Lane Grp Cap(c), veh/h				1005	1873	765	530	0	0	0	0	618
V/C Ratio(X)				0.31	0.28	0.07	0.50	0.00	0.00	0.00	0.00	0.44
Avail Cap(c_a), veh/h				1005	1873	765	530	0	0	0	0	618
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				7.6	7.4	6.6	16.7	0.0	0.0	0.0	0.0	15.3
Incr Delay (d2), s/veh				0.8	0.4	0.2	3.4	0.0	0.0	0.0	0.0	2.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.0	2.4	0.5	4.2	0.0	0.0	0.0	0.0	3.9
LnGrp Delay(d),s/veh				8.4	7.8	6.7	20.1	0.0	0.0	0.0	0.0	17.6
LnGrp LOS				A	A	A	C					B
Approach Vol, veh/h					889			267			271	
Approach Delay, s/veh					7.9			20.1			17.6	
Approach LOS					A			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				24.0		36.0		24.0
Change Period (Y+Rc), s				3.5		3.5		3.5
Max Green Setting (Gmax), s				20.5		32.5		20.5
Max Q Clear Time (g_c+I1), s				9.0		7.5		13.7
Green Ext Time (p_c), s				1.8		3.9		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	12.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	1008	210	0	0	0	0	0	0	255	764	0
Number	5	2	12							7	4	14
Initial Q (Qb), veh	0	0	0							0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93							1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00							1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1900	1900							1900	1900	0
Adj Flow Rate, veh/h	0	1008	199							255	764	0
Adj No. of Lanes	0	3	1							0	4	0
Peak Hour Factor	1.00	1.00	1.00							1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0							0	0	0
Cap, veh/h	0	2810	811							547	1598	0
Arrive On Green	0.00	0.18	0.18							0.11	0.11	0.00
Sat Flow, veh/h	0	5358	1497							1275	4920	0
Grp Volume(v), veh/h	0	1008	199							298	721	0
Grp Sat Flow(s),veh/h/ln	0	1729	1497							1493	1487	0
Q Serve(g_s), s	0.0	10.2	6.8							11.4	9.1	0.0
Cycle Q Clear(g_c), s	0.0	10.2	6.8							11.4	9.1	0.0
Prop In Lane	0.00		1.00							0.85		0.00
Lane Grp Cap(c), veh/h	0	2810	811							621	1524	0
V/C Ratio(X)	0.00	0.36	0.25							0.48	0.47	0.00
Avail Cap(c_a), veh/h	0	2810	811							621	1524	0
HCM Platoon Ratio	1.00	0.33	0.33							0.33	0.33	1.00
Upstream Filter(I)	0.00	1.00	1.00							1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	15.5	14.1							22.6	21.6	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.7							2.6	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0							0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.0	3.0							5.2	3.9	0.0
LnGrp Delay(d),s/veh	0.0	15.9	14.8							25.2	22.6	0.0
LnGrp LOS		B	B							C	C	
Approach Vol, veh/h		1207									1019	
Approach Delay, s/veh		15.7									23.4	
Approach LOS		B									C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				
Phs Duration (G+Y+Rc), s		36.0		24.0				
Change Period (Y+Rc), s		3.5		3.5				
Max Green Setting (Gmax), s		32.5		20.5				
Max Q Clear Time (g_c+I1), s		12.2		13.4				
Green Ext Time (p_c), s		5.8		2.9				

Intersection Summary	
HCM 2010 Ctrl Delay	19.2
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	109	1101	40	0	0	0	0	595	312	97	130	0
Number	5	2	12				3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.91				1.00		0.85	0.98		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	109	1101	32				0	595	265	97	130	0
Adj No. of Lanes	0	3	1				0	2	0	0	2	0
Peak Hour Factor	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	234	2523	756				0	824	366	206	589	0
Arrive On Green	0.17	0.17	0.17				0.00	0.36	0.36	0.36	0.36	0.00
Sat Flow, veh/h	453	4883	1463				0	2394	1022	239	1729	0
Grp Volume(v), veh/h	452	758	32				0	467	393	97	130	0
Grp Sat Flow(s),veh/h/ln	1877	1729	1463				0	1805	1516	239	1643	0
Q Serve(g_s), s	13.0	11.8	1.1				0.0	13.4	13.5	8.0	3.3	0.0
Cycle Q Clear(g_c), s	13.0	11.8	1.1				0.0	13.4	13.5	21.5	3.3	0.0
Prop In Lane	0.24		1.00				0.00		0.67	1.00		0.00
Lane Grp Cap(c), veh/h	970	1787	756				0	647	543	206	589	0
V/C Ratio(X)	0.47	0.42	0.04				0.00	0.72	0.72	0.47	0.22	0.00
Avail Cap(c_a), veh/h	970	1787	756				0	647	543	206	589	0
HCM Platoon Ratio	0.33	0.33	0.33				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	17.4	16.9	12.5				0.0	16.7	16.7	26.5	13.4	0.0
Incr Delay (d2), s/veh	1.6	0.7	0.1				0.0	6.8	8.2	7.6	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	5.8	0.5				0.0	7.8	6.8	2.0	1.6	0.0
LnGrp Delay(d),s/veh	19.0	17.6	12.6				0.0	23.5	24.8	34.0	14.3	0.0
LnGrp LOS	B	B	B					C	C	C	B	
Approach Vol, veh/h		1242						860			227	
Approach Delay, s/veh		18.0						24.1			22.7	
Approach LOS		B						C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		35.0		25.0				25.0
Change Period (Y+Rc), s		4.0		3.5				3.5
Max Green Setting (Gmax), s		31.0		21.5				21.5
Max Q Clear Time (g_c+I1), s		15.0		23.5				15.5
Green Ext Time (p_c), s		5.3		0.0				2.9

Intersection Summary	
HCM 2010 Ctrl Delay	20.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	150	950	0	0	0	0	0	240	260	8	0	0
Number	5	2	12				7	4	14			
Initial Q (Qb), veh	0	0	0				0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.82			
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1900	0				0	1900	1900			
Adj Flow Rate, veh/h	150	950	0				0	240	256			
Adj No. of Lanes	0	3	0				0	4	0			
Peak Hour Factor	1.00	1.00	1.00				1.00	1.00	1.00			
Percent Heavy Veh, %	0	0	0				0	0	0			
Cap, veh/h	289	1536	0				0	2492	675			
Arrive On Green	0.36	0.36	0.00				0.00	0.51	0.51			
Sat Flow, veh/h	577	4441	0				0	5168	1328			
Grp Volume(v), veh/h	402	698	0				0	240	256			
Grp Sat Flow(s),veh/h/ln	1716	1573	0				0	1634	1328			
Q Serve(g_s), s	9.7	11.0	0.0				0.0	1.5	7.0			
Cycle Q Clear(g_c), s	11.6	11.0	0.0				0.0	1.5	7.0			
Prop In Lane	0.37		0.00				0.00		1.00			
Lane Grp Cap(c), veh/h	697	1128	0				0	2492	675			
V/C Ratio(X)	0.58	0.62	0.00				0.00	0.10	0.38			
Avail Cap(c_a), veh/h	697	1128	0				0	2492	675			
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00				0.00	1.00	1.00			
Uniform Delay (d), s/veh	16.0	15.9	0.0				0.0	7.6	9.0			
Incr Delay (d2), s/veh	3.5	2.6	0.0				0.0	0.1	1.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	6.1	5.2	0.0				0.0	0.7	2.9			
LnGrp Delay(d),s/veh	19.5	18.4	0.0				0.0	7.7	10.6			
LnGrp LOS	B	B						A	B			
Approach Vol, veh/h		1100						496				
Approach Delay, s/veh		18.8						9.2				
Approach LOS		B						A				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				
Phs Duration (G+Y+Rc), s		25.0		35.0				
Change Period (Y+Rc), s		3.5		4.5				
Max Green Setting (Gmax), s		21.5		30.5				
Max Q Clear Time (g_c+I1), s		13.6		9.0				
Green Ext Time (p_c), s		3.2		2.5				

Intersection Summary	
HCM 2010 Ctrl Delay	15.8
HCM 2010 LOS	B

APPENDIX B

W12 Mixed Use Project - Site Assessment for Heron Rookery

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

Subject: W12 Mixed Use Project - Site Assessment for Heron Rookery

Dear Christina Ferracane:

The purpose of this memo is to document the potential for a heron (Family: Ardeidae)[1] rookery near the proposed W12 Mixed Use development project (project) located at Webster and 12th Streets in downtown Oakland, CA. The survey area (project site) consists of one full city block (referred to as the "Full Block") and one-quarter city block (referred to as the "Quarter Block") in downtown Oakland. The Full Block is bounded by Webster Street, 12th Street, Harrison Street, and 11th Street and is currently occupied by a single structure being used for school and public parking and the Downtown Oakland Charter School. There is no vegetation on, or within 50 feet of, this block. The Quarter Block is southeast of the full city block and is bordered by 12th Street and Harrison Street. The Quarter Block is vacant and serves as a paved recreation area for the Downtown Oakland Charter School. The corner at 12th and Harrison Streets is lined with four mature little-leaf fig trees (*Ficus microcarpa*), two on 12th Street and two on Harrison Street. Three little-leaf fig trees are also present on the northeast side of 12th Street, approximately 50 feet from the project site. Pedestrian and vehicle activity is high within and adjacent to the survey area; therefore any birds capable of nesting in this area would be habituated to existing human disturbance. Photos of the survey site are included in **Attachment A**.

Methods

The survey was conducted by ESA wildlife biologist Erika Walther between 10:55 a.m. and 11:40 a.m. on January 21, 2016. Weather conditions at the site were relatively clear and sunny. The temperature was approximately 65˚F, with a light breeze. The survey covered all potential bird nesting habitat located on the project site, and within 50 feet of the project site, using 10x42 binoculars and specifically looking for any birds displaying breeding or nesting behavior.

Survey Results

The four little-leaf fig trees on the corner of 12th and Harrison Streets were each observed to have multiple medium-sized (approximately10-12" diameter) stick platform nests in the canopies. One tree had approximately six nests, and the other three trees had from 15 to 30 nests each. The nests did not appear to be active as no herons were observed in any of the trees during the survey period. In addition, the three trees on the northeast side of 12th Street each included three to six similar nests and are considered part of the same rookery. Whitewash, or bird

[1] The taxonomic family Ardeidae includes species of herons, egrets, and bitterns, some species of which nest colonially in trees.

guano, was apparent on a parking sign, parking meter, and fence under the tree canopies on Harrison Street. The whitewash was not fresh but suggests that this site was used as a rookery in the recent past. Heavy rains two days prior likely washed away any whitewash on the sidewalk and street beneath the trees. Black-crowned night herons are known to have nested a few blocks from this project site, at 13th and Alice Streets in previous years; however, no black-crowned night herons or other species with the potential to use this type of nest were observed at the nests or in the tree canopy at the project site. Because January does not fall within the typical nesting season for herons in the San Francisco Bay Area, additional surveys during peak nesting season (i.e., March – July) would be required to confirm whether the rookery is active and which species utilize it.

Yellow-rumped warbler (*Setophaga coronate*), unidentified gull species, and rock pigeon (*Columba livia*) were observed near the project site. No nesting behavior was observed (e.g., territorial demonstrations, gathering nesting material, making food deliveries to young). A pair of American crows (*Corvus brachyrhynchos*) was observed in one of the fig trees containing heron nests, and it is important to note that these trees could provide suitable nesting habitat for birds other than herons.

Regulatory Context and Recommendations

During the nesting bird season, the California Department of Fish and Wildlife (CDFW) recommends a 250-foot construction exclusion zone around the nests of active passerine songbirds during the breeding season, and a 500-foot buffer for nesting raptors. These buffer distances are considered initial starting distances once a nest has been identified, and are commonly revised downward to as low as 100 feet and 250 feet, respectively, based on site conditions and the nature of the work being performed. The nesting bird season is generally defined as February 1 through August 31. Because no rare, threatened, or endangered bird species are expected to nest at the project site, construction exclusion zones would not apply outside of the nesting bird season.

Although the rookery was not active at the time of the survey, black-crowned night herons are known to have active nests from March through end of September in the San Francisco Bay Area.[2]. Once a nest contains eggs, it is considered active and, therefore, protected from disturbance by Section 3503 of the California Fish and Game Code. Under Section 3503 of the California Fish and Game Code, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Nests are generally considered active until young have fully fledged. Thus, it is recommended that tree removal activities take place prior to, or following, of the active nesting season.

Section 3503.3 of the California Fish and Game Code prohibits take, possession, or destruction of any birds in the orders Falconiformes (hawks)[3] or Strigiformes (owls), or of their nests and eggs. Peregrine falcons (*Falco peregrinus*) and Cooper's hawks (*Accipiter cooperii*) are raptors that commonly nest in urban environments and, if found breeding within 500 feet and within line-of-sight of the project area, would probably warrant consultation with CDFW regarding how to proceed. Lastly, the Migratory Bird Treaty Act states that without a permit issued by the U.S. Department of the Interior, it is unlawful to pursue, hunt, take, capture, or kill any migratory bird.

Rookeries often provide perennial nesting habitat, which can be considered important habitat for herons. The rookery at the W12 project includes seven trees surrounded by a highly disturbed urban setting, which does not provide suitable long-term habitat for the herons relative to other nearby habitats (e.g., Lake Merritt). Therefore,

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[2] Brianne E. Brussee and William E. Davis, Jr. 2010. Black-crowned Night-Heron (*Nycticorax nycticorax*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/074 doi:10.2173/bna.74, Accessed January 21, 2016.

[3] At the time Section 3503.5 was written, the order Falconiformes included diurnal birds of prey in the families Accipitridae (eagles, hawks, kites, harriers and others) and Falconidae (falcons and caracaras). In 2010, Accipitridae was placed in a new order, Acciptriformes, by the North American Classification Committee (NACC). However, for the purposes of this report, we interpret the reference to the order Falconiformes in Section 3503.5 to also include diurnal birds of prey in the order Accipitriformes.

ESA Biological Resources

we believe removal of the rookery trees during the non-nesting season would result in a less-than-significant and indirect impact to the herons.

If you have any questions regarding this survey report please feel free to contact me (510-740-1734).

Sincerely,

Erika Walther
Associate Wildlife Biologist

ESA Biological Resources

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Appendix A – Photos

Fig 1. Southwest side of Full Block. Photo taken from 11th Street with view toward Harrison Street.

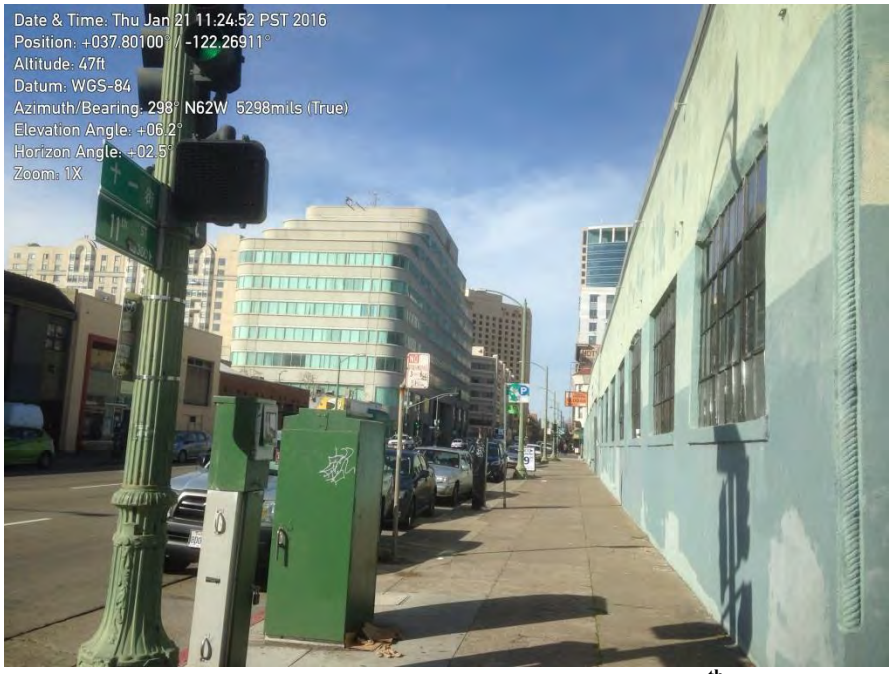

Fig 2. Southwest side of Full Block. Photo taken from 11th and Harrison Streets with view to Webster Street.

Fig 3. Photo taken from 12th St. with view towards Harrison Street. Fig trees with rookery nests visible.

Fig 4. Photo taken from 12th St. at Alice St. with view towards Harrison Street. Trees on left are on northeast side of Quarter Block. Trees on right are part of the rookery, but are approximately 50 ft from project site.

Fig 5. Rookery trees at on 12th Street at Harrison Street. Northeast side of the Quarter Block is on right side of photo.

Fig 6. Rookery trees on Harrison Street at 12th Street. This block runs between the Quarter Block (left) and Full Block (right) of the project site.

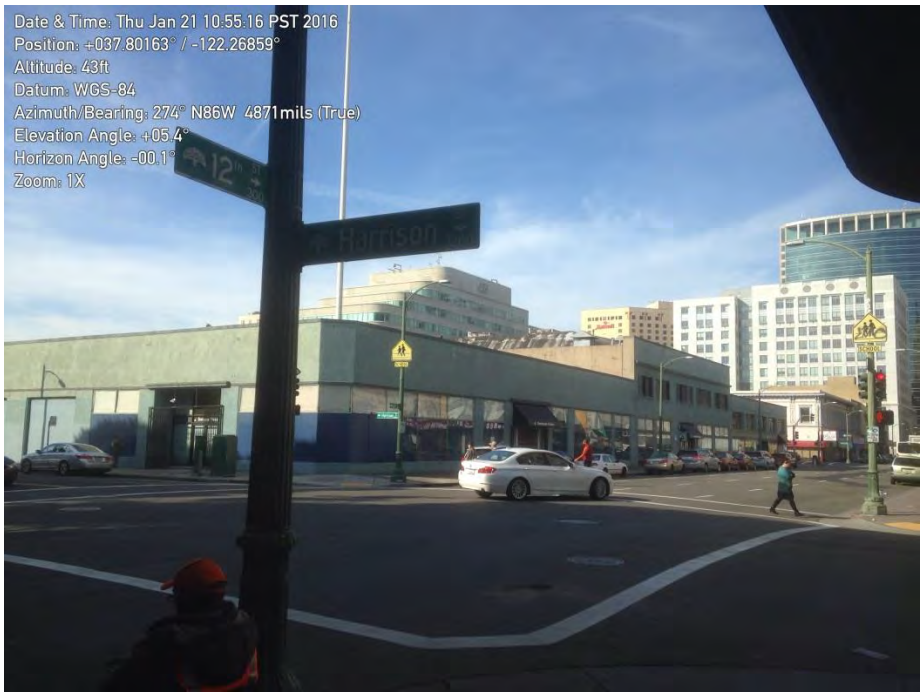

Fig 7. Photo taken from 12th Street at Harrison looking towards the northeast and southeast sides of the Full Block.

Fig 8. Bird guano on fence under rookery tree on the Harrison Street side of the Quarter Block.

Fig 9. Bird guano on parking meter under rookery tree on the Harrison Street side of the Quarter Block.

Fig 10. Bird guano on parking sign under rookery tree on the Harrison Street side of the Quarter Block.