



DRAFT ENVIRONMENTAL IMPACT REPORT

1500 Mission Street Project

PLANNING DEPARTMENT
CASE NO. 2014-000362ENV

STATE CLEARINGHOUSE NO. 2015052040



SAN FRANCISCO
PLANNING
DEPARTMENT

Draft EIR Publication Date:	November 9, 2016
Draft EIR Public Hearing Date:	December 15, 2016
Draft EIR Public Comment Period:	November 9, 2016 – January 4, 2017

Written comments should be sent to:
Lisa M. Gibson, Acting Environmental Review Officer | 1650 Mission Street, Suite 400 | San Francisco, CA 94103

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SAN FRANCISCO PLANNING DEPARTMENT

MEMO

DATE: **November 9, 2016**
TO: Distribution List for the 1500 Mission Street EIR
FROM: Lisa M. Gibson, Acting Environmental Review Officer
Re: **Request for the Final Environmental Impact Report for the 1500 Mission Street (Case No. 2014.000362ENV)**

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This is the Draft of the Environmental Impact Report (EIR) for the 1500 Mission Street project. A public hearing will be held on the adequacy and accuracy of this document. After the public hearing, our office will prepare and publish a document entitled "Response to Comments," which will contain a summary of all relevant comments on this Draft EIR and our responses to those comments, along with copies of the letters received and a transcript of the public hearing. The Response to Comments document may also specify changes to this Draft EIR. Public agencies and members of the public who testify at the hearing on the Draft EIR will automatically receive a copy of the Response to Comments document, along with notice of the date reserved for certification; others may receive such copies and notice on request or by visiting our office. This Draft EIR, together with the Response to Comments document, will be considered by the Planning Commission in an advertised public meeting, and then certified as a Final EIR if deemed adequate.

After certification, we will modify the Draft EIR as specified by the Response to Comments document and print both documents in a single publication called the Final Environmental Impact Report. The Final EIR will add no new information to the combination of the two documents except to reproduce the certification resolution. It will simply provide the information in one rather than two documents. Therefore, if you receive a copy of the Response to Comments document in addition to this copy of the Draft EIR, you will technically have a copy of the Final EIR.

We are aware that many people who receive the Draft EIR and Response to Comments document have no interest in receiving virtually the same information after the EIR has been certified. To avoid expending money and paper needlessly, we would like to send copies of the Final EIR, in Adobe Acrobat format on a compact disk (CD), to private individuals only if they request them. Therefore, if you would like a copy of the Final EIR, please fill out and mail the postcard provided inside the back cover to the Environmental Planning division of the Planning Department within two weeks after certification of the EIR. Any private party not requesting a Final EIR by that time will not be mailed a copy.

Thank you for your interest in this project.

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ACRONYMS AND ABBREVIATIONS

°C	degrees Celsius
°F	degrees Fahrenheit
2010 CAP	2010 Clean Air Plan
AAS	annual available sunlight
AB	Assembly Bill
ABAG	Association of Bay Area Governments
ADA	Americans with Disabilities Act
AQI	Air Quality Index
AQTR	Air Quality Technical Report
ARB	[California] Air Resources Board
ARDTP	Archeological Research Design Treatment Plan
ASCE	American Society of Civil Engineers
ATCM	Air Toxics Control Measure
BAAQMD	Bay Area Air Quality Management District
BACT	Best Available Control Technology for Toxics
BART	Bay Area Rapid Transit
BMPs	best management practices
BP	building permit
Btu	British thermal unit
C&D	construction and demolition
CAA	Clean Air Act of 1970
CAAQS	California Ambient Air Quality Standards
CalRecycle	California Department of Resources Recycling and Recovery
CAP	Clean Air Plan
CBC	California Building Code
CBSC	California Building Standards Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CCSF	City and County of San Francisco
CD	compact disc
CDFW	California Department of Fish and Wildlife
CDMG	California Division of Mines and Geology
CDOC	California Department of Conservation
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESQG	conditionally exempt small-quantity generator
CH ₄	methane
CHP	California Highway Patrol
CHSC	California Health and Safety Code
CI	compression-ignition [engine] (diesel)
CIP	Capital Improvement Program

CMP	Congestion Management Plan
CO	carbon monoxide
CO _{2e}	carbon dioxide-equivalent
COA	Certificate of Appropriateness
CRHR	California Register of Historical Resources
CU	conditional use
DBI	[San Francisco] Department of Building Inspection
DOT	[U.S.] Department of Transportation
DPH	[San Francisco] Department of Public Health
DPM	diesel particulate matter
DR	Discretionary Review
EB	eastbound
EIR	environmental impact report
EO	Executive Order
EOC	Emergency Operations Center
EP	San Francisco Planning Department, Environmental Planning Division
ERO	Environmental Review Officer
ERP	Emergency Response Plan
ESA	environmental site assessment
FARR	Final Archeological Resources Report
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GHG	greenhouse gas
gsf	gross square feet
HCD	California Department of Housing and Community Development
HCM	Highway Capacity Manual
HEPA	high-efficiency particulate air [filter]
HPC	San Francisco Historic Preservation Commission
HRA	health risk assessment
HREC	historical recognized environmental condition
HRER	Historic Resources Evaluation Responses
I-#	Interstate #
I-280	Interstate 280
I-80	Interstate 80
IBC	International Building Code
IS	initial study
ITE	Institute of Transportation Engineers
kg	kilograms
lb	pound
LEED	Leadership in Energy and Environmental Design
LOS	Level of Service
LQG	large-quantity generator
LTS	less than significant
MLD	most likely descendant
mph	miles per hour
MTC	Metropolitan Transportation Commission
MTS	Metropolitan Transportation System
Muni	San Francisco Municipal Transportation Agency

MUTCD	[California] Manual on Uniform Traffic Control Devices
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NB	northbound
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act of 1966
NI	no impact
NMHC	nonmethane hydrocarbons
NO ₂	nitrogen dioxide
NOI	notice of intent
NOP	notice of preparation
NO _x	nitrogen oxide
NRHP	National Register of Historic Places
NSR	[federal] New Source Review [program]
O ₃	Ozone
OEHHA	Office of Environmental Health Hazard Assessment
OHP	Office of Historic Preservation
OSHA	[U.S.] Occupational Safety and Health Administration
P	Public Use
PAR	Preliminary Archeological Review
PASS	Preliminary Archeological Sensitivity Study
PCO	Parking Control Officers
PG&E	Pacific Gas & Electric Company
PLZ	passenger loading zone
PM ₁₀	coarse respirable particulate matter
PM _{2.5}	fine respirable particulate matter
POPOS	privately-owned publicly-accessible open spaces
ppb	parts per billion
ppd	pounds per day
pph	persons per household
ppm	parts per million
PS	potentially significant
Public Works	[San Francisco] Department of Public Works
PV	photovoltaic
RHNA	Regional Housing Needs Allocation
ROG	reactive organic gas
RPP	Residential Parking Permit
SamTrans	San Mateo County Transit District
SB	Senate Bill
SB	southbound
SCS	sustainable communities strategy
sf	square feet
SFBC	San Francisco Building Code
SFDPH	San Francisco Department of Public Health
SFDPH-LOP	San Francisco Department of Public Health-Local Oversight Program
SFFD	San Francisco Fire Department
SFGBO	San Francisco Green Building Ordinance

SFHC	San Francisco Health Code
SFMTA	City and County of San Francisco Municipal Transportation Agency
SFO	San Francisco International Airport
SFPD	San Francisco Police Department
SFPL	San Francisco Public Library
SFPUC	San Francisco Public Utilities Commission
SFRA	San Francisco Redevelopment Agency
SFRPD	San Francisco Recreation & Parks Department
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SO ₂	sulfur dioxide
SOI	Secretary of the Interior
SoMa	South of Market Area
SR-#	State Route #
SRO	single-residential occupancy
SU	significant and unavoidable
TAAS	Theoretically Available Annual Sunlight
TAC	toxic air contaminant
TASC	Transportation Advisory Staff Committee
TCDP	Transit Center District Plan
TDM	transportation demand management
TEP	Transit Effectiveness Project
TIDF	Transit Impact Development Fee
TIS	Transportation Impact Study
TMASF	Transportation Management Association of San Francisco
TOG	total organic gases
tpy	tons per year
TTRP	Travel Time Reduction Proposal
U.S. 101	United States Highway 101
UMU	Urban Mixed Use
USEPA	United States Environmental Protection Agency
V/C	volume-to-capacity ratio
VDECS	Verified Diesel Emission Control Strategy
VDED	verified diesel emission control
VMT	vehicle miles traveled
WB	westbound
µg/m ³	micrograms per cubic meter

SUMMARY

1500 Mission Street Project Draft Environmental Impact Report

Project Synopsis

The project site occupies approximately 110,772 square feet (2.5 acres) on the north side of Mission Street between South Van Ness Avenue and 11th Street, within the Downtown Area Plan and the Market & Octavia Area Plan. The project site contains two lots with a building occupying each lot: 1500 Mission Street (Assessor's Block 3506, Lot 002) and 1580 Mission Street (Assessor's Block 3506, Lot 003).¹ The existing 1500 Mission Street lot contains a one-story, approximately 28-foot-tall (including an approximately 97-foot-tall clock tower), approximately 57,000-square-foot warehouse building currently occupied by Goodwill Industries with a below-grade parking garage. The existing 1580 Mission Street lot contains a two-story, approximately 30-foot-tall, 29,000-square-foot retail and office building also currently occupied by Goodwill Industries. Goodwill Industries sold the project site to the project sponsor, Goodwill SF Urban Development, LLC, an affiliate of Related California Urban Housing. With the proceeds, Goodwill Industries has relocated its warehouse to South San Francisco and plans to relocate its office and store to 2290 Powell Street (at Bay Street) in San Francisco.

The project sponsor proposes to demolish the existing 1580 Mission Street building and to retain and rehabilitate a portion of the 1500 Mission Street building and demolish the remaining portions on the project site, and construct a mixed-use development with two components. The first component would consist of a residential and retail/restaurant building ("residential and retail/restaurant component") with frontages along Mission Street and South Van Ness Avenue. The second component would consist of an office and permit center building ("office and permit center component") containing several City and County of San Francisco ("City") departments as well as a childcare facility on the remainder of the site, with frontages along 11th Street and South Van Ness Avenue.

Combined, the two proposed components ("proposed project") would develop up to approximately 1,334,500 combined square feet of residential, office, retail, restaurant, and supporting uses.^{2,3} The proposed residential

¹ Lots 002 and 003 are also referred to in some property records as Lots 006 and 007, respectively.

² For the purposes of a conservative analysis, the maximum development scenario for the proposed project is analyzed herein. Upon final approval, the proposed project may be smaller in terms of unit count and area than the maximum scenario.

³ All floor area dimensions herein are conservatively provided in square feet of gross building area. For projects, such as the proposed project, in the C-3 (Downtown) Use Districts, certain portions of the building are excluded from the *Planning Code's* definition of "gross floor area," which serves as the basis for the calculation of floor area ratio. These exclusions, as indicated in *Planning Code* Section 102, include, but are not limited to, ground floor and mezzanine retail and restaurant space, up to 5,000 square feet per use; ground floor pedestrian circulation and building service space; childcare facilities; principally permitted accessory parking that is underground; certain mechanical space; and basement space used for storage and building operation and maintenance.

and retail/restaurant component would consist of a 39-story, 396-foot-tall tower (416 feet to top of parapet enclosing mechanical equipment) with mid-rise podium elements. The proposed residential and retail/restaurant component would contain up to approximately 626,200 square feet of residential space (a maximum of 560 dwelling units, 20 percent of which would be on-site inclusionary affordable units), approximately 28,300 square feet of retail space located on the ground floor of the residential building, approximately 9,700 square feet of restaurant space located in the retained portion of the 1500 Mission Street building, and approximately 27,000 square feet of common and publicly-accessible open space. The proposed residential and retail/restaurant component would provide 300 off-street vehicular parking spaces in two basement levels, with vehicular ingress and egress from a new 29-foot -wide curb cut along 11th Street, consisting of 280 for residential uses (including 11 American with Disabilities Act (ADA)-accessible parking spaces), six car-share spaces (including the two car-share spaces required for the office component), and 14 spaces for retail uses. In addition, the proposed residential and retail/restaurant component would include three off-street freight loading spaces with vehicular ingress and egress from a new 26-foot-four-inch-wide curb cut along Mission Street. The proposed residential and retail/restaurant component would also include approximately 247 Class 1 bicycle parking spaces provided on the first basement level and approximately 52 Class 2 bicycle parking spaces provided on sidewalks adjacent to the project site. An emergency backup generator would be located in an enclosed room on the ground floor of the residential building and other mechanical equipment, such as the HVAC system, would be located on the roof in an enclosed mechanical area.

The proposed office and permit center component would consist of a 16-story, 227-foot-tall tower (257 feet to top of parapet enclosing mechanical equipment) with mid-rise elements extending west and south from the tower. The proposed office and permit center component would contain approximately 449,800 square feet of office uses that would be occupied by City offices, including a permit center for the Planning Department, Department of Building Inspection (DBI), San Francisco Public Works (Public Works), and other departments on the second floor.⁴ In addition, an approximately 4,400-square-foot childcare facility would be located on the third floor. The proposed office and permit center component would provide up to 120 off-street vehicular parking spaces, including four ADA-accessible parking spaces, in two basement levels, and four off-street service spaces and three freight loading spaces on the first basement level, with vehicular ingress and egress to the spaces from a new 28-foot-wide curb cut along 11th Street. The proposed office and permit center component would also include approximately 306 Class 1 bicycle parking spaces on the first basement level, and 15 Class 2 bicycle parking spaces on sidewalks adjacent to the project site. An emergency backup generator would be located in an enclosed mechanical area on the 10th floor of the building.

The proposed project would require approximately 86,000 cubic yards of excavation for the building foundation and two basement levels. The project sponsor proposes to install a mat foundation to support the proposed buildings. The mat thickness in the residential area ranges from 2.5 feet to 10 feet; in the office area, the mat thickness ranges from two feet to five feet. The excavation for the proposed below-grade parking and mat foundation will range from 19 to 32 feet.

⁴ It is unknown at this time what other Departments would occupy the new office building. It is anticipated that the majority of employees from those other Departments already work in existing City office buildings in the Civic Center and mid-Market neighborhoods.

The proposed project would seek amendments to the Zoning Map Height and Bulk Districts and Special Use Districts and *San Francisco Planning Code (Planning Code)* text amendments to create a new special use district (proposed Mission and South Van Ness Special Use District), which would require a recommendation by the Planning Commission and approval by the Board of Supervisors. The proposed project would also seek a Downtown Project Authorization (*Planning Code* Section 309), including any requested exceptions from the Planning Commission and approval by the Planning Commission and recommendation from the Recreation and Park Commission to determine that new shadow would not adversely impact use of a park (*Planning Code* Section 195).

Summary of Impacts, Mitigation Measures, and Improvement Measures

This Environmental Impact Report (EIR) analyzes the potential effects of the 1500 Mission Street project, as determined in the Notice of Preparation (NOP) of an EIR issued May 13, 2015 (Appendix B of this EIR). The Initial Study (Appendix A of this EIR) found that the proposed project would have potentially significant impacts in the areas of cultural resources, transportation and circulation, air quality, wind, and shadow. It also found that the project's impacts on other environmental resource areas either would not be significant or would be less-than-significant with mitigation, or that the project would have no impact.

Table S-1, Summary of Impacts of the Proposed Project—Disclosed in This EIR, summarizes all impacts identified for the proposed project addressed in the environmental review for this EIR, whether the level of significance was found to be no impact, less-than-significant impact, or significant. For any impacts found to be significant, corresponding mitigation measures are included, where feasible, and the level of significance after mitigation is indicated.

The Initial Study identified resource topics that were determined not to apply to the proposed project and topics where the proposed project would have no impact, a less-than-significant impact, or less-than-significant with mitigation. For any impacts identified as significant in the Initial Study, corresponding mitigation measures are included that would reduce these impacts to a less-than-significant level. These topics, summarized in **Table S-2, Summary of Impacts of the Proposed Project—Disclosed in the Initial Study**, are not addressed in this EIR.

The proposed project would have significant and unavoidable project-level cultural resources impacts and cumulative level construction period traffic impacts.

TABLE S-1 SUMMARY OF IMPACTS OF THE PROPOSED PROJECT – DISCLOSED IN THIS EIR

Environmental Impact	Level of Significance prior to Mitigation	Improvement/Mitigation Measures	Level of Significance after Mitigation
Section IV.A, Cultural Resources			
<p>Impact CR-1: The proposed project would not cause a substantial adverse change in the significance of a historical resource due to the demolition of the 1580 Mission Street building, which is not considered a historical resource, as defined in CEQA Guidelines Section 15064.5(b).</p>	NI	None required.	NA
<p>Impact CR-2: The proposed project would demolish most of the historic 1500 Mission Street building, which would cause a substantial adverse change in the significance of a historical resource, as defined in CEQA Guidelines Section 15064.5(b).</p>	S	<p>M-CR-2a – Documentation. Prior to the issuance of demolition or site permits, the project sponsor shall undertake Historic American Building Survey (HABS) documentation of the subject property, structures, objects, materials, and surrounding context. The project sponsor shall retain a professional who meets the Secretary of the Interior’s Professional Qualifications Standards for Architectural History, as set forth by the Secretary of the Interior’s Professional Qualification Standards (36 CFR, Part 61), to prepare written and photographic documentation of 1500 Mission Street. The document shall consist of the following:</p> <ul style="list-style-type: none"> • <i>Measured Drawings:</i> A set of measured drawings that depict the existing size, scale, and dimension of the subject property. Planning Department Preservation staff will accept the original architectural drawings or an as-built set of architectural drawings (plan, section, elevation, etc.). Planning Department Preservation staff will assist the consultant in determining the appropriate level of measured drawings; • <i>HABS-Level Photograph:</i> Either HABS standard large format or digital photography shall be used. The scope of the digital photographs shall be reviewed by Planning Department Preservation staff for concurrence, and all digital photography shall be conducted according to the latest National Park Service Standards. The photography shall be undertaken by a qualified professional with demonstrated experience in HABS photography. Photograph views for the dataset shall include (a) contextual views; (b) views of each side of the building and interior views, where possible; (c) oblique views of the building; and (d) detail views of character-defining features, including features on the interior. All views shall be referenced on a photographic key. This photographic key shall be on a map of the property and shall show the photograph number with an arrow to indicate the direction of the view. Historic photographs shall also be collected, reproduced, and included in the dataset; and • <i>HABS Historical Report:</i> A written historical narrative and report, per HABS Historical Report Guidelines. <p>The project sponsor shall transmit such documentation, in both printed and electronic form, to the History Room of the San Francisco Public Library, San Francisco Architectural Heritage, and the Northwest Information Center of the California Historical Information Resource System. All</p>	SUM

TABLE S-1 SUMMARY OF IMPACTS OF THE PROPOSED PROJECT – DISCLOSED IN THIS EIR

Environmental Impact	Level of Significance prior to Mitigation	Improvement/Mitigation Measures	Level of Significance after Mitigation
		<p>documentation will be reviewed and approved by the San Francisco Planning Department’s Preservation Coordinator prior to granting any demolition or site permit.</p> <p>M-CR-2b – Historic Preservation Plan and Protective Measures. A historic preservation plan and protective measures shall be prepared and implemented to aid in preserving those portions of the individual historical resource that would be retained and incorporated into the project. The Historic Preservation Plan shall be prepared by a qualified architectural historian who meets the Secretary of Interior’s Professional Qualification Standards (36 CFR, Part 61). The project sponsor shall ensure that the contractor follows these plans. The preservation and protection plan, specifications, monitoring schedule, and other supporting documents shall be incorporated into the building or site permit application plan sets. The documentation shall be reviewed and approved by Planning Department Preservation staff.</p> <p>The historic preservation plan shall be prepared and implemented to aid in preserving those portions of the historical resource that would be incorporated into the project. The plan shall establish measures to protect the retained building façades and character-defining features, from vibration effects as well as construction equipment inadvertently coming in contact with the remaining portions of the resource. If deemed necessary upon further condition assessment of the building, the plan shall include the preliminary stabilization of the retained portion prior to construction to prevent further deterioration or damage. The historic preservation plan shall also further investigate and incorporate preservation recommendations regarding the historic materials that comprise the façades and other elements of the historical resource to be retained.</p> <p>Specifically, the Preservation Plan shall incorporate construction specifications for the proposed project with a requirement that the construction contractor(s) use all feasible means to avoid damage to adjacent historic building, including, but not necessarily limited to, staging of equipment and materials as far as possible from historic buildings to avoid direct impact damage; using techniques in demolition, excavation, shoring, and construction that not exceed a vibration level that would damage the retained structure; maintaining a buffer zone when possible between heavy equipment and historical resource(s) within 50 feet, as identified by the Planning Department; appropriately shoring excavation sidewalls to prevent movement of adjacent structures; design and installation of the new foundation to minimize uplift of adjacent soils; ensuring adequate drainage from adjacent sites; covering the roof of adjacent structures to avoid damage from falling objects; and ensuring appropriate security to minimize risks of vandalism and fire. The consultant shall conduct regular periodic inspections of the retained portion of the 1500 Mission Street building during ground-disturbing activity on the project site. Should damage to the building occur, the building shall be remediated to its preconstruction condition at the conclusion of ground-disturbing activity on the site.</p> <p>M-CR-2c – Video Recordation of the Historic Resource. Video recordation shall be undertaken prior to the issuance of demolition or site permits. The project sponsor shall undertake video documentation of the affected historical resource and its setting. The documentation shall be</p>	

TABLE S-1 SUMMARY OF IMPACTS OF THE PROPOSED PROJECT – DISCLOSED IN THIS EIR

Environmental Impact	Level of Significance prior to Mitigation	Improvement/Mitigation Measures	Level of Significance after Mitigation
		<p>conducted by a professional videographer, preferably one with experience recording architectural resources. The documentation shall be narrated by a qualified professional who meets the standards for history, architectural history, or architecture (as appropriate) set forth by the Secretary of the Interior’s Professional Qualification Standards (36 Code of Federal Regulations, Part 61). The documentation shall include as much information as possible—using visuals in combination with narration—about the materials, construction methods, current condition, historic use, and historic context of the historical resource. Archival copies of the video documentation shall be submitted to the Planning Department, and to repositories including but not limited to the History Room of the San Francisco Public Library, San Francisco Architectural Heritage, Northwest Information Center of the California Historical Information Resource System.</p> <p>M-CR-2d – Historic Resource Interpretation. The project sponsor shall provide a permanent display of interpretive materials concerning the history and architectural features of the building at 1500 Mission Street, and its operation during the period of significance. The historic interpretation shall be supervised by an architectural historian or historian who meets the Secretary of the Interior’s Professional Qualification Standards, and shall be conducted in coordination with an exhibit designer. The interpretative materials (which may include, but are not limited to, a display of photographs, news articles, Coca-Cola bottling memorabilia, history of streamline modern industrial style, video) shall be placed in a prominent, public setting within new building. A proposal describing the general parameters of the interpretive program shall be approved by Planning Department Preservation staff prior to issuance of a Site Permit. The substance, media and other elements of such interpretive display shall be approved by Planning Department Preservation staff prior to issuance of a Temporary Certificate of Occupancy.</p>	
<p>Impact CR-3: The proposed project would not cause a substantial adverse change in the significance of an adjacent historical resource.</p>	LTS	None required.	NA
<p>Impact CR-4: The proposed project could cause a substantial adverse change in the significance of an archeological resource pursuant to Section 15064.5(f).</p>	S	<p>M-CR-4 – Archeological Testing Program. Based on a reasonable presumption that archeological resources may be present within the project site, the following measures shall be undertaken to avoid any potentially significant adverse effect from the proposed project on buried or submerged historical resources. The project sponsor shall retain the services of an archeological consultant from the rotational Department Qualified Archeological Consultants List (QACL) maintained by the Planning Department archeologist. The project sponsor shall contact the Department archeologist to obtain the names and contact information for the next three archeological consultants on the QACL. The archeological consultant shall undertake an archeological testing program as specified herein. In addition, the consultant shall be available to conduct an archeological monitoring and/or data recovery program if required pursuant to this measure. The archeological consultant’s work shall be conducted in accordance with this measure at the direction of the Environmental Review Officer</p>	LTS

TABLE S-1 SUMMARY OF IMPACTS OF THE PROPOSED PROJECT – DISCLOSED IN THIS EIR

Environmental Impact	Level of Significance prior to Mitigation	Improvement/Mitigation Measures	Level of Significance after Mitigation
		<p>(ERO). All plans and reports prepared by the consultant as specified herein shall be submitted first and directly to the ERO for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO. Archeological monitoring and/or data recovery programs required by this measure could suspend construction of the project for up to a maximum of four weeks. At the direction of the ERO, the suspension of construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce to a less-than-significant level potential effects on a significant archeological resource as defined in CEQA Guidelines Section 15064.5(a)(c).</p> <p><i>Consultation with Descendant Communities:</i> On discovery of an archeological site (the term “archeological site” is intended here to minimally included any archeological deposit, feature, burial, or evidence of burial) associated with descendant Native Americans, the Overseas Chinese, or other potentially interested descendant group an appropriate representative of the descendant group and the ERO shall be contacted. (An “appropriate representative” of the descendant group is here defined to mean, in the case of Native Americans, any individual listed in the current Native American Contact List for the City and County of San Francisco maintained by the California Native American Heritage Commission and in the case of the Overseas Chinese, the Chinese Historical Society of America.) An appropriate representative of other descendant groups should be determined in consultation with the Department archeologist. The representative of the descendant group shall be given the opportunity to monitor archeological field investigations of the site and to consult with ERO regarding appropriate archeological treatment of the site, of recovered data from the site, and, if applicable, any interpretative treatment of the associated archeological site. A copy of the Final Archeological Resources Report shall be provided to the representative of the descendant group.</p> <p><i>Archeological Testing Program.</i> The archeological consultant shall prepare and submit to the ERO for review and approval an archeological testing plan (ATP). The archeological testing program shall be conducted in accordance with the approved ATP. The ATP shall identify the property types of the expected archeological resource(s) that potentially could be adversely affected by the proposed project, the testing method to be used, and the locations recommended for testing. The purpose of the archeological testing program will be to determine to the extent possible the presence or absence of archeological resources and to identify and to evaluate whether any archeological resource encountered on the site constitutes an historical resource under CEQA.</p> <p>At the completion of the archeological testing program, the archeological consultant shall submit a written report of the findings to the ERO. If based on the archeological testing program the archeological consultant finds that significant archeological resources may be present, the ERO in consultation with the archeological consultant shall determine if additional measures are warranted. Additional measures that may be undertaken include additional archeological testing, archeological monitoring, and/or an archeological data recovery program. If the ERO determines that a significant archeological resource is present and that the resource could be adversely affected by the proposed project, at the discretion of the project sponsor either:</p>	

TABLE S-1 SUMMARY OF IMPACTS OF THE PROPOSED PROJECT – DISCLOSED IN THIS EIR

Environmental Impact	Level of Significance prior to Mitigation	Improvement/Mitigation Measures	Level of Significance after Mitigation
		<p>A. The proposed project shall be re-designed so as to avoid any adverse effect on the significant archeological resource; or</p> <p>B. A data recovery program shall be implemented, unless the ERO determines that the archeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.</p> <p><i>Archeological Monitoring Program.</i> If the ERO in consultation with the archeological consultant determines that an archeological monitoring program shall be implemented the archeological monitoring program shall minimally include the following provisions:</p> <ul style="list-style-type: none"> • The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the AMP reasonably prior to any project-related soils disturbing activities commencing. The ERO in consultation with the archeological consultant shall determine what project activities shall be archeologically monitored. In most cases, any soils- disturbing activities, such as demolition, foundation removal, excavation, grading, utilities installation, foundation work, driving of piles (foundation, shoring, etc.), site remediation, etc., shall require archeological monitoring because of the risk these activities pose to potential archaeological resources and to their depositional context; • The archeological consultant shall advise all project contractors to be on the alert for evidence of the presence of the expected resource(s), of how to identify the evidence of the expected resource(s), and of the appropriate protocol in the event of apparent discovery of an archeological resource; • The archeological monitor(s) shall be present on the project site according to a schedule agreed upon by the archeological consultant and the ERO until the ERO has, in consultation with project archeological consultant, determined that project construction activities could have no effects on significant archeological deposits; • The archeological monitor shall record and be authorized to collect soil samples and artefactual/ecofactual material as warranted for analysis; and • If an intact archeological deposit is encountered, all soils-disturbing activities in the vicinity of the deposit shall cease. The archeological monitor shall be empowered to temporarily redirect demolition/excavation/pile driving/construction activities and equipment until the deposit is evaluated. If in the case of pile driving activity (foundation, shoring, etc.), the archeological monitor has cause to believe that the pile driving activity may affect an archeological resource, the pile driving activity shall be terminated until an appropriate evaluation of the resource has been made in consultation with the ERO. The archeological consultant shall immediately notify the ERO of the encountered archeological deposit. The archeological consultant shall make a reasonable effort to assess the identity, integrity, and significance of the encountered archeological deposit, and present the findings of this assessment to the ERO. <p>Whether or not significant archeological resources are encountered, the archeological consultant shall</p>	

TABLE S-1 SUMMARY OF IMPACTS OF THE PROPOSED PROJECT – DISCLOSED IN THIS EIR

Environmental Impact	Level of Significance prior to Mitigation	Improvement/Mitigation Measures	Level of Significance after Mitigation
		<p>submit a written report of the findings of the monitoring program to the ERO.</p> <p><i>Archeological Data Recovery Program.</i> The archeological data recovery program shall be conducted in accord with an archeological data recovery plan (ADRP). The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the ADRP prior to preparation of a draft ADRP. The archeological consultant shall submit a draft ADRP to the ERO. The ADRP shall identify how the proposed data recovery program will preserve the significant information the archeological resource is expected to contain. That is, the ADRP will identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the proposed project. Destructive data recovery methods shall not be applied to portions of the archeological resources if nondestructive methods are practical.</p> <p>The scope of the ADRP shall include the following elements:</p> <ul style="list-style-type: none"> • <i>Field Methods and Procedures.</i> Descriptions of proposed field strategies, procedures, and operations. • <i>Cataloguing and Laboratory Analysis.</i> Description of selected cataloguing system and artifact analysis procedures. • <i>Discard and Deaccession Policy.</i> Description of and rationale for field and post-field discard and deaccession policies. • <i>Interpretive Program.</i> Consideration of an on-site/off-site public interpretive program during the course of the archeological data recovery program. • <i>Security Measures.</i> Recommended security measures to protect the archeological resource from vandalism, looting, and non-intentionally damaging activities. • <i>Final Report.</i> Description of proposed report format and distribution of results. • <i>Curation.</i> Description of the procedures and recommendations for the curation of any recovered data having potential research value, identification of appropriate curation facilities, and a summary of the accession policies of the curation facilities. <p><i>Final Archeological Resources Report.</i> The archeological consultant shall submit a Draft Final Archeological Resources Report (FARR) to the ERO that evaluates the historical significance of any discovered archeological resource and describes the archeological and historical research methods employed in the archeological testing/monitoring/data recovery program(s) undertaken. Information that may put at risk any archeological resource shall be provided in a separate removable insert within the final report.</p> <p>Once approved by the ERO, copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. The Environmental Planning</p>	

TABLE S-1 SUMMARY OF IMPACTS OF THE PROPOSED PROJECT – DISCLOSED IN THIS EIR

Environmental Impact	Level of Significance prior to Mitigation	Improvement/Mitigation Measures	Level of Significance after Mitigation
		division of the Planning Department shall receive one bound, one unbound and one unlocked, searchable PDF copy on CD of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest in or the high interpretive value of the resource, the ERO may require a different final report content, format, and distribution than that presented above.	
<p>Impact CR-5: The proposed project could result in a substantial adverse change in the significance of a tribal cultural resource.</p>	S	<p>M-CR-5 – Tribal Cultural Resources Interpretive Program. If the ERO determines that a significant archeological resource is present, and if in consultation with the affiliated Native American tribal representatives, the ERO determines that the resource constitutes a tribal cultural resource (TCR) and that the resource could be adversely affected by the proposed project, the proposed project shall be redesigned so as to avoid any adverse effect on the significant tribal cultural resource, if feasible.</p> <p>If the Environmental Review Officer (ERO), if in consultation with the affiliated Native American tribal representatives and the Project Sponsor, determines that preservation-in-place of the tribal cultural resources is not a sufficient or feasible option, the Project Sponsor shall implement an interpretive program of the TCR in consultation with affiliated tribal representatives. An interpretive plan produced in consultation with the ERO and affiliated tribal representatives, at a minimum, and approved by the ERO would be required to guide the interpretive program. The plan shall identify, as appropriate, proposed locations for installations or displays, the proposed content and materials of those displays or installation, the producers or artists of the displays or installation, and a long-term maintenance program. The interpretive program may include artist installations, preferably by local Native American artists, oral histories with local Native Americans, artifacts displays and interpretation, and educational panels or other informational displays.</p>	LTS

TABLE S-1 SUMMARY OF IMPACTS OF THE PROPOSED PROJECT – DISCLOSED IN THIS EIR

Environmental Impact	Level of Significance prior to Mitigation	Improvement/Mitigation Measures	Level of Significance after Mitigation
<p>Impact CR-6: The proposed project could disturb human remains, including those interred outside of formal cemeteries.</p>	<p>S</p>	<p>M-CR-6 – Inadvertent Discovery of Human Remains. The treatment of human remains and of associated or unassociated funerary objects discovered during any soils disturbing activity shall comply with applicable State and Federal laws. This shall include immediate notification of the Coroner of the City and County of San Francisco and the ERO, and in the event of the Coroner’s determination that the human remains are Native American remains, notification of the California State Native American Heritage Commission (NAHC) who shall appoint a Most Likely Descendant (MLD) (Public Resource Code Section 5097.98). The archeological consultant, project sponsor, ERO, and MLD shall have up to but not beyond six days of discovery to make all reasonable efforts to develop an agreement for the treatment of human remains and associated or unassociated funerary objects with appropriate dignity (CEQA Guidelines Section 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. Nothing in existing State regulations or in this mitigation measure compels the project sponsor and the ERO to accept recommendations of an MLD. The archeological consultant shall retain possession of any Native American human remains and associated or unassociated burial objects until completion of any scientific analyses of the human remains or objects as specified in the treatment agreement if such as agreement has been made or, otherwise, as determined by the archeological consultant and the ERO.</p>	<p>LTS</p>
<p>Impact C-CR-1: The proposed project, in combination with past, present, and reasonably foreseeable projects in the area, would not result in a significant cumulative impact on historic architectural resources.</p>	<p>LTS</p>	<p>None required.</p>	<p>NA</p>
<p>Impact C-CR-2: The proposed project, in combination with past, present, and reasonably foreseeable projects in the area, would not result in significant cumulative impacts on archeological resources, tribal cultural resources, or human remains.</p>	<p>LTS</p>	<p>None required.</p>	<p>NA</p>
<p>Section IV.B, Transportation and Circulation</p>			
<p>Impact TR-1: The proposed project would not cause substantial additional VMT nor substantially induce automobile travel.</p>	<p>LTS</p>	<p>None required.</p>	<p>NA</p>

TABLE S-1 SUMMARY OF IMPACTS OF THE PROPOSED PROJECT – DISCLOSED IN THIS EIR

Environmental Impact	Level of Significance prior to Mitigation	Improvement/Mitigation Measures	Level of Significance after Mitigation
<p>Impact TR-2: The proposed project would not cause major traffic hazards.</p>	<p>LTS</p>	<p>I-TR-2a – Monitoring and Abatement of Queues. As an improvement measure to reduce the potential for queuing of vehicles accessing the project site, it should be the responsibility of the project sponsor to ensure that recurring vehicle queues or vehicle conflicts do not occur adjacent to the site. A vehicle queue is defined as one or more vehicles blocking any portion of adjacent sidewalks or travel lanes for a consecutive period of three minutes or longer on a daily and/or weekly basis.</p> <p>If recurring queuing occurs, the owner/operator of the facility should employ abatement methods as needed to abate the queue. Appropriate abatement methods would vary depending on the characteristics and causes of the recurring queue, as well as the characteristics of the parking and loading facility, the street(s) to which the facility connects, and the associated land uses (if applicable).</p> <p>Suggested abatement methods include, but are not limited to the following: redesign of facility to improve vehicle circulation and/or on-site queue capacity; employment of parking attendants; installation of LOT FULL signs with active management by parking attendants; use of valet parking or other space-efficient parking techniques; use of off-site parking facilities or shared parking with nearby uses; use of parking occupancy sensors and signage directing drivers to available spaces; travel demand management strategies; and/or parking demand management strategies such as parking time limits, paid parking, time-of-day parking surcharge, or validated parking.</p> <p>If the Planning Director, or his or her designee, determines that a recurring queue or conflict may be present, the Planning Department should notify the project sponsor in writing. Upon request, the owner/operator should hire a qualified transportation consultant to evaluate the conditions at the site for no less than seven days. The consultant should prepare a monitoring report to be submitted to the Planning Department for review. If the Planning Department determines that a recurring queue or conflict does exist, the project sponsor should have 90 days from the date of the written determination to abate the recurring queue or conflict.</p> <p>I-TR-2b – Transportation Demand Management (TDM) Program. As an improvement measure to encourage use of sustainable modes, the project sponsor and subsequent property owners, should develop and implement a TDM Plan. The scope and number of TDM measures included in the TDM Plan should be in accordance with the Planning Commission Standards for the TDM Program (TDM Program) for the type of development proposed.⁵ The TDM Program Standards may be refined as the proposed TDM Ordinance goes through the legislative process. The proposed project’s TDM Plan should conform to the most recent version of the TDM Program Standards available at the time of the project’s approval, as defined in the proposed TDM Ordinance. The Planning Department should review and approve the TDM Plan, as well as any subsequent revisions to the TDM Plan, pursuant to the TDM Program Standards. The TDM Plan should target a reduction in the vehicle miles traveled</p>	<p>NA</p>

⁵ San Francisco Planning Department, *Draft TDM Program Standards*, July 2016. The most up-to-date *Draft TDM Program Standards* are available online at: <http://sf-planning.org/tdm-materials-and-resources>. Note: the July 2016 TDM Program Standards were adopted unanimously at the Planning Commission August 4, 2016 and the legislative amendments, which reference the TDM Program Standards, are awaiting Board of Supervisors hearings, accessed on September 19, 2016.

TABLE S-1 SUMMARY OF IMPACTS OF THE PROPOSED PROJECT – DISCLOSED IN THIS EIR

Environmental Impact	Level of Significance prior to Mitigation	Improvement/Mitigation Measures	Level of Significance after Mitigation
		<p>(VMT) rate (e.g., VMT per capita), monitor and evaluate project performance (actual VMT), and adjust TDM measures over time to attempt to meet VMT target reduction.</p> <p>This improvement measure may be superseded if a comparable TDM Ordinance is adopted that applies to the proposed project.</p> <p>The TDM Plan may include, but is not limited to the types of measures summarized below for explanatory example purposes. Actual TDM measures selected should include those from the TDM Program Standards, which describe the scope and applicability of candidate measures in detail and include:</p> <ol style="list-style-type: none"> 1. Active Transportation: Provision of streetscape improvements to encourage walking, secure bicycle parking, shower and locker facilities for cyclists, subsidized bike share memberships for project occupants, bicycle repair and maintenance services, and other bicycle-related services 2. Car-Share: Provision of car-share parking spaces and subsidized memberships for project occupants 3. Delivery: Provision of amenities and services to support delivery of goods to project occupants 4. Family-Oriented Measures: Provision of on-site childcare and other amenities to support the use of sustainable transportation modes by families 5. High-Occupancy Vehicles: Provision of carpooling/vanpooling incentives and shuttle bus service 6. Information and Communications: Provision of multimodal wayfinding signage, transportation information displays, and tailored transportation marketing services 7. Land Use: Provision of on-site affordable housing and healthy food retail services in underserved areas 8. Parking: Provision of unbundled parking, short term daily parking provision, parking cash out offers, and reduced off-street parking supply. 	
<p>Impact TR-3: The proposed project would not result in a substantial increase in transit demand that could not be accommodated by adjacent local and regional transit capacity, but could cause a substantial increase in delays or operating costs such that significant adverse impacts to local or regional transit service could occur.</p>	<p>S</p>	<p>M-TR-3 – Avoidance of Conflicts Associated with On-Site Loading Operations. The project sponsor shall design and operate the mid-block alley with access from Mission Street in a way that shall not result in ongoing conflicts between project-related loading activities and people riding transit, bicycling, walking, or driving adjacent and near the project site. Examples of ongoing conflicts include, but are not limited to, project-related loading designs and operations that:</p> <ul style="list-style-type: none"> • Delay transit operations (e.g., by blocking the bus stop along Mission Street, precluding buses from pulling out of or into the bus stop, conducting loading activities at the curb along Mission Street, staging in the transit-only lane while waiting to access the on-site loading dock, etc.); • Interfere with bicycle movements (e.g., blocking bicycle access to on-street bicycle facilities, not yielding to bicyclists when pulling out of the mid-block alley, etc.); • Interfere with pedestrian movements (e.g., blocking the sidewalk and forcing pedestrians onto 	<p>LTS</p>

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		<p>the street, not yielding to pedestrians when pulling out of the mid-block alley, etc.); and</p> <ul style="list-style-type: none"> • Interfere with vehicles within the westbound right-turn-only lane along Mission Street at the intersection of South Van Ness Avenue, if applicable. <p>In order to avoid ongoing conflicts, the project sponsor shall implement the following design actions:</p> <ol style="list-style-type: none"> 1. Design access into the mid-block alley such that restrictions for loading vehicles (e.g., trucks) are easily enforceable. This may include, but not be limited to, installation of hydraulic bollards that are programmed to allow access to the loading dock during approved hours and/or signage; 2. Design access into the mid-block alley in a way that alerts pedestrians and loading vehicle operators to the potential for conflicts (e.g., pavement texture or other indicators that alert people with hearing impairments; in-pavement flashing lighting or other indicators that alert people with visual impairments; signage; etc.); 3. Design the loading dock area to include sufficient storage space for deliveries to be consolidated for coordinated deliveries internal to project facilities (i.e., retail and residential); and 4. Design the loading dock area to allow for unassisted delivery systems (i.e., a range of delivery systems that eliminate the need for human intervention at the receiving end), particularly for use when the receiver site (e.g., retail space) is not in operation. Examples could include the receiver site providing a key or electronic fob to loading vehicle operators, which enables the loading vehicle operator to deposit the goods inside the business or in a secured area that is separated from the business, but can be accessed from the mid-block alley; <p>In addition, the on-site loading dock could be designed to include electrification abilities for commercial refrigeration units, so that the loading vehicle operators do not need to run their diesel engines while making deliveries.</p> <p>In addition to the above-listed design actions, the project sponsor should explore the feasibility of providing a door along South Van Ness Avenue and a service corridor between South Van Ness Avenue and the proposed on-site delivery drop-off room for UPS, United States Parcel Service, Federal Express, and other similar services, and the residential building concierge should be instructed not to accept deliveries via the front door on Mission Street. These changes should be made in order to discourage drivers from stopping on Mission Street in front of the residential building lobby.</p> <p>In order to avoid ongoing conflicts, prior to receiving the building certificate of occupancy, the project sponsor shall develop a Loading Management Plan to address operational actions for City review and approval. The Loading Management Plan shall incorporate, but not be limited to, the following ongoing actions:</p> <ol style="list-style-type: none"> 1. Allow access into the mid-block alley for loading vehicles only between the hours of 10:00 a.m. and 3:00 p.m., and 7:00 p.m. and 7:00 a.m. on weekdays. On Saturdays and Sundays access into the mid-block alley and on-site loading spaces shall not be restricted. 	

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		<p>In addition, the Loading Management Plan should include best management practices (e.g., standards set in PIEK certification scheme in the Netherlands) to reduce noise for night-time delivery activities;</p> <ol style="list-style-type: none"> 2. On weekdays between 10:00 a.m. and 3:00 p.m., allow access to a maximum of nine loading vehicles less than or equal to 30 feet in length to the mid-block alley. At all other times, excluding the hours where access to the mid-block alley for loading vehicles is completely restricted, access to the maximum number of loading vehicles less than or equal to 30 feet in length to the mid-block alley shall not be limited, as long as the other requirements of the Loading Management Plan are met. At all times, loading vehicles more than 30 feet in length shall not be permitted to access the mid-block alley; 3. Establish a scheduling and loading vehicle assignment system for project-related loading activities, including the size and type of loading vehicles that shall be required to use the on-street commercial loading spaces on South Van Ness Avenue and 11th Street (e.g., UPS, USPS, and Federal Express), as a means of reducing the number of loading vehicular entries and exits to the on-site loading facility; 4. Direct residential building lobby attendants and retail tenants to notify any delivery personnel illegally stopping at the curb along Mission Street (i.e., in the red zones) that delivery vehicles should be parked within the on-street commercial loading spaces on South Van Ness Avenue or 11th Street; 5. Inform residents and retail tenants of the restricted hours of access to the mid-block alley and associated on-site loading facility for deliveries; 6. Direct residents to schedule all move-in and move-out activities and deliveries of large items (e.g., furniture) with building management. For move-in and move-out activities that will result in loading vehicles larger than 30 feet in length, building management shall obtain a reserved curbside permit for South Van Ness Avenue or 11th Street from the San Francisco Municipal Transportation Agency (SFMTA) in advance. To the extent feasible, these activities should occur during non-peak hours (i.e., the hours specified above for access to the mid-block alley); 7. Direct retail tenants to schedule deliveries, to the extent feasible; 8. Ensure that no loading vehicles access the mid-block alley without assistance by building personnel, or at times when the on-site loading facility is full; 9. Use an adequate number of building personnel to alert people using the mid-block alley and pedestrians and bicyclists on Mission Street adjacent to the project site of approaching loading vehicles; 10. Ensure that loading vehicles' paths through the mid-block alley remains clear of obstructions at all times during permitted on-site loading hours; 11. Ensure that loading vehicles enter the mid-block alley from Mission Street front-first, and exit 	

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		<p>from the mid-block alley onto Mission Street front-first;</p> <p>12. Ensure that loading vehicles entering the mid-block alley load and unload within the designated loading spaces, and not in the mid-block alley; and</p> <p>13. During hours when loading vehicles are not allowed via the mid-block alley, ensure that loading vehicles use the curbside commercial loading spaces on South Van Ness Avenue or 11th Street, rather than on Mission Street.</p> <p>The Loading Management Plan shall be evaluated by a qualified transportation professional, retained by the project sponsor and approved by the SFMTA, after the residential building reaches 50 percent occupancy and once a year going forward until such time that the SFMTA determines that the evaluation is no longer necessary or could be done at less frequent intervals. The content of the evaluation report shall be determined by SFMTA staff, in consultation with the Planning Department, and generally shall include an assessment of on-site and on-street loading conditions, including actual loading demand, loading operation observations, and an assessment of how the project meets this mitigation measure. If ongoing conflicts are occurring based on the assessment, the Loading Management Plan evaluation report shall put forth additional measures to address ongoing conflicts associated with loading operations. The evaluation report shall be reviewed by SFMTA staff, which shall make the final determination whether ongoing conflicts are occurring. In the event that the ongoing conflicts are occurring, the above Loading Management Plan requirements may be altered (e.g., the hour and day restrictions listed above, number of loading vehicle operates permitted during certain hours listed above, etc.).</p> <p>Further, revisions to the Loading Management Plan for the mid-block alley shall be made as necessary to reflect changes in generally accepted technology or operation protocols, or changes in street or circulation conditions (e.g., City implemented transportation projects). The Loading Management Plan and all revisions shall be reviewed and approved by the Environmental Review Officer or designee of the Planning Department and the Sustainable Streets Director or designee of the SFMTA.</p> <p>Implementation of I-TR-2a – Monitoring and Abatement of Queues.</p>	
<p>Impact TR-4: The proposed project would not result in substantial overcrowding on public sidewalks, but could create potential hazardous conditions for pedestrians, and otherwise interfere with pedestrian accessibility to the site and adjoining areas.</p>	<p>S</p>	<p>Implementation of M-TR-3 – Avoidance of Conflicts Associated with On-Site Loading Operations.</p>	<p>LTS</p>

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Impact TR-5: The proposed project could result in potentially hazardous conditions for bicyclists, or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas.	S	Implementation of M-TR-3 – Avoidance of Conflicts Associated with On-Site Loading Operations.	LTS
Impact TR-6: The proposed project would not result in a loading demand that could not be accommodated within the proposed on-site loading facilities or within convenient on-street loading zones, but could create potentially hazardous conditions or significant delays for traffic, transit, bicyclists, or pedestrians.	S	Implementation of M-TR-3 – Avoidance of Conflicts Associated with On-Site Loading Operations.	LTS
Impact TR-7: The proposed project would not result in significant impacts on emergency vehicle access.	LTS	None required.	NA
Impact TR-8: The proposed project construction activities would not result in substantial interference with pedestrian, bicycle, or vehicle circulation and accessibility to adjoining areas, and would not result in potentially hazardous conditions.	LTS	<p>I-TR-8 – Construction Management Plan and Public Updates.</p> <ul style="list-style-type: none"> <i>Construction Management Plan</i>—The project sponsor should develop and, upon review and approval by the SFMTA and Public Works, implement a Construction Management Plan, addressing transportation-related circulation, access, staging and hours of delivery. The Construction Management Plan would disseminate appropriate information to contractors and affected agencies with respect to coordinating construction activities to minimize overall disruption and ensure that overall circulation in the project area is maintained to the extent possible, with particular focus on ensuring transit, pedestrian, and bicycle connectivity. The Construction Management Plan would supplement and expand, rather than modify or supersede, and manual, regulations, or provisions set forth by the SFMTA, Public Works, or other City departments and agencies, and the California Department of Transportation. Management practices could include: best practices for accommodating pedestrians and bicyclists, identifying routes for construction trucks to utilize, minimizing deliveries and travel lane closures during the a.m. (7:30 a.m. to 9:00 a.m.) and p.m. (4:30 p.m. to 6:00 p.m.) peak periods along South Van Ness Avenue and Mission Street (Monday through Friday). <i>Carpool, Bicycle, Walk, and Transit Access for Construction Workers</i>—To minimize parking demand and vehicle trips associated with construction workers, the construction contractor could include as part of the Construction Management Plan methods to encourage carpooling, bicycle, walk and transit access to the project site by construction workers (such as providing secure bicycle parking spaces, participating in free-to-employee and employer ride matching program from 	NA

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		<p>www.511.org, participating in emergency ride home program through the City of San Francisco (www.sferh.org), and providing transit information to construction workers.</p> <ul style="list-style-type: none"> • <i>Construction Worker Parking Plan</i>—As part of the Construction Management Plan that would be developed by the construction contractor, the location of construction worker parking could be identified as well as the person(s) responsible for monitoring the implementation of the proposed parking plan. The use of on-street parking to accommodate construction worker parking could be discouraged. The project sponsor could provide on-site parking once the below grade parking garage is usable. • <i>Project Construction Updates for Adjacent Businesses and Residents</i>—To minimize construction impacts on access to nearby residences and businesses, the project sponsor could provide nearby residences and adjacent businesses with regularly-updated information regarding project construction, including construction activities, peak construction vehicle activities (e.g., concrete pours), travel lane closures, and parking lane and sidewalk closures. A regular email notice could be distributed by the project sponsor that would provide current construction information of interest to neighbors, as well as contact information for specific construction inquiries or concerns. 	
<p>Impact C-TR-1: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not contribute to regional VMT in excess of expected levels.</p>	LTS	None required.	NA
<p>Impact C-TR-2: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not cause major traffic hazards.</p>	LTS	None required.	NA
<p>Impact C-TR-3: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant transit impacts.</p>	LTS	None required.	NA
<p>Impact C-TR-4: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant pedestrian impacts.</p>	LTS	None required.	NA

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<p>Impact C-TR-5: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not result in cumulative bicycle impacts.</p>	<p>S</p>	<p>Implementation of M-TR-3 – Avoidance of Conflicts Associated with On-Site Loading Operations.</p>	<p>LTS</p>
<p>Impact C-TR-6: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant impacts on loading.</p>	<p>LTS</p>	<p>None required.</p>	<p>NA</p>
<p>Impact C-TR-7: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant impacts on emergency vehicle access.</p>	<p>LTS</p>	<p>None required.</p>	<p>NA</p>
<p>Impact C-TR-8: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would contribute considerably to significant cumulative construction-related transportation impacts.</p>	<p>S</p>	<p>M-C-TR-8 – Construction Coordination. If construction of the proposed project is determined to overlap with nearby adjacent project(s) as to result in transportation-related impacts, the project sponsor or its contractor(s) shall consult with various City departments such as the SFMTA and Public Works through ISCOTT, and other interdepartmental meetings as deemed necessary by the SFMTA, Public Works, and the Planning Department, to develop a Coordinated Construction Management Plan. The Coordinated Construction Management Plan that shall address construction-related vehicle routing, detours, and maintaining transit, bicycle, vehicle, and pedestrian movements in the vicinity of the construction area for the duration of the construction period overlap. Key coordination meetings would be held jointly between project sponsors and contractors of other projects for which the City departments determine impacts could overlap. The Coordinated Construction Management Plan shall consider other ongoing construction in the project vicinity, including development and transportation infrastructure projects, and shall include, but not be limited to, the following:</p> <ul style="list-style-type: none"> • <i>Restricted Construction Truck Access Hours</i>—Limit construction truck movements to the hours between 9:00 a.m. and 4:30 p.m., or other times if approved by the SFMTA, to minimize disruption to vehicular traffic, including transit, during the a.m. and p.m. peak periods. • <i>Construction Truck Routing Plans</i>—Identify optimal truck routes between the regional facilities and the project site, taking into consideration truck routes of other development projects and any construction activities affecting the roadway network. • <i>Coordination of Temporary Lane and Sidewalk Closures</i> – The project sponsor shall coordinate lane closures with other projects requesting concurrent lane and sidewalk closures through the 	<p>SUM</p>

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		<p>ISCOTT and interdepartmental meetings process above, to minimize the extent and duration of requested lane and sidewalk closures. Travel lane closures shall be minimized especially along transit and bicycle routes, so as to limit the impacts to transit service and bicycle circulation and safety.</p> <ul style="list-style-type: none"> ● <i>Maintenance of Transit, Vehicle, Bicycle, and Pedestrian Access</i> – The project sponsor/construction contractor(s) shall meet with Public Works, SFMTA, the Fire Department, Muni Operations and other City agencies to coordinate feasible measures to include in the Coordinated Construction Management Plan to maintain access for transit, vehicles, bicycles and pedestrians. This shall include an assessment of the need for temporary transit stop relocations or other measures to reduce potential traffic, bicycle, and transit disruption and pedestrian circulation effects during construction of the project. ● <i>Carpool, Bicycle, Walk and Transit Access for Construction Workers</i> – The construction contractor shall include methods to encourage carpooling, bicycling, walk and transit access to the project site by construction workers (such as providing secure bicycle parking spaces, participating in free-to-employee and employer ride matching program from www.511.org, participating in emergency ride home program through the City of San Francisco (www.sferh.org), and providing transit information to construction workers). ● <i>Construction Worker Parking Plan</i> – The location of construction worker parking shall be identified as well as the person(s) responsible for monitoring the implementation of the proposed parking plan. The use of on-street parking to accommodate construction worker parking shall be discouraged. The project sponsor could provide on-site parking once the below grade parking garage is usable. ● <i>Project Construction Updates for Adjacent Businesses and Residents</i> – To minimize construction impacts on access for nearby institutions and businesses, the project sponsor shall provide nearby residences and adjacent businesses with regularly-updated information regarding project construction, including construction activities, peak construction vehicle activities (e.g., concrete pours), travel lane closures, and lane closures. At regular intervals to be defined in the Coordinated Construction Management Plan, a regular email notice shall be distributed by the project sponsor that shall provide current construction information of interest to neighbors, as well as contact information for specific construction inquiries or concerns. 	

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Section IV.C, Air Quality			
<p>Impact AQ-1: The proposed project’s construction activities would generate fugitive dust and criteria air pollutants but would not violate an air quality standard, contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants.</p>	LTS	None required.	NA
<p>Impact AQ-2: During project operations, the proposed project would result in emissions of criteria air pollutants, but not at levels that would violate an air quality standard, contribute to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants.</p>	LTS	None required.	NA
<p>Impact AQ-3: The proposed project would generate toxic air contaminants, including diesel particulate matter, exposing sensitive receptors to substantial air pollutant concentrations.</p>	S	<p>M-AQ-3a – Construction Air Quality. The project sponsor or the project sponsor’s Contractor shall comply with the following requirements:</p> <p>A. <i>Engine Requirements.</i></p> <ol style="list-style-type: none"> 1. All off-road equipment greater than 25 horse power (hp) and operating for more than 20 total hours over the entire duration of construction activities shall have engines that meet or exceed either (1) U.S. Environmental Protection Agency (USEPA) or California Air Resources Board (ARB) Tier 4 or Tier 4 Interim off-road emission standards, or (2) Tier 2 standards with a Level 3 Verified Diesel Emissions Control Strategy (VDECS). 2. Where access to alternative sources of power is available, portable diesel engines shall be prohibited. 3. Diesel engines, whether for off-road or on-road equipment, shall not be left idling for more than two minutes, at any location, except as provided in exceptions to the applicable state regulations regarding idling for off-road and on-road equipment (e.g., traffic conditions, safe operating conditions). The Contractor shall post legible and visible signs in English, Spanish, and Chinese, in designated queuing areas and at the construction site to remind operators of the two-minute idling limit. 4. The Contractor shall instruct construction workers and equipment operators on the maintenance and tuning of construction equipment, and require that such workers and 	LTS

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		<p>operators properly maintain and tune equipment in accordance with manufacturer specifications.</p> <p>B. <i>Waivers.</i></p> <ol style="list-style-type: none"> 1. The Planning Department’s Environmental Review Officer or designee (ERO) may waive the alternative source of power requirement of Subsection (A)(2) if an alternative source of power is limited or infeasible at the project site. If the ERO grants the waiver, the Contractor must submit documentation that the equipment used for on-site power generation meets the requirements of Subsection (A)(1). If seeking a waiver under this section, the contractor must provide documentation demonstrating that off-site receptors would not be exposed to an excess cancer risk of greater than 7 per one million population exposed as a result of toxic air contaminant emissions from construction and operation. 2. The ERO may waive the equipment requirements of Subsection (A)(1) if a particular piece of off-road equipment is not commercially available; the equipment would not produce desired emissions reduction due to expected operating modes; or, there is a compelling emergency need to use off-road equipment that is not fitted with a Tier 4 engine or Tier 2 engine with level 3 VDECS. If the ERO grants the waiver, the Contractor must use the next cleanest piece of off-road equipment, according to Table M-AQ-3a. If seeking a waiver under this section, the Contractor must provide documentation demonstrating that off-site receptors would not be exposed to an excess cancer risk of greater than 7 per one million population exposed as a result of toxic air contaminant emissions from construction and operation. <p style="text-align: center;">TABLE M-AQ-3A OFF-ROAD EQUIPMENT COMPLIANCE STEP-DOWN SCHEDULE</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Compliance Alternative</th> <th>Engine Emission Standard</th> <th>Emissions Control</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">Tier 3</td> <td style="text-align: center;">ARB Level 3 PM VDECS*</td> </tr> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">Tier 2</td> <td style="text-align: center;">ARB Level 3 PM VDECS*</td> </tr> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">Tier 2</td> <td style="text-align: center;">Alternative Fuel**</td> </tr> </tbody> </table> <p>NOTES:</p> <p>How to use the table: If the ERO determines that the equipment requirements cannot be met, then the project sponsor would need to meet Compliance Alternative 1. If the ERO determines that the Contractor cannot supply off-road equipment meeting Compliance Alternative 1, then the Contractor must meet Compliance Alternative 2. If the ERO determines that the Contractor cannot supply off-road equipment meeting Compliance Alternative 2, then the Contractor must meet Compliance Alternative 3.</p> <p>* VDECS is a Verified Diesel Emissions Control Strategy.</p> <p>** Alternative fuels are not a VDECS.</p>	Compliance Alternative	Engine Emission Standard	Emissions Control	1	Tier 3	ARB Level 3 PM VDECS*	2	Tier 2	ARB Level 3 PM VDECS*	3	Tier 2	Alternative Fuel**	
Compliance Alternative	Engine Emission Standard	Emissions Control													
1	Tier 3	ARB Level 3 PM VDECS*													
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		<p>C. <i>Construction Emissions Minimization Plan.</i> Before starting on-site construction activities, the Contractor shall submit a Construction Emissions Minimization Plan (Plan) to the ERO for review and approval. The Plan shall state, in reasonable detail, how the Contractor will meet the requirements of Section A.</p> <ol style="list-style-type: none"> 1. The Plan shall include estimates of the construction timeline by phase, with a description of each piece of off-road equipment required for every construction phase. The description may include, but is not limited to, equipment type, equipment manufacturer, equipment identification number, engine model year, engine certification (Tier rating), horsepower, engine serial number, and expected fuel usage and hours of operation. For VDECS installed, the description may include technology type, serial number, make, model, manufacturer, ARB verification number level, and installation date and hour meter reading on installation date. For off-road equipment using alternative fuels, the description shall also specify the type of alternative fuel being used. 2. The project sponsor shall ensure that all applicable requirements of the Plan have been incorporated into the contract specifications. The Plan shall include a certification statement that the Contractor agrees to comply fully with the Plan. 3. The Contractor shall make the Plan available to the public for review on-site during working hours. The Contractor shall post at the construction site a legible and visible sign summarizing the Plan. The sign shall also state that the public may ask to inspect the Plan for the project at any time during working hours and shall explain how to request to inspect the Plan. The Contractor shall post at least one copy of the sign in a visible location on each side of the construction site facing a public right-of-way. <p>D. <i>Monitoring.</i> After start of Construction Activities, the Contractor shall submit quarterly reports to the ERO documenting compliance with the Plan. After completion of construction activities and prior to receiving a final certificate of occupancy, the project sponsor shall submit to the ERO a final report summarizing construction activities, including the start and end dates and duration of each construction phase, and the specific information required in the Plan.</p> <p>M-AQ-3b –Diesel Generator Specifications. The proposed residential generator exhaust stack shall be located in the north central portion of the second floor residential open space, as indicated in the Air Quality Technical Report, and meet the following specifications:</p> <ul style="list-style-type: none"> • Meet or exceed one of the following emission standards for particulate matter: (1) Tier 4 certified engine, or (2) Tier 2 or Tier 3 certified engine that is equipped with a California Air Resources Board (ARB) Level 3 Verified Diesel Emissions Control Strategy (VDECS). A non-verified diesel emission control strategy may be used if the filter has the same particulate matter reduction as the identical ARB verified model and if the Bay Area Air Quality Management District (BAAQMD) approves of its use; and • Have a stack diameter between eight and 12 inches, a minimum flow rate of 8,858 standard cubic 	

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		<p>feet per minute, and a minimum stack elevation of 20 feet above grade.</p> <ul style="list-style-type: none"> The project sponsor shall submit documentation of compliance with the BAAQMD New Source Review permitting process (Regulation 2, Rule 2, and Regulation 2, Rule 5) and the emission standard requirement of this mitigation measure to the Planning Department for review and approval prior to issuance of a permit. <p>I-AQ-3 – Additional Diesel Generator Locations. To further reduce exposure of air pollutants to sensitive uses, the following additional generator locations are provided:</p> <ul style="list-style-type: none"> The generator may be placed in the northwest corner of the 5th floor residential mezzanine; or The generator may be placed in the northeast or southeast corner of the 11th floor pool deck. <p>The residential generator may be installed at these locations and meet the specifications in M-AQ-3b above, and no further analysis would be required.</p>	
Impact AQ-4: The proposed project would not conflict with, or obstruct implementation of, the 2010 Clean Air Plan.	LTS	None required.	NA
Impact AQ-5: The proposed project would not create objectionable odors that would affect a substantial number of people.	LTS	None required.	NA
Impact C-AQ-1: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not contribute considerably to cumulative increases in criteria air pollutant emissions.	LTS	None required.	NA
Impact C-AQ-2: The proposed project could result in a considerable contribution to cumulative increases in short- and long-term exposures to toxic air contaminants.	S	Implementation of M-AQ-3a – Construction Air Quality and M-AQ-3b – Diesel Generator Specifications.	LTS

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Environmental Impact	Level of Significance prior to Mitigation	Improvement/Mitigation Measures	Level of Significance after Mitigation
Section IV.D, Wind			
<p>Impact WI-1: The proposed project would not alter wind in a manner that substantially affects public areas in the vicinity of the project site.</p>	LTS	<p>I-WI-1 – Project Design Modifications to Improve On-Site Pedestrian Wind Conditions. The project sponsor should evaluate and implement feasible design modifications to avoid a wind hazard exceedance and improve pedestrian wind conditions within publicly-accessible locations on the project site. This measure should require that the project sponsor undertake wind analysis focused on the publicly-accessible, mid-block concourse that would extend east into the site from South Van Ness Avenue, between the mixed-use residential building and the office building, as well as the mid-block alley extending north into the site from Mission Street; together, these features would provide pedestrian connectivity midway through the site between South Van Ness Avenue and Mission Street. Design modifications to be evaluated may include, but should not be limited to, installation of awnings or canopies extending over all or a portion of the concourse and/or alley. The project sponsor should engage Planning Department staff in the review and adoption of potential design modifications to improve on-site pedestrian wind conditions.</p>	NA
<p>Impact C-WI-1: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would alter wind in a manner that substantially affects public areas in the vicinity of the project site, but the proposed project’s contribution to this impact would not be cumulatively considerable.</p>	LTS	None required.	NA
Section IV.E, Shadow			
<p>Impact SH-1: The proposed project would not create new shadow in a manner that would have an adverse effect on the use of any park or open space under the jurisdiction of the San Francisco Recreation and Park Department.</p>	LTS	None required.	NA
<p>Impact SH-2: The proposed project would not create new shadow in a manner that would substantially affect the use of other existing publicly-accessible open space or outdoor recreation facilities or other public areas.</p>	LTS	None required.	NA

TABLE S-1 SUMMARY OF IMPACTS OF THE PROPOSED PROJECT – DISCLOSED IN THIS EIR

Environmental Impact	Level of Significance prior to Mitigation	Improvement/Mitigation Measures	Level of Significance after Mitigation
<p>Impact C-SH-1: The proposed project, in combination with past, present, or reasonably foreseeable future projects, would create new shadow in a manner that would substantially affect the use of any park or open space under the jurisdiction of the Recreation and Park Department, or other existing publicly-accessible open space, outdoor recreation facilities, or other public areas; however, the proposed project’s contribution to this impact would not be cumulatively considerable.</p>	<p>LTS</p>	<p>None required.</p>	<p>NA</p>

IMPACT CODES:

NA Not Applicable

NI No impact

LTS Less than significant or negligible impact; no mitigation required

S Significant

SU Significant and unavoidable adverse impact, no feasible mitigation

SUM Significant and unavoidable adverse impact, after mitigation

TABLE S-2 SUMMARY OF IMPACTS OF THE PROPOSED PROJECT – DISCLOSED IN THE INITIAL STUDY (APPENDIX A)

Environmental Impact	Level of Significance prior to Mitigation	Improvement/Mitigation Measures	Level of Significance after Mitigation
Land Use and Land Use Planning			
Impact LU-1: The proposed project would not physically divide an established community.	NI	None required.	NA
Impact LU-2: The proposed project would not conflict with any applicable land use plans, policies or regulations of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect.	LTS	None required.	NA
Impact LU-3: The proposed project would not have a substantial impact upon the existing character of the vicinity.	LTS	None required.	NA
Impact C-LU-1: The proposed project, in combination with past, present, and reasonably foreseeable projects, would not result in a cumulative land use impact.	LTS	None required.	NA
Population and Housing			
Impact PH-1: The proposed project would not induce substantial population growth either directly or indirectly.	LTS	None required.	NA
Impact PH-2: The proposed project would not displace a substantial number of existing housing units, people, or employees, or create demand for additional housing elsewhere.	LTS	None required.	NA
Impact C-PH-1: The proposed project, in combination with past, present, and reasonably foreseeable projects, would not result in a cumulative impact related to population or housing.	LTS	None required.	NA
Noise			
Impact NO-1: The proposed project would not result in the exposure of persons to or generation of noise levels in excess of established standards, nor would the proposed project result in a substantial permanent increase in ambient noise levels or otherwise be substantially affected by existing noise.	LTS	None required.	NA

TABLE S-2 SUMMARY OF IMPACTS OF THE PROPOSED PROJECT – DISCLOSED IN THE INITIAL STUDY (APPENDIX A)

Environmental Impact	Level of Significance prior to Mitigation	Improvement/Mitigation Measures	Level of Significance after Mitigation
<p>Impact NO-2: The proposed project could result in a substantial temporary or periodic increase in ambient noise and vibration in the project vicinity above levels existing without the project.</p>	<p>S</p>	<p>M-NO-2 – Construction-Related Noise Reduction. Incorporate the following practices into the construction contract agreement documents to be implemented by the construction contractor:</p> <ul style="list-style-type: none"> • Provide enclosures and mufflers for stationary equipment and shroud or shield impact tools; • Use construction equipment with lower noise emission ratings whenever possible, particularly for air compressors; • Provide sound-control devices on equipment no less effective than those provided by the manufacturer; • Locate stationary equipment, material stockpiles, and vehicle staging areas as far as practicable from Mission Street and all other identified sensitive receptors; • Prohibit unnecessary idling of internal combustion engines; • Implement noise attenuation measures to the extent feasible, which may include, but are not limited to, noise barrier curtains or noise blankets. The placement of such attenuation measures shall be reviewed and approved by the Director of Public Works prior to issuance of development permits for construction activities; • Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. 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 where feasible; this could achieve a reduction of five dBA. Quieter procedures, such as use of drills rather than impact tools, shall be used where feasible; and • The project sponsor shall designate a point of contact to respond to noise complaints. The point of contact must have the authority to modify construction noise-generating activities to ensure compliance with the measures above and with the San Francisco Noise Ordinance. 	<p>LTS</p>

TABLE S-2 SUMMARY OF IMPACTS OF THE PROPOSED PROJECT – DISCLOSED IN THE INITIAL STUDY (APPENDIX A)

Environmental Impact	Level of Significance prior to Mitigation	Improvement/Mitigation Measures	Level of Significance after Mitigation
<p>Impact C-NO-1: The proposed project, in combination with past, present, and reasonably foreseeable future projects, could result in a considerable contribution to cumulative impacts related to construction noise.</p>	S	Implementation of M-NO-2 – Construction-Related Noise Reduction.	LTS
Greenhouse Gas Emissions			
<p>Impact C-GG-1: The proposed project would generate greenhouse gas emissions, but not at levels that would result in a significant impact on the environment or conflict with any policy, plan, or regulation adopted for the purpose of reducing greenhouse gas emissions.</p>	LTS	None required.	NA
Recreation			
<p>Impact RE-1: The proposed project would not result in a substantial increase in the use of existing parks and recreational facilities, the deterioration of such facilities, including recreation facilities, or require the expansion of recreational facilities, or physically degrade existing recreational resources.</p>	LTS	None required.	NA
<p>Impact C-RE-1: The proposed project, in combination with other past, present, or reasonably foreseeable projects, would result in less-than-significant impacts to recreational resources.</p>	LTS	None required.	NA
Utilities and Service Systems			
<p>Impact UT-1: The proposed project would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board, would not exceed the capacity of the wastewater treatment provider serving the project site, or require construction of new stormwater drainage facilities, wastewater treatment facilities, or expansion of existing facilities.</p>	LTS	None required.	NA
<p>Impact UT-2: SFPUC has sufficient water supply available to serve the project from existing entitlements and resources, and the proposed project would not require expansion or construction of new water supply resources or facilities.</p>	LTS	None required.	NA
<p>Impact UT-3: The proposed project would be served by a landfill with sufficient permitted capacity to accommodate the proposed project’s solid waste disposal needs.</p>	LTS	None required.	NA

TABLE S-2 SUMMARY OF IMPACTS OF THE PROPOSED PROJECT – DISCLOSED IN THE INITIAL STUDY (APPENDIX A)

Environmental Impact	Level of Significance prior to Mitigation	Improvement/Mitigation Measures	Level of Significance after Mitigation
Impact UT-4: The construction and operation of the proposed project would comply with all applicable statutes and regulations related to solid waste.	LTS	None required.	NA
Impact C-UT-1: The proposed project, in combination with past, present, and reasonably foreseeable projects, would not result in cumulative impacts on utilities or service systems.	LTS	None required.	NA
Public Services			
Impact PS-1: The proposed project would increase demand for police protection, fire protection, schools, or other services, but not to an extent that would result in substantial adverse physical impacts associated with the construction or alteration of governmental facilities.	LTS	None required.	NA
Impact C-PS-1: The proposed project, combined with past, present, and reasonably foreseeable future projects in the vicinity, would not result in cumulative impacts to public services.	LTS	None required.	NA
Biological Resources			
Impact BI-1: The proposed project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species, riparian habitat or sensitive natural communities, and would not interfere substantially with 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.	LTS	None required.	NA
Impact BI-2: The proposed project would not conflict with the City’s local tree ordinance.	LTS	None required.	NA
Impact C-BI-1: The proposed project, in combination with other past, present or reasonably foreseeable projects, would not result in cumulative impacts to biological resources.	LTS	None required.	NA

TABLE S-2 SUMMARY OF IMPACTS OF THE PROPOSED PROJECT – DISCLOSED IN THE INITIAL STUDY (APPENDIX A)

Environmental Impact	Level of Significance prior to Mitigation	Improvement/Mitigation Measures	Level of Significance after Mitigation
Geology and Soils			
Impact GE-1: The proposed project would not result in exposure of people and structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, seismic ground-shaking, liquefaction, lateral spreading, or landslides.	LTS	None required.	NA
Impact GE-2: The proposed project would not result in substantial loss of topsoil or erosion.	LTS	None required.	NA
Impact GE-3: The proposed project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.	LTS	None required.	NA
Impact GE-4: The proposed project is not located on expansive soil, as defined in the <i>California Building Code</i> , creating substantial risks to life or property.	LTS	None required.	NA
Impact GE-5: The proposed project would not substantially change the topography or any unique geologic or physical features of the site.	NI	None required.	NA

TABLE S-2 SUMMARY OF IMPACTS OF THE PROPOSED PROJECT – DISCLOSED IN THE INITIAL STUDY (APPENDIX A)

Environmental Impact	Level of Significance prior to Mitigation	Improvement/Mitigation Measures	Level of Significance after Mitigation
<p>Impact GE-6: The proposed project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.</p>	S	<p>M-GE-6 – Inadvertent Discovery of Paleontological Resources. If potential vertebrate fossils are discovered by construction crews, all earthwork or other types of ground disturbance within 50 feet of the find shall stop immediately and the monitor shall notify the City. Work shall not resume until a qualified professional paleontologist can assess the nature and importance of the find. Based on the scientific value or uniqueness of the find, the qualified paleontologist may record the find and allow work to continue, or recommend salvage and recovery of the fossil. The qualified paleontologist may also propose modifications to the stop-work radius based on the nature of the find, site geology, and the activities occurring on the site. If treatment and salvage is required, recommendations shall be consistent with SVP 1995 guidelines, and currently accepted scientific practice, and shall be subject to review and approval by the City. If required, treatment for fossil remains may include preparation and recovery of fossil materials so that they can be housed in an appropriate museum or university collection [e.g., the University of California Museum of Paleontology], and may also include preparation of a report for publication describing the finds. The City shall ensure that information on the nature, location, and depth of all finds is readily available to the scientific community through university curation or other appropriate means.</p>	LTS
<p>Impact C-GE-1: The proposed project, in combination with past, present, and reasonably foreseeable future projects, would not result in a considerable contribution to any cumulative significant effects related to geology or soils.</p>	LTS	None required.	NA
Hydrology and Water Quality			
<p>Impact HY-1: The proposed project would not violate any water quality standards or waste discharge requirements, or otherwise substantially degrade water quality.</p>	LTS	None required.	NA
<p>Impact HY-2: The proposed project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or lowering of the local groundwater table.</p>	LTS	None required.	NA

TABLE S-2 SUMMARY OF IMPACTS OF THE PROPOSED PROJECT – DISCLOSED IN THE INITIAL STUDY (APPENDIX A)

Environmental Impact	Level of Significance prior to Mitigation	Improvement/Mitigation Measures	Level of Significance after Mitigation
Impact HY-3: The proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or substantially increase the rate or amount of surface runoff in a manner that would result in substantial erosion, siltation, or flooding on- or off-site.	LTS	None required.	NA
Impact HY-4: The proposed project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.	LTS	None required.	NA
Impact HY-5: The proposed project would not exacerbate flooding conditions such that people or structures would be exposed to a significant risk from future flooding.	LTS	None required.	NA
Impact C-HY-1: The proposed project, in combination with other past, present, or reasonably foreseeable projects, would result in less-than-significant cumulative impacts to hydrology and water.	LTS	None required.	NA
Hazards and Hazardous Materials			
Impact HZ-1: The proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	LTS	None required.	NA
Impact HZ-2: The proposed project could create a significant hazard to the public or the environment through reasonably foreseeable conditions involving the release of hazardous materials into the environment.	S	M-HZ-2—Hazardous Building Materials Abatement. The project sponsor shall ensure that, prior to demolition, the building is surveyed for hazardous building materials including, electrical equipment containing polychlorinated biphenyl (PCBs), fluorescent light ballasts containing PCBs or bis(2-ethylhexyl) phthalate (DEHP), and fluorescent light tubes containing mercury vapors. These materials shall be removed and properly disposed of prior to the start of demolition or renovation. Light ballasts that are proposed to be removed during renovation shall be evaluated for the presence of PCBs and in the case where the presence of PCBs in the light ballast cannot be verified, they shall be assumed to contain PCBs, and handled and disposed of as such, according to applicable laws and regulations. Any other hazardous building materials identified either before or during demolition or renovation shall be abated according to federal, state, and local laws and regulations.	LTS

Summary

TABLE S-2 SUMMARY OF IMPACTS OF THE PROPOSED PROJECT – DISCLOSED IN THE INITIAL STUDY (APPENDIX A)

Environmental Impact	Level of Significance prior to Mitigation	Improvement/Mitigation Measures	Level of Significance after Mitigation
Impact HZ-3: The proposed project could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within a quarter-mile of an existing or proposed school.	S	Implementation of M-HZ-2 – Hazardous Building Materials Abatement.	LTS
Impact HZ-4: The proposed project is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5; however, this would not result in a significant impact.	LTS	None required.	NA
Impact HZ-5: The proposed project would not expose people or structures to a significant risk of loss, injury or death involving fires, nor interfere with the implementation of an emergency response plan.	LTS	None required.	NA
Impact C-HZ-1: The proposed project, in combination with past, present, and reasonably foreseeable future projects, could result in a considerable contribution to cumulative impacts related to hazardous materials.	S	Implementation of M-HZ-2 – Hazardous Building Materials Abatement.	LTS
Mineral and Energy Resources			
Impact ME-1: The proposed project would not encourage activities that would result in the use of large amounts of fuel, water, or energy, or use these resources in a wasteful manner.	LTS	None required.	NA
Impact C-ME-1: The proposed project, in combination with other past, present or reasonably foreseeable projects, would not result in a cumulative impact on mineral and energy resources.	LTS	None required.	NA
Agriculture and Forest Resources			
No impacts related to agriculture and forest resources.	NI	None required.	NA

IMPACT CODES:

NA Not Applicable

NI No impact

LTS Less than significant or negligible impact; no mitigation required

S Significant

SU Significant and unavoidable adverse impact, no feasible mitigation

SUM Significant and unavoidable adverse impact, after mitigation

Summary of Project Alternatives

This EIR provides four project alternatives to the proposed project as summarized below and further details in Chapter VI, *Alternatives*:

- **No Project Alternative:** Under the No Project Alternative, the existing Goodwill buildings would remain in use, though by a different tenant and would not be expanded.
- **Partial Preservation Alternative:** The Partial Preservation Alternative would develop a similar program to that of the proposed project, but would retain the entirety of both the Mission Street and 11th Street façades of the 1500 Mission Street building as part of the office space development. The approximately 42,000 square foot permit center would be housed within the ground floor of the existing building. The Partial Preservation Alternative would maintain most of the exterior character-defining features of the existing building. The Partial Preservation Alternative would provide a residential and retail/restaurant component on a reduced footprint, as compared to the proposed project, and the 1500 Mission Street building would be retained along the entire length of its Mission and 11th Street facades. The residential tower would remain at the same location as under the proposed project, at the corner of Mission Street and South Van Ness Avenue, but the 10-story podium would not extend as far to the east of the 39-story tower as under the proposed project. This alternative would include approximately 511,500 square feet of residential space for 468 residential units, 92 units (16 percent) fewer than with the proposed project, and would provide approximately 35,900 square feet of retail/restaurant space (nearly 9,700 square feet of which would be restaurant), approximately 2,100 square feet (six percent) less than with the project. For the office tower, a new second story, set back approximately 38 feet from the Mission Street façade, would be added directly behind the clock tower of the 1500 Mission Street building. The office tower would then step up to seven stories behind the portion of the existing building that would be retained, at a distance of approximately 110 feet from the Mission Street façade (90 feet from the rear elevation of the tower), and then up to 16 stories at the rear of the building. The new tower would be setback approximately 29 feet from the existing 11th Street façade. As with the proposed project, this alternative would also provide an approximately 4,400-square-foot childcare facility. This alternative would provide approximately 455,600 square feet of office space, or 5,800 square feet (one percent) more than with the project, including the permit center within the retained 1500 Mission Street building. Access to below-grade parking, which would contain 332 parking spaces (21 percent fewer parking spaces than the proposed project), would be provided via two ramps accessible from 11th Street—one for the office and permit center component at the northeast corner of the project site and one for the residential and retail/restaurant component located four bays south of the office and permit center ramp.
- **Full Preservation Alternative:** The Full Preservation Alternative would be similar to the Partial Preservation Alternative; however, the office tower would be set back approximately 59 feet from the 11th Street façade of the 1500 Mission Street building, or more than twice the setback of the Partial Preservation Alternative. Also, in addition to preserving exterior features of the existing 1500 Mission Street building, this alternative would retain a substantial portion of the industrial warehouse section of the building, including wire glass skylights, exposed steel truss work/structural framing, unfinished concrete floor, and full-height interior space that would remain intact as part of the first floor permit center within the office building. The Full Preservation Alternative would retain the Mission and 11th Street facades of the existing 1500 Mission Street building in their entirety, and a new office tower would be constructed at the rear northwest corner of the existing building. All of the character-

defining features on these two facades, and for the majority of the building, would be retained. The Full Preservation Alternative would provide a residential and retail/restaurant component on a reduced footprint as compared to the proposed project (the same as with the Partial Preservation Alternative). Like the Partial Preservation Alternative, the Full Preservation Alternative would provide approximately 35,900 square feet of retail/restaurant space and 511,500 square feet of residential space that would accommodate 468 units. Under this alternative, an office tower would be set back approximately 59 feet from the 11th Street facade, or just over twice the setback in the Partial Preservation Alternative. Unlike the Partial Preservation Alternative, there would be no second floor addition behind the clock tower, so the setback of the office tower would be approximately 111 feet from the Mission Street elevation (about 90 feet from the rear elevation of the tower). The office tower, at the northeast corner of the building, would step up to 9 stories (compared to seven stories with the Partial Preservation Alternative), and then up to 16 stories at the rear of the building, beginning about 180 feet back from the Mission Street façade. This alternative would provide approximately 452,400 square feet of office space, 2,600 square feet (0.6 percent) more than with the proposed project, including the permit center within the retained portion of the 1500 Mission Street building, but no childcare facility due to the lack of available space for required childcare open space. As with the Partial Preservation Alternative, access to below-grade parking, which would contain 142 parking spaces (66 percent fewer parking spaces than the proposed project), would be provided via two ramps accessible from 11th Street, one for the office and permit center component at the northeast corner of the project site and one for the residential and retail/restaurant component located four bays south of the office and permit center ramp. This alternative would have one basement level of parking compared to the Partial Preservation Alternative, which would have two below-grade levels of parking.

- **All Residential Alternative:** The All Residential Alternative would provide residential and retail uses in two proposed towers in approximately the same location as the towers in the proposed project. At complete buildout, Tower 1, located along South Van Ness and Mission Street would be 39 stories, consistent with the proposed project tower at this location, and Tower 2, located on 11th Street between Market and Mission Streets, would be 30 stories, or 14 stories taller than the proposed project. Tower 1 would provide 570 residential units in approximately 642,900 square feet, and approximately 38,400 square feet of retail space, as well as 298 below-grade parking spaces. Tower 2 would provide 406 residential units in approximately 395,500 square feet, along with 12,700 square feet of retail space, and 203 below-grade vehicle parking spaces. Under this alternative, Tower 1 would provide 570 units, 10 more than the proposed project, and Tower 2 would be entirely devoted to residential housing, providing 406 units with the additional square footage. In addition, 38,400 square feet of retail and restaurant uses would be provided in Tower 1, with an additional 12,700 square feet of similar uses in Tower 2. Apart from modified building heights, this alternative would use the same buildout scope and design of the proposed project, and would provide approximately 416 more residential units for a total of 976 units, 20 percent of which would be affordable units. Under the All Residential Alternative, the project would provide no office or permit center. Like the Full Preservation Alternative, this alternative would also not provide a childcare facility. Access to below-grade parking, which would contain 501 parking spaces (19 percent greater parking spaces than the proposed project), would be available from two locations off of 11th Street.

Table S-3, Comparison of the Significant Environmental Impacts of Project to Impacts of Alternatives, presents the significant impacts of the proposed project and summarizes the environmental impacts of the selected alternatives compared to those of the proposed project.

Environmentally Superior Alternative

The California Environmental Quality Act (CEQA) Guidelines require the identification of an environmentally superior alternative (Section 15126.6(e)). The environmentally superior alternative is the alternative that best avoids or lessens any significant effects of the proposed project, even if the alternative would impede to some degree the attainment of the project objectives. If it is determined that the “no project” alternative would be the environmentally superior alternative, then the EIR shall also identify an environmentally superior alternative among the other project alternatives (Section 15126.6(3)).

The No Project Alternative would be the environmentally superior alternative because the significant impacts associated with implementation of the proposed project would not occur. The No Project Alternative, which would involve no new development on the project site, would also eliminate the less-than-significant impacts associated with the proposed project’s larger and taller buildings on the site (e.g., impacts related to wind), along with less-than-significant impacts related to additional human activity on the site and on the local transportation network (e.g., recreation and transit, pedestrian, bicycle, and loading impacts). Mitigation measures to reduce cultural resource, transportation and circulation, and air quality impacts would also not be required.

Because CEQA requires selection of the “environmentally superior alternative other than the no project alternative” from among the proposed project and the other alternatives evaluated, the Full Preservation Alternative is identified as the environmentally superior alternative because it would meet most of the project sponsor and City’s basic objectives, while avoiding the cultural resource impact to the 1500 Mission Street building that would occur under the proposed project. This impact reduction would be achieved because this alternative would have fewer residential units and commercial space at the site compared to the proposed project, and, therefore, would retain more of the historic building’s character-defining features. The Full Preservation Alternative would also require less excavation than the proposed project, as such average daily emissions of criteria air pollutants would be slightly less than the proposed project. However, the Full Preservation Alternative would not markedly change impacts related to air quality, noise, or archeology, as well as those related to pedestrians, bicyclists, and loading.

Areas of Controversy and Issues to Be Resolved

During the NOP review and comment period, a total of four comment letters were submitted to the Planning Department and three speakers provided oral comments at the public scoping session. Many of the comments expressed concern over the effects of the project on nearby neighborhoods with respect to: the proposed heights of the two towers; the amount of parking provided; the increase in vehicular traffic in the area (including related noise impacts); the potential to generate greenhouse gases; the potential for hazardous materials to be encountered during project site excavation and construction; and wind and shadow effects. Comments were received from one agency with specific requests pertaining to the transportation analysis, and one organization provided comments regarding the existing historic structure on-site and the project design in regards to the treatment of the historic building. A more detailed description of comments raised in response to the NOP is provided in Section V.E, *Areas of Known Controversy and Issues to Be Resolved*, and in Chapter V, *Other CEQA Considerations*, of this EIR. In addition, the Initial Study identified potentially significant impacts related to cultural resources, transportation and circulation, air quality, wind, and shadow, all of which are analyzed in Sections IV.A through IV.E of this EIR.

TABLE S-3 COMPARISON OF THE SIGNIFICANT ENVIRONMENTAL IMPACTS OF PROJECT TO IMPACTS OF ALTERNATIVES

Impacts	Proposed Project	Alternative A: No Project Alternative	Alternative B: Partial Preservation Alternative	Alternative C: Full Preservation Alternative	Alternative D: All Residential Alternative
Description	The proposed project would demolish the 1580 Mission Street building to construct a 39-story residential and retail/restaurant development providing 560 units, and demolish a majority of the 1500 Mission Street building to construct a 16-story office building containing approximately 454,200 sf of office space and an approximately 4,400 sf childcare facility. Up to 280 below-grade parking spaces would be included with the proposed project.	The existing one-story warehouse and clock tower would remain, as would the two-story retail office building, all managed by Goodwill Industries. No additional development would occur.	This alternative would demolish the 1580 Mission Street building to construct a 39-story residential and retail/restaurant development providing 458 units, and partially demolish the 1500 Mission Street building to construct a 16-story office building containing approximately 455,600 sf of office space and an approximately 4,400 sf childcare facility. Up to 252 below-grade parking spaces would be included with this alternative.	This alternative would demolish the 1580 Mission Street building to construct a 39-story residential and retail/restaurant development providing 458 units, and partially demolish the 1500 Mission Street building to construct a 16-story office building containing approximately 452,400 sf of office space. Up to 117 below-grade parking spaces would be included with this alternative.	This alternative would demolish the 1580 Mission Street building and partially demolish the 1500 Mission Street building to construct two residential towers (a 39- and 30-story tower) with retail/restaurant use that would provide 976 units. Up to 501 below-grade parking spaces would be included with this alternative.
Ability to Meet Project Sponsor's Objectives	All.	None.	Most.	Most.	Some.
Cultural Resources					
Historical Resources	Impact CR-1: The proposed project would not cause a substantial adverse change in the significance of a historical resource due to the demolition of the 1580 Mission Street building, which is not considered a historical resource, as defined in CEQA Guidelines Section 15064.5(b). (NI)	No impact. (NI)	Same as the proposed project. (NI)	Same as the proposed project. (NI)	Same as the proposed project. (NI)
Historical Resources	Impact CR-2: The proposed project would demolish most of the historic 1500 Mission Street building, which would cause a substantial adverse change in the significance of a historical resource, as defined in CEQA Guidelines Section 15064.5(b). (SUM)	No impact. (NI)	Similar to but less than proposed project. (SUM)	Substantially less than the proposed project. (LTS)	Similar to the proposed project. (SUM)

TABLE S-3 COMPARISON OF THE SIGNIFICANT ENVIRONMENTAL IMPACTS OF PROJECT TO IMPACTS OF ALTERNATIVES

Impacts	Proposed Project	Alternative A: No Project Alternative	Alternative B: Partial Preservation Alternative	Alternative C: Full Preservation Alternative	Alternative D: All Residential Alternative
Historical Resources	Impact CR-3: The proposed project would not cause a substantial adverse change in the significance of an adjacent historical resource. (LTS)	No impact. (NI)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)
Archeological Resources	Impact CR-4: The proposed project could cause a substantial adverse change in the significance of an archeological resource pursuant to Section 15064.5(f). (SM)	No impact. (NI)	Similar to the proposed project. (SM)	Similar to the proposed project. (SM)	Similar to but worse than the proposed project. (SM)
Cultural Resources	Impact CR-5: The proposed project could result in a substantial adverse change in the significance of a tribal cultural resource. (SM)	No impact. (NI)	Similar to the proposed project. (SM)	Similar to the proposed project. (SM)	Similar to or worse than the proposed project. (SM)
Archeological Resources	Impact CR-6: The proposed project could disturb human remains, including those interred outside of formal cemeteries. (SM)	No impact. (NI)	Similar to the proposed project. (SM)	Similar to the proposed project. (SM)	Similar to but worse than the proposed project. (SM)
Cumulative Cultural Resources	Impact C-CR-1: The proposed project, in combination with past, present, and reasonably foreseeable projects in the area, would not result in a significant cumulative impact on historic architectural resources. (LTS)	No impact. (NI)	Similar to but less than the proposed project. (LTS)	Similar to but less than the proposed project. (LTS)	Similar to the proposed project. (LTS)
Cumulative Cultural Resources	Impact C-CR-2: The proposed project, in combination with past, present, and reasonably foreseeable projects in the area, would not result in significant cumulative impacts on archeological resources, tribal cultural resources, or human remains. (LTS)	No impact. (NI)	Similar to but less than the proposed project. (LTS)	Similar to but less than the proposed project. (LTS)	Similar to the proposed project. (LTS)

TABLE S-3 COMPARISON OF THE SIGNIFICANT ENVIRONMENTAL IMPACTS OF PROJECT TO IMPACTS OF ALTERNATIVES

Impacts	Proposed Project	Alternative A: No Project Alternative	Alternative B: Partial Preservation Alternative	Alternative C: Full Preservation Alternative	Alternative D: All Residential Alternative
Transportation and Circulation					
VMT	Impact TR-1: The proposed project would not cause substantial additional VMT nor substantially induce automobile travel. (LTS)	No impact. (NI)	Fewer person and vehicle trips than the proposed project. Similar VMT per capita. (LTS)	Fewer person and vehicle trips than the proposed project. Similar VMT per capita. (LTS)	Fewer person and vehicle trips than the proposed project. Similar VMT per capita. (LTS)
Traffic Hazards	Impact TR-2: The proposed project would not cause major traffic hazards. (LTS)	No impact. (NI)	Fewer trips and traffic hazards than the proposed project. (LTS)	Fewer trips and traffic hazards than the proposed project. (LTS)	Fewer trips and traffic hazards than the proposed project. (LTS)
Transit Demand and Service	Impact TR-3: The proposed project would not result in a substantial increase in transit demand that could not be accommodated by adjacent local and regional transit capacity, but could cause a substantial increase in delays or operating costs such that significant adverse impacts to local or regional transit service could occur. (SM)	No impact. (NI)	Fewer transit trips than the proposed project. Similar operational conclusions. (SM)	Fewer transit trips than the proposed project. Similar operational conclusions. (SM)	Fewer transit trips than the proposed project. Similar operational conclusions. (SM)
Pedestrian Accessibility	Impact TR-4: The proposed project would not result in substantial overcrowding on public sidewalks, but could create potential hazardous conditions for pedestrians, and otherwise interfere with pedestrian accessibility to the site and adjoining areas. (SM)	No impact. (NI)	Fewer pedestrian trips than the proposed project. Similar accessibility and hazards conclusions. (SM)	Fewer pedestrian trips than the proposed project. Similar accessibility and hazards conclusions. (SM)	Fewer pedestrian trips than the proposed project. Similar accessibility and hazards conclusions. (SM)
Bicyclist Accessibility	Impact TR-5: The proposed project could result in potentially hazardous conditions for bicyclists, or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas. (SM)	No impact. (NI)	Fewer bicycle trips than the proposed project. Similar accessibility and hazards conclusions. (SM)	Fewer bicycle trips than the proposed project. Similar accessibility and hazards conclusions. (SM)	Fewer bicycle trips than the proposed project. Similar accessibility and hazards conclusions. (SM)

TABLE S-3 COMPARISON OF THE SIGNIFICANT ENVIRONMENTAL IMPACTS OF PROJECT TO IMPACTS OF ALTERNATIVES

Impacts	Proposed Project	Alternative A: No Project Alternative	Alternative B: Partial Preservation Alternative	Alternative C: Full Preservation Alternative	Alternative D: All Residential Alternative
Loading Facilities	Impact TR-6: The proposed project would not result in a loading demand that could not be accommodated within the proposed on-site loading facilities, or within convenient on-street loading zones, but could create potentially hazardous conditions or significant delays for traffic, transit, bicyclists, or pedestrians. (SM)	No impact. (NI)	Fewer loading trips than the proposed project. Similar loading configuration and conflicts conclusions. (SM)	Fewer loading trips than the proposed project. Similar loading configuration and conflicts conclusions. (SM)	Fewer loading trips than the proposed project, but more residential move-in/move-out trips. Similar loading configuration and conflict conclusions. (SM)
Emergency Access	Impact TR-7: The proposed project would not result in significant impacts on emergency vehicle access. (LTS)	No impact. (NI)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)
Construction Related Hazards	Impact TR-8: The proposed project construction activities would not result in substantial interference with pedestrian, bicycle, or vehicle circulation and accessibility to adjoining areas, and would not result in potentially hazardous conditions. (LTS)	No impact. (NI)	Fewer construction trips than the proposed project. Similar construction hazards conclusions to the proposed project. (LTS)	Fewer construction trips than the proposed project. Similar construction hazards conclusions to the proposed project. (LTS)	Fewer construction trips than the proposed project. Similar construction hazards conclusions to the proposed project. (LTS)
Cumulative VMT Impacts	Impact C-TR-1: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not contribute to regional VMT in excess of expected levels. (LTS)	No impact. (NI)	Fewer person and vehicle trips than the proposed project. Similar VMT per capita. (LTS)	Fewer person and vehicle trips than the proposed project. Similar VMT per capita. (LTS)	Fewer person and vehicle trips than the proposed project. Similar VMT per capita. (LTS)
Traffic Hazards	Impact C-TR-2: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not cause major traffic hazards. (LTS)	No impact. (NI)	Fewer trips and traffic hazards than the proposed project. (LTS)	Fewer trips and traffic hazards than the proposed project. (LTS)	Fewer trips and traffic hazards than the proposed project. (LTS)

TABLE S-3 COMPARISON OF THE SIGNIFICANT ENVIRONMENTAL IMPACTS OF PROJECT TO IMPACTS OF ALTERNATIVES

Impacts	Proposed Project	Alternative A: No Project Alternative	Alternative B: Partial Preservation Alternative	Alternative C: Full Preservation Alternative	Alternative D: All Residential Alternative
Cumulative Transit Demand and Service	Impact C-TR-3: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant transit impacts. (LTS)	No impact. (NI)	Fewer transit trips than the proposed project. Similar operational conclusions. (LTS)	Fewer transit trips than the proposed project. Similar operational conclusions. (LTS)	Fewer transit trips than the proposed project. Similar operational conclusions. (LTS)
Cumulative Pedestrian Accessibility	Impact C-TR-4: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant pedestrian impacts. (LTS)	No impact. (NI)	Fewer pedestrian trips than the proposed project. Similar accessibility and hazards conclusions. (LTS)	Fewer pedestrian trips than the proposed project. Similar accessibility and hazards conclusions. (LTS)	Fewer pedestrian trips than the proposed project. Similar accessibility and hazards conclusions. (LTS)
Cumulative Bicyclist Accessibility	Impact C-TR-5: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not result in cumulative bicycle impacts. (SM)	No impact. (NI)	Fewer bicycle trips than the proposed project. Similar accessibility and hazards conclusions. (SM)	Fewer bicycle trips than the proposed project. Similar accessibility and hazards conclusions. (SM)	Fewer bicycle trips than the proposed project. Similar accessibility and hazards conclusions. (SM)
Cumulative Loading Facilities	Impact C-TR-6: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant impacts on loading. (LTS)	No impact. (NI)	Fewer loading trips than the proposed project. Similar loading configuration and conflicts conclusions. (LTS)	Fewer loading trips than the proposed project. Similar loading configuration and conflicts conclusions. (LTS)	Fewer loading trips than the proposed project, but more residential move-in/move-out trips. Similar loading configuration and conflicts conclusions. (LTS)
Cumulative Emergency Access	Impact C-TR-7: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant impacts on emergency vehicle access. (LTS)	No impact. (NI)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)

TABLE S-3 COMPARISON OF THE SIGNIFICANT ENVIRONMENTAL IMPACTS OF PROJECT TO IMPACTS OF ALTERNATIVES

Impacts	Proposed Project	Alternative A: No Project Alternative	Alternative B: Partial Preservation Alternative	Alternative C: Full Preservation Alternative	Alternative D: All Residential Alternative
Cumulative Construction Related Hazards	Impact C-TR-8: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would contribute considerably to significant cumulative construction-related transportation impacts. (SUM)	No impact. (NI)	Fewer construction trips than the proposed project. Similar construction hazards conclusions to the proposed project. Similar contributions to significant cumulative impacts in combination with reasonably foreseeable projects in the vicinity. (SUM)	Fewer construction trips than the proposed project. Similar construction hazards conclusions to the proposed project. Similar contributions to significant cumulative impacts in combination with reasonably foreseeable projects in the vicinity. (SUM)	Fewer construction trips than the proposed project. Similar construction hazards conclusions to the proposed project. Similar contributions to significant cumulative impacts in combination with reasonably foreseeable projects in the vicinity. (SUM)
Air Quality					
Construction Air Quality	Impact AQ-1: The proposed project's construction activities would generate fugitive dust and criteria air pollutants but would not violate an air quality standard, contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants. (LTS)	No impact. (NI)	Similar to but less than proposed project. (LTS)	Similar to but less than proposed project. (LTS)	Similar to the proposed project. (LTS)
Operational Air Quality	Impact AQ-2: During project operations, the proposed project would result in emissions of criteria air pollutants, but not at levels that would violate an air quality standard, contribute to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants. (LTS)	No impact. (NI)	Similar to but less than proposed project. (LTS)	Similar to but less than proposed project. (LTS)	Similar to the proposed project. (LTS)
Exposure to Sensitive Receptors	Impact AQ-3: The proposed project would generate toxic air contaminants, including diesel particulate matter, exposing sensitive receptors to substantial air pollutant concentrations. (SM)	No impact. (NI)	Similar to but less than proposed project. (SM)	Similar to but less than proposed project. (SM)	Similar to the proposed project. (SM)

TABLE S-3 COMPARISON OF THE SIGNIFICANT ENVIRONMENTAL IMPACTS OF PROJECT TO IMPACTS OF ALTERNATIVES

Impacts	Proposed Project	Alternative A: No Project Alternative	Alternative B: Partial Preservation Alternative	Alternative C: Full Preservation Alternative	Alternative D: All Residential Alternative
Clean Air Plan Consistency	Impact AQ-4: The proposed project would not conflict with, or obstruct implementation of, the <i>2010 Clean Air Plan</i> . (LTS)	No impact. (NI)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)
Odors	Impact AQ-5: The proposed project would not create objectionable odors that would affect a substantial number of people. (LTS)	No impact. (NI)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)
Cumulative Air Quality	Impact C-AQ-1: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not contribute considerably to cumulative increases in criteria air pollutant emissions. (LTS)	No impact. (NI)	Similar to but less than proposed project. (LTS)	Similar to but less than proposed project. (LTS)	Similar to the proposed project. (LTS)
Cumulative Toxic Air Contaminants	Impact C-AQ-2: The proposed project could result in a considerable contribution to cumulative increases in short- and long-term exposures to Toxic Air Contaminants. (SM)	No impact. (NI)	Similar to but less than proposed project. (SM)	Similar to but less than proposed project. (SM)	Similar to the proposed project. (SM)
Wind					
Alter Wind	Impact WI-1: The proposed project would not alter wind in a manner that substantially affects public areas in the vicinity of the project site. (LTS)	No impact. (NI)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)
Cumulative Wind	Impact C-WI-1: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would alter wind in a manner that substantially affects public areas in the vicinity of the project site, but the proposed project's contribution to this impact would not be cumulatively considerable. (LTS)	No impact. (NI)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)

TABLE S-3 COMPARISON OF THE SIGNIFICANT ENVIRONMENTAL IMPACTS OF PROJECT TO IMPACTS OF ALTERNATIVES

Impacts	Proposed Project	Alternative A: No Project Alternative	Alternative B: Partial Preservation Alternative	Alternative C: Full Preservation Alternative	Alternative D: All Residential Alternative
Shadow					
Shadow on Designated Park or Open Space	Impact SH-1: The proposed project would not create new shadow in a manner that would have an adverse effect on the use of any park or open space under the jurisdiction of the Recreation and Park Department. (LTS)	No impact. (NI)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)
Shadow on Public Open Space	Impact SH-2: The proposed project would not create new shadow in a manner that would substantially affect the use of other existing publicly-accessible open space or outdoor recreation facilities or other public areas. (LTS)	No impact. (NI)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)
Cumulative Shadow	Impact C-SH-1: The proposed project, in combination with past, present, or reasonably foreseeable future projects, would create new shadow in a manner that would substantially affect the use of any park or open space under the jurisdiction of the Recreation and Park Department, or other existing publicly-accessible open space, outdoor recreation facilities, or other public areas; however, the proposed project's contribution to this impact would not be cumulatively considerable. (LTS)	No impact. (NI)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)

IMPACT CODES:

NI No impact

LTS Less than significant or negligible impact; no mitigation required

SM Significant but mitigable

SU Significant and unavoidable adverse impact, no feasible mitigation

SUM Significant and unavoidable adverse impact, after mitigation

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CHAPTER I

Introduction

I.A Project Summary

This Environmental Impact Report (EIR) analyzes potential environmental effects associated with the 1500 Mission Street project (proposed project). The project sponsor, Goodwill SF Urban Development, LLC, an affiliate of Related California Urban Housing, proposes to demolish an existing 29,000-square-foot, 30-foot-tall building at 1580 Mission Street and to retain and rehabilitate a portion of an existing 57,000-square-foot, 28-foot-tall building at 1500 Mission Street and demolish the remaining portions on the project site, and construct a mixed-use development with two components: an approximately 767,200-square-foot, 396-foot-tall (416 feet to the top of the parapet) residential and retail/restaurant building at the corner of South Van Ness Avenue and Mission Street; and an approximately 567,300-square-foot, 227-foot-tall (257 feet to the top of the parapet) office and permit center building for the City and County of San Francisco (“City”) on 11th Street between Market and Mission Streets. The project site is bounded by Mission Street to the south, South Van Ness Avenue to the west, and 11th Street to the east in the South of Market (SoMa) neighborhood of San Francisco. The proposed project includes a proposed Zoning Map amendment and *Planning Code* text amendment to create the Mission and South Van Ness Special Use District to supersede the Van Ness & Market Downtown Residential Special Use District designation and a proposed amendment to *Planning Code* Section 270 associated with bulk limitations, allowing for an exceedance of the current Height and Bulk District limitations, additional off-street parking, and office space above the fourth floor. Further details regarding the proposed project components that form the basis for the EIR analysis are discussed in depth in Chapter II, *Project Description*.

I.B Purpose of This EIR

This EIR analyzes the physical environmental effects associated with implementation of the proposed project. This EIR has been prepared by the San Francisco Planning Department (Planning Department) in the City and County of San Francisco, the Lead Agency for the proposed project, in compliance with the provisions of the California Environmental Quality Act (CEQA) and the CEQA Guidelines (California Public Resources Code Sections 21000 et seq., and California Code of Regulations Title 14, Sections 15000 et seq., “CEQA Guidelines”), and Chapter 31 of the San Francisco Administrative Code. The lead agency is the public agency that has the principal responsibility for carrying out or approving a project.

As described by CEQA and in the CEQA Guidelines, public agencies are charged with the duty to avoid or substantially lessen significant environmental effects, where feasible. In undertaking this duty, a public agency has an obligation to balance a project’s significant effects on the environment with its benefits, including economic, social, technological, legal, and other non-environmental characteristics.

As defined in CEQA Guidelines Section 15382, a “significant effect on the environment” is:

... a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.

CEQA requires that before a discretionary decision can be made to approve a project that may cause a significant effect on the environment, an EIR must be prepared. The EIR is a public information document for use by governmental agencies and the public to identify and evaluate potential environmental impacts of a project, to identify mitigation measures to lessen or eliminate significant adverse impacts, and to examine feasible alternatives to the project. The City must consider the information in this EIR and make certain findings with respect to each significant effect that is identified. The information contained in this EIR, along with other information available through the public review processes, will be reviewed and considered by the decision-makers prior to a decision to approve, disapprove, or modify the proposed project, or to adopt an alternative to the proposed project.

I.C Type of EIR

This document is a project-level EIR pursuant to the CEQA Guidelines Section 15161. A project-level EIR focuses on the changes in the environment that would result from construction and operation of a specific development project.

Furthermore, this EIR is also a focused EIR, in accordance with CEQA Guidelines Section 15063(c). In accordance with Section 15128, an Initial Study on the proposed project was prepared (refer to Appendix A of this EIR), to identify which of the proposed project’s effects would result in less-than-significant impacts and do not require further analysis, and which topics warrant more detailed environmental analysis in the EIR. The Initial Study has not gone through a separate public review process; however, comments will be accepted on the Initial Study during the public review period for the EIR.⁶ Thus, this EIR focuses the environmental analysis on those topics identified in the Initial Study with the potential to have significant impacts.

This EIR evaluates the whole of the proposed action, including project-level impacts (off-site, on-site, construction-related, operational, direct, and indirect) and cumulative impacts. This EIR is an informational document that does not determine whether a project will be approved, but aids in the planning and decision-making process by disclosing the potential environmental impacts associated with construction and operation of the proposed project.

An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information that enables them to make a decision that takes account of environmental consequences. An evaluation of the environmental impacts of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts

⁶ Pursuant to CEQA Guidelines Section 15128, the EIR shall contain a brief statement indicating the reasons why various possible significant effects were determined not to be significant and were therefore not discussed in the EIR. A copy of the initial study or NOP should be attached to the EIR to provide a basis for limiting the impacts discussion.

have looked not for perfection, but for adequacy, completeness, and a good faith effort at full disclosure (CEQA Guidelines Section 15151).

I.D CEQA Environmental Review Process

I.D.1 Notice of Preparation

Goodwill SF Urban Development, LLC filed an Environmental Evaluation application with the Planning Department on October 14, 2014. The filing of the Environmental Evaluation application initiated the environmental review process. The EIR process provides an opportunity for the public to review and comment on the proposed project's potential environmental effects and to further inform the environmental analysis.

On May 13, 2015, the Planning Department published a Notice of Preparation (NOP) of an Environmental Impact Report (EIR) and a Notice of Public Scoping Meeting for the project. The NOP was distributed for a 30-day review period to responsible or trustee agencies with CEQA Guidelines Section 15082, and to other organizations, companies, and/or individuals that the City believed have an interest in the project. The NOP requested that agencies and interested parties comment on environmental issues that should be addressed in the EIR. The purpose of the public review period was to solicit comments on the scope and content of the environmental analysis contained in the EIR. In addition, to solicit further comments on the scope and content of the environmental analysis to be included in the EIR, the Planning Department held a public scoping meeting on June 2, 2015, at One South Van Ness Avenue in San Francisco.

I.D.2 Areas of Known Controversy and Issues to Be Resolved

During the NOP review and comment period, a total of four comment letters were submitted to the Planning Department and three speakers provided oral comments at the public scoping session. Many of the comments expressed concern over the effects of the project on nearby neighborhoods with respect to: the proposed height of the towers at 396 feet for the residential and retail/restaurant component and 227 feet for the office and permit center component, amount of parking provided, increase in vehicular traffic in the area, and wind and shadow effects. Comments were received from one agency with specific requests pertaining to the transportation analysis, and one organization provided comments regarding the existing historic structure on-site and the proposed project's impacts to architectural resources.

The comment letters, emails, and comment cards received in response to the NOP, as well as a transcript of the oral comments received at the June 2, 2015, public scoping meeting can be found in Appendix B and are also available for review as part of Case File No. 2014-000362ENV. The Planning Department has considered the comments made by the public in preparation of the EIR for the proposed project. Comments on the NOP that relate to environmental issues are addressed and analyzed throughout this EIR and Initial Study.

Comments expressing support for or opposition to the proposed project will be considered independently of the environmental review process by City decision-makers as part of their decision to approve, modify, or disapprove the proposed project.

As noted in the *Summary* of this EIR, the proposed project is subject to CEQA Statute 21099(d), which eliminates consideration of impacts related to the topics of aesthetics and parking in determining the significance of physical environmental impacts under CEQA for residential, mixed-use residential, or employment center projects on infill sites within transit priority areas. Accordingly, this EIR does not contain a separate discussion of impacts related to the topic of aesthetics. The EIR nonetheless provides an overview of the existing and proposed visual character of the site and surroundings for informational purposes as part of Chapter II, *Project Description*. Furthermore, this EIR discusses parking in Section IV.B, *Transportation and Circulation*, for informational purposes only. Overall, the information regarding aesthetics (visual character) and parking provided here does not relate to the impact significance determinations in the EIR.

In addition, CEQA Section 21099(b)(1) requires that the State Office of Planning and Research (OPR) develop revisions to the CEQA Guidelines establishing criteria for determining the significance of transportation impacts of projects that promote the “reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses.” CEQA Section 21099(b)(2) states that upon certification of the revised CEQA Guidelines for determining transportation impacts pursuant to Section 21099(b)(1), automobile delay, as described solely by level of service (LOS) or similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment under CEQA.

In January 2016, OPR published for public review and comment a *Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA* (proposed transportation impact guidelines) recommending that transportation impacts for projects be measured using a vehicle miles traveled (VMT) metric.⁷ VMT measures the amount and distance that a project might cause people to drive, accounting for the number of passengers within a vehicle.

OPR’s proposed transportation impact guidelines provides substantial evidence that VMT is an appropriate standard to use in analyzing transportation impacts to protect environmental quality and a better indicator of greenhouse gas, air quality, and energy impacts than automobile delay. Acknowledging this, San Francisco Planning Commission Resolution 19579, adopted on March 3, 2016:

- Found that automobile delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion, shall no longer be considered a significant impact on the environment pursuant to CEQA, because it does not measure environmental impacts and therefore it does not protect environmental quality.
- Directed the Environmental Review Officer to remove automobile delay as a factor in determining significant impacts pursuant to CEQA for all guidelines, criteria, and list of exemptions, and to update the Transportation Impact Analysis Guidelines for Environmental Review and Categorical Exemptions from CEQA to reflect this change.
- Directed the Environmental Planning Division and Environmental Review Officer to replace automobile delay with VMT criteria which promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses; and consistent with proposed and forthcoming changes to the CEQA Guidelines by OPR.

⁷ California Governor’s Office of planning and Research, *Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA*, January 20, 2016. This document (and all other documents cited in this report, unless otherwise noted) is available for review at 1650 Mission Street, Suite 400, San Francisco, CA, as part of Case No. 2014.000362ENV. It is also available at https://www.opr.ca.gov/s_sb743.php, accessed September 20, 2016.

Planning Commission Resolution 19579 became effective immediately for all projects that have not received a CEQA determination and all projects that have previously received CEQA determinations, but require additional environmental analysis.

Accordingly, this EIR does not contain a discussion of automobile delay impacts. Instead, a VMT and induced automobile travel impact analysis is provided in Section IV.B, *Transportation and Circulation*. Nonetheless, automobile delay may be considered by decision-makers, independent of the environmental review process, as part of their decision to approve, modify, or disapprove the proposed project.

I.D.3 Draft EIR and Initial Study Public Review and Opportunities for Public Participation

An Initial Study has been prepared to determine whether any aspect of the proposed project, either individually or cumulatively, would cause a significant effect on the environment. The Initial Study narrowed the focus (or scope) of the environmental analysis by identifying which impacts would be less than significant (with or without mitigation), and, therefore, were adequately analyzed in the Initial Study, and which impacts required further analysis in the EIR. The Initial Study found that the following potential individual and cumulative environmental impacts of the proposed project would result in less-than-significant impacts and did not require further analysis in the EIR: Land Use and Land Use Planning, Population and Housing, Noise, Greenhouse Gas Emissions, Recreation, Utilities and Services Systems, Public Services, Biological Resources, Geology and Soils, Hydrology and Water Quality, Hazards and Hazardous Materials, Mineral and Energy Resources, and Agriculture and Forest Resources. As such, these issue topics are not further addressed in this EIR. The Initial Study determined that the proposed project could result in potentially significant environmental impacts to the following environmental topics, which are analyzed in this EIR: Cultural Resources, Transportation and Circulation, Air Quality, Wind, and Shadow. The Initial Study has not gone through a separate public review process; however, comments will be accepted on the Initial Study during the public review period for the EIR per CEQA Guideline Section 15128, as discussed below.

The CEQA Guidelines and Chapter 31 of the *San Francisco Administrative Code* encourage public participation in the planning and environmental review processes. The City will provide opportunities for the public to present comments and concerns regarding this EIR and Initial Study and its CEQA process. These opportunities will occur during a public review and comment period and a public hearing before the San Francisco Planning Commission.

The Draft EIR and Initial Study are available for public review and comment on the Planning Department's Negative Declarations and EIRs web page (<http://tinyurl.com/sfceqadocs>). CDs and paper copies are also available at the Planning Information Center (PIC) counter on the first floor of 1660 Mission Street, San Francisco. Referenced materials are available for review by appointment at the Planning Department's office on the fourth floor of 1650 Mission Street (call (415) 575-9028). Documents referenced in this EIR are available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2014-000362ENV. The public comment period for this EIR is from November 9, 2016, to January 4, 2017.

The Planning Commission will hold a public hearing on this Draft EIR during the 55-day public review and comment period for this Draft EIR to solicit public comment on the information presented in this Draft EIR.

The public hearing will be held on December 15, 2016 at City Hall, Dr. Carlton B. Goodlett Place, Room 400, beginning at 12:00 p.m. or later (call (415) 588-6422 the week of the hearing for a recorded message giving a more specific time).

The Historic Preservation Commission (HPC) will hold a public hearing on this Draft EIR to consider providing comments on the Draft EIR. The public hearing will be held on December 7, 2016, at City Hall, Dr. Carlton B. Goodlett Place, Room 400, beginning at 12:30 p.m. Please call (415) 558-6320 the week of the hearing for a recorded message giving a more specific time.

In addition, members of the public are invited to submit written comments on the Draft EIR. Written public comments may be submitted to:

City and County of San Francisco
Planning Department
Attention: Lisa M. Gibson, Acting Environmental Review Officer
1650 Mission Street, Suite 400
San Francisco, CA 94103
lisa.gibson@sfgov.org

Comments are most helpful when they suggest specific alternatives and/or additional measures that would better mitigate significant environmental impacts or comment on the environmental analysis itself.

Members of the public are not required to provide personal identifying information when they communicate with the Planning Commission. All written or oral communications, including submitted personal contact information, may be made available to the public for inspection and copying upon request and may appear on the Department's website or in other public documents.

I.D.4 Final EIR and EIR Certification

Following the close of the public review and comment period, the City will prepare and publish a document titled "Responses to Comments on Draft EIR," which will contain all written and recorded oral comments on this Draft EIR and written responses to those comments, along with copies of the letters received, a transcript of the public hearing, and any necessary revisions to the Draft EIR. The Draft EIR and the Responses to Comment document will constitute the Final EIR. Not less than ten days prior to the Planning Commission hearing to consider certification of the Final EIR, the Final EIR will be made available to the public and to any board(s), commission(s) or department(s) that will carry out or approve the project. The Planning Commission hearing, in an advertised public meeting(s), will consider the documents and, if found adequate, will certify the Final EIR: (1) has been completed in compliance with CEQA; (2) was presented to the Planning Commission and the Planning Commission reviewed and considered the information contained in the Final EIR prior to approving the proposed project; and (3) reflects the lead agency's independent judgment and analysis.

CEQA requires that agencies shall neither approve nor implement a project unless the project's significant environmental impacts have been reduced to a less-than-significant level, essentially eliminating, avoiding, or substantially lessening the potentially significant impacts, except when certain findings are made. If an agency approves a project that would result in the occurrence of significant adverse impacts that cannot feasibly be

mitigated to less-than-significant levels (that is, significant and unavoidable impacts), the agency must state the reasons for its action in writing, demonstrate that mitigation is infeasible based on the EIR or other information in the record, and adopt a Statement of Overriding Considerations.

I.D.5 Mitigation Monitoring and Reporting Program

At the time of project approval, CEQA and the CEQA Guidelines require lead agencies to adopt a reporting and mitigation monitoring program that it has made a condition of project approval in order to mitigate or avoid significant impacts on the environment (CEQA Guidelines Section 21081.6; CEQA Guidelines Section 15097). This EIR identifies and presents mitigation measures and improvement measures that would form the basis of such a monitoring and reporting program. Any mitigation and improvement measures adopted by the Agency and City as conditions for approval of the project would be included in the Mitigation Monitoring and Reporting Program (MMRP).

I.E Organization of the Draft EIR

This EIR has been organized as follows:

- **Summary.** This chapter summarizes the EIR by providing a concise overview of the proposed project, the environmental impacts that would result from the proposed project, mitigation and improvement measures identified to reduce or eliminate these impacts, project alternatives and their comparative environmental effects, and areas of controversy and issues to be resolved.
- **Chapter I, *Introduction*.** This chapter includes a discussion of the purpose of the EIR, a discussion of the environmental review process, a summary of the comments received on the scope of the EIR, and a brief outline of this document's organization.
- **Chapter II, *Project Description*.** This chapter provides a detailed description of the project, including the project background and objectives, project location, existing site land use characteristics, project components and characteristics, development schedule (including anticipated construction activities), and identifies project approvals (or intended uses of the EIR).
- **Chapter III, *Plans and Policies*.** This chapter provides a summary of the plans, policies, and regulations of the City, regional, and State agencies that may be applicable to the project.
- **Chapter IV, *Environmental Setting, Impacts, and Mitigation Measures*.** This chapter provides analysis for the five resources topics previously identified for further analysis. Each environmental topic contains a description of the environmental setting (or existing conditions), regulatory framework, and project-level and cumulative impacts. Each impact discussion includes the significance criteria used to determine the nature or magnitude of environmental impacts, significance conclusions, and feasible mitigation and improvement measures that would avoid, minimize, or mitigate significant or potentially significant environmental impacts, if feasible. Environmental topics included in this EIR are as follows:
 - Cultural Resources;
 - Transportation and Circulation;
 - Air Quality;
 - Wind; and

- Shadow.
- **Chapter V, *Other CEQA Considerations*.** Pursuant to Section 15126.2 of the CEQA Guidelines, this chapter summarizes any growth-inducing impacts that could result from the proposed project, irreversible changes to the environment, and significant and unavoidable environmental impacts and this chapter presents any areas of controversy left to be resolved.
- **Chapter VI, *Alternatives*.** This chapter analyzes alternatives to the proposed project, including the required No Project Alternative, and compares their environmental effects to those of the proposed project, and identifies the environmentally superior alternative. This chapter also discusses other alternatives considered but rejected as infeasible. Alternatives evaluated in this chapter include the following:
 - Alternative A: No Project Alternative
 - Alternative B: Partial Preservation Alternative
 - Alternative C: Full Preservation Alternative
 - Alternative D: All Residential Alternative
- **Chapter VII, *EIR Preparers and Persons and Organizations Consulted*.** This chapter presents a list of persons involved in preparation of this EIR, as well as the persons and organizations contacted during preparation of the EIR.
- **Appendices.** The following appendices are included in this EIR: Initial Study (Appendix A) and Notice of Preparation (NOP) for Case No. 2014-000362ENV and Written Responses and Public Comments on the NOP (Appendix B).

CHAPTER II

Project Description

II.A Project Overview

The project sponsor, Goodwill SF Urban Development, LLC, proposes to demolish an existing 29,000-square-foot, 30-foot-tall building at 1580 Mission Street and to retain and rehabilitate a portion of an existing 57,000-square-foot, 28-foot-tall building at 1500 Mission Street and demolish the remaining portions on the project site, and construct a mixed-use development with two components: an approximately 767,200-square-foot, 396-foot-tall (416 feet to the top of the parapet) residential and retail/restaurant building at the corner of South Van Ness Avenue and Mission Street; and an approximately 567,300-square-foot, 227-foot-tall (257 feet to the top of the parapet) office and permit center building for the City and County of San Francisco (“City”) on 11th Street between Market and Mission Streets. The project site is bounded by Mission Street to the south, South Van Ness Avenue to the west, and 11th Street to the east in the South of Market (SoMa) neighborhood of San Francisco. The proposed project includes a proposed Zoning Map amendment and *Planning Code* text amendment to create the Mission and South Van Ness Special Use District to supersede the Van Ness & Market Downtown Residential Special Use District designation and a proposed amendment to *Planning Code* Section 270 associated with bulk limitations, allowing for an exceedance of the current Height and Bulk District limitations, additional off-street parking, and office space above the fourth floor.

II.B Project Sponsor’s and City’s Objectives

The project sponsor, Goodwill SF Urban Development, LLC, would develop the proposed project, and the City would purchase prior to construction and occupy the office and permit center component following construction. Therefore, the proposed project’s objectives are listed as two distinct groupings, one representing the City’s objectives for the office and permit center component and one representing the project sponsor’s objectives for the retail and residential component development. Collectively, these constitute the proposed project’s objectives.

The City’s objectives for the City office and permit center component of the proposed project are to:

1. Develop a new, seismically-sound, Class-A, LEED Gold City office building of enough size to accommodate several interdependent City departments currently housed in disparate buildings around the Civic Center, into a single building to foster interagency cooperation, and located in close proximity to mass transit.
2. Allow for potential future physical connections to the existing City office building at One South Van Ness Avenue by developing a new City office building on an adjacent site.
3. Provide large office floor plates on the lower levels of the building to accommodate the specific functional requirements of several essential services departments (San Francisco Public Works, Department of Building Inspection, and the Planning Department), to allow for a one-stop permit

center, to centralize permitting functions for enhanced customer service and streamlined operations on a single floor.

4. Ensure enough parking spaces are provided to accommodate vehicles used by inspectors and other City personnel who make off-site field trips, as well as parking for members of the public visiting the permit center and other City offices.
5. Construct shared conference, meeting, training, and boardroom facilities on the lower levels of the building for use by occupants of the office building, other nearby City departments, and the public.
6. Provide and activate publicly-accessible open space areas, including a mid-block pedestrian connection, with regular civic programming and other public events.
7. Provide an early childcare facility primarily for use by City employees.

Goodwill SF Urban Development, LLC's, objectives for the Retail/Residential Component of the project are to:

1. Redevelop a large underused site at a prominent location in the downtown area that will serve as an iconic addition to the City's skyline and a gateway to the Civic Center and that will include a range of residential unit types and neighborhood serving retail uses.
2. Build a substantial number of dwelling units on the site, including 20 percent to be affordable to residents earning a maximum of 50 percent of the average median income, to contribute to the City's *General Plan* Housing Element goals, and the Association of Bay Area Governments' Regional Housing Needs Allocation for the City.
3. Assist the City in fulfilling its objectives associated with the construction of a new City office building and one-stop permit center on a portion of the site not developed with residential and retail uses and that can be subdivided as a separate legal parcel and conveyed to the City.
4. Create a mixed-use project generally consistent with the land use, housing, open space and other objectives and policies of the Market & Octavia Area Plan.
5. Provide commercial retail space of sufficient size to attract neighborhood-serving retail and personal services that are not currently offered in the immediate vicinity for project residents, area residents, and the public, such as one or more restaurants and a market.
6. Retain portions of the former Coca-Cola Bottling Co. building, including the original clock tower and elements of the facades along Mission and 11th Streets that contribute to the Streamline Moderne character-defining features of the building.
7. Develop a project that is economically feasible, able to attract equity and debt financing, and that will create a reasonable financial return to the project sponsor.

II.C Project Location

II.C.1 Project Site

The project site consists of two parcels (Assessor's Block 3506, Lot 002 [1500 Mission Street] and Lot 003 [1580 Mission Street]), located on the north side of Mission Street between 11th Street to the east and South Van Ness Avenue to the west, within San Francisco's South of Market (SoMa) neighborhood, as shown in **Figure II-1**,

Project Location.⁸ The project site is located within the Downtown Area Plan and Market & Octavia Area Plan and is located within the C-3-G (Downtown General Commercial) Use District, the Van Ness & Market Downtown Residential Special Use District, and the 120/320-R-2, 85/250-R-2, and 85-X Height and Bulk Districts. **Figure III-2** in Chapter III, *Plans and Policies*, illustrates the height and bulk districts within a one-block radius of the project site.

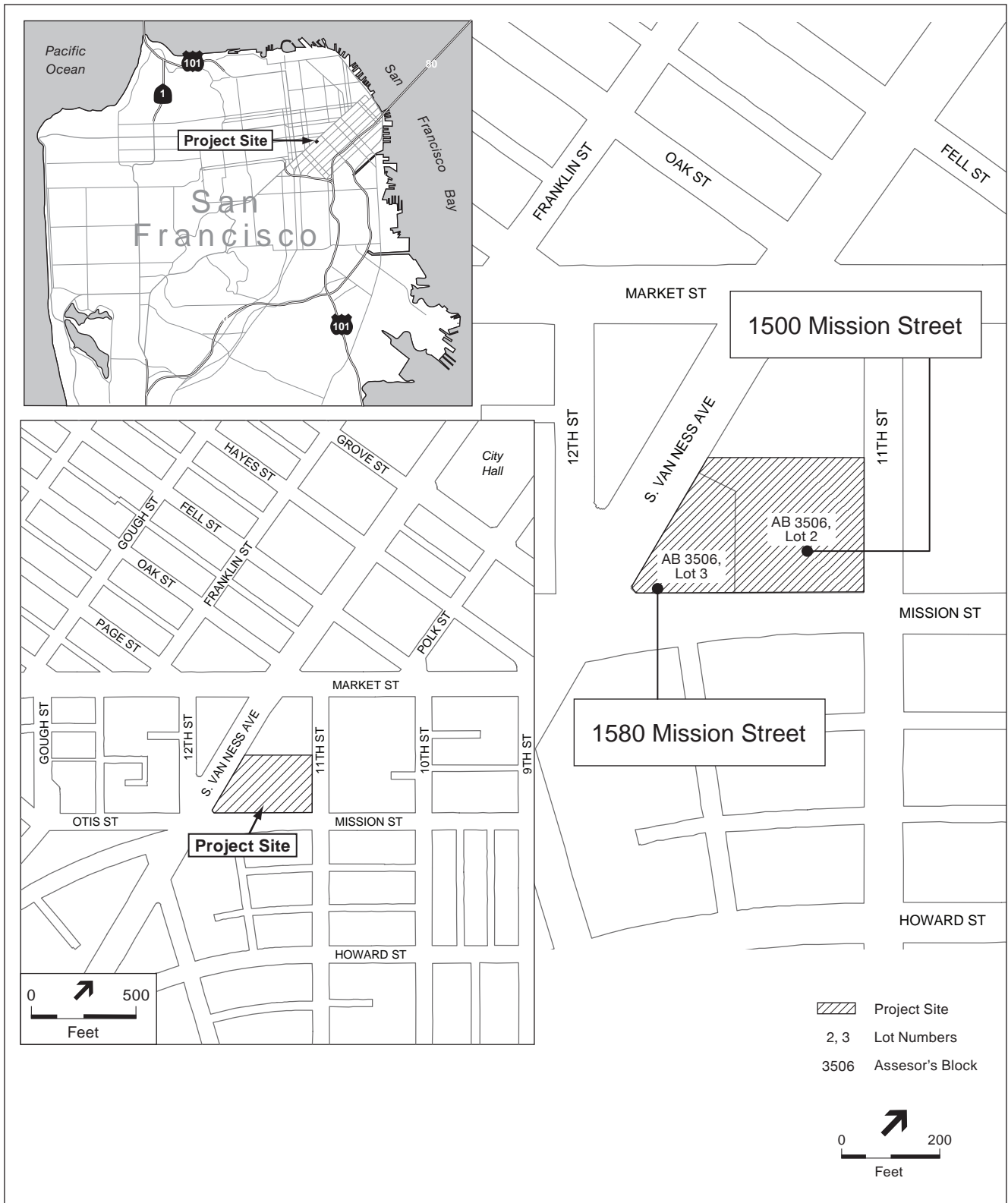
The project site totals 110,772 square feet (2.5 acres), and the lot is generally flat. The site is a trapezoidal shape with approximately 472 feet of frontage along Mission Street, 301 feet of frontage along South Van Ness Avenue, and 275 feet of frontage along 11th Street. The northern boundary of the site stretches for 321 feet abutting an eight-story City office building that fronts onto South Van Ness Avenue and Market Street (One South Van Ness Avenue).

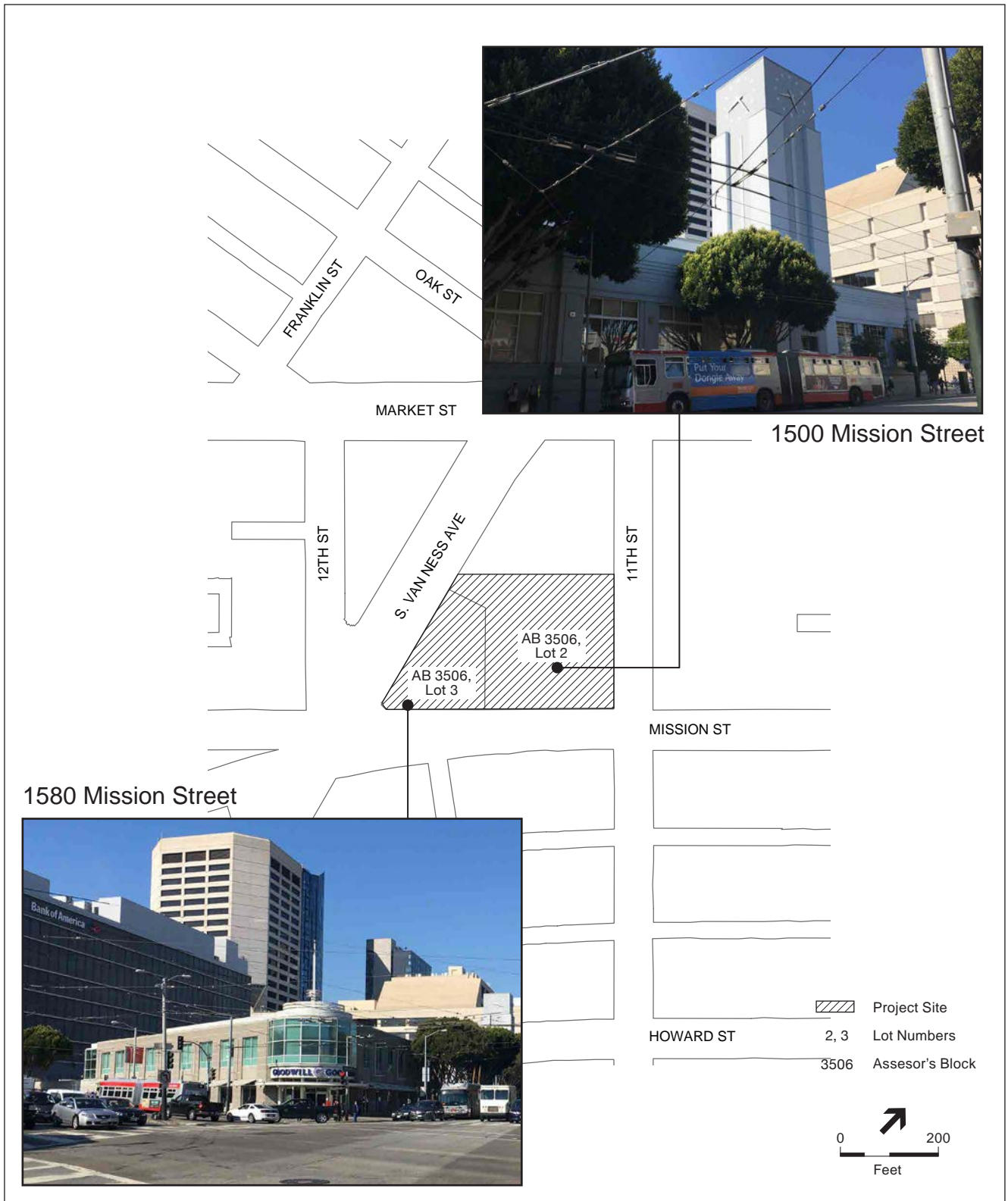
The project site is currently occupied by two existing buildings used by Goodwill Industries: a two-story, approximately 30-foot-tall 29,000-square-foot building located at 1580 Mission Street that was constructed in 1997 and contains a Goodwill retail store on the ground level and offices above, and an approximately 57,000-square-foot, approximately 28-foot-tall (including an approximately 97-foot-tall clock tower), largely single-story warehouse building located at 1500 Mission Street that was used until June 2016 by Goodwill for processing donated items. The warehouse building at 1500 Mission Street has a basement parking garage with approximately 110 public parking spaces (some of which are valet), and accessed from an approximately 25-foot-wide curb cut on South Van Ness Avenue. The project site also contains approximately 25 surface parking spaces and six surface loading spaces, accessed from an approximately 46-foot-wide curb cut on Mission Street. The warehouse building, which features an approximately 97-foot-tall clock tower atop the Mission Street façade, was constructed in 1925 for the White Motor Company and renovated in 1941 for use as a Coca-Cola bottling plant—a use that continued until the 1980s. The building located at 1580 Mission Street is less than 45 years of age and is considered a “Category C” property—Not a Historical Resource. The warehouse building located at 1500 Mission Street has been determined individually eligible for the California Register of Historical Resources and is considered a “Category A” property – Known Historical Resource. The existing conditions at the project site are shown in **Figure II-2, Existing Conditions**, and **Figure II-3, Existing Site Plan**.

The primary pedestrian entrance to the retail building at 1580 Mission Street is at the corner of South Van Ness Avenue and Mission Street. The pedestrian entrance and primary façade of the warehouse building at 1500 Mission Street, along with the clock tower, is located on Mission Street toward the corner of 11th Street. The project site contains two street trees on South Van Ness Avenue, eight street trees on Mission Street, and six street trees on 11th Street.

Interstate 80 and U.S. Highway 101 provide the primary regional access to the project area. Interstate 280 provides regional access from the SoMa neighborhood to southern San Francisco, the Peninsula, and the South Bay. South Van Ness Avenue serves as U.S. Highway 101 between Market Street and the Central Freeway (at 13th Street), providing direct vehicular access to the project site. The Market Street/South Van Ness Muni Metro station is located one-half block north of the project site, on Market Street. There are multiple bus stops located in proximity to the project site, including stops along South Van Ness Avenue and Mission Street directly adjacent to the project site frontages.

⁸ Lots 002 and 003 are also referred to in some property records as Lots 006 and 007, respectively.





SOURCE: ESA, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure II-2
Existing Conditions

II.C.2 Surrounding Land Uses

Land uses in the immediate area of the project site generally include high-rise commercial buildings to the north and east, with low- and mid-rise mixed-use commercial buildings located to the south and west. Other uses located in the project area include storage facilities, hotels, multifamily housing, entertainment uses, and government institutions.

The project site is bounded by an eight-story building to the north, 11th Street to the east, Mission Street to the south, and South Van Ness Avenue to the west. The property to the north of the project site, located at One South Van Ness Avenue, is an eight-story City-owned office building with a ground-floor Bank of America branch and parking. Various city departments, including the San Francisco Municipal Transportation Agency (SFMTA), Mayor's Office of Housing and Community Development, and Office of Community Investment and Infrastructure, occupy the upper floors. To the east of the project site, across 11th Street, is a mixed-use office and retail building, which rises from eight stories on Mission Street to 22 stories on Market Street. The SoMa Self-Storage facility (six stories) is located to the southeast at 1475 Mission Street, and a Public Storage facility is located to the southwest (approximately two stories) at 99 South Van Ness Avenue.

Mixed-use commercial, retail, and residential buildings are located to the south of the project site, including three-story buildings located at 1517, 1519–1535, 1543, and 1551–1559 Mission Street, as well as a five-story building located at 1563 Mission Street, which is an outpatient medical facility. All of these buildings are located between 11th Street and South Van Ness Avenue. To the southwest of the project site, across South Van Ness Avenue, there is a parking lot and food truck located at 1600 Mission Street, with a gas station located further to the south. A mix of commercial buildings ranging from one to three stories in height is located west of the intersection of South Van Ness Avenue and 12th Street. A Honda Dealership and Service Center is located to the northwest of the project site at 10 South Van Ness Avenue.

The project site is located approximately four blocks south of San Francisco City Hall and Civic Center Plaza, a 4.5-acre open plaza with an underground parking garage and surrounded by many of San Francisco's largest government and cultural organizations. Approximately one-half mile northeast of the project site is United Nations Plaza, which is owned by the City and is generally bounded by Market Street to the south, McAllister Street to the north, Seventh Street to the east, and Hyde Street to the west. The plaza consists of a 2.6-acre pedestrian mall with seating, lawn areas, a fountain, public art installations, trees, and small gardens with a clear view of City Hall. The plaza is used twice a week for the Heart of the City Farmers Market and is near the San Francisco Public Library, Asian Art Museum, various governmental institutions, offices, and numerous public transportation stops and stations.

The proposed project is also located within one-half mile of Patricia's Green, which is generally located to the northwest. Patricia's Green includes a playground, walking paths, seating areas, lawn areas, and a rotating art installation. Patricia's Green is generally bounded by Hayes Street to the north, Octavia Street to the east (northbound) and west (southbound), and Fell Street to the south.

II.D Proposed Project Characteristics

II.D.1 Proposed Project Building Characteristics

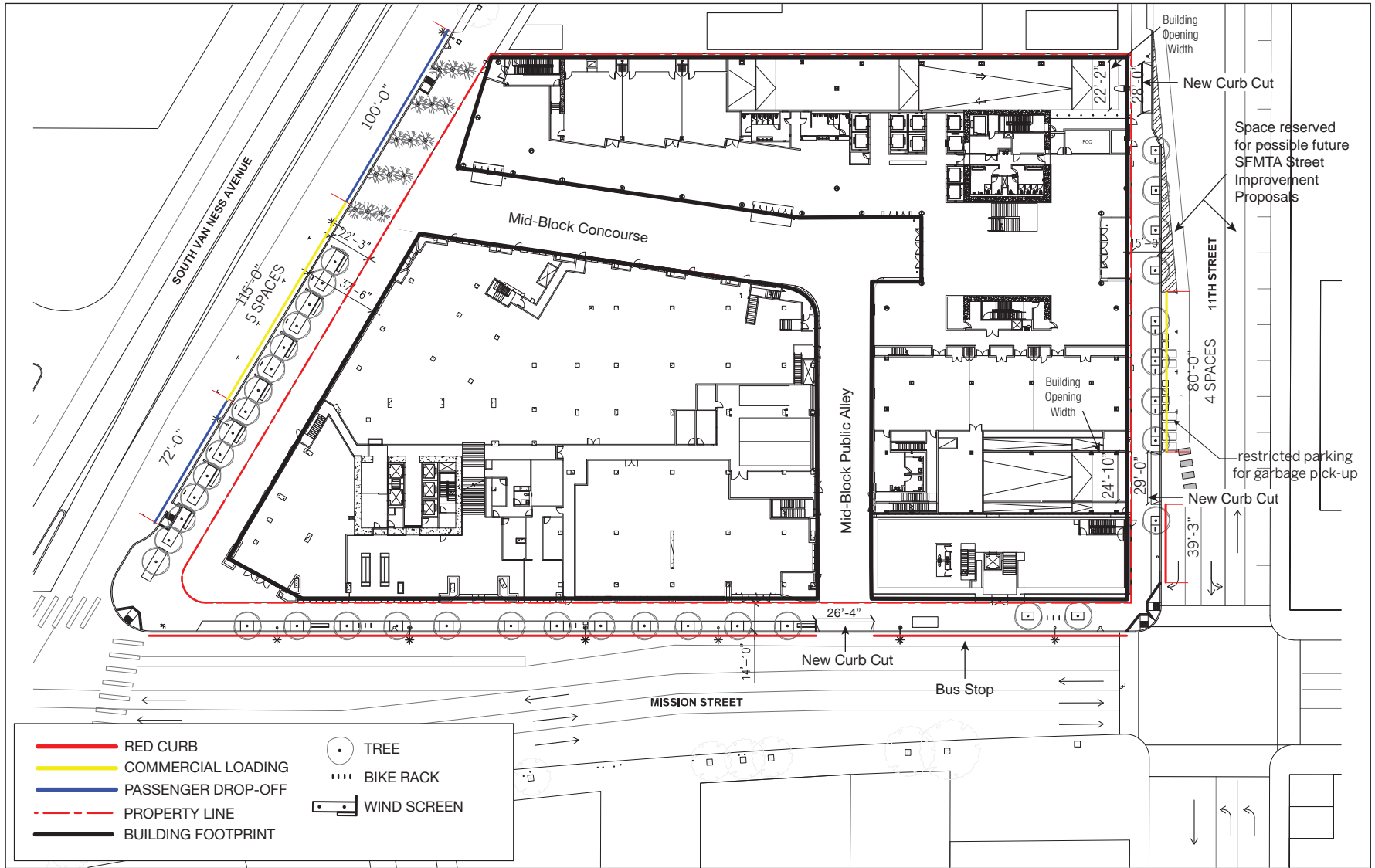
The project sponsor, Goodwill SF Urban Development, LLC, proposes to demolish an existing 29,000-square-foot, 30-foot-tall building at 1580 Mission Street and to retain and rehabilitate a portion of an existing 57,000-square-foot, 28-foot-tall building at 1500 Mission Street on the project site and demolish the remaining portions, and construct a mixed-use development with two components: an approximately 767,200 square-foot residential and retail/restaurant building at the corner of South Van Ness Avenue and Mission Street; and an approximately 567,300 square-foot office and permit center building for the City on 11th Street between Market and Mission Streets. All of the 1580 Mission Street building would be demolished. A portion of the 1500 Mission Street building, including the clock tower, six bays of the Mission Street façade, five bays of the 11th Street façade, and a 43-foot deep portion of the building interior fronting Mission Street and 11th Street, would be retained and rehabilitated; the remainder of the 1500 Mission Street building would be demolished.⁹ The proposed site plan is provided in **Figure II-4, Proposed Site Plan**, while individual floor plans are provided in **Figure II-5** through **Figure II-15**.

The proposed project would develop approximately 1,334,500 combined square feet of residential, office, retail, restaurant, and supporting uses.¹⁰ The mixed-use residential and retail/restaurant component of the proposed project would include a 39-story, 396-foot-tall tower (approximately 416 feet to the top of the mechanical screen enclosing mechanical equipment) at the corner of Mission Street and South Van Ness Avenue, with a mid-rise podium element along South Van Ness up to 49 feet tall and a mid-rise podium element along Mission Street up to 123 feet tall. Retail/commercial space would be located on the first floor of the residential building, and retail/restaurant space would be located in the retained and rehabilitated portion of the 1500 Mission Street building. The office component would be constructed on the portion of the site to be acquired by the City and would contain City offices, including a permit center for the Planning Department, Department of Building Inspection (DBI), San Francisco Public Works (Public Works), and other departments on the first two floors, as well as an approximately 4,400-square-foot childcare facility on the third floor.¹¹ This office building would consist of a 16-story, 227-foot-tall tower (up to 257 feet to the top of the parapet enclosing mechanical equipment) on 11th Street between Market and Mission Streets, with mid-rise podium elements approximately 131 feet tall extending westward from the tower to South Van Ness Avenue.

⁹ *Planning Code* Section 1005(f) defines demolition as any one of the following: (1) Removal of more than 25 percent of the surface of all external walls facing a public street(s); (2) Removal of more than 50 percent of all external walls from their function as all external walls; (3) Removal of more than 25 percent of external walls from function as either external or internal walls; or (4) Removal of more than 75 percent of the building's existing internal structural framework or floor plates unless the City determines that such removal is the only feasible means to meet the standards for seismic load and forces of the latest adopted version of the *San Francisco Building Code* and the *State Historical Building Code*.

¹⁰ For the purposes of a conservative analysis, a maximum development scenario for the proposed project is analyzed herein. Upon final approval, the proposed project may be smaller in terms of unit count and area than a maximum development scenario.

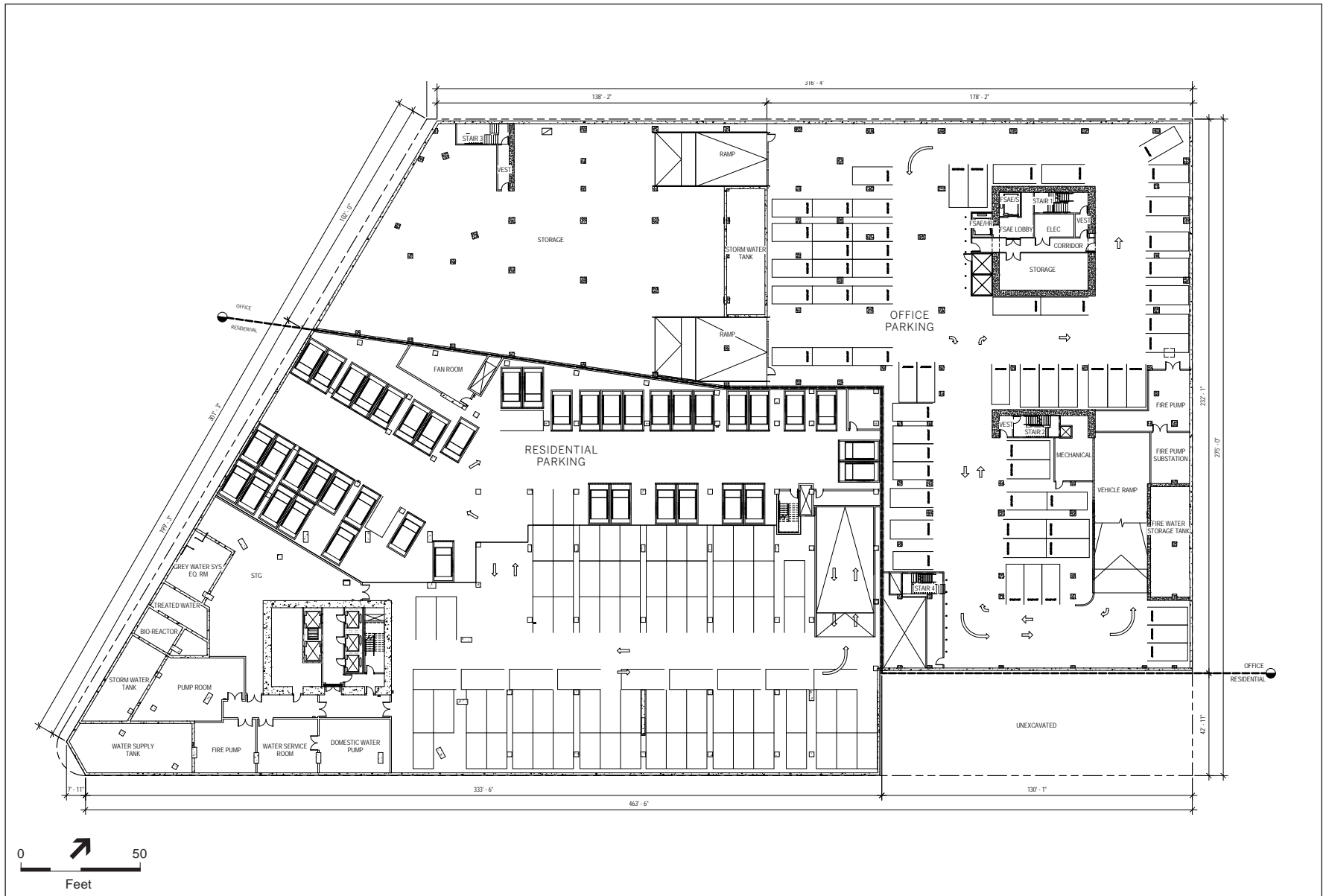
¹¹ It is unknown at this time what other Departments would occupy the new office building. It is anticipated that the majority of employees from those other Departments already work in existing City office buildings in the Civic Center and mid-Market neighborhoods.



SOURCE: SOM, 2015

1500 Mission Street; Case No. 2014-000362ENV

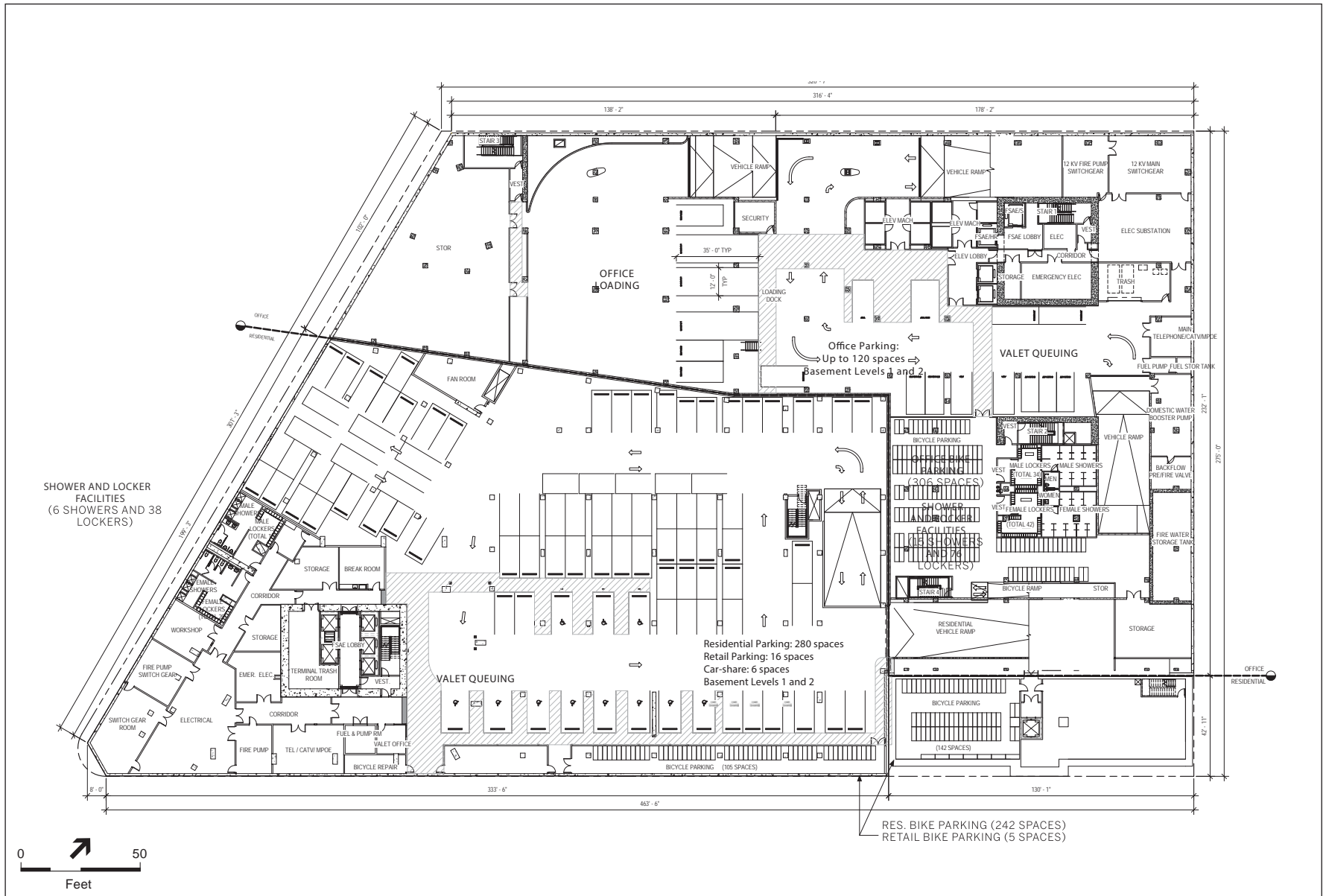
Figure II-4
Proposed Site Plan



SOURCE: SOM, 2016

1500 Mission Street; Case No. 2014-000362ENV

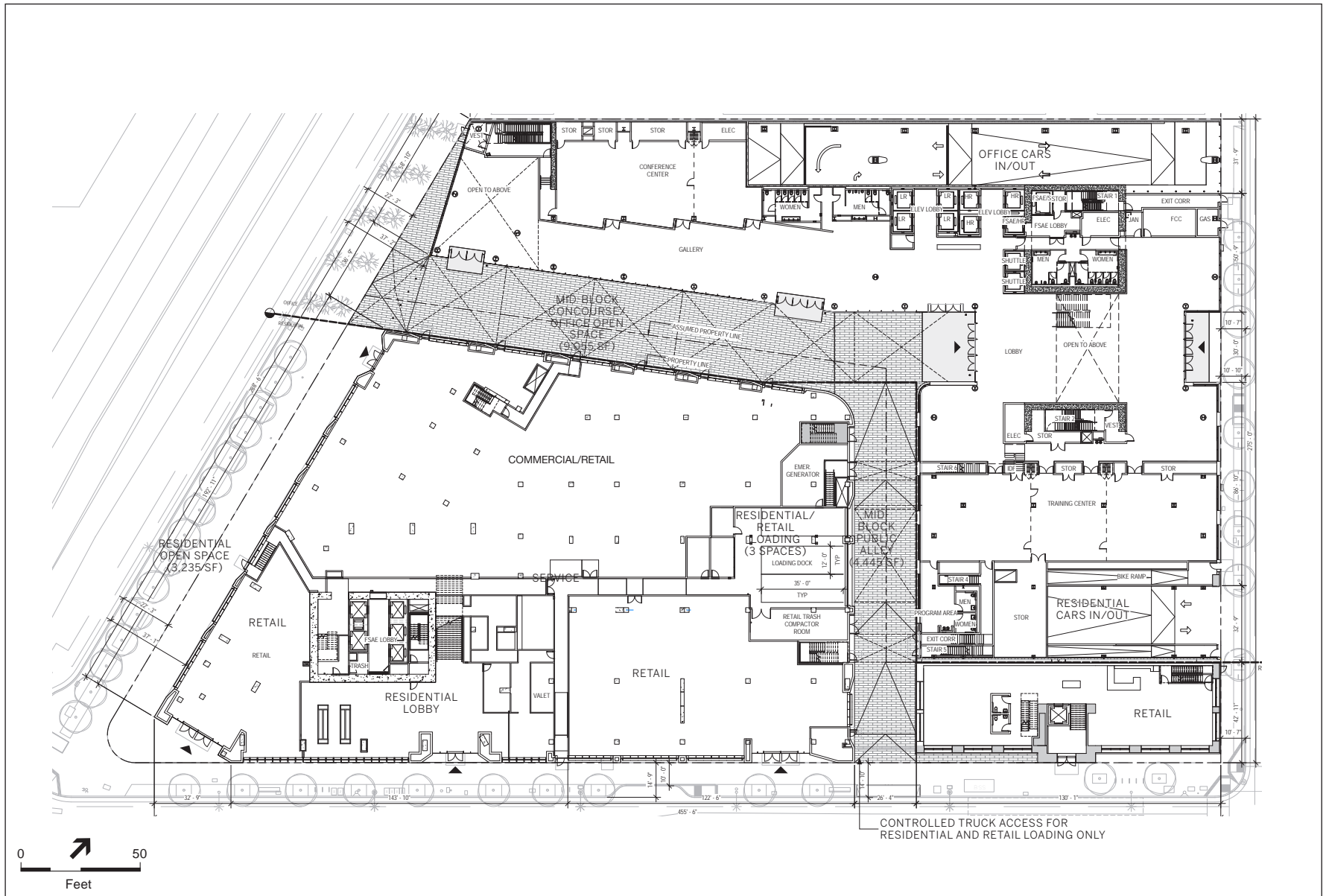
Figure II-5
Basement Level 2 Plan



SOURCE: SOM, 2016

1500 Mission Street; Case No. 2014-000362ENV

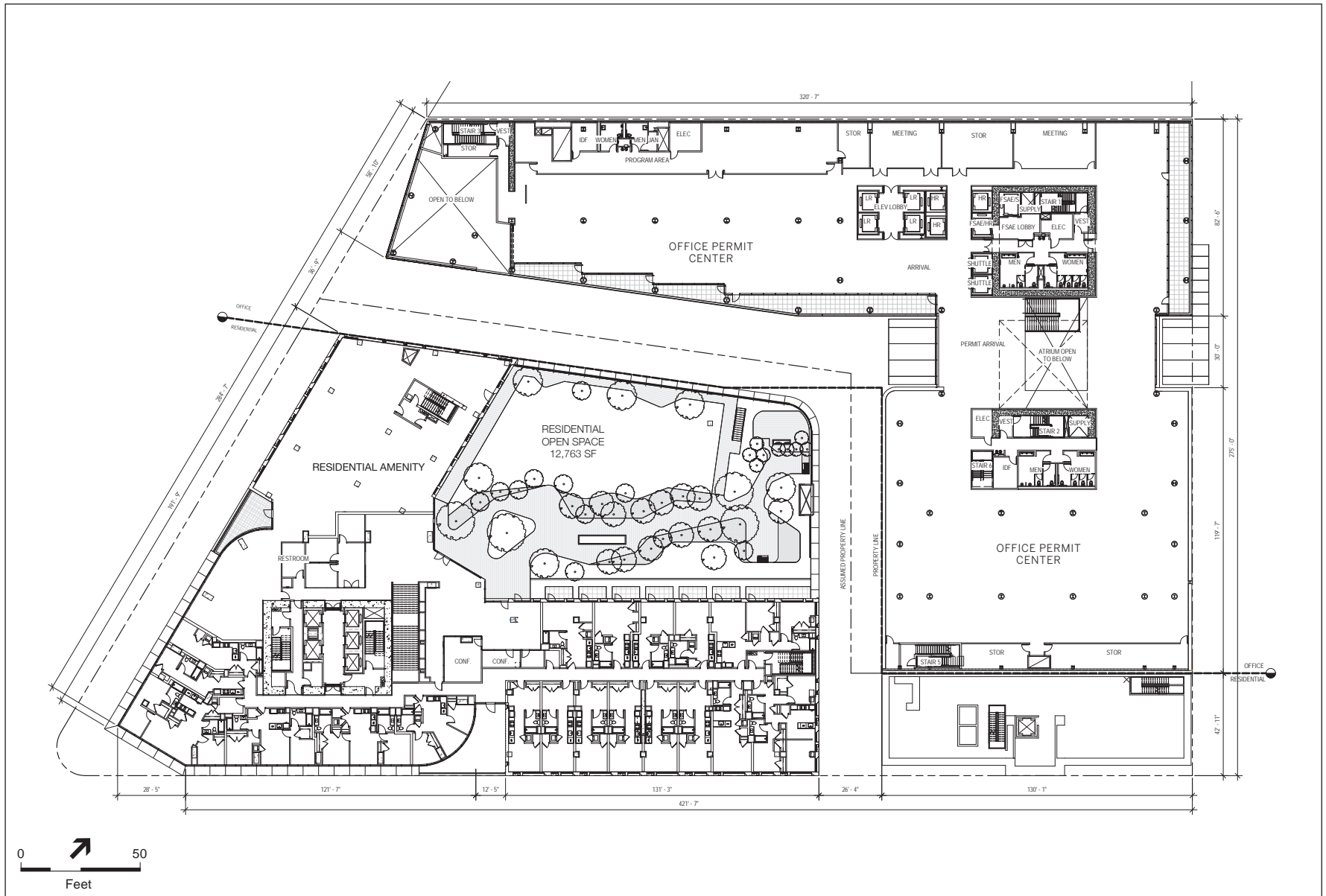
Figure II-6
Basement Level 1 Plan



SOURCE: SOM, 2016

1500 Mission Street; Case No. 2014-000362ENV

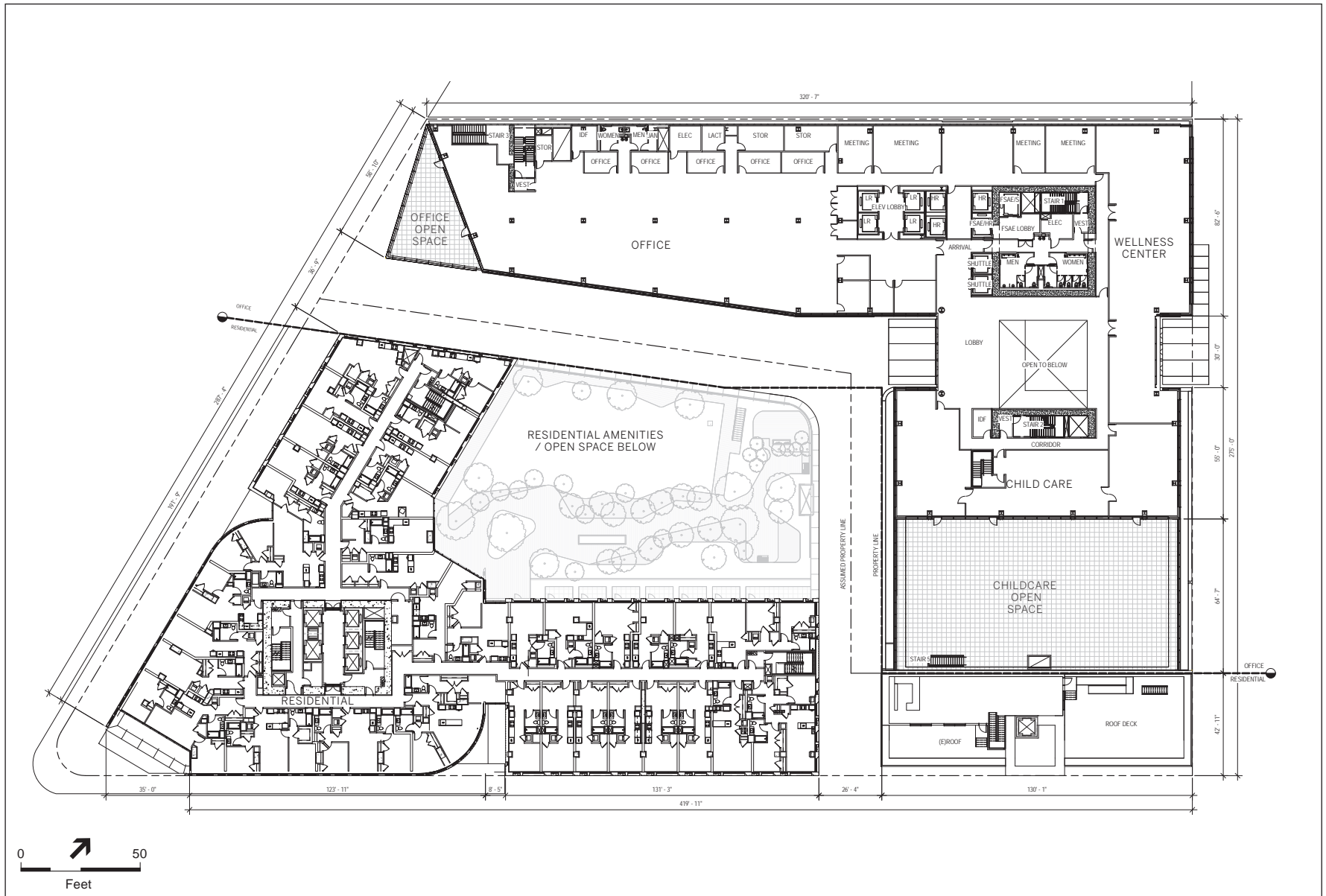
Figure II-7
Ground Floor Plan



SOURCE: SOM, 2016

1500 Mission Street; Case No. 2014-000362ENV

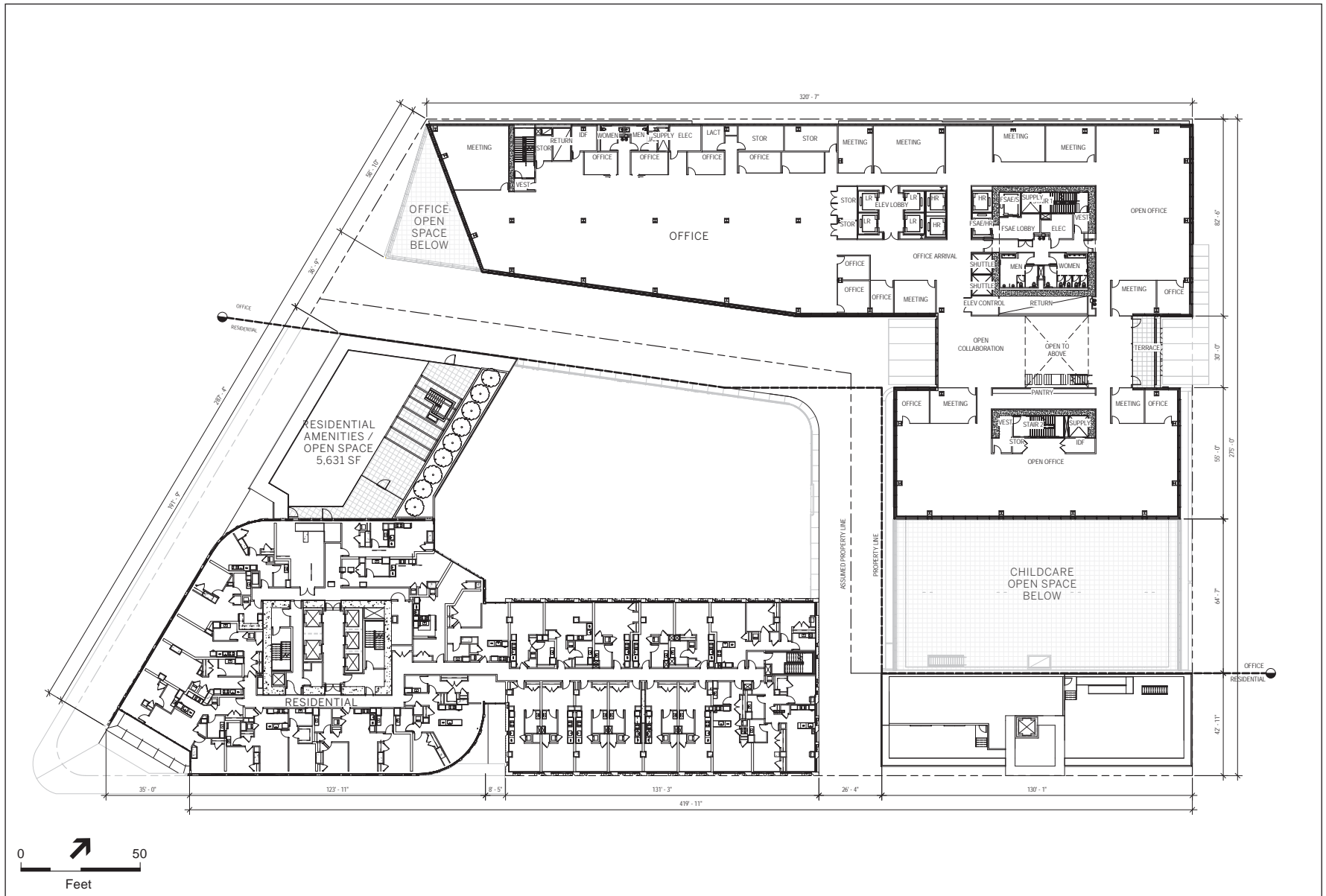
Figure II-8
2nd Floor Plan



SOURCE: SOM, 2016

1500 Mission Street; Case No. 2014-000362ENV

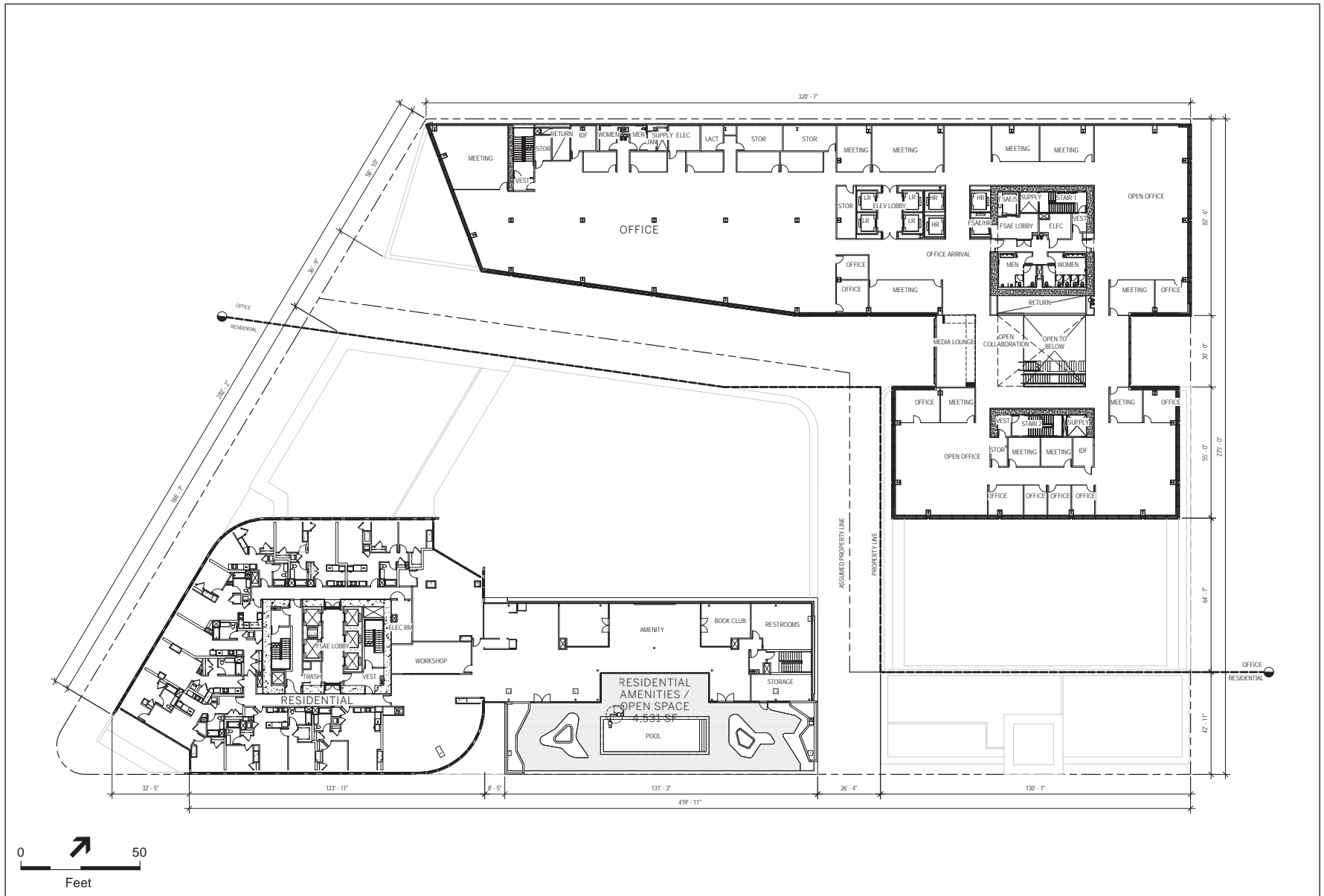
Figure II-9
3rd Floor Plan



SOURCE: SOM, 2016

1500 Mission Street; Case No. 2014-000362ENV

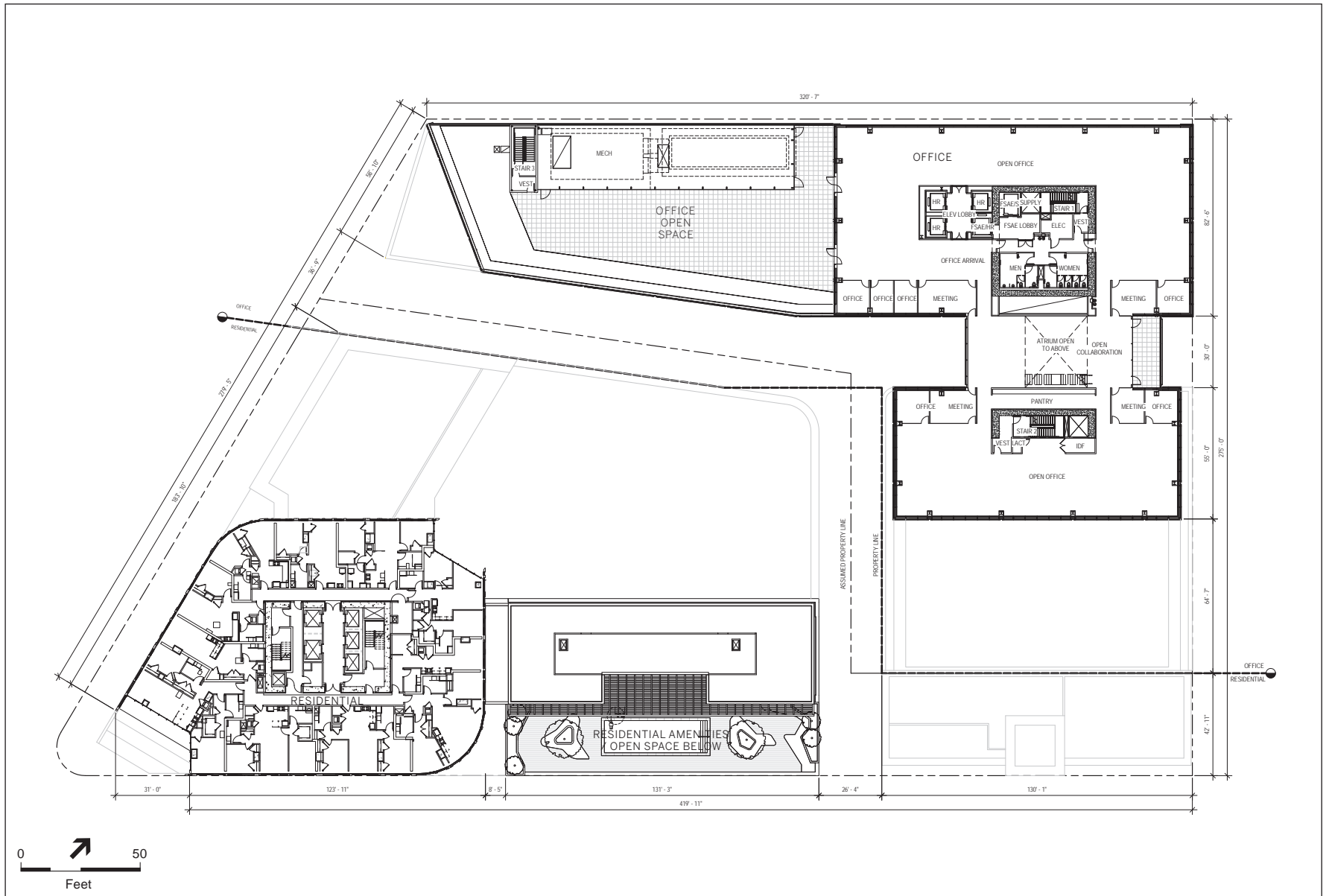
Figure II-10
Residential 5th Floor Plan; Office 4th Floor Plan



SOURCE: SOM, 2016

1500 Mission Street; Case No. 2014-000362ENV

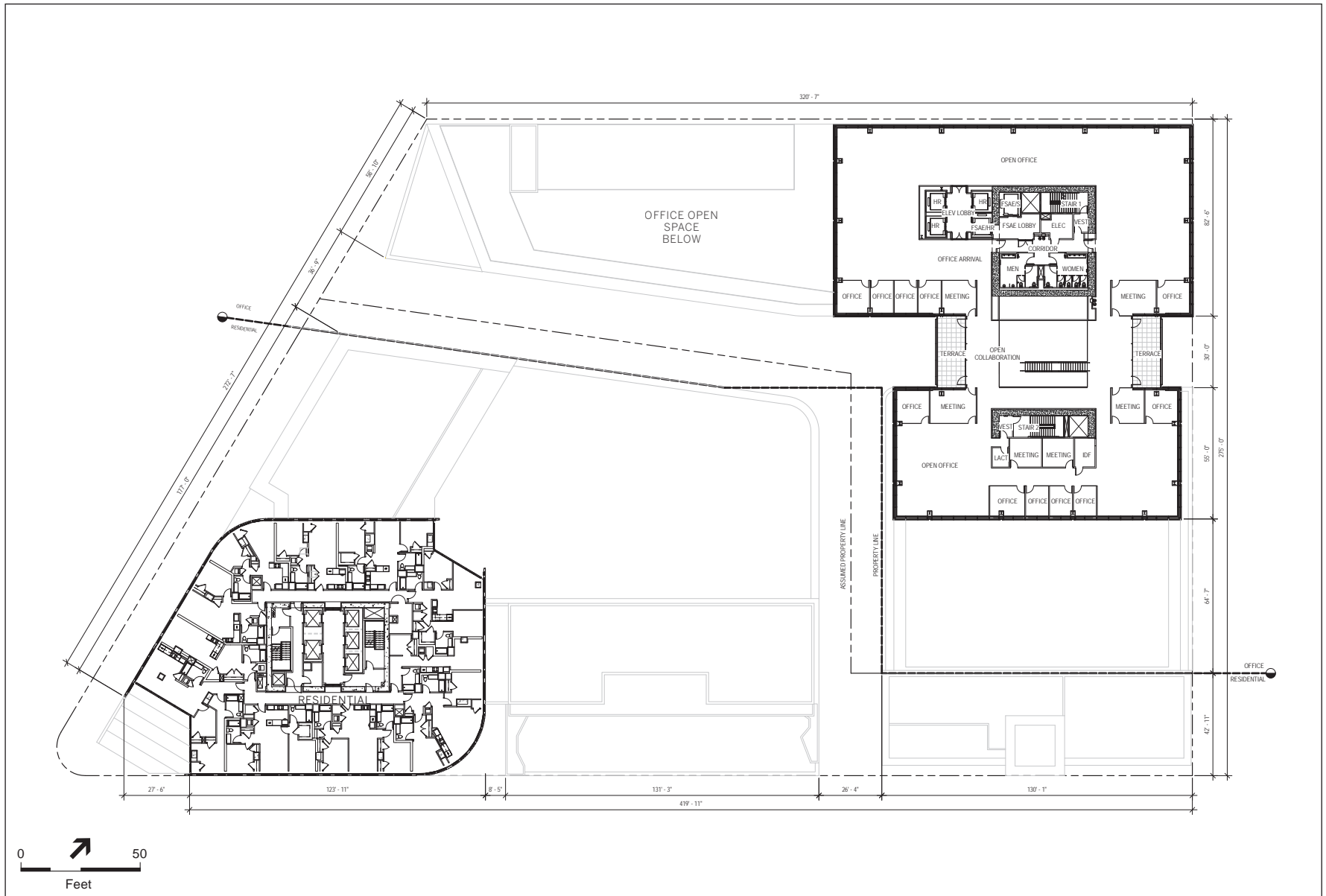
Figure II-11
Residential 11th Floor Plan; Office 8th Floor Plan



SOURCE: SOM, 2016

1500 Mission Street; Case No. 2014-000362ENV

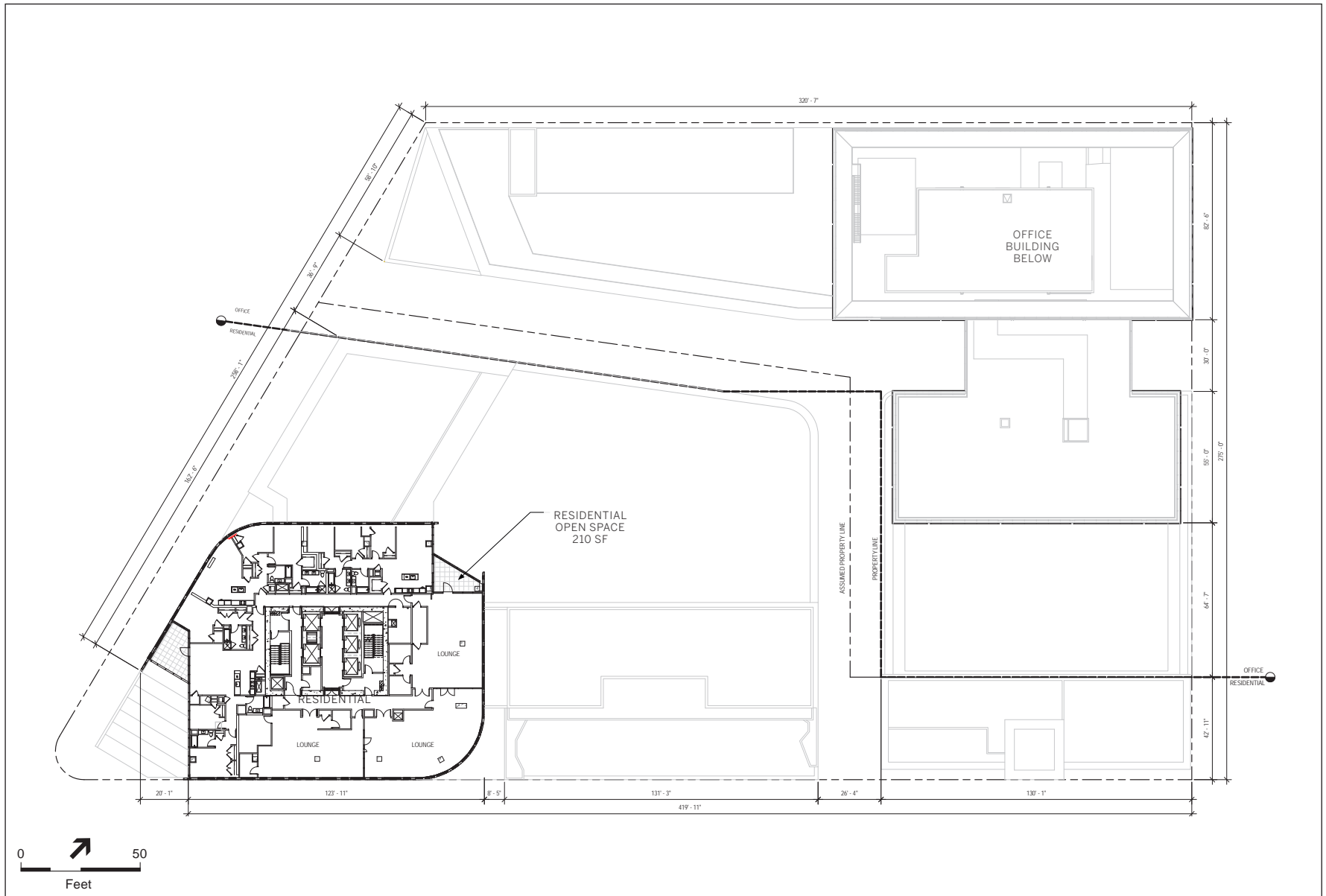
Figure II-12
Residential 13th Floor Plan; Office 10th Floor Plan



SOURCE: SOM, 2016

1500 Mission Street; Case No. 2014-000362ENV

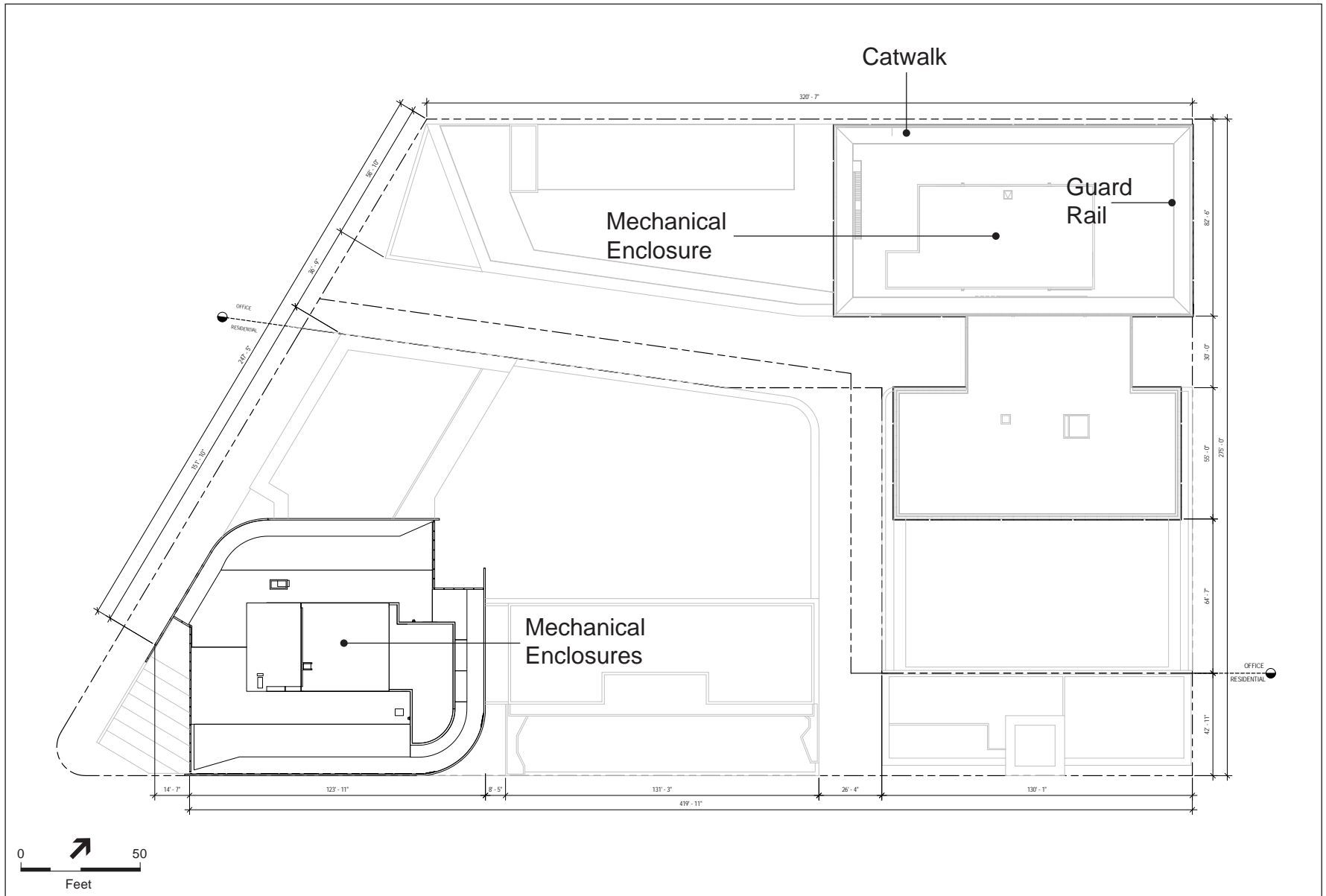
Figure II-13
Residential 22nd Floor Plan; Office 16th Floor Plan



SOURCE: SOM, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure II-14
Residential 39th Floor Plan; Office Roof Plan



SOURCE: SOM, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure II-15
Residential and Office Roof Plan

A publicly-accessible, mid-block concourse totaling approximately 9,000 square feet would separate the mixed-use residential building from the office building and provide pedestrian connectivity midway through the site from South Van Ness Avenue to Mission Street via an approximately 4,400-square-foot mid-block alley, as illustrated by **Figure II-7, Ground Floor Plan**. Pedestrian access would also be available between South Van Ness Avenue and 11th Street during office building operating hours via the concourse and the building lobby. An additional 3,300 square feet of publicly-accessible open space would be provided along South Van Ness Avenue. **Table II-1, Proposed Project Characteristics—Maximum Development Scenario**, presents the proposed project characteristics for both components, which are further described below.

TABLE II-1 PROPOSED PROJECT CHARACTERISTICS—MAXIMUM DEVELOPMENT SCENARIO

Proposed Use	Description	Approximate Size Square Feet (sf) ^a
RESIDENTIAL AND RETAIL/ RESTAURANT	39 stories, 396 feet tall (416 feet to top of parapet)	767,200
Residential Tower and Podiums	560 units total (20 percent affordable units)	626,200
Studios and One-Bedroom Units	311 units	—
Two- and Three-Bedroom units	249 units	—
Retail/Restaurant ^b	Ground floor	38,000
Basement Area ^c	Below-grade Levels 1 and 2	103,000
Vehicle Parking ^d	300 spaces, consisting of 280 residential spaces (including 11 ADA-accessible spaces); 14 retail spaces; 6 car-share spaces	—
Loading	3 full-size loading spaces ^e	—
Class 1 Bicycle Parking	247 spaces	—
Class 2 Bicycle Sidewalk Spaces	52 spaces	—
Shower Facilities	6 showers	—
Lockers	38 lockers	—
OFFICE AND PERMIT CENTER	16 stories, 227 feet tall (257 feet to top of parapet)	567,300
Offices	Floors 1 and 3 to 16	408,600
Permit Center	Floor 2	41,200
Childcare Facility	Floor 3	4,400
Basement Area ^c	Below-grade Levels 1 and 2	113,100
Vehicle Parking	Up to 120 spaces, including 4 ADA-accessible spaces	—
Loading/Service	3 full-size loading spaces; 4 service vehicle spaces ^{e,f}	—
Class 1 Bicycle Parking	306 spaces	—
Class 2 Bicycle Sidewalk Spaces	15 spaces	—
Shower Facilities	15 showers	—
Lockers	76 lockers	—

TABLE II-1 PROPOSED PROJECT CHARACTERISTICS—MAXIMUM DEVELOPMENT SCENARIO

Proposed Use	Description	Approximate Size Square Feet (sf) ^a
COMBINED PROJECT	All Proposed Uses	1,334,500
Total Site Area	Area of parcels at ground level	110,772 (2.5 acres)
Total Vehicle Parking	Up to 420 spaces; including 15 ADA-accessible spaces and 6 car-share spaces ^g	—
Total Loading/Service	6 full-size loading spaces; 4 service vehicle spaces ^f	—
Total Class 1 Bike Parking	553 spaces	—
Total Class 2 Bike Sidewalk Racks	67 spaces	—
Shower Facilities	21 showers	—
Lockers	114 lockers	—
OPEN SPACE	Residential, Office, and Public Open Space	58,600
Residential Common Open Space	Floors 2, 5, 11, and 39	23,700
Publicly-Accessible Residential and Retail Open Space ^h	South Van Ness Avenue Sidewalk	3,300
Private Residential Open Space	Provided for 15 units	3,100
Private Office Open Space	Floors 2–4, 6–7, 9–10, 12–13, 16 (includes 6,800 sf childcare open space)	19,500
Publicly-Accessible Office Open Space	Mid-block concourse ⁱ	9,000

SOURCE: Related California, HKS and SOM, June 2016.

NOTES:

- a. Areas rounded to nearest 100 sf
- b. Includes approximately 9,700 sf of restaurant in retained 1500 Mission Street building frontage.
- c. Includes ramp to garage and garage circulation space in the basement.
- d. Includes two car-share spaces required for the office component.
- e. Loading for the residential and retail/restaurant building would be accessed from the mid-block alley, which would be accessed from Mission Street.
- f. The *Planning Code* requirement for the office component is five loading spaces; however, per Section 153(a)(6), two service-vehicle spaces can be substituted for one full-size loading space.
- g. Parking square footage included in total site area figure provided for the combined project.
- h. Includes approximately 2,500 sf of residential common open space and approximately 760 sf of retail publicly-accessible open space on South Van Ness Avenue.
- i. Although not considered open space under the *Planning Code*, an approximately 4,400-square-foot mid-block alley extending from Mission Street to the mid-block concourse would provide for additional pedestrian access.

Residential and Retail/Restaurant Component

The residential and retail/restaurant component of the proposed project, totaling approximately 664,200 square feet (excluding approximately 103,000 square feet of basement parking, mechanical, and storage areas), would contain approximately 626,200 square feet of residential space, 28,300 square feet of retail/commercial

space, and 9,700 square feet of restaurant space.¹² In addition, approximately 23,700 square feet of common residential open space, 3,300 square feet of publicly-accessible open space along South Van Ness Avenue, and private balconies for 15 units would be provided.¹³ The residential tower, located at the corner of Mission Street and South Van Ness Avenue, would be 39 stories and 396 feet tall (up to 416 feet tall to the top of the parapet enclosing mechanical equipment), with a 123-foot-tall podium wing extending east along Mission Street and a 49-foot-tall podium wing extending north along South Van Ness Avenue. In addition, an approximately 20-foot-wide wind reduction canopy would be located along the South Van Ness façade, and an approximately 14-foot-nine-inch-wide canopy would be located on a portion of the Mission Street façade, both of which would be approximately 28 feet above the sidewalk level of the residential and retail/restaurant component. The residential and retail/restaurant component would contain approximately 560 dwelling units, and the entrance lobby would be located on Mission Street. Twenty percent of the units would be inclusionary affordable units, available to residents earning a maximum of 50 percent of the average median income.

A total of approximately 28,300 square feet of retail/commercial space would be located on the first floor of the residential building, and approximately 9,700 square feet of retail/restaurant space would be located in the retained and rehabilitated portion of the existing 1500 Mission Street building. A new north-south mid-block alley totaling approximately 4,400 square feet would provide truck access to a residential and retail freight loading area and accessed from Mission Street, and a mid-block concourse containing approximately 9,000 square feet of publicly-accessible open space would allow pedestrian access from the mid-block alley to South Van Ness Avenue. Vehicle and bicycle parking would be provided in two basement levels totaling approximately 103,000 square feet, with access via a two-way ramp on 11th Street located approximately 40 feet north of Mission Street.

Office and Permit Center Component

The proposed office and permit center component, totaling approximately 454,200 square feet (excluding approximately 113,100 square feet of basement parking, mechanical, and storage areas), would be occupied by City offices, including a permit center for the DBI, Planning, and Public Works, and other City departments, as well as a childcare facility.¹⁴ The office tower would be developed fronting 11th Street, with a podium wing extending west through the site to South Van Ness Avenue. The office podium would be 131 feet in height on South Van Ness Avenue, with the tower rising to 16 stories and 227 feet tall (up to 257 feet tall to top of the parapet enclosing mechanical equipment) on 11th Street.

¹² All floor area dimensions herein are conservatively provided in square feet of gross building area. For projects, such as the proposed project, in the C-3 (Downtown) Use Districts, certain portions of the building are excluded from the *Planning Code's* definition of "gross floor area," which serves as the basis for the calculation of floor area ratio. These exclusions, as indicated in *Planning Code* Section 102, include, but are not limited to, ground floor and mezzanine retail and restaurant space, up to 5,000 square feet per use; ground floor pedestrian circulation and building service space; childcare facilities; principally permitted accessory parking that is underground; certain mechanical space; and basement space used for storage and building operation and maintenance.

¹³ The approximately 3,300 square feet of open space proposed on South Van Ness Avenue is also considered common open space for the residential use to fulfill Section 135 requirements, in accordance with the proposed South Van Ness and Mission Special Use District.

¹⁴ It is unknown at this time what other Departments would occupy the new office building. It is anticipated that the majority of employees from those other Departments already work in existing City office buildings in the Civic Center and mid-Market neighborhoods.

The City's permit center would occupy approximately 41,200 square feet on the second floor of the building, including the second-floor podium extending west toward South Van Ness Avenue. Approximately 408,600 square feet of office space would be provided on floors one and three through 16, and an approximately 4,400-square-foot childcare facility would also be provided on the third floor. The development of the office tower would be designed to allow for a potential future physical connection to One South Van Ness Avenue.

Vehicle and bicycle parking for the office component would be provided in two belowground basement levels totaling approximately 113,100 square feet (accommodating up to 120 vehicle parking spaces), with access via a two-way ramp located at the northeastern corner of the project site on 11th Street.¹⁵

Site Access

Pedestrian access for the residential retail/restaurant component of the proposed project would be available from Mission Street, and pedestrian access to the retail/restaurant component would be available from Mission Street and South Van Ness Avenue. Access to the Class 1 bicycle parking spaces for the residential and retail/restaurant component would be available from the two-way ramp on 11th Street located at the northeast corner of the site. As noted above, parking for both buildings would be provided below grade. Automobile parking for the residential and retail/restaurant component would consist of 280 residential spaces (including 11 ADA-accessible spaces), six car-share spaces (including the two car-share spaces required for the office component), and 14 retail spaces for a total of 300 spaces located in two basement levels accessible from a new 29-foot-wide curb cut on 11th Street and a 24-foot-10-inch-wide garage opening located approximately 40 feet north of Mission Street. Three full-size loading spaces would be provided at grade with access via a 26-foot-four-inch-wide curb cut on Mission Street through a north-south mid-block alley.

Pedestrian access to the office and permit center component of the proposed project would be available from 11th Street and from the mid-block concourse accessible from both Mission Street and South Van Ness Avenue. Access to the Class 1 bicycle parking spaces for the office and permit center component would be available from the two-way ramp on 11th Street located approximately 40 feet north of Mission Street. Parking for the City office building would include up to approximately 120 automobile parking spaces (depending on whether stackers are used), including four ADA-accessible parking spaces, which would be provided in two basement levels, with access provided via a second new 28-foot-wide vehicular curb cut located at the northeastern corner of the project site on 11th Street and a 22-foot-two-inch-wide garage opening. Of the up to 120 spaces, approximately 45 percent (up to about 55 spaces) would be reserved for City vehicles and an approximately equal number of spaces would be available to the public. The remaining approximately 10 percent of parking spaces (up to about 12 spaces) would be for short-term drop-off and pickup use for the childcare facility. Loading for the office building, including three full-size loading spaces and four service

¹⁵ The project sponsor is pursuing the possibility of obtaining a joint operating agreement between the residential building owners and the City that would allow the residential building garage users to access the garage via the office building; the residential building garage users would exit the residential garage via a one-way exit ramp. This shared access concept would require modifications to the basement level to provide for access from the office building to the residential building, and the residential building garage ramp would be modified to provide for a one-way ramp at the street level (i.e., outbound only). This potential operating agreement is analyzed in this EIR; therefore, if the sponsor pursues this agreement, it would not require further environmental review.

spaces, would be located on the first level of the basement, accessible from the 11th Street vehicular entrance and ramp. In total, the proposed project would provide up to 420 off-street parking spaces.¹⁶

Bicycle parking and amenities would be provided for the residential and retail/restaurant component (247 Class 1 bicycle spaces, six showers, and 38 clothes lockers) and for the office component (306 Class 1 bicycle spaces, 15 showers, and 76 clothes lockers) on the first basement level. The proposed project would provide 52 Class 2 bicycle parking spaces for the residential and retail/restaurant component and 15 Class 2 bicycle parking spaces for the office component on streets adjacent to the project site.

Streetscape Changes

A publicly-accessible mid-block concourse totaling approximately 9,000 square feet would separate the residential and retail/restaurant component from the office development and provide pedestrian connectivity midway through the site from South Van Ness Avenue to Mission Street via a new mid-block alley. Pedestrian access would also be available between South Van Ness Avenue and 11th Street during office building operating hours via the concourse and the building lobby. The north-south mid-block alley also would provide truck access to a residential and retail freight loading area.

Other streetscape changes would include the addition of five on-street commercial loading spaces on South Van Ness Avenue and four commercial loading spaces on 11th Street. In addition, a passenger drop-off zone would be located on South Van Ness Avenue just north of Mission Street.

The residential and retail/restaurant component would be set back approximately 15 feet along South Van Ness Avenue, which would increase the sidewalk width from 22 to 37 feet along this portion of the project site. In addition, the proposed project would include widening of the sidewalk adjacent to the project site on 11th Street by approximately seven feet to a width of 15 feet, which would result in the removal of 24 parking spaces, including four commercial loading spaces, along 11th Street. The proposed project also would include the installation of eight wind screens approximately eight feet tall by 10 feet wide at 40-foot intervals along the South Van Ness Avenue sidewalk adjacent to the project site and perpendicular to the street (see Figure II-16, **Proposed Wind Screens and Canopy**).

As part of the proposed project, the 16 existing street trees along South Van Ness Avenue, Mission Street, and 11th Street would be removed, and at least 53 new trees would be planted along the project sidewalks. The trees planted along South Van Ness Avenue and Mission Street would be mature at planting and, therefore, would help offset windy conditions around the project site. Additionally, other sidewalk improvements would be made, consistent with the *Better Streets Plan* and in accordance with *Planning Code* Section 138.1, to ensure adequate stormwater runoff management, pedestrian safety, and landscaping considerations are met.

¹⁶ Includes residential, restaurant/retail, office, car-share, and ADA-accessible spaces.



SOURCE: SOM, 2016

1500 Mission Street; Case No. 2014-000362ENV
Figure II-16
 Proposed Wind Screens and Canopy

Open Space

The proposed project would provide approximately 58,600 square feet of open space, including publicly-accessible and common and private open space. Open space for the residential and retail/restaurant component would total 31,100 square feet and would include a second-floor courtyard; open space atop the fifth floor podium, the 11th floor podium, and the 39th floor, as well as approximately 3,300 square feet of publicly-accessible open space provided along South Van Ness Avenue adjacent to the proposed retail space.

Open space for the office and permit center component would total approximately 28,500 square feet and would include approximately 6,800 square feet for the childcare facility on the third floor, as well as open space and terraces on the third, 10th, and 16th floors, and an approximately 9,000-square-foot, publicly-accessible pedestrian mid-block concourse separating the residential and retail/restaurant component from the office and permit center component. Although not considered open space under the *Planning Code*, an approximately 4,400-square-foot mid-block alley extending from Mission Street to the mid-block concourse would provide for additional pedestrian access, as well as access to the three residential/retail at-grade, off-street full-size loading spaces available during certain hours of the day.

Mechanical Equipment

The proposed project would include two diesel-powered Tier 2 + Level 3 VDECS generators to provide backup power in the event of an emergency. One generator would be installed in each building. The residential and retail/restaurant building generator would be located at grade and would be enclosed within the northeast corner of the building, near the north end of the mid-block pedestrian alley. This generator would be rated at approximately 1,000 kilowatts (kW). The office and permit center building generator, rated at approximately 2,000 kW, would be located within an enclosure on the roof of the building wing extending west from the office tower towards South Van Ness Avenue, at a height of about 130 feet above grade. The generator enclosure would be adjacent to the project site's northern property line. The residential tower would have other building mechanical, electrical, and building operations equipment in the two basement levels, including storage tanks for stormwater and treated greywater, both of which would be recycled. Rooftop mechanical enclosures on the residential tower would contain elevator and heating, ventilation, and air conditioning (HVAC) equipment. The office and permit center tower would also have rooftop elevator and HVAC systems, including a cooling tower, and an additional mechanical enclosure would be adjacent to the generator enclosure on the roof of the office building's westerly wing.

Construction Activities

The proposed project would require approximately 86,000 cubic yards of excavation for the building foundation and two basement levels. The project sponsor proposes to install a mat foundation to support the proposed buildings. The mat thickness for the residential component ranges from approximately 2.5 feet to 10 feet; the mat thickness for the office and permit center component ranges from approximately two feet to five feet. The excavation for the proposed below-grade parking and mat foundation would range from approximately 19 to 32 feet.

Project construction would require the use of the following equipment: air compressors, backhoes, bore/drill rigs, cement and mortar mixers, saws, compactors, cranes, crawler tractors, excavators, forklifts, generators, haul trucks, pumps, signal boards, and sweepers/scrubbers. No pile driving is anticipated for project construction. There would be an average of between 15 and 375 construction workers per day at the project site and an average of between 32 and 60 construction trucks traveling to the site on a daily basis, with the greatest number of construction truck trips occurring during the foundation mat pour, with about 300 truck trips per day.

Construction staging would occur on-site and on the sidewalks adjacent to the project site (i.e., on South Van Ness Avenue, Mission Street, and 11th Street). It is anticipated that construction activities, such as delivery of large construction equipment and oversized construction materials, as well as foundation pours, would require one or more temporary lane closures on South Van Ness Avenue or Mission Street. These temporary lane closures may result in the temporary removal of on-street parking or loading spaces. It is also anticipated that the two bus stops located along to the project site frontage, one on South Van Ness Avenue north of Mission Street and one on Mission Street west of 11th Street, may require temporary relocation during construction.

A number of support poles for Muni overhead wires are located on South Van Ness Avenue, Mission Street, and 11th Street. It is anticipated that these support poles would be maintained, but some may require temporarily relocation during construction.

Construction Schedule

It is anticipated that construction of the proposed project would take approximately 24 months. The project sponsor proposes to construct both buildings simultaneously. There would be five primary construction phases, which would partially overlap:

- Demolition—two months
- Excavation and shoring—five months
- Foundation and below-grade construction—two months
- Base building construction—seven months
- Exterior and Interior finishing—15 months

Construction-related activities would typically occur Monday through Friday, between 7:00 a.m. and 7:00 p.m., although some work is anticipated to occur overnight and on Saturdays. For example, the pouring of concrete for the mat foundation would most likely occur during a continuous 24-hour period, and may occur during the overnight hours and/or on a Saturday. Some weekend work, including equipment and material deliveries, would be expected in order to minimize the impact on adjacent traffic, including transit. Construction is not anticipated to occur on major legal holidays, but may occur on an as-needed basis.

II.D.2 Height, Massing, and Design

Figure II-17 through **Figure II-19** present elevation massing drawings of the proposed development for the south (from Mission Street), west (from South Van Ness Avenue), and east (from 11th Street) elevations,

respectively. **Figure II-17, South Elevations as Viewed from Mission Street**, presents drawings depicting the south elevation, looking north from Mission Street. The primary entrance to the residential lobby is visible, flanked by window bays housing retail uses that open onto Mission Street. The residential tower and south podium wing can be seen to the west, while the retained and rehabilitated portion of the 1500 Mission Street building can be seen to the east, with the new office tower and podiums rising behind. The alleyway that separates the two components and provides loading for the residential and retail component is also shown.

Figure II-18, West Elevations as Viewed from South Van Ness Avenue, presents a depiction of the west elevation, looking east from South Van Ness Avenue. The office component, including the tower and east podium, can be seen in the background with the north podium extending to South Van Ness Avenue. The entrance to the City Permit Center and office lobby can be seen, marked by the City's seal, set back from the entrance to the pedestrian concourse. The residential component is visible, with the west podium extending along South Van Ness Avenue, topped by an open space area. Retail space is provided at the ground floor, with window bays, and the canopy structure is seen projecting out over the sidewalk on the corner of South Van Ness Avenue and Mission Street.

Figure II-19, East Elevations as Viewed from 11th Street, presents the east elevation, looking west from 11th Street. The entrance to the basement parking is shown on the northern end of the site, as well as the 11th Street entrance to the office lobby. The vehicular access for the residential parking area is seen between the office lobby entrance and the windows of the retained and rehabilitated portion of the 1500 Mission Street building, with an office open space area shown above the residential garage ramp.

Figure II-20, View West of Proposed Project from Mission and 11th Street, presents a visual simulation, looking west from Mission and 11th Streets. The retained and rehabilitated portion of the 1500 Mission Street building is shown in the foreground, with the residential and retail/restaurant tower and podium extending to the east along Mission Street shown to the west, and the tower of the office and permit center component shown to the north of the 1500 Mission Street building.

Figure II-21, View North of Proposed Project from 11th and Minna Streets, presents a visual simulation, looking north from 11th and Minna Streets. The retained and rehabilitated portion of the 1500 Mission Street building is also shown in the foreground, with the residential and retail/restaurant tower and podium extending to the east along Mission Street shown to the west, and the office and permit center tower shown to the north of the 1500 Mission Street building.

Figure II-22, View South of Proposed Project from South Van Ness Avenue, presents a visual simulation, looking east from South Van Ness Avenue between Market and Mission Streets. The office component, including the tower and east podium, can be seen in the background with the north podium extending to South Van Ness Avenue. The entrance to the City Permit Center and office lobby can be seen, marked by the City's seal, set back from the entrance to the pedestrian concourse. The residential component is visible, with the west podium extending along South Van Ness Avenue, topped by an open space area. Retail space is provided at the ground floor, with large window bays, and the canopy structure is seen projecting out over the sidewalk on the corner of South Van Ness Avenue and Mission Street.



SOURCE: SOM, 2016

1500 Mission Street; Case No. 2014-000362ENV

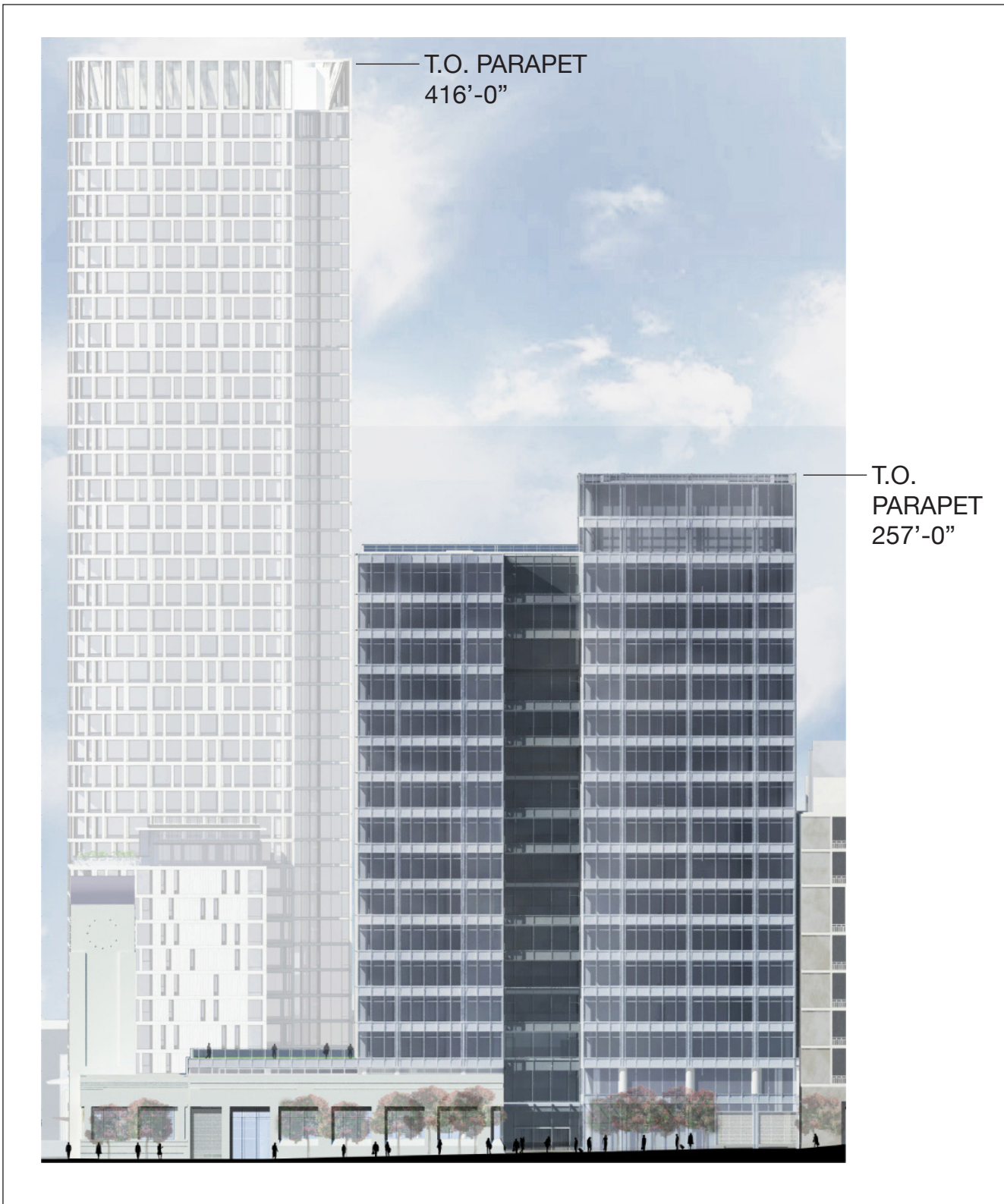
Figure II-17
South Elevations as Viewed from Mission Street



SOURCE: SOM, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure II-18
West Elevations as Viewed from South Van Ness Avenue



SOURCE: SOM, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure II-19
East Elevations as Viewed from 11th Street



SOURCE: SOM, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure II-20

View West of Proposed Project from Mission and 11th Street



SOURCE: SOM, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure II-21
View North of Proposed Project from 11th and Minna Streets



SOURCE: SOM, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure II-22
View South of Proposed Project from South Van Ness Avenue

II.E Intended Uses of the EIR

This is a project-specific Environmental Impact Report (EIR), intended to provide information about the environmental consequences of the proposed project in accordance with the requirements of the California Environmental Quality Act (CEQA). In addition to describing the proposed project and required approvals, this EIR analyzes potential environmental impacts of the proposed project, identifies feasible mitigation where those impacts are significant, addresses cumulative impacts to which the proposed project could make a substantial contribution, and evaluates alternatives to the proposed project that could avoid or substantially reduce significant impacts while still meeting most of the proposed project's basic objectives. Refer to Chapter I, *Introduction*, for a more detailed description of CEQA requirements.

II.E.1 Approvals Required

Before discretionary project approvals may be granted for the proposed project by the City or a responsible agency, the San Francisco Planning Commission and Board of Supervisors, as the approval bodies of the lead agency, must certify that the EIR was presented, that the Planning Commission reviewed and considered the information in it, that the EIR complies with CEQA, and that the EIR reflects the City's independent judgment and analysis. The following is a list of discretionary and nondiscretionary approvals that would or may be required for implementation of the proposed project, if approved, although other approvals may also be necessary. The proposed project is anticipated to require the following approvals:

San Francisco Board of Supervisors

- Zoning Map amendments to change the site's height and bulk district designations and amendment to Map 3 (height districts) of the Market & Octavia Area Plan.
- *Planning Code* amendments to create the Mission and South Van Ness Special Use District, which would supersede the project site's current Van Ness & Market Downtown Residential Special Use District, to permit office uses on the ground floor and above the fourth floor and allow parking for the City's fleet vehicles and to permit a ratio of 0.5 parking space per unit for the residential parking, and to amend Section 270 regarding bulk limits by creating a new Subsection 270(g).
- Ratification of the City's conditional agreement to purchase the office building component
- Potential approvals for construction within the public right-of-way (e.g., sidewalk wind screens and benches) on Mission and 11th Street and South Van Ness Avenue if ownership of the South Van Ness sidewalk is conveyed to the City from Caltrans

San Francisco Planning Commission

- Certification of the Final EIR
- Zoning Map Amendment to alter the parcels' height and bulk and amendment to Map 3 (height districts) of the Market & Octavia Area Plan (recommendation to the Board of Supervisors)
- *Planning Code* amendments to create the Mission and South Van Ness Special Use District, which would supersede the project site's current Van Ness & Market Downtown Residential Special Use District, to permit office uses on the ground floor and above the fourth floor and allow parking for the City's fleet vehicles, and to amend Section 270 regarding bulk limits by creating a new Subsection 270(g) (recommendation to the Board of Supervisors)

- Downtown Project Authorization (*Planning Code* Section 309), including exceptions to the requirement to provide a rear yard amounting to 25 percent of lot depth, eliminate existing and new exceedances of the pedestrian wind comfort criterion of Section 148, and the requirement for off-street freight-loading spaces for the residential building of Section 152.1 (four spaces required, three proposed)
- Findings, upon the recommendation of the Recreation and Park General Manager and/or Commission, that shadow would not adversely affect public open spaces under Recreation and Park Commission jurisdiction (*Planning Code* Section 295)

San Francisco Public Works

- Minor or major street encroachment permits for construction within the public right-of-way (e.g., wind canopy, sidewalk wind screens and benches) on Mission and 11th Street and on South Van Ness Avenue if ownership of the South Van Ness sidewalk is conveyed to the City from Caltrans
- Approval of lot merger and subdivision applications
- If sidewalk(s) are used for construction staging and pedestrian walkways are constructed in the curb lane(s), approval of a street space permit from the Bureau of Street Use and Mapping

San Francisco Department of Building Inspection

- Approval of demolition, grading, and building permit applications
- If any night construction work is proposed that would result in noise greater than five dBA above ambient noise levels, approval of a permit for nighttime construction

San Francisco Municipal Transportation Agency

- Approval of the placement of bicycle racks on the sidewalk, and of other sidewalk improvements, by the Sustainable Streets Division
- If sidewalk(s) are used for construction staging and pedestrian walkways are constructed in the curb lane(s), approval of a special traffic permit from the Sustainable Streets Division
- Approval of construction within the public right-of-way to ensure consistency with the *Better Streets Plan*
- Approval of the on-street commercial (yellow zone) and passenger (white zone) loading spaces proposed on South Van Ness Avenue and on 11th Street

San Francisco Public Utilities Commission

- Approval of any changes to sewer laterals (connections to the City sewer) or relocation of sewer lines
- Approval of an Erosion and Sediment Control Plan, in accordance with Article 4.1 of the *San Francisco Public Works Code*
- Approval of post-construction stormwater design guidelines, including a stormwater control plan that complies with the City's Stormwater Design Guidelines

San Francisco Recreation and Park Commission

- Determination and recommendation to the Planning Commission that shadow would not adversely affect open spaces under Commission jurisdiction

San Francisco Department of Public Health

- Approval of an Enhanced Ventilation Proposal as required pursuant to Article 38 of the *Health Code*
- Approval of a Dust Control Plan as required pursuant to Article 22B of the *Health Code*
- Approval of a Work Plan for Soil and Groundwater Characterization and, if determined necessary by the Department of Public Health, a Site Mitigation Plan, pursuant to Article 22A of the *Health Code*

Bay Area Air Quality Management District

- Approval of permit to operate for emergency generators

California Department of Transportation

- Approval of encroachment permits for any work above or in the street and, if the South Van Ness Avenue sidewalk remains in State ownership, for the wind canopy, wind screens, benches and trees on the South Van Ness Avenue (Highway 101) sidewalk

CHAPTER III

Plans and Policies

III.A Overview

Pursuant to the California Environmental Quality Act (CEQA) Guidelines Section 15125(d), this chapter provides a general description of land use plans applicable to the 1500 Mission Street project and identifies the proposed project's potential to conflict with those plans or policies adopted for the purpose of avoiding or mitigating an environmental effect. Policy conflicts do not indicate a significant environmental effect within the context of CEQA environmental review. Instead, the intent of CEQA is to determine physical effects associated with a project. To the extent that physical environmental impacts of a proposed project may result in conflicts with one of the goals related to a specific resource topic, such impacts are analyzed in this Environmental Impact Report (EIR) and Initial Study (Appendix A).

Land use plans typically contain numerous policies emphasizing differing legislative goals, and an interpretation of consistency requires the balancing of all relevant policies. In the case of this project, the San Francisco Planning Commission will evaluate the proposed project in accordance with provisions of the *San Francisco General Plan (General Plan)*, including the Market & Octavia Area Plan.

Decision-makers will consider the consistency of the 1500 Mission Street project with applicable plans and policies that do not directly relate to physical environmental issues when they determine whether to approve or disapprove the proposed project.

Plans and policies addressed in this chapter include:

- The *San Francisco Planning Code (Planning Code)*, including: Allowable Uses, Affordable Housing, Height and Bulk, Open Space and Streetscape Improvements, and Vehicle and Bicycle Parking and Loading
- The *General Plan*
 - Including the Housing, Urban Design, Recreation and Open Space, Air Quality, and Transportation Elements
- *Area Plans*
 - The Downtown Plan
 - The Market & Octavia Area Plan
- *Proposed Area Plans*
 - The Market Street Hub (“the Hub”) Project
- The *Accountable Planning Initiative*
- The *Climate Action Plan*

- *San Francisco Bicycle Plan*
- *The Better Streets Plan*
- The Transit-First policy
- Transportation Sustainability Program
- Regional Plans and Policies
 - *Plan Bay Area*, which includes the Sustainable Communities Strategy, Bay Area Air Quality Management District's (BAAQMD's) *2010 Clean Air Plan*, The Metropolitan Transportation Commission, *Regional Transportation Plan – Transportation 2040*, and *The San Francisco Bay Plan*
 - San Francisco Regional Water Quality Control Board's (RWQCB's) *San Francisco Basin Plan*

Sections IV.A through IV.E of this EIR describe pertinent resource-specific plans and policies in the environmental topical area analysis. In addition, specific approval requirements, as they relate to plans or policies, are described in Chapter II, *Project Description* (Section II.F, *Intended Uses of the EIR*).

III.B Plans and Policies Relevant to the Proposed Project

III.B.1 San Francisco Planning Code

The *Planning Code*, which incorporates by reference the City's Zoning Maps, governs allowed uses, densities, and the configuration of buildings in San Francisco. Permits to construct new buildings (or to alter or demolish existing ones) may not be issued unless either the proposed action conforms to the *Planning Code* or an exception is granted pursuant to provisions of the *Planning Code*.

Allowable Uses

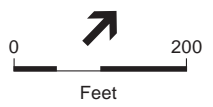
As shown in **Figure III-1, Project Vicinity Zoning Map**, the proposed project is located in the C-3-G (Downtown – General Commercial) Zoning District, which covers the eastern portions of downtown district of San Francisco. As stated in *Planning Code* Section 210.3, the C-3-G Zoning District allows a variety of uses, including retail, offices, hotels, entertainment, clubs and institutions, and high-density residential. Many of these uses have a citywide or regional function, although the intensity of development is lower here than in the downtown core area further to the east.

The requirements associated with the C-3-G Zoning District are described in *Planning Code* Section 210.3 with references to other applicable articles of the *Planning Code* as necessary (for example, for provisions concerning parking, rear yards, and open space). As in the case of other Downtown districts, no off-street parking is required for individual commercial or residential buildings. In the vicinity of Market Street, the configuration of this district reflects easy accessibility by rapid transit. Within the C-3-G district, office, retail/restaurant and residential uses, as proposed by the project, are principally allowed.¹⁷

¹⁷ *Planning Code* Sections 215(a), 218(b).



 Project Site



SOURCE: San Francisco Planning Department

1500 Mission Street; Case No. 2014-000362ENV

Figure III-1
Project Vicinity Zoning Map

The project is also located in the Van Ness & Market Downtown Residential Special Use District, which covers properties in the vicinity of the intersection of Van Ness Avenue and Market Street. As stated in *Planning Code* Section 249.33, non-residential uses are not permitted above the fourth story, and at least two occupied square feet of residential use must be provided for each occupied square foot of non-residential use. However, in order to accommodate local government office uses near City Hall, publicly-owned or leased buildings or lots are exempted from this requirement.

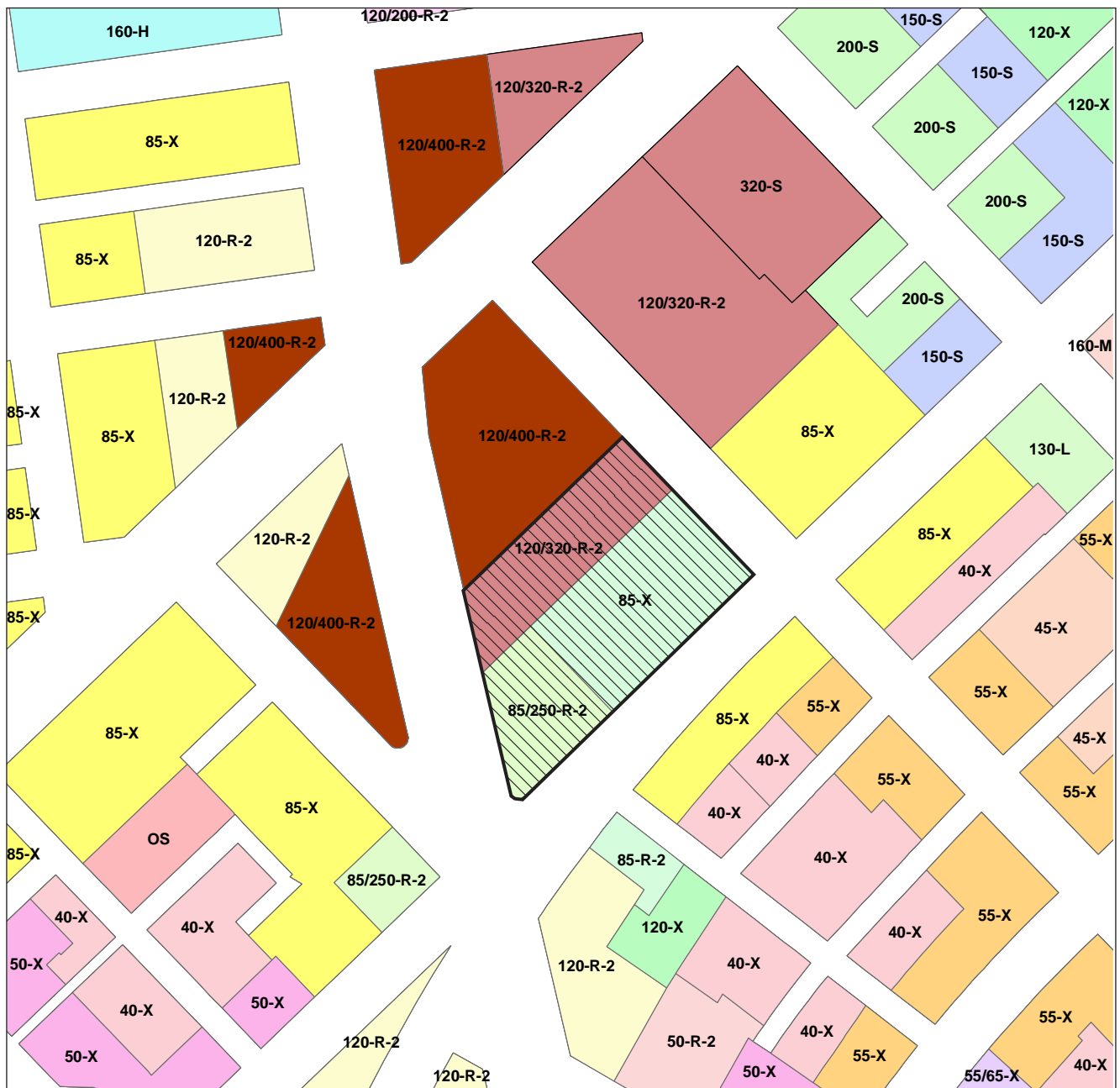
Height and Bulk

The project site falls within three separate Height and Bulk Districts (see **Figure III-2, Height and Bulk District Map**). The southwestern side of the project site is within a 85/250-R-2 Height and Bulk District; the southeastern portion of the project site falls within a 85-X Height and Bulk District; and the northern portion of the site falls within a 120/320-R-2 Height and Bulk District. The 85-X district permits a maximum height of 85 feet with no restriction on building bulk. The 85/250-R-2 and 120/320-R-2 districts permit building heights up to 250 feet and 320 feet, respectively, and *Planning Code* Section 270(f) contains limitations on building bulk above the base heights of 85 feet and 120 feet, respectively: these restrictions include maximum plan dimensions at the applicable height limit of 100 feet and 115 feet, respectively, and maximum diagonal dimensions of 125 feet and 145 feet, respectively. In both the 120/320-R-2 and 85/250-R-2 districts, a tower up to 240 feet in height may not exceed a plan length of 90 feet and a diagonal dimension of 120 feet, and a maximum average floor area of 8,500 gross square feet (gsf); and a tower between 351 and 550 feet in height may not exceed a plan length of 115 feet and a diagonal dimension of 145 feet, and an average floor area of 10,000 gsf.¹⁸ Additionally, buildings taller than 120 feet must have a tower separation of 115 feet apart.

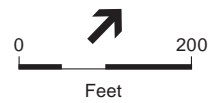
The proposed project would construct a residential and retail tower at the corner of South Van Ness Avenue and Mission Street that would be 396 feet tall, measured from ground level to the top of the roof, with various rooftop elements, including a parapet, extending to a height of 416 feet.¹⁹ The proposed project also would construct a second tower that would front on 11th Street and would be 227 feet tall, from ground level to the top of the roof, with rooftop elements, including a parapet, extending to a height of 257 feet. The two towers would be approximately 180 feet apart. The plan length for the 396-foot-tall tower above the podium would be approximately 127 feet along Mission Street and approximately 108 feet along South Van Ness Avenue, and the diagonal dimension would be approximately 162 feet. The floorplates for each floor would range from approximately 10,300 square feet in the tower to approximately 27,600 square feet in the podium. The plan length for the 227-foot-tall tower above the podium would be approximately 165 feet along 11th Street and approximately 150 feet along north side of the building, and the diagonal dimension would be approximately 223 feet. The floorplates for each floor would range from between approximately 20,700 square feet in the tower to 41,200 square feet in the podium. The proposed project would exceed the height limit of the existing Height and Bulk Districts but would conform to the requirement that the two buildings would have a tower separation of at least 115 feet apart, as they would be spaced 180 feet apart.

¹⁸ See *Planning Code* Section 270(f)(1).

¹⁹ *Planning Code* Section 270(f) defines the tower in the 85/250-R-2 and 120/320-R-2 height and bulk districts as being any part of the building above 85 feet and 120 feet in height, respectively.



 Project Site



The proposed project would be reviewed by the Planning Commission, which would make a recommendation to the Board of Supervisors on proposed Zoning Map amendments to adjust the height and bulk limit designations and text amendments to the *Planning Code* to create the Mission and South Van Ness Special Use District to supersede the Van Ness & Market Downtown Residential Special Use District designation, allow additional off-street parking, and provide office space above the fourth floor, and to amend the bulk limit provisions of Section 270 by creating a new Subsection 270(g) applicable within the new height and bulk districts. The proposed Height and Bulk district for the Mission and South Van Ness Special Use District would include three separate districts. The southwestern side of the project site would fall within a 130/400-R-3 Height and Bulk District; the southeastern portion of the project site would fall within an 85-X Height and Bulk District; and the northern portion of the site would fall within a 130/240-R-3 Height and Bulk District. The 85-X district permits a maximum height of 85 feet with no restriction on building bulk. The 130/240-R-3 and 130/400-R-3 districts permit building heights up to 240 feet and 400 feet, respectively, with bulk limitations and tower separation requirements above a podium height of 130 feet.

Affordable Housing

The proposed project would meet the requirements of the City's Residential Inclusionary Affordable Housing Program requirements (*Planning Code* Sections 415 et seq.) of 13.5 percent by including 20 percent below-market-rate (BMR) units on-site.²⁰

Open Space

Planning Code Section 135 specifies the amount of usable open space that is required for new residential development in C-3-G Downtown General Commercial Zoning Districts. "Private usable open space" is defined as areas private to and designed for use by only one dwelling unit, while "common usable open space" is defined as an area or areas designed for joint use by two or more dwelling units.

For C-3-G Zoning Districts, Section 135(d) (Table 135A of the *Planning Code*) requires 36 square feet of usable open space per dwelling unit if all open spaces are private. The ratio of common usable space that can be substituted for private space is 1.33 square feet.

Section 135(a) requires that usable open space shall be composed of an outdoor area that is safe and suitably surfaced and screened; is on the same lot as the dwelling units served; and is designed and oriented in a manner that will make the best use of available sun and other climatic advantages. Section 135(b) also requires that usable open space shall be as close as practicable to the dwelling unit and shall be accessible from such dwelling unit in two ways: either by private usable open space that is accessible from the bedroom or dwelling; or by common usable open space that is easily and independently accessible from such dwelling or from another common area of the building or lot. In addition, Section 135(g)(1) requires that common usable open space shall be at least 15 feet in every horizontal dimension and shall have a minimum area of 300 square feet.

²⁰ Although San Francisco voters in June 2016 approved an increase in affordable housing requirements for new projects through passage of Proposition C, *Planning Code* provisions adopted by the Board of Supervisors and signed by the mayor in May 2016 provide for the graduated application of increased affordable housing requirements for projects with applications already on file. Based on the May 2016 provisions, because the environmental review application for the proposed project was submitted in 2014, the proposed project would be required to provide 13.5 percent of on-site housing units as affordable units.

Of the 560 residential units proposed for the project, 15 would have private balconies that meet the 36 square feet minimum requirement for private open space. Thus, 48 square feet per unit of common open space (1.33 x 36 square feet = 48 square feet per unit) would be required for the remaining 545 units, for a total of 26,160 square feet. The proposed project would provide approximately 23,700 square feet of common residential open space, in addition to approximately 3,300 square feet of common residential open space that would also be publicly-accessible open space on South Van Ness Avenue in front of the residential and retail/restaurant building, for a total of approximately 27,000 square feet of open space.

Planning Code Section 138 requires one square foot of publicly-accessible office space for every 50 gsf of commercial uses in the C-3 districts. Thus, 9,756 square feet of publicly-accessible open space would be required for the approximately 487,800 square feet of office and retail uses.²¹ To comply with this open space requirement, approximately 12,400 square feet of publicly-accessible open space would be provided in a pedestrian mid-block concourse and the building setback along South Van Ness Avenue. Non-publicly-accessible office open space for City employees also would be provided on upper level terraces of the office and permit center component. An additional approximately 6,800 square feet of open space would be provided on the third floor as part of the childcare facility. Therefore, the proposed project would comply with the *Planning Code* requirements for open space meeting *Planning Code* Section 135 requirements.

Streetscape Improvements

Planning Code Section 138.1(c)(1) requires that for every 20 feet of property frontage along each street, one 24-inch box tree be planted, with any remaining fraction of 10 feet or more of frontage requiring an additional tree. The proposed project would have 301 feet of total frontage along South Van Ness Avenue, 472 feet of frontage along Mission Street, and 275 feet of frontage along 11th Street, for a total of approximately 1,048 feet of frontage requiring 52 street trees. The proposed project would comply with Section 138.1(c)(1) by replacing the 16 existing trees along 11th Street, Mission Street, and South Van Ness Avenue and planting up to 53 street trees in total. Therefore, the proposed project would comply with the *Planning Code* requirements for street trees.

Automobile Parking, Bicycle Parking, and Loading

According to *Planning Code* Section 151.1, off-street parking for residential or commercial uses in the C-3-G district is not required; instead a maximum amount of off-street parking is permitted. The residential and retail/restaurant component of the proposed project would provide 280 residential parking spaces (including 11 ADA-accessible parking spaces), 14 retail parking spaces, and six car-share spaces (including the two car-share spaces required for the office component). If off-street parking is provided, minimum requirements apply with respect to ADA-accessible spaces (one per 25 spaces provided) and car-share spaces (for 201 or more dwelling units, two spaces plus one space for each 200 dwelling units in excess of 200 units, and for non-residential projects with 50 or more parking spaces, one space, plus one space for every 50 parking spaces over 50). For retail/restaurant uses, up to seven percent of the gross floor area of the retail/restaurant use is permitted, which would allow 2,660 square feet (about 14 parking spaces) for the retail/restaurant component

²¹ The approximate 487,800 square feet of office and retail uses is based upon gross square feet as defined in *Planning Code* Section 102.

of the project. For residential uses, 0.25 parking space per unit (140 spaces for the proposed 560 dwelling units) are principally permitted and up to 0.5 parking space per unit (280 spaces) are permitted with a Conditional Use Authorization in the Van Ness & Market Downtown Residential Special Use District. Therefore, the residential and retail/restaurant parking component of the proposed project requires a Conditional Use Authorization and this requirement will be included in *Planning Code* amendments to create the Mission and South Van Ness Special Use District.

The office and permit center component of the proposed project would provide approximately 113,100 square feet on two basement levels to accommodate up to 120 automobile parking spaces for the City office building (depending on whether stackers are used) including four ADA-accessible parking spaces. For office uses, up to seven percent of the gross floor area of the office use is permitted, which would allow 31,794 square feet (about 90 vehicle parking spaces) for the office component. Therefore, the office and permit center component does not comply with these requirements and the proposed project would require a *Planning Code* text amendment as part of the proposed Mission and South Van Ness Special Use District.

Vehicle and bicycle access to the two garages would be provided via separate driveways on 11th Street. The residential and retail/restaurant component would have an approximately 24-foot-10-inch-wide garage opening, accessed via an approximately 29-foot-wide curb cut; the garage opening to the office and permit center component would be approximately 22 feet and two inches wide and accessed via an approximately 28-foot-wide curb cut. The driveway to the residential and retail component would be located about 40 feet north of Mission Street, while driveway into the office and permit center component would be located about 250 feet north of Mission Street and 320 feet south of Market Street.

Planning Code Section 155.2 requires that for new residential buildings over 100 units, 100 secure (Class 1) bicycle parking spaces (bicycle locker or space in a secure room) are provided plus one Class 1 space for every four dwelling units over 100, along with one Class 2 space (publicly-accessible bicycle rack) for each 20 units. Therefore, the residential component of the proposed project would require 215 Class 1 spaces and 28 Class 2 spaces. Section 155.2 also requires that office uses provide one Class 1 space for every 5,000 occupied square feet and a minimum of two Class 2 spaces for any office use greater than 5,000 feet with one Class 2 space for each additional 50,000 occupied square feet, or 90 Class 1 and 11 Class 2 spaces for the proposed project. For the retail space, Section 155.2 requires one Class 1 space for each 7,500 square feet of occupied space and one Class 2 space for each 2,500 square feet of occupied space, or four Class 1 spaces and 11 Class 2 spaces for the retail use. In addition, for a restaurant use Section 155.2 requires one Class 1 space for each 7,500 square feet of occupied space, and one Class 2 space for every 750 square feet of occupied space, for a total of one Class 1 space and 13 Class 2 spaces for the restaurant use. For the childcare use, Section 155.2 requires a minimum of two Class 1 spaces or one space for every 20 children, and one Class 2 space for every 20 children. The total requirement for the proposed project would be 314 Class 1 spaces and 67 Class 2 spaces (racks). The proposed project would provide 553 Class 1 bicycle spaces in the basement garages and 67 Class 2 bicycle spaces; therefore, the proposed project would comply with *Planning Code* Section 155.2.

The Class 1 bicycle spaces for the residential and retail/restaurant component would be provided on the first basement level of the garage, and would be accessed via a dedicated bicycle ramp from 11th Street located to the south of the vehicle ramp serving the residential and retail/restaurant building garage; the Class 1 bicycle spaces for the office and permit center component would be provided on the first basement level of the garage, and would be accessed via a dedicated bicycle ramp from 11th Street located to the north of the vehicle ramp

servicing the residential and retail/restaurant building garage. The Class 2 bicycle spaces would be provided in bicycle racks on 11th Street, Mission Street, and South Van Ness Avenue, subject to SFMTA approval.

Per *Planning Code* Section 155.4, the office and permit center component of the proposed project would require four showers and 24 clothes lockers when the occupied floor area exceeds 50,000 square feet. For the retail/restaurant component of the proposed project, Section 155.4 requires one shower and 12 clothes lockers when the occupied floor area exceeds 25,000 square feet but is not greater than 50,000 square feet. As six showers and 38 lockers are proposed for the residential and retail/restaurant component, and 15 showers and 76 lockers are proposed for the office and permit center component, the proposed project would meet the *Planning Code* requirement.

Planning Code Section 152.1 requires three off-street loading spaces for residential buildings greater than 500,000; one space per 25,000 sf for retail uses greater than 50,000 square feet; and 0.1 space per 10,000 square feet of office space. For the residential and retail component, the proposed project would provide three off-street loading spaces, from a 26-foot-four-inch-wide curb cut and mid-block alley accessed from Mission Street. The location of this curb cut off of Mission Street, which is not permitted under *Planning Code* Section 155(1)(r) would require an exception from the Planning Commission. Further detail on this proposed curb cut is provided in Section IV.B, *Transportation and Circulation*. For the office component, three truck loading spaces and four service vehicle loading spaces would be provided in the first below-grade garage level, which would be accessed from a driveway on 11th Street, would comply with Section 152.1.

III.B.2 San Francisco General Plan²²

The *General Plan* sets forth the City's comprehensive, long-term land use policies and direction. The *General Plan* contains 10 elements (Housing, Commerce and Industry, Recreation and Open Space, Transportation, Urban Design, Environmental Protection, Community Facilities, Community Safety, Arts, and Air Quality) that provide goals, policies, and objectives for the physical development of San Francisco. In addition, the *General Plan* includes area plans that outline goals and objectives for specific geographic and community planning areas (such as the Market & Octavia Area Plan, discussed in the following subsection, within which the project site is located).

The Planning Department, Zoning Administrator, Planning Commission, and other City decision-makers will evaluate the proposed project in the context of the *General Plan*, and as part of the project review process will consider potential conflicts. The consideration of *General Plan* objectives and policies would take place independently of the environmental review process. Any potential conflict not identified in this EIR would be considered in that context and would not alter the analysis of physical environmental impacts found in this EIR.

Three *General Plan* elements that are particularly applicable to planning considerations associated with the proposed project are the Housing, Urban Design, and Recreation and Open Space elements of the *General Plan*, as described below and in the following pages. Other elements of the *General Plan* that are applicable to technical aspects of the proposed project include the Air Quality and Transportation Elements. The proposed

²² City and County of San Francisco, *San Francisco General Plan*, 1988, as amended through 2009. Available at http://www.sf-planning.org/ftp/General_Plan/index.htm.

project's consistency with the individual policies contained in these more technical elements is discussed in the appropriate topical sections of this EIR.

Housing Element. The 2014 Housing Element is a component of the *General Plan* that establishes the City's overall housing policies. California State Housing Element law (California Government Code Sections 65580 et seq.) requires local jurisdictions to adequately plan for and address the housing needs of all segments of its population in order to attain the region's share of projected statewide housing goals. This law requires local governments to plan for their existing and projected housing needs by facilitating the improvement and development of housing and removing constraints on development opportunities. San Francisco's 2014 Housing Element was required to plan for an existing and projected housing need of 28,869 new dwelling units. A particular focus of the Housing Element is on the creation and retention of affordable housing, which reflects intense demand for such housing, a growing economy (which itself puts increasing pressure on the existing housing stock), and a constrained supply of land (necessitating infill development and increased density). In general, the 2014 Housing Element supports projects that increase the City's housing supply (both market-rate and affordable housing), especially in areas that are close to the City's job centers and are well-served by transit. The proposed project, which is a mixed-use project containing housing, would not obviously conflict with any objectives or policies in the Housing Element.

Urban Design Element. As described in the *General Plan*, the Urban Design Element relates to the physical character and order of the city, and the relationship between people and their environment. The element specifically calls for centers of activity to be made more prominent through design of street features and other means (Policy 1.6). Recommended features include street landscaping, lighting, distinctive paving, furniture, and other elements that fit within the context and contribute to the identity of the area, suitable to the needs and desires of merchants, shoppers and other people using the area.

- **Policy 3.4** states that the City shall "promote building forms that will respect and improve the integrity of open spaces and other public areas." This policy's explanation specifically states that large buildings and developments should provide open space on their sites and consider separation of pedestrian and vehicular circulation levels where possible. By providing publically-accessible open space on the project site, the proposed project would generally be consistent with the urban design policies of the Urban Design Element (refer to the Market & Octavia Area Plan, and the *Planning Code* discussion in the following pages).

Potential conflicts with Urban Design Element policies are discussed below, beginning with identification of applicable policies for which the project may conflict:

- **Policy 2.4:** Preserve notable landmarks and areas of historic, architectural or aesthetic value, and promote the preservation of other buildings and features that provide continuity with past development.

Implementation of the proposed project would result in the demolition and partial retention of the 1500 Mission Street building, considered a historical resource under CEQA due to its eligibility for listing in the California Register under Criterion C (design/construction). Therefore, demolition and partial retention and rehabilitation of the 1500 Mission Street building could potentially conflict with Policy 2.4. Associated physical environmental impacts are discussed in Section IV.A, *Cultural Resources*.

- **Policy 4.4** states that walkways should be designed to minimize danger to pedestrians, and should be set apart where possible to provide a separate circulation system.

Implementation of the proposed project could potentially conflict with the Urban Design Element by providing truck loading spaces for the residential building that would be accessed via Mission Street and a mid-block alley. Unrestricted truck access to the on-site loading spaces has the potential for interfering with pedestrian circulation on Mission Street and in the mid-block alley, creating potentially hazardous conditions for pedestrians. See Section IV.B, *Transportation and Circulation*, for a more detailed discussion of potential impacts to pedestrians.

Recreation and Open Space Element (ROSE). The *General Plan's* Recreation and Open Space Element (ROSE), revised and updated in April 2014, addresses the character of the city's open spaces and calls for the preservation and enhancement of open spaces through community engagement. Specifically, the ROSE calls for the acquisition of open space in high needs areas (Policy 2.1), and supporting the development of civic-serving open spaces (Policy 2.6). The ROSE identifies portions of the project site area as a high needs open space area. As the proposed project would include the development of a publicly-accessible mid-block concourse that would provide passive recreational opportunities in a high needs open space area, the proposed project would not obviously conflict with any objectives or policies in the ROSE.

Air Quality Element. San Francisco has a number of policies and regulations related to air quality, including those within the Air Quality Element of the *General Plan*. The objectives specified by the Air Quality Element focus on reducing mobile sources of air pollution (Objective 2), decreasing air quality impacts of development (Objective 3), increasing public awareness regarding the negative health effects of pollutants generated by stationary and mobile sources (Objective 4), and minimizing particulate matter emissions from road and construction sites (Objective 5). Implementation of the proposed project could result in potential conflicts with the Air Quality Element, particularly with regard to particulate matter emissions from construction and negative health impacts from mobile sources (i.e. residential generator) associated with the proposed project. See Section IV.C, *Air Quality*, for a more detailed discussion of potential impacts to air quality.

Transportation Element. The Transportation Element of the *General Plan* is composed of objectives and policies that relate to the eight aspects of the citywide transportation system: General Regional Transportation, Congestion Management, Vehicle Circulation, Transit, Pedestrian, Bicycles, Citywide Parking, and Goods Management. The Transportation Element references San Francisco's Transit First Policy in its introduction, and contains objectives and policies that are directly pertinent to consideration of the proposed project, including objectives related to locating development near transit facilities, encouraging transit use, and timing traffic signals to emphasize transit, pedestrian, and bicycle traffic as part of a balanced multimodal transportation system. The *General Plan* also emphasizes alternative transportation through the positioning of building entrances, making improvements to the pedestrian environment, and providing safe bicycle parking facilities. Implementation of the proposed project could result in potential conflicts with the Transportation Element, particularly with regard to potential delays to Muni and potential hazardous conditions for bicyclists and pedestrians. See Section IV.B, *Transportation and Circulation*, for a more detailed discussion of potential impacts to pedestrians.

Downtown Plan

The Downtown Plan is an area plan under the *General Plan*, and applies to the project site and is in the C-3 Plan region of the Area Plan. The aim of the Downtown Plan is to encourage business activity and promote economic growth downtown, as the City's and region's premier city center, while improving the quality of

place and providing necessary supporting amenities. Centered on Market Street, the Plan covers an area roughly bounded by Van Ness Avenue to the west, Steuart Street to the east, Folsom Street to the south, and the northern edge of the Financial District to the north.

The Downtown Plan contains objectives and policies that address the following issues: provision of space for commerce, housing, and open space; preservation of the past; urban form; and movement to, from, and within the downtown area (transportation). The Downtown Plan was intended to maintain a compact downtown core and direct growth to areas with developable space and easy transit accessibility so that downtown would “encompass a compact mix of activities, historical values, and distinctive architecture and urban forms that engender a special excitement reflective of a world city.”²³ The Downtown Plan regulates growth in the downtown area, centered in the Financial District, through restrictions on height limits and floor area ratios (FARs).

The Downtown Plan grew out of awareness of public concern in the mid-to-late 20th century over the degree of change occurring downtown and because of “the often conflicting civic objectives between fostering a vital economy and retaining the urban patterns and structures which collectively form the physical essence of San Francisco.”²⁴ One of the fundamental concepts embodied within the Downtown Plan is to expand the City’s downtown office core south from its traditional location north of Market Street, in a way that protects the smaller-scale and mixed uses in Chinatown, Jackson Square, along Kearny Street, around Union Square, and in the Mid-Market and Tenderloin/North of Market neighborhoods. As the project is proposing to develop an office building and a residential tower at Mission Street, 11th Street, and South Van Ness Avenue south of Market Street, the proposed would not obviously conflict with the objective and policies of the Downtown Plan.

As discussed in the Initial Study under Topic 1, *Land Use and Land Use Planning*, Question 1c (refer to Appendix A), the proposed project would introduce two new towers to the area that are generally taller and larger than other buildings in the vicinity. Therefore, the proposed project may conflict with Policy 13.1 of the Downtown Plan:

- **Policy 13.1:** Relate the height of buildings to important attributes of the city pattern and to the height and character of existing and proposed development.

As noted under the discussion of *General Plan* Urban Design Element Policy 2.4, implementation of the proposed project would result in the demolition of a majority of the 1500 Mission Street building, a historical resource. Demolition of the majority of the building could also conflict with Policy 12.1 of the Downtown Area Plan, which is similar to Urban Design Element Policy 2.4.

- **Policy 12.1:** Preserve notable landmarks and areas of historic, architectural, or aesthetic value, and promote the preservation of other buildings and features that provide continuity with past development.

Associated physical environmental impacts are discussed in Section IV.A, *Cultural Resources*.

²³ Introduction to the Downtown Area Plan.

²⁴ *Ibid.*

Market & Octavia Area Plan

The project site is located in the area referred to as “SoMa West” within the Market & Octavia Area Plan (Area Plan) boundaries, an area plan under the *General Plan*. The Area Plan promotes a mixed-use urban neighborhood in which new and current residents enjoy a vibrant pedestrian realm and rich transit connections. The Area Plan allows for intensive commercial uses and residential towers clustered around the intersection of Market Street and Van Ness Avenue. The building façade, street-level retail uses, and pedestrian-scale design along Mission Street and South Van Ness Avenue are consistent with the Area Plan’s design principles.

By replacing existing structures with a high-density residential, retail/restaurant, and office space development centered around transit, the proposed project at 1500 Mission Street would implement several policies identified in the Area Plan, including but not limited to Policies 1.1.2 (concentrating uses in areas served by transit), 1.2.2 (maximize housing opportunities and encourage high-quality commercial spaces on the ground floor), and 1.2.8 (encourage the development of slender residential towers above the base height in the area along South Van Ness Avenue between Market and Mission Streets). However, the proposed project would introduce two new towers to the area that are generally taller and larger than other buildings in the vicinity. Therefore, the proposed project may conflict with Policy 1.2.4 of the Area Plan—encourage buildings of the same height along each side of major streets. See Topic 1, *Land Use and Land Use Planning*, Question 1c in the Initial Study (Appendix A) for a more detailed discussion of potential impacts of the proposed project on the existing character of the vicinity.

III.B.3 Proposed Area Plans

The Market Street Hub (“the Hub”) Project

The Market Street Hub Project (the Hub),²⁵ is a community-based planning effort that seeks to reexamine and propose changes to the current zoning, land use policies and public realm/street designs for the area referred to as “SoMa West” in the Market & Octavia Area Plan. The Hub covers the eastern-most portions of the Market and Octavia Area Plan. This community-based planning effort would be informed by other city projects, such as the Better Market Street project and Van Ness Bus Rapid Transit, which are reviewing and proposing changes for many of the streets in the project area. The Hub Project would include the following zoning components: zoning changes requiring more permanently affordable housing units, both on-site, off-site, and through in-lieu fees; zoning changes to incentivize development of affordable housing for artists, office space for non-profit organizations, and performance or fine arts studio space; height district increases to introduce a variety of building heights and smooth height transitions to adjacent areas; study of minor use changes such as inclusion of office beyond current Market Octavia allowances; bulk control increases to accommodate building construction efficiencies due to recent building code changes; zoning change to reduce parking maximums; transportation Demand Management (TDM) policies; and development fees to support

²⁵ From the 1880s through the 1950s, the area of San Francisco near the intersections of Market Street with Valencia, Haight and Gough Streets was a well-known and distinct neighborhood called the “Market Street Hub” or simply, “The Hub.” The name was likely derived from the convergence of streetcar lines carrying people from outlying neighborhoods to downtown San Francisco. The area’s distinctive block pattern - created by the meeting of the Mission, South of Market, and North of Market street grids - lends additional meaning to this historic name.

project area transit improvements. The Hub Project would include the following potential public realm and transportation components: road diets and sidewalk expansions for 12th, 11th, and Otis Streets; conversion to shared street design or pedestrian-only streets for segments of Colton, Brady, and Stevenson Streets, as well as Chase Court; changes to parking, loading, taxi pick-up/drop-off and other on-street curbside conditions; pedestrian improvements and safety enhancements including shared streets, living alleys, plazas, bulb-outs, turn restrictions, and intersection crossing treatments; new public open spaces, including a central neighborhood open space within the Brady Block and potentially other small sites; and bicycle circulation changes, facility improvements and upgrades, and safety improvements. The Hub Project may include potential geometric intersection changes, including new access restrictions, for the following locations: Mission and Van Ness; Gough, McCoppin, and Otis; Duboce, Mission, and Otis; Page, Franklin, and Market; South Van Ness, Howard, and 13th Streets.

III.B.4 Accountable Planning Initiative

In November 1986, the voters of San Francisco approved Proposition M, the *Accountable Planning Initiative*, which added Section 101.1 to the *Planning Code* to establish the following eight priority policies:

- Preservation and enhancement of neighborhood-serving retail uses;
- Protection of neighborhood character (refer to Appendix A, Topic 1, *Land Use and Land Use Planning*, Question 1c);
- Preservation and enhancement of affordable housing (refer to Appendix A, Section 2, *Population and Housing*, Question 2b, with regard to housing supply and displacement);
- Discouragement of commuter automobiles (refer to Appendix A, Section 7, *Greenhouse Gas Emissions*, and Section IV.B, *Transportation and Circulation*, of the EIR);
- Protection of industrial and service land uses from commercial office development and enhancement of resident employment and business ownership (refer to Appendix A, Section 1, *Land Use and Land Use Planning*, Question 1c);
- Maximization of earthquake preparedness (refer to Appendix A, Section 13, *Geology and Soils*, Questions 13a through 13d);
- Landmark and historic building preservation (refer to Section IV.A, *Cultural and Resources*, of the EIR); and
- Protection of open space (refer to Section IV.E, *Shadow*, in the EIR and Appendix A, Section 9, *Recreation*, Questions 9a and 9c).

Prior to issuing a permit for any project that requires an Initial Study or EIR under CEQA, or issuing a permit for any demolition, conversion, or change of use, and prior to taking any action that requires a finding of consistency with the *General Plan*, the City is required to find that the proposed project would be consistent with these priority policies. As the proposed project would create neighborhood-serving retail uses, discourage use of commuter automobiles, and provide affordable housing, the proposed project would be consistent with the *Accountable Planning Initiative*.

III.B.5 Climate Action Plan

In February 2002, the San Francisco Board of Supervisors passed the *Greenhouse Gas Emissions Reduction Resolution* (Number 158-02) committing the City and County of San Francisco to a GHG emissions reductions goal of 20 percent below 1990 levels by the year 2012. The resolution also directs the San Francisco Department of the Environment, the San Francisco Public Utilities Commission (SFPUC), and other appropriate City agencies to complete and coordinate an analysis and planning of a local action plan targeting GHG emission reduction activities. In September 2004, the Department of the Environment and the SFPUC published the *Climate Action Plan for San Francisco: Local Actions to Reduce Greenhouse Gas Emissions (Climate Action Plan)*. The *Climate Action Plan* examines the causes of global climate change and human activities that contribute to global warming and provides projections of climate change impacts on California and San Francisco from recent scientific reports; presents estimates of San Francisco's baseline GHG emissions inventory and reduction targets; describes recommended emissions reduction actions in the key target sectors—transportation, energy efficiency, renewable energy, and solid waste management—to meet stated goals by 2012; and presents next steps required over the near term to implement the plan. Although the Board of Supervisors has not formally committed the City to perform the actions addressed in the Plan, and many of the actions require further development and commitment of resources, the Plan serves as a blueprint for GHG emission reductions, and several actions are now in progress.

The *Climate Action Plan* cites an array of potential environmental impacts to San Francisco from climate change, including rising sea levels that could threaten coastal wetlands, infrastructure, and property; increased storm activity that could increase beach erosion and cliff undercutting; warmer temperatures that could result in more frequent El Niño storms causing more rain than snow in the Sierras, reducing snow pack that is an important source of the region's water supply; decreased summer runoff and warming ocean temperatures that could affect salinity, water circulation, and nutrients in the Bay, potentially altering Bay ecosystems; other possible effects to food supply and the viability of the state's agricultural system; possible public health effects related to degraded air quality and changes in disease vectors; and other social and economic impacts.

The *Climate Action Plan* presents estimates of San Francisco's baseline GHG emissions inventory and reduction targets. It indicates that burning fossil fuels in vehicles and for energy use in buildings and facilities are the major contributors to San Francisco's GHG emissions, and the Plan includes GHG-reduction strategies such as targeting emission reductions from fossil fuel use in cars, power plants, and commercial buildings; developing renewable energy technologies like solar, wind, fuel cells, and tidal power; and expanding residential and commercial recycling programs. According to the Plan, achieving these goals will require the cooperation of a number of different city agencies. An analysis of potential effects on global warming and GHGs is presented in Appendix A, Section E.7, *Greenhouse Gas Emissions*, which determined that impacts would be less than significant and would not require further analysis in this EIR.

III.B.6 San Francisco Bicycle Plan

In August 2009, the Board of Supervisors approved the *San Francisco Bicycle Plan (Bicycle Plan)*. The *Bicycle Plan* includes a citywide bicycle transportation plan (comprising a "Policy Framework" and a "Network Improvement" document) and implementation of specific bicycle improvements identified within the *Plan*.

The *Bicycle Plan* includes objectives and identifies policy changes that would enhance the City's bike-ability. It also describes the existing bicycle route network (a series of interconnected streets in which bicycling is encouraged), and identifies gaps within the citywide bicycle route network that require improvement. As described in Chapter II, *Project Description*, and earlier in this chapter under *Planning Code*, the proposed project would provide bicycle parking consistent with *Planning Code* Section 155.2 and accommodate bicycle lanes on 11th Street and Mission Street, thereby encouraging bicycle use. As described in Section IV.B, *Transportation and Circulation*, the planned 26-foot-four-inch-wide curb cut on Mission Street providing truck access for residential and retail loading could create potentially hazardous conditions for bicyclists traveling in the adjacent bicycle lane planned as part of SFMTA's Mission Street/South Van Ness Avenue/Otis Street and Muni Forward TTRP.14 projects. Therefore, implementation of the proposed project would potentially conflict with the *Bicycle Plan*, and this is discussed further in Section IV.B, *Transportation and Circulation*, of this EIR.

III.B.7 Better Streets Plan

In December 2010, the *San Francisco Better Streets Plan* (*Better Streets Plan*) was adopted in support of the City's efforts to enhance the streetscape and the pedestrian environment. The *Better Streets Plan* carries out the intent of San Francisco's Better Streets Policy, which was adopted by the Board of Supervisors on February 6, 2006. The *Better Streets Plan* classifies the City's public streets and right-of-way, and creates a unified set of standards, guidelines, and implementation strategies that guide how the City designs, builds, and maintains its public streets and right-of-way.

The *Better Streets Plan* consists of policies and guidelines for the City's pedestrian realm. Major concepts related to streetscape and pedestrian improvements include (1) pedestrian safety and accessibility features, such as enhanced pedestrian crossings, corner or midblock curb extensions, pedestrian countdown and priority signals, and other traffic calming features; (2) universal pedestrian oriented design, with incorporation of street trees, sidewalk plantings, furnishing, lighting, efficient utility location for unobstructed sidewalks, shared single surface for small streets/alleys, and sidewalk/median pocket parks; (3) integrated pedestrian/transit functions using bus bulb-outs and boarding islands (bus stops in medians within the street); (4) opportunities for new outdoor seating areas; and (5) improved ecological performance with incorporation of stormwater management techniques and urban forest maintenance.

The requirements of the *Better Streets Plan* were incorporated into the *Planning Code* as Section 138.1. The proposed project would be consistent with the *Better Streets Plan* by complying with *Planning Code* Section 138.1 through the implementation of the following measures: pedestrian safety and accessibility features; universal pedestrian-oriented streetscape design with incorporation of street trees, street lighting, efficient utility location for unobstructed sidewalks, shared single surface for small streets/alleys, and sidewalk/median pocket parks; and integrated pedestrian/transit functions using bus bulb-outs and boarding islands (bus stops located in medians within the street). Please refer to Section IV.B, *Transportation and Circulation*, for an analysis of the proposed project's impacts on pedestrian circulation.

III.B.8 Transit First Policy

The City's Transit First Policy was adopted by the Board of Supervisors in 1973, amended in 1999, and is contained in Section 8A.115 of the City Charter. The Transit First Policy is a set of principles that emphasize

the City's commitment that the use of public rights-of-way by pedestrians, bicyclists, and public transit be given priority over the private automobile. These principles are embodied in the policies and objectives of the Transportation Element of the *General Plan*. All City boards, commissions, and departments are required by law to implement the City's Transit First Policy principles in conducting the City's affairs.

Under *Planning Code* Section 151.1, the residential and retail/restaurant component would be permitted to provide up to one parking space per each four units, and up to 0.5 space per dwelling unit subject to criteria and procedures related to Conditional Use Authorization, and would be permitted to provide up to 14 parking spaces for the retail/restaurant uses. The residential and retail/restaurant component would provide 280 residential and 14 retail/restaurant parking spaces, and would require a Conditional Use Authorization for the 0.5 parking ratio, which will be considered as part of the *Planning Code* amendment to create the Mission and South Van Ness Special Use District. The office and permit center component would be permitted to provide parking within an area not to exceed seven percent of the gross square area, and the proposed project would exceed this requirement necessitating a *Planning Code* amendment to accommodate the parking requirements of the proposed permit center, including parking for fleet vehicles used by City inspectors. Many of the trips associated with the proposed project are anticipated to be made via public transportation because of the project site's close proximity to numerous Muni routes and the Civic Center BART station. In addition, the proposed project would provide 553 Class 1 bicycle parking spaces and 67 Class 2 bicycle parking spaces along South Van Ness Avenue and Market and 11th Streets, which is greater than the 215 and 28 bicycle parking spaces, respectively, required in the *Planning Code*. However, as discussed above, the planned approximately 26-foot-four-inch-wide curb cut on Mission Street providing truck access for residential and retail loading could potentially delay Muni. In addition, it could potentially create hazardous conditions for bicyclists traveling in the adjacent bicycle lane and the potential for interfering with pedestrian circulation on Mission Street and in the mid-block alley, creating potentially hazardous conditions for pedestrians. Therefore, implementation of the proposed project would potentially conflict with the Transit First Policy, and this is discussed further in Section IV.B, *Transportation and Circulation*, of this EIR.

III.B.9 Transportation Sustainability Program

The Transportation Sustainability Program is an initiative aimed at improving and expanding the transportation system to help accommodate new growth, and create a policy framework for private development to contribute to minimizing its impact on the transportation system, including helping to pay for the system's enhancement and expansion. The Transportation Sustainability Program is a joint effort by the Mayor's Office, the San Francisco Planning Department, the SFMTA, and the San Francisco County Transportation Authority (Transportation Authority), comprised of the following three objectives:

- **Fund Transportation Improvements to Support Growth**—The Transportation Sustainability Fee (TSF) set forth in *Planning Code* Section 411A is assessed on new development, including residential development, to help fund improvements to transit capacity and reliability as well as bicycle and pedestrian improvements. The new TSP replaces the Transit Impact Development Fee (TIDF) that was levied on most new non-residential development citywide to offset new development's impacts on the transit system. The TSF is applicable to the proposed project.
- **Modernize Environmental Review**—This component of the Transportation Sustainability Program changes how the City analyzes impacts of new development on the transportation system under the California Environmental Quality Act (CEQA). This reform has been helped by California Senate Bill

743, which requires that the existing transportation review standard, focused on automobile delay (vehicular level of service), be replaced with VMT. VMT is a measure of the amount and distance that a project causes potential residents, tenants, employees, and visitors of a project to drive, including the number of passengers within a vehicle. Resolution 19579 regarding this reform was adopted at the Planning Commission hearing on March 3, 2016.

- **Encourage Sustainable Travel**—This component of the Transportation Sustainability Program would help manage demand on the transportation network through a Transportation Demand Management (TDM) Program, making sure new developments are designed to make it easier for new residents, tenants, employees, and visitors to get around by sustainable travel modes such as transit, walking, and biking. Each measure that would be included in the TDM program is intended to reduce VMT traveled from new development. *Planning Code* amendments to implement the TDM program were approved by the Planning Commission on August 4, 2016, (Resolutions 19715 and 19716) and the *Planning Code* amendments have been forwarded to the Board of Supervisors for legislative approval. The proposed project would generally comply with the Transportation Sustainability Program.

III.B.10 Regional Plans and Policies

Plan Bay Area

The 2013 adopted *Plan Bay Area*, which includes the region's Sustainable Communities Strategy, is a collaboration of the following four principal regional planning agencies and their policy documents that guide planning in the nine-county Bay Area: Association of Bay Area Governments (ABAG) *Projections*; BAAQMD *2010 Clean Air Plan* (2010 CAP); the Metropolitan Transportation Commission (MTC) *Regional Transportation Plan – Transportation 2040*; and the San Francisco Bay Conservation and Development Commission (BCDC) *San Francisco Bay Plan*.

ABAG's *Projections* includes long-term forecasts of population, housing, and employment for the nine-county Bay Area, but does not include policies or goals; thus, the proposed project would not be inconsistent with ABAG's *Projections*. Refer also to the discussion under Topic 2, *Population and Housing*, in the Initial Study included in Appendix A.

BAAQMD's 2010 CAP is a road map that demonstrates how the San Francisco Bay Area will reduce emissions and decrease ambient concentration of harmful pollutants, achieves compliance with the state ozone standards, and reduces the transport of ozone and ozone precursors to neighboring air basins. As described in Section IV.C, *Air Quality*, the proposed project includes applicable transportation and energy and climate control measures to reduce automobile trips and associated emissions and would not conflict with the 2010 CAP.

MTC's *Regional Transportation Plan – Transportation 2040* provides a long-range road map to guide the Bay Area's MTC transportation investments for a 25-year period. The proposed project is not in the vicinity of any of the planned investments and therefore would not conflict with the Regional Transportation Plan.

San Francisco Bay BCDC *San Francisco Bay Plan* provides direction for BCDC's permit authority regarding various activities within its jurisdiction. The proposed project is not located within BCDC's jurisdiction and therefore would not conflict with the Bay Plan.

San Francisco Basin Plan

In addition, the RWQCB *San Francisco Basin Plan* guides planning of the San Francisco Bay Basin. It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives. As described further in the Initial Study (included in Appendix A), the proposed project would not result in substantial water quality effects; thus, the proposed project would not conflict with the Basin Plan.

III.C Summary

Based upon the discussion presented in this section, the proposed project could potentially conflict with policies in the *General Plan*, the *Downtown Plan*, and the *Market & Octavia Area Plan* related to the preservation of historic resources (due to the demolition of a majority of the 1500 Mission Street building) and changes to the scale and density of the site. Implementation of the proposed project could also potentially conflict with the policies in the *General Plan*, *San Francisco Bicycle Plan* and the *Transit First Policy* related to potential delays to Muni and potential hazardous conditions for bicyclists and pedestrians. The project application includes requests for amendments to existing land use designations and development controls, and the staff report for the Planning Commission will evaluate the consistency of the proposed project with *General Plan* policies and applicable *Planning Code* regulations.

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CHAPTER IV

Environmental Setting, Impacts, and Mitigation Measures

Overview

This chapter provides a project-level impact analysis of the physical environmental impacts of implementing the 1500 Mission Street project as described in Chapter II, *Project Description*. This chapter describes the environmental setting; assesses impacts (off-site, on-site, construction-related, operational, direct, and indirect) and cumulative impacts; and identifies mitigation measures that would reduce or avoid identified significant environmental impacts.

Scope of Analysis

The project sponsor, Goodwill SF Urban Development, LLC, an affiliate of Related California Urban Housing, filed an application on November 12, 2014, for the environmental evaluation of the proposed project. The EIR process provides an opportunity for the public to review and comment on the proposed project's potential environmental effects and to further inform the environmental analysis. The San Francisco Planning Department determined that an EIR was required and published a Notice of Preparation (Appendix B) announcing this requirement on May 13, 2015, and requested that agencies and interested parties comment on environmental issues that should be addressed in the EIR. The Initial Study concluded that the many of the physical environmental impacts of the proposed project would result in less-than-significant impacts, or that mitigation measures agreed to by the project sponsor and required as conditions of approval, would reduce significant impacts to a less-than-significant level. CEQA does not require further assessment of the project's less-than-significant impacts, include the following topical areas: Land Use and Land Use Planning, Population and Housing, Noise, Greenhouse Gas Emissions, Recreation, Utilities and Services Systems, Public Services, Biological Resources, Geology and Soils, Hydrology and Water Quality, Hazards and Hazardous Materials, Mineral and Energy Resources, and Agriculture and Forest Resources.

The Initial Study (refer to Appendix A) determined that the proposed project could result in potentially significant impacts in the following topic areas addressed in this EIR:

- Cultural Resources (Section IV.A);
- Transportation and Circulation (Section IV.B);
- Air Quality (Section IV.C);
- Wind (Section IV.D); and
- Shadow (Section IV.E).

Senate Bill 743 and CEQA Section 21099

Aesthetics and Parking Analysis

CEQA Statute Section 21099(d) states that “Aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site located within a transit priority area shall not be considered significant impacts on the environment.”²⁶ Accordingly, aesthetics and parking are no longer to be considered in determining if a project has the potential to result in significant environmental effects for projects that meet all of the following three criteria:

- a) The project is in a transit priority area;²⁷
- b) The project is on an infill site;²⁸ and
- c) The project is residential, mixed-use residential, or an employment center.²⁹

The proposed project meets each of the above three criteria because it is (1) located within one-half mile of several rail and bus transit routes, (2) located on an infill site that is already developed with a one-story warehouse structure currently occupied by Goodwill Industries, with a below-grade parking garage, and a two-story retail and office structure also currently occupied by Goodwill Industries, and (3) would be a residential and retail/restaurant space, as well as an employment center.³⁰ Thus, this EIR does not consider aesthetics and the adequacy of parking in determining the significance of project impacts under CEQA.

CEQA Statute Section 21099(e) states that a lead agency maintains the authority to consider aesthetic impacts pursuant to local design review ordinances or other discretionary powers and that aesthetics impacts do not include impacts on historical or cultural resources. Therefore, there is no change in the Planning Department’s methodology related to design and historic review.

The Planning Department recognizes that the public and decision-makers nonetheless may be interested in information pertaining to the aesthetic effects of a proposed project, and may desire that such information be provided as part of the environmental review process. Therefore, some of the information that would have otherwise been provided in an aesthetics section of this EIR (such as visual simulations of the proposed project) has been included in Chapter II, *Project Description*. However, this information is provided solely for informational purposes and is not used to determine the significance of the environmental impacts of the project, pursuant to CEQA.

²⁶ Refer to CEQA Statute Section 21099(d)(1).

²⁷ CEQA Statute 21099(a)(7) defines a “transit priority area” as an area within 0.5 mile of an existing or planned major transit stop. A “major transit stop” is defined in CEQA Statute 21064.3 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 periods.

²⁸ CEQA Statute 21099(a)(4) defines an “infill site” as a lot located within an urban area that has been previously developed, or a vacant site where at least 75 percent of the perimeter of the site adjoins, or is *separated* only by an improved public right-of-way from, parcels that are developed with qualified urban uses.

²⁹ CEQA Statute 21099(a)(1) defines an “employment center” as a project located on property zoned for commercial uses with a floor area ratio of no less than 0.75 and located within a transit priority area.

³⁰ San Francisco Planning Department, *Eligibility Checklist: CEQA Section 21099 – Modernization of Transportation Analysis for 1500 Mission*, September 14, 2016. This document (and all other documents cited in this report, unless otherwise noted) is available for review at 1650 Mission Street, Suite 400, San Francisco, CA, as part of Case No. 2014.000362ENV.

Similarly, the Planning Department acknowledges that parking conditions may be of interest to the public and the decision-makers. Therefore, this EIR presents a parking demand analysis in Section IV.B, *Transportation and Circulation*, for informational purposes and considers any secondary physical impacts associated with constrained supply (e.g., queuing by drivers waiting for scarce on-site parking spaces that affects the public right-of-way) as applicable in the transportation analysis.

Automobile Delay and Vehicle Miles Traveled Analysis

CEQA Section 21099(b)(1) requires that the State Office of Planning and Research (OPR) develop revisions to the CEQA Guidelines establishing criteria for determining the significance of transportation impacts of projects that promote the “reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses.” CEQA Section 21099(b)(2) states that upon certification of the revised CEQA Guidelines for determining transportation impacts pursuant to Section 21099(b)(1), automobile delay, as described solely by level of service (LOS) or similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment under CEQA.

In January 2016, OPR published for public review and comment a *Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA* (proposed transportation impact guidelines) recommending that transportation impacts for projects be measured using a vehicle miles traveled (VMT) metric.³¹ VMT measures the amount and distance that a project might cause people to drive, accounting for the number of passengers within a vehicle.

OPR’s proposed transportation impact guidelines provides substantial evidence that VMT is an appropriate standard to use in analyzing transportation impacts to protect environmental quality and a better indicator of greenhouse gas, air quality, and energy impacts than automobile delay. Acknowledging this, San Francisco Planning Commission Resolution 19579, adopted on March 3, 2016:

- Found that automobile delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion, shall no longer be considered a significant impact on the environment pursuant to CEQA, because it does not measure environmental impacts and therefore it does not protect environmental quality.
- Directed the Environmental Review Officer to remove automobile delay as a factor in determining significant impacts pursuant to CEQA for all guidelines, criteria, and list of exemptions, and to update the Transportation Impact Analysis Guidelines for Environmental Review and Categorical Exemptions from CEQA to reflect this change.
- Directed the Environmental Planning Division and Environmental Review Officer to replace automobile delay with VMT criteria which promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses; and consistent with proposed and forthcoming changes to the CEQA Guidelines by OPR.

³¹ California Governor’s Office of planning and Research, *Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA*, January 20, 2016. It is also available at https://www.opr.ca.gov/s_sb743.php, accessed September 20, 2016.

Planning Commission Resolution 19579 became effective immediately for all projects that have not received a CEQA determination and all projects that have previously received CEQA determinations, but require additional environmental analysis.

Accordingly, this EIR does not contain a discussion of automobile delay impacts. Instead, a VMT and induced automobile travel impact analysis is provided in Section IV.B, *Transportation and Circulation*. Nonetheless, automobile delay may be considered by decision-makers, independent of the environmental review process, as part of their decision to approve, modify, or disapprove the proposed project.

CEQA Methodological Requirements

CEQA Guidelines Section 15151 describes standards for the preparation of an adequate EIR. Specifically, the standards under Section 15151 are listed below.

- An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information that enables them to make a decision that intelligently takes into account environmental consequences
- An evaluation of the environmental impacts of a project need not be exhaustive; rather, the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible
- Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts

In practice, the above points indicate that EIR preparers should adopt a reasonable methodology upon which to estimate impacts. This approach means making reasonable assumptions using the best information available. In some cases, typically when information is limited or where there are possible variations in project characteristics, EIR preparers will employ a “reasonable worst-case analysis” in order to capture the largest expected potential change from existing baseline conditions that may result from implementation of a project.

Economic and Social Impacts

Under CEQA, economic and social effects of a proposed project are not required to be evaluated. However, if the social or economic effects would lead to physical environmental effects, only then would such effects need to be analyzed and addressed in the EIR. CEQA Guidelines Section 15131 states the following specific ways that economic or fiscal effects may be considered as part of the EIR:

- Economic or social effects of a proposed project shall not be treated as significant effects on the environment. An EIR may trace a chain of cause and effect from a proposed decision on a proposed project through anticipated economic or social changes resulting from the proposed project to physical changes caused in turn by the economic or social changes. The intermediate economic or social changes need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of the analysis shall be on the physical changes.
- Economic or social effects of a proposed project may be used to determine the significance of physical changes caused by the proposed project.

Economic, social, and particularly housing factors shall be considered by public agencies together with technological and environmental factors in deciding whether changes in a proposed project are feasible to reduce or avoid the significant effects on the environment identified in the EIR.

Format of Environmental Analysis

Each of the resource areas provided in Sections IV.A through IV.E of this chapter (cultural resources, transportation and circulation, air quality, wind, and shadow) includes the following elements.

Introduction

This subsection includes a brief description of the types of impacts that are analyzed, as well as a summary of the impacts that were scoped out in the Initial Study (that is, impacts that were determined to result in a less-than-significant impact).

Environmental Setting

This subsection presents a description of the existing, baseline physical conditions of the project site and surroundings (e.g., existing land uses, noise environment, transportation conditions) at the time of issuance of the Notice of Preparation (NOP) (with respect to each resource topic) in sufficient detail and breadth to allow a general understanding of the environmental impacts of the proposed project.

Regulatory Framework

This subsection describes the relevant federal, state, and local regulatory requirements that are directly applicable to the environmental topic being analyzed.

Approach to Analysis

This section describes the methodology used to analyze potential environmental impacts for each environmental topic under the identified significance criteria. Some evaluations (e.g., transportation and circulation) are quantitative, while the evaluations for other topics (e.g., cultural resources) are qualitative.

Impact Evaluations

This subsection evaluates the potential for the proposed project to result in direct and indirect adverse effects of the project on the existing physical environment, with consideration of both short-term and long-term effects. The analysis covers all phases of the proposed project, including construction and operation. The significance criteria for evaluating the environmental impacts are defined at the beginning of each impact analysis section, and the approach to analysis explains how the significance criteria are applied in evaluating the impacts of the proposed project. The conclusion of each impact analysis is expressed in terms of the impact significance as no impact, less-than-significant impact, less-than-significant impact with mitigation, significant and unavoidable impact with mitigation, or significant and unavoidable impact.

Significance Thresholds

Under CEQA, a significant effect is defined as a substantial, or potentially substantial, adverse change in the environment. The guidelines implementing CEQA direct that this determination be based on scientific and factual data, including the entire record for the project, and not on argument, speculation, or unsubstantiated evidence. The significance thresholds (or criteria) used in this EIR are based on the San Francisco Planning Department's Environmental Planning Division (EP) guidance regarding the thresholds of significance used to assess the severity of environmental impacts of the proposed project. EP guidance is based on CEQA Guidelines Appendix G, with procedures as set forth in *San Francisco Administrative Code* Chapter 31.10. The significance thresholds used to analyze each environmental resource topic are presented in each resource section of Chapter IV before the discussion of impacts. The impacts of the proposed project are organized into separate categories based on the criteria listed in each topical section. Project-specific impacts are discussed first, followed by cumulative analysis.

Significance Determinations

The categories used to designate impact significance are described as follows:

- **No Impact.** A no impact conclusion is reached if there is no potential for impacts or the environmental resource does not occur within the project area or the area of potential effects.
- **Less-than-Significant Impact.** This determination applies if the impact does not exceed the defined significance criteria or would be eliminated or reduced to a less-than-significant level through compliance with existing local, state, and federal laws and regulations. No mitigation is required for impacts determined to be less than significant.
- **Less-than-Significant-Impact with Mitigation.** This determination applies if the project would result in a significant effect, exceeding the established significance criteria, but feasible mitigation is available that would reduce the impact to a less-than-significant level.
- **Significant and Unavoidable Impact with Mitigation.** This determination applies if the project would result in an adverse effect that exceeds the established significance criteria, and although feasible mitigation might lessen the impact, the residual effect would remain significant, and, therefore, the impact would be unavoidable.
- **Significant and Unavoidable Impact.** This determination applies if the project would result in an adverse effect that exceeds the established significance criteria, and there is no feasible mitigation available to reduce the impact to a less-than-significant level. Therefore, the residual impact would be significant and unavoidable.

Mitigation Measures and Improvement Measures

Mitigation measures are identified, where feasible, for impacts considered significant or potentially significant consistent with CEQA Guidelines Section 15126.4, which states that an EIR "shall describe feasible measures which could minimize significant adverse impacts." CEQA requires that mitigation measures have an essential nexus and be roughly proportional to the significant effect identified in the EIR. Pursuant to CEQA Guidelines Section 15126.4, mitigation measures are not required for environmental impacts that are not found to be significant. Therefore, for resource topics in which this EIR found the proposed project's physical

environmental impact to be less than significant, but for which the Planning Department has identified measures that would further lessen the already less-than-significant impacts of the project, these measures have been identified as “improvement measures.” The project sponsor has indicated that, if the project is approved, they would incorporate all improvement measures identified in this EIR as part of the project.

Impacts are numbered and shown in bold type, and the corresponding mitigation measures, where identified, are numbered and indented, and follow impact statements. Impacts and mitigation measures are numbered consecutively within each topic and include an abbreviated reference to the impact section (e.g., LU). The following abbreviations are used for individual topics:

CR: Cultural Resources
TR: Transportation and Circulation
AQ: Air Quality
WI: Wind
SH: Shadow

Cumulative Impacts

Cumulative impacts, as defined in CEQA Guidelines Section 15355, refer to two or more individual effects that, when taken together, are “considerable” or that compound or increase other environmental impacts. A cumulative impact from several projects is the change in the environment that would result from the incremental impact of the project when added to those of other closely related past, present, or reasonably foreseeable future projects. Pertinent guidance for cumulative impact analysis is provided in CEQA Guidelines Section 15130:

- An EIR shall discuss cumulative impacts of a project when the project’s incremental effect is “cumulatively considerable” (e.g., the incremental effects of an individual project are considerable when viewed in connection with the effects of past, current, and probable future projects, including those outside the control of the agency, if necessary).
- An EIR should not discuss impacts that do not result in part from the project evaluated in the EIR.
- A project’s contribution is less than cumulatively considerable, and thus not significant, if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact.
- The discussion of impact severity and likelihood of occurrence need not be as detailed as for effects attributable to the project alone.
- The focus of analysis should be on the cumulative impact to which the identified other projects contribute, rather than on attributes of the other projects that do not contribute to the cumulative impact.

The cumulative impact analysis for each individual resource topic is described in each resource section of this chapter immediately following the description of the direct project impacts and identified mitigation measures.

Approach to Cumulative Impact Analysis

Two approaches to a cumulative impact analysis are provided in CEQA Guidelines Section 15130(b)(1): (a) the analysis can be based on a list of past, present, and reasonably foreseeable probable future projects producing closely related impacts that could combine with those of a proposed project, or (b) a summary of projections contained in a general plan or related planning document can be used to determine cumulative impacts. The following factors were used to determine an appropriate level for cumulative analysis in this EIR:

- **Similar Environmental Impacts.** A relevant project contributes to effects on resources that are also affected by the proposed project. A relevant future project is defined as one that is “reasonably foreseeable,” such as a proposed project for which an application has been filed with the approving agency or has approved funding.
- **Geographic Scope and Location.** A relevant project is located within the geographic area within which effects could combine. The geographic scope varies on a resource-by-resource basis. For example, the geographic scope for evaluating cumulative effects to air quality consists of the affected air basin.
- **Timing and Duration of Implementation.** Effects associated with activities for a relevant project (e.g., short-term construction or demolition, or long-term operations) would likely coincide in timing with the related effects of the proposed project.

The analyses in this EIR employ both the list-based approach and a projections approach, depending on which approach best suits the individual resource topic being analyzed. For instance, the shadow analysis considers individual projects that are anticipated in the project site vicinity that may alter shadow conditions in public spaces. By comparison, the transportation and circulation analysis relies on a projection of overall citywide growth and other reasonably foreseeable projects, which is the typical methodology the Planning Department applies to analysis of transportation impacts. Refer to the following discussion and **Table IV-1, Cumulative Land Use Projects within 0.25 Mile of the Project Site**, for an identification of the cumulative projects and plans located within 0.25 mile of the project site.

Cumulative Setting

Past, present, and reasonably foreseeable cumulative development projects located within 0.25 mile of the project site comprise the list of cumulative projects as of the date of the Notice of Preparation (May 13, 2015), which are listed in **Table IV-1** and mapped on **Figure IV-1, Cumulative Projects within 0.25 Mile of the Project Site**. These cumulative land use projects, several of which are associated with the Market Street Hub Project—a proposed transit-oriented, high-density, mixed-use neighborhood around the intersections of Market Street and Van Ness Avenue—are either under construction or the subject of an Environmental Evaluation Application on file with the Planning Department.³²

³² See Section IV.B, *Transportation and Circulation*, in the EIR for a list of cumulative transportation projects associated with that analysis.

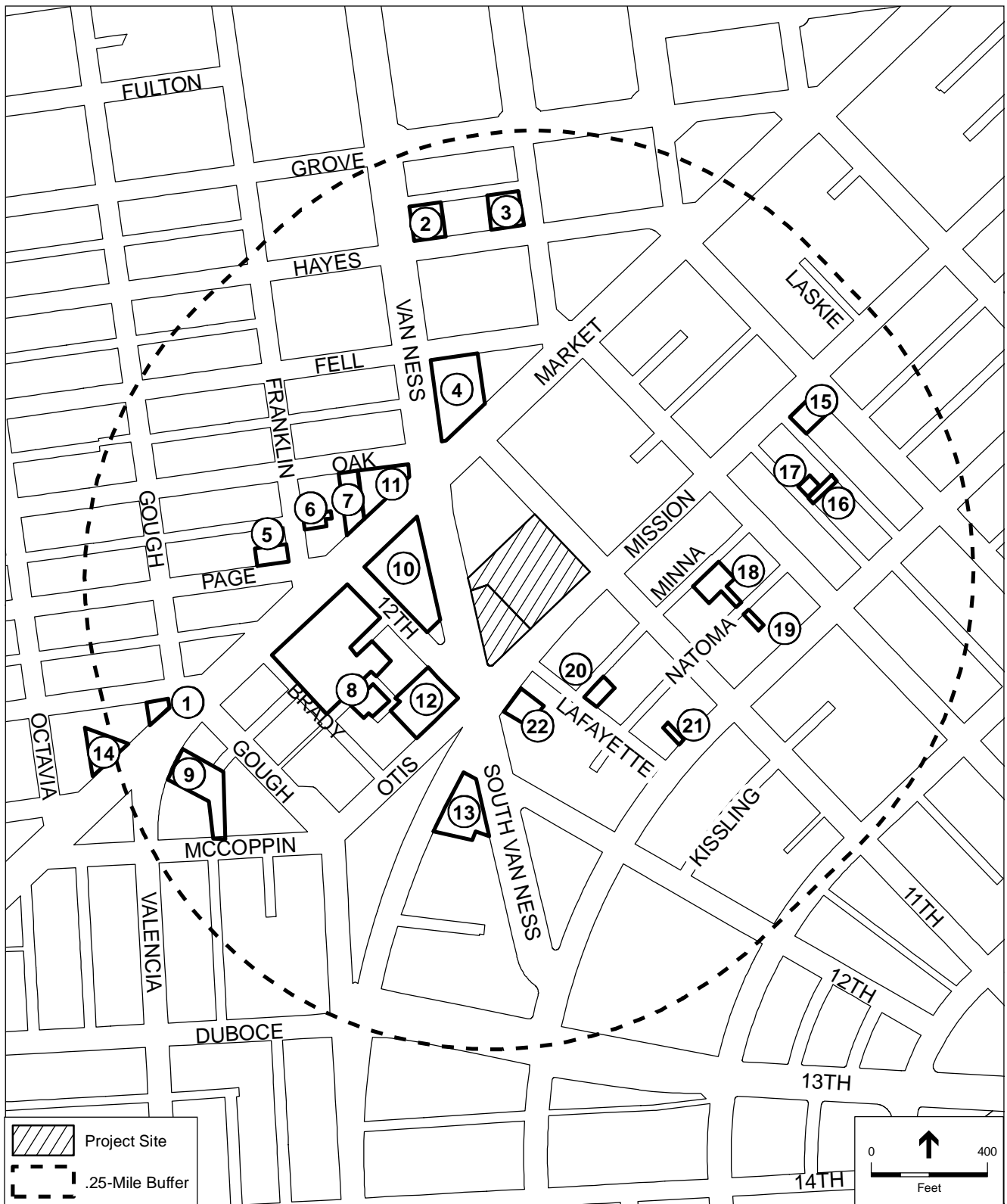
TABLE IV-1 CUMULATIVE LAND USE PROJECTS WITHIN 0.25 MILE OF THE PROJECT SITE

	Address	Case File No.	Dwelling Units	Commercial (gsf)	Office (gsf)
1	1700 Market Street	2013.1179E	42	1,753	
2	200–214 Van Ness Avenue	2015-012994ENV	17		
3	101 Polk Street	2011.0702E	162		
4	30 Van Ness Avenue (sale of site by the City) ^a	2015-008571ENV			
5	1 Franklin Street	2008.1328E	35	2,400	
6	22–24 Franklin Street	2013.1005E	24	1,900	
7	1546–1564 Market Street	2012.0877E	219	4,560	
8	1629 Market Street	2015-005848ENV	584	9,275	27,300
9	1699 Market Street	2014.0484E	160	3,937	
10	10 South Van Ness (Honda Site)	2015-004568ENV	767	20,400	
11	One Oak Street (formerly 1500–1540 Market Street)	2009.0159E	320	12,970	
12	30 Otis Street	2015-010013ENV	354	4,600	
13	1601 Mission Street (Tower Car Wash)	2014.1121ENV	220	7,336	
14	1740 Market Street	2014.0409E	100	4,385	
15	104 Ninth Street	2011.0312E	180	3,359	
16	17 Grace Street	2014-002016ENV	13		
17	15–23 Grace Street	2014-001736ENV	13		
18	915 Minna Street	2015-002600ENX	44		
19	949 Natoma Street	2015-001958ENV	6		
20	35 Lafayette Street	2013.0113E	4		
21	1532 Howard Street	2013.1305E	15		
22	1563 Mission Street ^b	2014.0095E			40,600
Totals			3,279	76,875	67,900

SOURCE: ESA, 2016.

NOTES:

- a. This case is for the sale of a City-owned property for the development of a residential tower; the number of residential units is unknown at this time.
- b. This project is for an outpatient medical facility.



SOURCE: San Francisco GIS

1500 Mission Street: Case No. 2014-000362ENV

Figure IV-1
 Cumulative Projects within
 0.25 Mile of the Project Site

In addition to the cumulative land use projects identified in **Table IV-1**, the following area plans are also considered part of the cumulative setting:

- **Market & Octavia Area Plan**, Case No. 2003.0347: The Market & Octavia Plan is an adopted element of the *San Francisco General Plan*. The Market & Octavia Plan serves to respond to the need for housing, repair the fabric of the neighborhood, and to support transit-oriented development. The Plan includes zoning for residential and commercial uses, prescribes streetscape and open space improvements, and places high-density land uses close to transit. Additionally, the Plan describes infill guidelines for housing on 22 vacant Central Freeway parcels and the creation of a new residential center in the SoMa West / South Van Ness area. To date, development on 10 of the freeway parcels has been completed and projects on another three have been approved but not yet built—at 455 Fell Street (Central Freeway Parcel O) and 300–350 Octavia Street (Parcels M and N). Another nine freeway parcels remain undeveloped.
- **The Market Street Hub (The Hub) Project**, Case No. 2015-000940ENV: The Hub Project would reexamine and propose changes to the current zoning, land use policies and public realm/street designs for the area referred to as “SoMa West” in the *Market Octavia Area Plan*. The Hub Project would include the following zoning components: zoning changes requiring more permanently affordable housing units; zoning changes to incentivize development of affordable housing for artists, office space for non-profit organizations, and performance or fine arts studio space; height district increases to introduce a variety of building heights and smooth height transitions to adjacent areas study of minor use changes such as inclusion of office beyond current Market Octavia allowances; bulk control increases; zoning change to reduce parking maximums; transportation demand management policies; and development impact fees. The Hub Project would also include potential public realm and transportation components. Further discussion of the Hub Project is provided in Chapter III, *Plans and Policies*, pp. III-13 to III-14.
- **Western SoMa Area Plan**, Case No. 2008.0877: The Western SoMa Community Plan is an adopted element of the *San Francisco General Plan*. The Plan Area comprises approximately 298 acres in the western portion of the South of Market. The various components of the Plan, compared to the prior classifications, include increases and decreases in building heights on selected parcels due to height and bulk district reclassifications, increases and decreases in density on selected parcels due to use district reclassifications that replaced density standards with other mechanisms to account for density, such as building envelope controls; and Streetscape improvements along designated streets and intersections, including installation of signalized pedestrian crossings; sidewalk extensions and corner bulbouts; gateway treatments such as signage and lighting; physical roadway features such as enhanced hardscape area, landscaped islands and colored textured pavement; public realm greening amenities (i.e., street trees and planted medians); and other pedestrian enhancements (i.e., street furniture and public restrooms).
- **Van Ness Bus Rapid Transit Project**. The Van Ness BRT project is a program to improve Muni bus service (i.e., the planned 49R Van Ness-Mission Rapid route) along Van Ness Avenue between Mission and Lombard Streets through the implementation of operational improvements and physical improvements. The operational improvements consist of (1) designating bus-only lanes to allow buses to travel with fewer impediments, (2) adjusting traffic signals to give buses more green light time at intersections, and (3) providing real-time bus arrival and departure information to passengers to allow them to manage their time more efficiently. The physical improvements consist of (1) building high-quality and well-lit bus stations to improve passenger safety and comfort and (2) providing streetscape improvements and amenities to make the street safer and more comfortable for pedestrians and bicyclists who access the transit stations. In the vicinity of the project site, the BRT

station in the northbound direction of South Van Ness Avenue will be at Market Street, and the existing curbside bus stop on South Van Ness Avenue north of Mission Street will be discontinued.

- **Better Market Street Project.** San Francisco Public Works, in coordination with the San Francisco Planning Department and the SFMTA proposes to redesign and provide various transportation and streetscape improvements to the 2.2-mile segment of Market Street between Octavia Boulevard and The Embarcadero, and potentially to the 2.3-mile segment of Mission Street between Valencia Street and The Embarcadero, as well as Valencia Street between McCoppin and Market Streets, and 10th Street between Market and Mission Streets. Better Market Street project elements consist of both transportation and streetscape improvements, including changes to roadway configuration and private vehicle access; traffic signals; surface transit, including transit-only lanes, stop spacing, service, stop location, stop characteristics and infrastructure; bicycle facilities; pedestrian facilities; streetscapes; commercial and passenger loading; vehicular parking; plazas; and utilities. Environmental review has recently been initiated, and will analyze three possible alternatives for the project.

Under this Project, Alternatives 1 and 2 involve redesign and improvement of Market Street only, while Alternative 3 would redesign and improve Mission Street in addition to providing the Alternative 1 improvements to Market Street. Alternatives 1 and 2 each have two design options for bicycle facilities on Market Street. Alternative 1 would remove all commercial and passenger loading zones on Market Street, with the exception of paratransit users, and new commercial loading spaces and passenger loading zones would be created on adjacent cross streets and alleys. Under Alternative 2 some commercial loading spaces and passenger loading zones would remain on Market Street, and some commercial loading spaces and passenger loading zones would be created on adjacent cross streets and alleys.

Alternatives 1 and 2 each include two designs for the bicycle facilities on Market Street: Design Option A and Design Option B. Under Alternatives 1 and 2 Design Option A, an enhanced version of the existing shared vehicle and bicycle lane with painted sharrows (shared lane pavement markings) would be provided at locations where a dedicated bicycle facility is not already present. Under Alternatives 1 and 2 Design Option B, a new raised cycle track (an exclusive bicycle facility that is physically separated from motor traffic and is distinct from the sidewalk for the exclusive or primary use of bicycles) the entire length of Market Street would be provided, except at locations where the BART/Muni entrances or other obstructions would not allow it. Alternative 3 includes the proposed bicycle facilities on Market Street described under Alternative 1, Design Option A and adds a cycle track in both directions and a floating parking lane (located between the travel lane and the cycle track on one side of the street) on Mission Street. Under Alternative 3, the existing transit-only lanes on Mission Street would be removed and Muni, Golden Gate Transit, and SamTrans bus routes would be moved to Market Street. Design, environmental review, selection of the preferred alternative, and approvals will continue through 2017, and construction of improvements is currently anticipated to start in 2018.³³

³³ Better Market Street Project information available at <http://www.bettermarketstreetsf.org/about-common-questions.html>, accessed February 4, 2015.

IV.A Cultural Resources

IV.A.1 Introduction

Cultural resources include architectural resources, prehistoric and historical archeological resources, human remains, and tribal cultural resources. This section describes the known and potential cultural resources on the project site and the potential for implementation of the proposed project to affect those resources.

The impact discussion in this section reviews the criteria for significant impacts on historical resources, archeological resources, human remains, and tribal cultural resources and identifies mitigation measures that would avoid or reduce significant impacts.

Primary sources of information for the context and setting discussion include the following: *Final Historic Context Statement, South of Market Area, San Francisco, California*;³⁴ *1500 Mission Street Historical Resource Evaluation, Parts 1 and 2 (HRE)*;³⁵ *1500 Mission Street Historic Resources Evaluation Response (HRER)*;³⁶ the *Market & Octavia Area Plan Historic Context Statement*;³⁷ the *Archeological Technical Memorandum for the San Francisco General Plan Housing Element EIR*;³⁸ the *Archeological Technical Memorandum for the San Francisco General Plan Housing Element EIR*;³⁹ and the preliminary archeological review (PAR) for the proposed project.⁴⁰

Definitions

Cultural resources include architectural resources, historical resources, archeological resources, tribal cultural resources, and human remains.

Archeological resources consist of prehistoric and historical archeological resources. Prehistoric archeological resources consist of village sites, temporary camps, lithic scatters, roasting pits/hearths, milling features, petroglyphs, rock features, and burials. Associated artifacts include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil (“midden”) containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs). Historical archeological resources consist of townsites, homesteads, maritime, agricultural or ranching features, mining-related features, refuse concentrations, and features or artifacts associated with early military and industrial land uses. Associated artifacts include stone, concrete, or adobe footings and walls; artifact-filled wells or privies; and deposits of metal, glass, and/or ceramic refuse.

³⁴ Page & Turnbull, *Final Historic Context Statement, South of Market Area, San Francisco, California*, prepared for City and County of San Francisco Planning Department, 2009.

³⁵ Architectural Resources Group, *1500 Mission Street Historical Resource Evaluation, Part 1*, November 19, 2015.

³⁶ San Francisco Planning Department, *1500 Mission Street Historic Resources Evaluation Response (HRER)*, June 15, 2016.

³⁷ Page & Turnbull, *Market & Octavia Area Plan Historic Context Statement, San Francisco, California*, prepared for City and County of San Francisco Planning Department, 2007.

³⁸ William Self Associates and Randall Dean, *Archeological Technical Memorandum for the San Francisco General Plan Housing Element EIR*, prepared for San Francisco Planning Department, 2009. Available: http://www.sf-planning.org/ftp/files/MEA/2007.1275E_SFHE_DEIR_AppxC.pdf, accessed April 19, 2012.

³⁹ WSA and Dean, 2009.

⁴⁰ San Francisco Planning Department, *Environmental Planning Preliminary Archeological Review Checklist for 1500-1580 Mission Street*, August 12, 2015.

Architectural resources include buildings, structures, objects, historic districts, or landscape features.

Historical Resources are defined under the California Environmental Quality Act (CEQA) Section 21084.1 as those listed in, or determined eligible for listing in, the California Register of Historical Resources (California Register). In addition, a resource that (i) is identified as significant in a local register of historical resources, such as Article 10 and Article 11 of the *San Francisco Planning Code (Planning Code)* or (ii) is deemed significant due to its identification in an historical resources survey meeting the requirements of *California Public Resources Code* Section 5024.1(g) is presumed to be historically significant “unless the preponderance of the evidence demonstrates that the resource is not historically or culturally significant.” CEQA Section 21084.1 also permits a lead agency to determine that a resource constitutes an historical resource even if the resource does not meet the foregoing criteria. Buildings and other structures, archeological resources, and tribal cultural resources may all be found to be historical resources, and the San Francisco Planning Department (“Planning Department”) considers those architectural, archeological, and tribal cultural resources that meet one of the definitions noted above to be historical resources for purposes of CEQA review. Each of these categories of historical resources is discussed in this section.

Tribal cultural resources are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are listed, or determined to be eligible for listing, on the national, state, or local register of historical resources.

IV.A.2 Environmental and Historic Setting

Geological Setting

The San Francisco Bay Area has undergone dramatic landscape changes since humans began to inhabit the region more than 13,000 years ago. Rising sea levels and increased sedimentation into streams and rivers are among some of the changes.⁴¹ In many places, the interface between older land surfaces and alluvial fans are marked by a well-developed buried soil profile known as a paleosol. Paleosols represent land forms in the past that were stable and thus suitable for human habitation prior to subsequent sediment deposition; therefore, paleosols have the potential to preserve archeological resources if humans occupied or settled the area.⁴² Because human populations have grown since the arrival of the area’s first inhabitants, younger (late Holocene) paleosols are more likely to yield archeological resources than older (early Holocene or Pleistocene) paleosols.

Soil samples from borings and penetration tests from the geotechnical report provides the subsurface conditions of the project site.⁴³ The project site is underlain by eight to 15 feet of loose to medium dense sandy artificial fill that contains varying amounts of silt, clay, and building debris. The artificial fill and the interface between artificial fill and native soils are generally considered sensitive for historic-period archeological resources. The fill is underlain by four to 20 feet of marsh deposit and dune sand. Below the marsh deposit is

⁴¹ E.J. Helley, K.R. LaJoie, W.E. Spangle, and M.L. Bair, *Flatland Deposits of the San Francisco Bay Region, California*. U.S. Geological Survey Professional Paper 943, 1979.

⁴² Jack Meyer and Jeffrey Rosenthal, *Geoarchaeological Overview of the Nine Bay Area Counties in Caltrans District 4*. Prepared for California Department of Transportation, District 4, Oakland, CA, 2007.

⁴³ Langan Treadwell Rollo, *Geotechnical Investigation, 1500-1580 Mission Street, San Francisco, California*, July 20, 2015.

medium dense to very dense sand, silty sand and clayey sand referred to as the Colma Formation, consisting of stiff to hard clay and very dense gravel with clay and sand extending to a depth of 196 feet below ground surface level (bgs). The dune sand and the upper three to five feet of the Colma Formation are generally considered sensitive for prehistoric archeological resources.

Prehistoric Context

The following discussion outlines the prehistoric context of the project site, including the most recent chronology for prehistoric archeological sites on the San Francisco peninsula and the San Francisco Bay Area.

Since the late Pleistocene, when indigenous peoples may have first arrived in the Bay Area, the region has undergone significant environmental changes. The oldest evidence of human occupation in San Francisco includes two isolated human skeletons discovered 45 years apart deep below city streets in marine deposits. In October 1969, fragmentary human bones were encountered during construction of the Bay Area Rapid Transit (BART) Civic Center Station in downtown San Francisco. Those remains belonged to a female individual aged 24–26 years. Radiocarbon dating of associated organic material indicated the remains were nearly 5,000 years old. The skeleton was discovered 75 feet (22.9 meters) bgs within a 40-foot-(12.2-meter-)thick clayey silt stratum (bay deposits), approximately 26 feet (7.9 meters) below mean sea level (CA-SFR-28).⁴⁴ More recently, an intact human skeleton was found during construction of the Transbay Transit Center in February 2014. The human remains were encountered at a depth of 58 feet (17.7 meters) bgs with Bay mud deposits, and are estimated to be between 5,000 to 7,000 years old.⁴⁵

These two finds are exceptional, as the majority of known prehistoric-era sites in San Francisco date to no more than 2,000 years before present (B.P.) and are found buried at depths of approximately 10 to 20 feet (3.0 to 6.1 meters) bgs. They were originally deposited within the dune sands that were blown eastward from the Pacific coast, across the peninsula over the last 6,000 years.

Prehistoric resources and sites that have survived to the present represent only a portion of the past. The early growth of San Francisco was characterized by filling the shallow Bay waters and other low-lying lands, removal of hills of sand and rock, and the obscuring of original ground surfaces by fill, roadways, buildings, and structures. Nels C. Nelson conducted a systematic survey around the perimeter of the entire San Francisco Bay between 1906 and 1909, focusing on shellmounds partially submerged by or adjacent to the Bay waters. Although Nelson recorded 425 shellmounds around the San Francisco Bay Area, his survey occurred well after the City of San Francisco and other areas were heavily developed and covered by the built environment, potentially obscuring other sites that may have been present.⁴⁶

Periods of prehistory and discovered sites dating from these periods are discussed below.

⁴⁴ Winfield Henn, Tom Jackson, and Julius Schlocker, Buried Human Bones at the 'BART' Site San Francisco, California Geology, Vol. 25, No. 9, 208-209. 1972.

⁴⁵ Jack Meyer, personal communication with ESA archaeologist Matthew Russell, Ph.D., April 2014.

⁴⁶ Nels C. Nelson, "Shellmounds of the San Francisco Bay Area," *University of California Publications in American Archaeology and Ethnology* 7, no.4, (1909): 310-356.

Terminal Pleistocene (13,450–11,550 B.P.)

No prehistoric archeological sites dating from this period have been discovered in the San Francisco Bay Area. The nearest Terminal Pleistocene site is the Borax Lake site (CA-LAK-36), in Lake County. Populations at this time were small and highly mobile. The archeological signature of highly mobile hunter-gatherers would be faint and geographically sparse, and would be easily disturbed by geological processes such as erosion, rising sea level, and alluvial burial.

Early Holocene (11,550–7,650 B.P.)

Early Holocene human populations are known from several Bay Area sites, such as those at the Los Vaqueros Reservoir (CA-CCO-696) and the Santa Clara Valley (CA-SCL-178). Communities from this period were semi-mobile hunter-gatherers who used flaked stone tools and ground stone implement such as manos and milling slabs. Human burials from this period have also been investigated. There are no recorded Early Holocene sites in the City of San Francisco.

Middle Holocene (7,650–3,750 B.P.)

Middle Holocene sites are more widespread in the San Francisco Bay Area and are evidenced by substantial settlements, isolated burials, distinct cemeteries, milling slabs, mortars and pestles, and the fabrication and use of shell beads and other ornaments. Differences in burial treatment such as differential distribution of shell beads and ornaments are interpreted as evidence of possible social stratification. The expansion of San Francisco Bay's estuaries and tidal wetlands seems to have resulted in a shift toward coastal and maritime resource exploitation. Two Middle Holocene sites have been recorded in San Francisco: the two sets of deeply buried human remains discussed above.

Late Holocene (3,750–170 B.P.)

The Late Holocene has left the most comprehensive archeological record of prehistoric populations in San Francisco. This period is marked by the establishment of large shellmounds. Artifact assemblages are characterized by bone awls (indicating appearance of coiled basketry); net sinkers; mortars (probably indicating greater consumption of acorns and other plant resources); *Olivella* shell beads; the appearance of the bow and arrow; and diverse beads and ornaments, such as incised bird bone tubes. There is some indication of a greater exploitation of deer, sea otter, mussels, and clams. There is growing indication of shellmounds as planned, constructed landscapes on sites of ancestral, or at least mortuary, importance.⁴⁷

⁴⁷ Kent G. Lightfoot, Cultural Construction of Coastal Landscapes: A Middle Holocene Perspective from San Francisco Bay. In *Archaeology of the California Coast during the Middle Holocene*, Jon M. Erlandson and Michael A. Glassow, editors, pp.129-141. Perspectives in California Archaeology Vol. 6, Cotsen Institute of Archaeology, University of California, Los Angeles, 1997; Lightfoot, Kent G. and Edward M. Luby, Late Holocene in the Greater San Francisco Bay Area: Temporal Trends in the Use and Abandonment of Shell Mounds in the East Bay. In *Catalysts to Complexity: The Late Holocene on the California Coast*. Jon M. Erlandson and Terry Jones, editors, pp. 263-281. Cotsen Institute of Archaeology, University of California, Los Angeles, 2002.

Prehistoric Archeological Investigations in San Francisco

Systematic investigation of prehistoric sites on the northern San Francisco peninsula began with Nelson's shellmound survey conducted between 1906 and 1909.⁴⁸ Nelson pursued his interest in San Francisco prehistory with excavations at CA-SFR-7 (the Crocker Mound) on the Bay's southeastern shoreline,⁴⁹ among other investigations. Nelson found that CA-SFR-7 contained a variety of flaked stone, worked bone, faunal remains, and 23 human burials. The constituents of this mound indicated long-term residential occupation. Two years later, L. L. Loud excavated another shellmound (CA-SFR-6), approximately three feet (0.9 meter) thick, near the Palace of Fine Arts.⁵⁰ While interest in the prehistory of the northern San Francisco peninsula began in the early 1900s, the area generally received little attention until more recent times. This was partially a result of the destruction and/or burial of sites due to historic settlement and development.

Within the past 30 years, the body of work focusing on the prehistoric archeology of the northern San Francisco peninsula has expanded, as archeological sites have been uncovered during construction or development activities within the City. Approximately 50 prehistoric archeological sites have been documented within the northern San Francisco peninsula and Yerba Buena Island; the majority of these were within one-half mile or less from the historic margins of the San Francisco Bay. Most of the prehistoric sites are shell midden sites, which have their greatest concentrations in the South of Market neighborhood and the Hunters Point-Bayview-Candlestick Point-Visitacion Valley area. Although midden sites in the latter area have been known since the 1870s and include some of the largest shellmound sites in San Francisco, they have not been thoroughly investigated and their dating is not well understood. The South of Market sites have, on the other hand, largely only come to light since the 1980s and have been subject to various analyses and absolute dating techniques. These shell midden sites are also remarkable within Bay Area shellmound studies because many of them possess good physical integrity as a result of having been buried beneath natural sand dune deposits for hundreds of years following their abandonment.

The Anthropological Studies Center (ASC) at Sonoma State University defined a National Register of Historic Places (National Register) eligible district that incorporates several prehistoric sites within sand dunes formed along the north side of Mission Bay in the South of Market neighborhood.⁵¹ These sites are considered to represent elements of a large multi-village community. The California State Historic Preservation Officer (SHPO) has recently determined that at least seven previously recorded prehistoric habitation sites are part of this district. The district is eligible under National Register Criterion A and California Register Criterion 1, association with events that made a significant contribution to the broad patterns of our history, as well as Criteria D/4, for its ability to yield important new insights into regional prehistory in the vicinity of Mission Bay.

⁴⁸ Nelson, 1909.

⁴⁹ M. J. Moratto, *California Archaeology*. Academic Press, Orlando, FL, 1984.

⁵⁰ Grace H. Ziesing, Replacement of the West Approach to the San Francisco-Oakland Bay Bridge: Archaeological Research Design and Treatment Plan. Prepared for the Office of Environmental Planning, District 4, California Department of Transportation, Oakland, CA, 2000.

⁵¹ Anthropological Studies Center (ASC), Site Specific Archaeological Research Design, Evaluation, and Data Recovery and Treatment Plan for Prehistoric Midden Deposits at Fourth and Howard Streets, San Francisco. Prepared for the San Francisco Municipal Transportation Agency, September 15, 2010.

Ethnohistorical Context

A compilation of ethnographical, historical, and archeological data indicates that the San Francisco peninsula was inhabited by a cultural group known as the Ohlone before the arrival of Europeans.⁵² While traditional anthropological literature portrayed the Ohlone peoples as having a static culture, today it is better understood that many variations of culture and ideology existed within and between villages. While these “static” descriptions of separations between native cultures of California make it an easier task for ethnographers to describe past behaviors, this masks Native adaptability and self-identity. California’s Native Americans never saw themselves as members of larger “cultural groups,” as described by anthropologists. Instead, they saw themselves as members of specific villages, perhaps related to others by marriage or kinship ties, but viewing the village as the primary identifier of their origins.

Levy describes the language group spoken by the Ohlone as “Costanoan.”⁵³ This term is originally derived from a Spanish word designating the coastal peoples of Central California. Today Costanoan is used as a linguistic term that references a larger language family that included at least eight distinct languages (as different as Spanish is from French) of the same Penutian language group. The Ohlone once occupied a large territory from San Francisco Bay in the north to the Big Sur and Salinas Rivers in the south. The project site is within the *Ramaytush Ohlone* linguistic territory, in the areas of present-day San Francisco and San Mateo counties. The northern portion of the San Francisco peninsula (including the City of San Francisco) was the tribal/regional community area of the *Yelamu*, one of seven tribal areas on the San Francisco peninsula (north of San Francisquito Creek). The *Yelamu* are estimated to have had a population of 160 and population density of one person per square kilometer (2.7 per square mile) at the time of Euro-American contact.⁵⁴

Economically, Ohlone engaged in hunting and gathering. Their territory encompassed both coastal and open valley environments that contained a wide variety of resources, including grass seeds, acorns, bulbs and tubers, bear, deer, elk, antelope, a variety of bird species, and rabbit and other small mammals. The Ohlone acknowledged private ownership of goods and songs, and village ownership of rights to land and/or natural resources; they appear to have aggressively protected their village territories, requiring monetary payment for access rights in the form of clamshell beads. After European contact, Ohlone society was severely disrupted by missionization, disease, and displacement. Today, people of Ohlone descent still have a strong presence in the San Francisco Bay Area and many are highly interested in their historic and prehistoric past.

⁵² Randall T. Milliken, *A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area, 1769–1810*. Menlo Park: Ballena Press, 1995.

⁵³ Richard Levy, *Costanoan in California*, edited by Robert F. Heizer, pp. 485–495. *Handbook of North American Indians*, vol. 8, William C. Sturtevant, general editor. Washington, D.C.: Smithsonian Institution, 1978.

⁵⁴ Randall T. Milliken, Richard Fitzgerald, Mark G. Hylkema, Randy Groza, Tom Origer, David G. Bieling, Alan Leventhal, Randy S. Wiberg, Andrew Gottsfield, Donna Gillette, Viviana Bellifemine, Eric Strother, Robert Cartier, and David A. Fredrickson. Punctuated Culture Change in the San Francisco Bay Area. Chapter 8 in *California Prehistory: Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar. Lanham, Maryland: Altamira Press, 2007.

Historic Period

Spanish, Mexican, and Early American Periods (1776–1848)

Initial European exploration of the San Francisco area began in 1769. During this period, a number of Spanish expeditions penetrated the territory occupied by the Ohlone peoples. Between 1769 and 1776, forays led by Portola, Ortega, Fages, Fages and Crespi, Anza (two expeditions), Rivera, and Moraga were carried out. Favorable reports led to the founding of seven missions in the region between 1770 and 1797.

In the spring of 1776, the site of San Francisco was chosen by Juan Batista Anza for the establishment of a mission and military post. Later that same year, the Mission San Francisco de Asís (also known as Mission Dolores) and Presidio de San Francisco were officially dedicated and Jose Joaquin Moraga (Anza's lieutenant) took formal possession in the name of King Carlos III.

The Spanish colonization of Alta California, as manifested in the religious-military mission system, produced profound changes in the cultures of the indigenous population. The missions resettled and concentrated the aboriginal hunter-gatherer population into agricultural communities. The concentration of population, coupled with the indigenous people's lack of immunity to European diseases, caused the tribes to be decimated by common diseases that were generally not fatal to Europeans. It has been estimated that the Ohlone population overall declined from 10,000 or more in 1770 to fewer than 2,000 in 1832.

The project site is approximately one mile northeast of Mission Dolores, but land used by the Spanish was not confined to the Mission itself. As has been shown on many other mission sites in California,⁵⁵ Mission fathers and neophytes (Native Americans who were converted to Christianity and then lived at the mission) did not constrain their activities to areas only within and nearby buildings. As a result, much of the land surrounding a Mission site remains an untapped archeological resource for discovering other, more temporary, land use and residential areas.

Most of California south of Sonoma was under Mexican rule from 1821 to 1848. In the years following the 1810 Mexican Revolution, political instability added to the diminishing conditions at (and funding to) the Missions. As a result, the Missions' power and influence waned during this period. Historic settlement in the region began in earnest in 1823, and the Mexican government awarded large grants of land to wealthy and politically influential individuals willing to settle in what was still known as Alta California. In 1833–1834, the Mexican government secularized the Spanish missions, and many mission lands were also subsequently granted to individuals who established vast cattle raising estates, or *ranchos*.⁵⁶

In 1836 American trader Jacob P. Leese built a wood house and store in Yerba Buena Cove near William A. Richardson's home, founder of Yerba Buena Cove.⁵⁷ In these early years, the small number of residents who

⁵⁵ Rebecca Allen, "Rethinking Mission Land Use and the Archaeological Record in Alta California: An Example from Santa Clara," *Historical Archaeology* 44(2): 72-96, 2010; Panich, Lee M., Assessing the Diversity of Mission Populations through the Comparison of Native American Residences at Mission Santa Clara de Asis. *International Journal of Historical Archaeology* 18(467): 488, 2014; Schneider, Tsim D. and Lee M. Panich, Native Agency at the Margins of Empire: Indigenous Landscapes, Spanish Missions, and Contested Histories. In *Indigenous Landscapes and Spanish Missions: New Perspectives from Archaeology and Ethnohistory*, edited by L. M. Panich and T. D. Schneider. The University of Arizona Press; Tucson, AZ, 2014, pp. 5-22.

⁵⁶ James J. Rawls, and Walton Bean, *California: An Interpretive History*, 7th Edition, McGraw Hill, 1997.

⁵⁷ Malcolm E. Barker, *San Francisco Memoirs 1835-1851: Eyewitness Accounts of the Birth of a City* (San Francisco, CA: Londonborn Publications, 1994).

had made their way to the San Francisco peninsula clustered in one of three places: the mission, the presidio, or the land along Yerba Buena Cove.

The Mission, the Presidio, and the village of Yerba Buena were located some distance from the project area during the Spanish, Mexican, and Early American Periods. No cultural resources from these periods have been previously recorded on the project site or in the immediate vicinity.

Gold Rush and Early American Period (1849–1906)

Prior to the discovery of gold at Sutter’s Mill in January 1848, the recently named city of San Francisco was a relatively quiet, shipping port. While the area around Portsmouth Square and Yerba Buena Cove grew rapidly after the discovery of gold, the area south of the present day Market Street was generally sand dunes toward the bay and flat marsh land toward the Mission Dolores.

The discovery of gold in the Sierra Nevada in 1848 produced a major population increase in northern California as immigrants poured into the territory seeking gold or associated opportunities. Before the Gold Rush, San Francisco was a small community with a population of approximately 800. With the discovery of gold and the sudden influx of thousands of newcomers, a city of canvas and wood sprang up around Yerba Buena Cove and on the surrounding sand dunes and hills. To accommodate the growing population, the city soon spread out in all directions, including south and west beyond the outskirts of the burgeoning city that was centered on Yerba Buena Cove.

In the early-1850s, a plank road was constructed as an extension of Mission Street from Fourth Street to 16th Street, where it reached the Mission settlements. The Mission Dolores Plank Road Company constructed the plank road in 1850 under contract to the city. The plank road was 40 feet (12.2 meters) wide and ran 2.25 miles (3.6 kilometers) over the old Mission trail.⁵⁸

The area known today as the South of Market Area (SoMa) was first laid out during the Mexican settlement of Yerba Buena. In an attempt to adjust and reorganize the tangle of sand dunes, muddy streets, and alleyways, Jasper O’Farrell developed the Authentic and Official Plan of San Francisco of 1847. In spite of this impressive effort, the plan was only peripherally implemented in the SoMa area, which remained sparsely developed from the 1870s to 1906. Generally the area was a working class, residential neighborhood composed of boarding houses, tenements, single and multi-family dwellings, churches, social halls, and scattered industries of various types and sizes.

Much of San Francisco’s industrial growth during the later-19th century can be attributed in part to the massive influx of immigrants, particularly after the opening of the Transcontinental Railroad in 1869. After arriving in San Francisco, many immigrants moved to the vicinity of the project site and the South of Market district.

Post-Earthquake to the Great Depression (1907–1929)

The first decade after the 1906 earthquake devastation of the SoMa area was largely dedicated to clearing away the debris, infilling creeks and gullies, processing insurance claims, and the ongoing debate amongst city officials regarding extending fire limits (allowed building materials) of the downtown to the South of Market area. By the early 1920s, due to post-WWI reinvestment and improved transportation and roadways, most of

⁵⁸ Robert O’Brien, “Notes for a Mission Street Guidebook,” in *Riptides; San Francisco Chronicle*, December 10, 1947.

the vacant land had been developed for utilitarian and industrial buildings, lumber yards, and small clusters of housing.⁵⁹ The *Market & Octavia Survey* states:

*Industrial uses intensified partially due to the availability of open land and, after World War I, the advent of motor transport. In response to new building codes and concerns resulting from the disaster of 1906, the newer industrial buildings were structurally more substantial than their predecessors, and made liberal use of newly validated reinforced concrete construction for both seismic and fire safety.*⁶⁰

The Depression through World War II (1929–1945)

As with other parts of the country, San Francisco, and by extension the SoMa area, experienced little reinvestment or property development during these years. However, some important government spending in the form of highway infrastructure and the Work Progress Administration (WPA) did spur construction of infrastructure in and around the SoMa area, including the extension of South Van Ness Avenue in 1931.

One of the most important events in the [Market to Octavia] Plan Area during the 1930s was the extension of South Van Ness Avenue in 1931. Prior to that time, vehicular traffic had been impaired by the lack of a direct route across Market Street—a result of Jasper O’Farrell’s 1847 survey which divided either side of Market Street into vastly different grids. The need to resolve this logjam acquired urgency with the routing of U.S. 101 along Van Ness Avenue in 1933. As a solution, the Department of Public Works condemned dozens of properties in a swath through the Plan Area, demolished or truncated several buildings, and extended Van Ness Avenue south to Howard Street, which was renamed South Van Ness Avenue in 1933. Several businesses acquired the residual irregularly sized lots and began constructing new buildings along South Van Ness and nearby streets. Examples include the San Francisco Recorder Building (1935) at 125 Twelfth Street (extant), the Dairyman’s Building (1937) at South Van Ness and Thirteenth Streets (extant), and the Coca-Cola bottling warehouse (1941) at 1500 Mission Street (extant). Another notable building erected nearby is the Pacific Telephone and Telegraph Exchange Building (1937).⁶¹

Post–Second World War (1945–1960s)

The SoMa building boom between the Depression and WWII resulted in the area being nearly built out by the mid-1950s. By 1953, the Bayshore Freeway was extended northward from Alemany Boulevard to Bryant Street, and the Central Freeway sliced through the western portion of the SoMa area. Both projects resulted in the demolition of industrial and warehouse buildings. With the advent of suburban industrial parks and the lure of financial incentives, growing businesses (and their employees) began moving out of the area into the suburbs.⁶²

⁵⁹ Ibid., 53.

⁶⁰ Ibid.

⁶¹ Ibid., 67.

⁶² Ibid., 76.

Existing Conditions on the Project Site

Archeological Resources on the Project Site

Although no prehistoric archeological sites have been recorded within or immediately adjacent to the project site, the project site is central to a number of recorded prehistoric sites representing a wide range of types and periods of Native American habitation of the San Francisco peninsula.

The Mission, the Presidio, and the village of Yerba Buena were located some distance from the project site during the Spanish, Mexican, and Early American Periods. No cultural resources from these periods have been previously recorded on the project site or in the immediate vicinity.

The 1851 U.S. Coast Survey map shows the plank road south of project site and a path running through the project site. Scattered development is shown in the immediate project vicinity. A historical marsh extended from Mission Bay to about one-quarter of a mile east of the project site, and Mission Creek ran about one-third of a mile to the south of the project site.

Small farm plots, market gardens, and dairies were present in the general vicinity of the project site by the late 1850s. In 1857, the project site had been graded and is shown as a cultivated field.

The 1869 U.S. Coast Survey map shows building development on the project site; the exact nature of this development is not currently known. The 1889 Sanborn map shows primarily residential development on the project site, including two-story flats and several outbuildings, the Trinity private school, and a large residential complex. The 1899 Sanborn map shows the same residential development, but the school and residential complex is labeled the “Nursery for Homeless Children.”

The project site is within the greater area that was decimated during the fire that followed the 1906 earthquake. No buildings survived the conflagration. As noted above, the general area was heavily residential before the 1906 earthquake, but was reconstructed as primarily industrial after the disaster.⁶³ After the earthquake, many former working class residents of the SoMa area moved to the expanding Sunset and Mission Districts, and to the East Bay.

The 1913 Sanborn Map shows that the project site was used as a “Ball Grounds”, in addition to an office building for the Ocean Shore Railroad company. By 1950, the Sanborn Map shows South Van Ness Avenue cutting through the project block, and the project site was developed with the current 1500 Mission Street building, then the Coca-Cola Bottling Company of California Bottling Works.

The geotechnical report for the proposed project describes the project site as underlain by eight to 15 feet of artificial fill. The project site is currently occupied by a two-story building on the western portion, and a one-story building with a basement and a clock tower on the eastern portion. The basement beneath the one-story building extends about 14 feet below existing site grades. It is likely that much of the late-19th-century development of the project site, especially on the east side, was removed during construction of the basement.

⁶³ Page & Turnbull, Final Historic Context Statement, South of Market Area, San Francisco, California. Prepared for City and County of San Francisco Planning Department, 2009.

Historical Architectural Resources on the Project Site

Building Description for 1500 Mission Street

The building at 1500 Mission Street is a reinforced-concrete, industrial-style building constructed in 1925 in the Classical Revival style.⁶⁴ In 1941, the building was enlarged and remodeled in the Streamlined Moderne style by the Coca-Cola Bottling Company based on a design by an Atlanta-based architect, Jesse Shelton. It is composed of a two-story main building section with an approximately 97-foot-tall clock tower and a rear one-story warehouse. The building is visible from the public right-of-way on three sides: southern, eastern, and western. The primary façade along Mission Street (south side) is 11 bays wide (measuring approximately 215 feet) and the secondary façade along 11th Street (east side) is 14 bays wide (measuring approximately 275 feet) (see **Figure IV.A-1, 1500 Mission Street Building: Mission Street and 11th Street Façades**). The west facade is largely occupied by contemporary, non-historic loading docks. The north facade abuts the adjacent building at One South Van Ness Avenue. The entire building is clad with stucco with large sections of scored, decorated, incised and smooth finishing. Two rounded belt courses, or horizontal bands, run along the base of the building.⁶⁵

The overall massing and silhouette of the building is dominated by the asymmetrically placed clock tower (with painted clock faces) at the main entrance. The verticality of the tower is emphasized by corner projections and decorative panels. On the west end of the Mission Street façade is a rounded corner. A one-story penthouse extends from the tower to the western parapet on the second floor.

Window types throughout the building consist of original, multi-pane industrial steel-sash windows, replacement aluminum sash windows, and a wraparound window at the rounded corner. Door types include steel doors with tall transoms (all with divided lights) and non-historic, metal roll up doors.

The southern and central portions of the first floor interior are occupied by office spaces with contemporary finishes and drop ceilings. The northern portion of the interior is a large open space that is connected to the warehouse. The warehouse is a large open space supported by steel trusses and illuminated by a series of skylights.

Historic Significance of the 1500 Mission Street Building

The *1500 Mission Street Historical Resource Evaluation, Part 1* found that the building retains a sufficient level of integrity to meet the criteria as a local example of an industrial building designed in the Streamline Moderne style of architecture in San Francisco; therefore, the building is eligible for inclusion in the California Register under Criterion 3 (architecture).⁶⁶

⁶⁴ Architectural Resources Group, *1500 Mission Street Historical Resource Evaluation, Part 1*, November 19, 2015.

⁶⁵ Ibid.

⁶⁶ Ibid., p. 30.



View of Mission Street façade



View of 11th Street façade

The Planning Department confirmed that the building at 1500 Mission Street is eligible for individual listing in the California Register under Criterion 3 (architecture) as a local example of an industrial building designed in the Streamline Moderne style of architecture in San Francisco. As such, the building is considered a historical resource for the purposes of CEQA.⁶⁷

Character-Defining Features of the 1500 Mission Street Building

Character-defining features include architectural ornament, engineering systems, construction details, massing, materials, craftsmanship, site features, and landscaping built within the period of significance. The period of significance for the 1500 Mission Street building has been established as 1941, when it was remodeled in the Streamline Moderne style. The 1500 Mission Street building's character-defining features include:

- Overall form and massing (front two-story office section, rear one-story warehouse section, vertical clock tower projection);
- Horizontal emphasis along Mission Street (juxtaposed with tower projection) and 11th Street facades;
- Rounded corners and curved surfaces;
- Speed lines (bands of horizontal piping);
- Flat roof with coping at the roofline;
- Smooth concrete wall surface;
- Wraparound window at the southwest corner;
- General absence of historically derived ornamentation;
- Asymmetrical façade;
- Recessed entry vestibule along Mission Street;
- Multi-pane, industrial steel sash windows, throughout;
- Clock faces at tower;
- Paired steel doors and tall transom at main entrance along Mission Street with decorative detailing; and
- Industrial warehouse section with wire glass skylights; exposed steel truss work and structural framing; unfinished concrete floor; and open, full-height interior space.⁶⁸

Integrity of the 1500 Mission Street Building

Integrity is the authenticity of a historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. As noted above, integrity involves several aspects including location, design, setting, materials, workmanship, feeling, and association. These aspects closely relate to the building's significance and must be primarily intact for eligibility. As the 1500 Mission Street building retains most of its character-defining features that convey its significance as an example of Streamline Moderne architecture in San Francisco, including but not limited to the overall form

⁶⁷ Planning Department, *HREER*, p. 3.

⁶⁸ *Ibid*, p. 7.

and massing, the rounded corners and curved surfaces, the speed lines, and the multi-pane, industrial steel sash windows, the building retains sufficient integrity to communicate its significance as a local example of an industrial building designed in the Streamline Moderne architectural style.⁶⁹

Other Buildings on the Project Site

Building Description for 1580 Mission Street

The building at 1580 Mission Street, constructed in 1997, is a two-story, commercial and office building that is V-shaped in plan and has a flat roof. The building is ten bays long on its two street frontages, with a rounded bay at the corner of Mission Street and South Van Ness Avenue. The bays at the end of each frontage are slightly recessed and clad in glass. The main entrance to the retail store is located in the rounded bay, which has a multi-light, rounded, projecting window on the second floor. The building is constructed of rough-hewn concrete masonry units. Painted corrugated metal awnings are located above the transoms of the ground floor windows (see **Figure IV.A-1**, 1500 Mission Street Building: Mission Street and 11th Street Façades).⁷⁰

Historic Significance of the 1580 Mission Street Building

The building at 1580 Mission Street is less than forty five years of age (constructed 1997) and, therefore, has not been included in previous surveys. The Planning Department has determined that the building at 1580 Mission Street is not an historical resource for the purposes CEQA and, therefore, assigned it a Category C property (not a historical resource).⁷¹

Historical Resources Adjacent to the Project Site

Surrounding the project site are several properties identified as individual historic resources and those nearby areas that comprise previously identified historic districts. There are no immediately adjacent historic resources that, in combination with the 1500 Mission Street building, would be considered a historic district. The following is quoted from the “Neighborhood Context and Description” section of the 1500 Mission Street HRER, dated June 15, 2016:

In the immediate vicinity of the project site, 1513 Mission Street ([Firestone Garage], 1930), 1519 Mission Street ([former Herbst Brothers Hardware], 1923), 1563 Mission Street (1917), and 99 South Van Ness Avenue ([Public Storage], 1934) have been identified as historic resources through survey evaluations.

The south side of Mission Street between 11th and Lafayette Streets, opposite the project site, is within a National Register-eligible historic district: Western SOMA Light Industrial and Residential District.

[The] Western SOMA Light Industrial and Residential District, bounded roughly by Mission or Minna Streets to north, Russ or 7th Streets to east, Harrison Street to south, and 12th Street to west, was determined eligible for the National Register in the Market & Octavia Area Plan Survey in 2006 (update, 2010). The district is significant under Criterion 1/A (Events) as a representation of postquake construction, light industrial development, and use, labor, and working-class culture in San Francisco and Criterion 3/C (Architecture) as a concentrated example of post-earthquake reconstruction between 1906

⁶⁹ Planning Department, HRER, p. 5.

⁷⁰ Ibid., p. 3.

⁷¹ Ibid.

and 1936. The district is characterized by brick masonry or concrete residential hotels, wood-frame residential flats, Romeo flats, 1920s commercial buildings, and concrete light industrial buildings and warehouses.⁷²

IV.A.3 Regulatory Framework

This section provides an overview of applicable federal, state, and local environmental laws, policies, plans, regulations, and/or guidelines relevant to cultural resources. A brief summary of each regulatory requirement is provided.

Federal Regulations

National Register of Historic Places

The National Register is the nation's official list of properties, structures, districts, and objects significant in American history, architecture, archeology, engineering, and culture. National Register properties have significance to the prehistory and history of their community, state, or nation. The National Register Criteria for Evaluation are "the basis for judging a property's significance for their association with important events or persons, for their importance in design or construction, or for their information potential."⁷³ Under the NHPA, a property is considered significant if it meets the NHPA listing criteria in 36 CFR 60.4, as follows:

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and that:

- a) Are associated with events that have made a significant contribution to the broad patterns of our history, or
- b) Are associated with the lives of persons significant in our past, or
- c) Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction, or
- d) Have yielded, or may be likely to yield, information important in prehistory or history.

Neither 1500 Mission Street nor 1580 Mission Street is listed on the National Register.

State Regulations

The State of California implements the NHPA of 1966, as amended, through its statewide comprehensive cultural resource surveys and preservation programs. The California Office of Historic Preservation (OHP), as an office of the California Department of Parks and Recreation (DPR), implements the policies of the NHPA on a statewide level. The OHP also maintains the California Historical Resources Inventory. The SHPO is an appointed official who implements historic preservation programs within the state's jurisdictions.

⁷² Ibid.

⁷³ Ibid., 11.

California Register of Historical Resources

The California Register is “an authoritative listing and guide to be used by state and local agencies, private groups, and citizens in identifying the existing historical resources of the state and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change” (Public Resources Code Section 5024.1(a)). The criteria for eligibility for the California Register are based on National Register criteria (Public Resources Code Section 5024.1(b)). Certain resources are determined by the statute to be automatically included in the California Register, including those formally determined eligible for or listed in the National Register.

To be eligible for the California Register, a historical resource must meet one or more of the following criteria (Public Resources Code Section 5024.1(c)):

- 1) **Criterion 1 (Events):** Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
- 2) **Criterion 2 (Persons):** Is associated with the lives of persons important in our past;
- 3) **Criterion 3 (Architecture):** Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- 4) **Criterion 4 (Information Potential):** Has yielded, or may be likely to yield, information important in prehistory or history.

In addition to meeting one or more of the above criteria, the California Register requires that sufficient time must have passed to allow a “scholarly perspective on the events or individuals associated with the resource.” Fifty years is used as a general estimate of the time needed to understand the historical importance of a resource.⁷⁴ In order to protect potential resources, the State of California Office of Historic Preservation recommends documenting, and taking into consideration in the planning process, any cultural resource that is 45 years or older.⁷⁵

The California Register also requires a resource to possess integrity, which is defined as “the authenticity of a historical resource’s physical identity evidenced by the survival of characteristics that existed during the resource’s period of significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association.”⁷⁶ These seven aspects of integrity are defined as:

- *Location:* the place where the resource was constructed;
- *Design:* the combination of elements that create the form, plans, space, structure, and style of the resource;

⁷⁴ CCR 14(11.5) Section 4852 (d)(2).

⁷⁵ California Office of Historic Preservation, *Instructions for Recording Historical Resources*, March 1995. Available: www.ohp.parks.ca.gov/pages/1054/files/manual95.pdf. The 45-year criterion is in place to account for a projected 5-year interval between resource identification and planning decisions. The criterion ensures that resources that will reach the age requirement in the interim are fully considered during the environmental review and decision-making processes.

⁷⁶ California Office of Historic Preservation, *California Register and National Register: A Comparison* (for purposes of determining eligibility for the California Register), Technical Assistance Series #6, N.D., 2011. Available: ohp.parks.ca.gov/pages/1069/files/technical%20assistance%20bulletin%206%202011%20update.pdf.

- *Setting*: the physical environment of the resource, including the landscape and spatial relationship of the buildings;
- *Materials*: the physical elements that were combined or deposited during a particular period of time and in a particular pattern of configuration to form the resource;
- *Workmanship*: the physical evidence of the crafts of a particular culture or people during any given period of history;
- *Feeling*: the resource's expression of the aesthetic or historic sense of a particular period of time; and
- *Association*: the direct link between an important historic event or person and a resource.

For a resource to be eligible for the California Register, it must retain enough integrity to be recognizable as a historical resource and to convey its significance. A resource that does not retain sufficient integrity to meet the National Register criteria may still be eligible for listing in the California Register. As noted above, the 1500 Mission Street building is eligible for inclusion in the California Register under Criterion 3 (architecture).

CEQA requires lead agencies to determine if a proposed project would have a significant effect on important archeological resources, either historical resources or unique archeological resources. If a lead agency determines that an archeological site is a historical resource, the provisions of Public Resources Code Section 21084.1 would apply and CEQA Guidelines Sections 15064.5(c) and 15126.4 and the limits in Public Resources Code Section 21083.2 would not apply. If an archeological site does not meet the CEQA Guidelines criteria for a historical resource, the site may meet the threshold of Public Resources Code Section 21083.2 regarding unique archeological resources. A unique archeological resource is "an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person [Public Resources Code Section 21083.2(g)]."

If a resource is neither a unique archeological resource nor a historical resource, the effects of the project on that resource shall not be considered a significant effect on the environment (CEQA Guidelines Section 15064.5(c)(4)).

California Public Resources Code

Section 7050.5 of the Health and Safety Code protects human remains by prohibiting the disinterring, disturbing, or removing of human remains from any location other than a dedicated cemetery. Section 5097.98 of the Public Resources Code (and reiterated in CEQA Guidelines Section 15064.59(e)) also identifies steps to follow in the event of the accidental discovery or recognition of Native American human remains in any location other than a dedicated cemetery.

Assembly Bill 52

In September of 2014, the California Legislature passed Assembly Bill (AB) 52, which added provisions to the Public Resource Code regarding the evaluation of impacts on tribal cultural resources under CEQA, and consultation requirements with California Native American tribes. In particular, AB 52 now requires lead agencies to analyze project impacts on “tribal cultural resources” separately from archeological resources (Public Resource Code Sections 21074; 21083.09). The Bill defines “tribal cultural resources” in a new section of the Public Resources Code, Section 21074. AB 52 also requires lead agencies to engage in additional consultation procedures with respect to California Native American tribes (Public Resources Code Sections 21080.3.1, 21080.3.2, 21082.3). Finally, AB 52 requires the Office of Planning and Research to update CEQA Guidelines Appendix G by July 1, 2016, to provide sample questions regarding impacts to tribal cultural resources (Public Resources Code Section 21083.09).

Local Regulations

City and County of San Francisco

The City and County of Planning Department CEQA Review Procedures for Historic Resources” provides guidance for the CEQA review process with regard to historic resources. As a certified local government and the lead agency in CEQA determinations, the City and County of San Francisco (“City”) has instituted guidelines and a system for initiating CEQA review of historic resources. The Planning Department’s CEQA review procedures for historical resources incorporate the CEQA Guidelines into the City’s existing regulatory framework. To facilitate the review process, the Planning Department has organized some 27 criteria into three major categories that classify properties based on their evaluation and inclusion in specified registers or surveys, as outlined in San Francisco Preservation Bulletin 16⁷⁷ and summarized here (Category A is divided into two subcategories):

- **Category A.1 – Resources Listed on or Formally Determined to Be Eligible for the California Register of Historical Resources.** These properties are historical resources.
- **Category A.2 – Adopted Local Registers, and Properties That Have Been Determined to Appear or May Become Eligible for the California Register.** These properties are presumed to be historical resources for purposes of CEQA, unless a preponderance of the evidence demonstrates that the resource is not historically or culturally significant.
- **Category B – Properties Requiring Further Consultation and Review.** Properties that do not meet the criteria for listing Categories A.1 or A.2, but for which the City has information indicating that further consultation and review will be required to evaluate whether a property is a historical resource for the purposes of CEQA.
- **Category C – Properties Determined Not to Be Historical Resources or Properties for Which the City Has No Information Indicating That the Property Is a Historical Resource.** Properties that have been affirmatively determined not to be historical resources, properties less than 50 years of age, and properties for which the City has no information indicating that the property qualifies as a historical resource.

⁷⁷ San Francisco Preservation Bulletin, No. 16, “City and County of San Francisco Planning Department CEQA Review Procedures for Historic Resources.” Available at <http://www.sfplanning.org/Modules/ShowDocument.aspx?documentid=5340>.

The Planning Department considers a listing of historical resources approved by ordinance or resolution of the Board of Supervisors or the Planning Commission to be a local register of historical resources for purposes of CEQA evaluation. These lists include Articles 10 and 11 of the *Planning Code*, as well as other adopted historical resource surveys, including the Here Today survey, the 1977–78 *Downtown Survey (Splendid Survivors)*, the Dogpatch Survey, the Central Waterfront Survey, and the North Beach Survey. Other historical resource surveys, such as the Architectural Heritage surveys and the 1990 Unreinforced Masonry Building survey are not approved by ordinance or resolution, but contain useful initial information as the basis for further study. The 1500 Mission Street building is a Category A property (known historical resource) and 1580 Mission Street building is a Category C property (not a historical resource).

San Francisco Landmarks and Locally Significant Properties

Article 10 Landmarks

Planning Code Article 10, Preservation of Historical, Architectural and Aesthetic Landmarks, provides for official designation of landmarks and historic districts that have “a special character or special historical, architectural or aesthetic interest or value.” Landmarks can be buildings, sites, or landscape features. Landmark status provides the greatest level of protection for historic resources in San Francisco; in general, alteration of a landmark requires approval by the Historic Preservation Commission of a Certificate of Appropriateness.

Neither 1500 Mission Street nor 1580 Mission Street is an Article 10 landmark and the project site is not located in an Article 10 historic district.

Article 11 Buildings and Conservation Districts

Planning Code Article 11, Preservation of Buildings and Districts of Architectural, Historical, and Aesthetic Importance in the C-3 Districts, governs approximately 430 downtown buildings. There are five ratings for buildings under Article 11. Category I and II buildings (“Significant Buildings”) are the most important. Contributory Buildings have a lesser level of significance and are classified as Category III or Category IV, depending on whether they are within an identified conservation district. Buildings in Categories I through IV are considered historical resources under CEQA. Unrated or non-contributory buildings are assigned to Category V.

An important provision of Article 11 is the establishment of conservation districts, defined as “substantial concentrations of buildings that together create subareas of special architectural and aesthetic importance.”

Both buildings located at 1500 Mission Street and 1580 Mission Street are designated Category V— Unrated Building, and the project site is not within an Article 11 conservation district.

Historical Resource Surveys

As discussed in the HREER, the building at 1500 Mission Street is over 50 years of age and was included in the 1976 *Citywide Architectural Survey* and the 1977–1978 *Downtown Survey*. More recently, the property was

surveyed in both the *Market & Octavia Area Plan Historic Resource Survey* and the *Van Ness Auto Row Support Structures Survey*.⁷⁸

1976 Citywide Architectural Survey

The 1500 Mission Street building was surveyed for the *1976 Citywide Architectural Survey* conducted by the Planning Department and was assigned a rating score of 3, indicating it was of relatively high importance, architecturally.

1977–78 Downtown Survey

The 1500 Mission Street building was surveyed as part of the *1977-1978 Downtown Survey* conducted by San Francisco Architectural Heritage and was assigned a “B” rating (building of major importance).

Market & Octavia Area Plan Historic Resource Survey

The 1500 Mission Street building was surveyed for the *Market & Octavia Area Plan Historic Resource Survey* adopted by the City on May 30, 2008. The property was identified as a contributor to a potentially eligible South Van Ness Deco-Moderne Historic District; however, in 2009 the Planning Department and Landmarks Preservation Advisory Board (predecessor to the Historic Preservation Commission) determined that the district was not California Register eligible.⁷⁹

Automotive Support Structures Survey

The 1500 Mission Street building was again evaluated in 2010 as part of the Van Ness Auto Row Support Structures survey adopted by the City on July 10, 2010. The property was assigned a California Historical Resource status code of 3CS, indicating the property “appears eligible for [the California Register] as an individual property through survey evaluation.” The building at 1500 Mission was determined not eligible as a contributor to the Van Ness Auto Row Support Structures district because it was fully remodeled for use as a Coca-Cola bottling plant in 1941, and, therefore, is no longer related to this context.⁸⁰

IV.A.4 Impacts and Mitigation Measures

This subsection evaluates the potential for the proposed project to result in adverse effects on the physical environment described in the setting. Significance criteria for evaluating the environmental impacts are defined at the beginning of each impact analysis section, and the “Approach to Analysis” explains how the significance criteria are applied in evaluating the impacts of the proposed project. The conclusion of each impact analysis is expressed in terms of the impact significance, which is discussed further under “Significance Determinations,” later in this section.

⁷⁸ Planning Department, *HRER*, p. 2.

⁷⁹ *Ibid.*, p. 3.

⁸⁰ *Ibid.*

Approach to Analysis

Historical Resources

CEQA Guidelines Section 15064.5 requires the lead agency to consider the effects of a project on historical resources. Potential impacts on architectural resources are assessed by identifying any activities that could affect resources that have been identified as historical resources for the purposes of CEQA. Once a resource has been identified as a CEQA historical resource, it then must be determined whether the impacts of the proposed project would “cause a substantial adverse change in the significance” of the resource.⁸¹ A substantial adverse change in the significance of a historical resource means “physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historic resource would be materially impaired.”⁸² A historical resource is materially impaired through the demolition or alteration of the resource’s physical characteristics that convey its historical significance and that justify its inclusion in the California Register.⁸³

In general, a project that is consistent with the Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings Preservation, Rehabilitation, Restoration, and Reconstruction (the Standards for Rehabilitation) is considered mitigated to a less-than-significant impact.

The Standards for Rehabilitation have been developed by the Department of the Interior to guide work undertaken on historic buildings. As noted above, a project that is consistent with the Standards for Rehabilitation of historic buildings is considered mitigated to a less-than-significant impact.⁸⁴ The Standards for Rehabilitation address compatibility of new uses, the preservation and retention of character-defining features, and avoiding physical treatments that could potentially damage historic material. The Standards for Rehabilitation include the following:

- 1) A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
- 2) The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
- 3) Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
- 4) Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
- 5) Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a historic property shall be preserved.
- 6) Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in

⁸¹ CEQA Guidelines Section 15064.5(b).

⁸² CEQA Guidelines Section 15064(b)(1).

⁸³ CEQA Guidelines Section 15064.5(b)(2)(A).

⁸⁴ CEQA Guidelines Section 15064.5(b)(3).

design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.

- 7) Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
- 8) Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
- 9) New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
- 10) New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.⁸⁵

Since the project proposes to retain and rehabilitate a portion of the 1500 Mission Street building, ARG conducted an analysis of the proposed project with regard to the Standards for Rehabilitation.⁸⁶

Archeological Resources

The significance of most prehistoric and historic-era archeological sites is usually assessed under National Register and California Register Criterion D/4. This criterion stresses the importance of the information potential contained within the site, rather than its significance as a surviving example of a type or its association with an important person or event. Archeological resources may also be assessed under CEQA as unique archeological resources, which are archeological artifacts, objects, or sites that contain information needed to answer important scientific research questions; have a special and particular quality such as being the oldest of its type or the best available example of its type; or are directly associated with a scientifically recognized important prehistoric or historic event or person.

The determination of whether an effect on an archeological resource is significant depends on the effect of the project on those characteristics of the archeological resource that make the archeological resource significant. For an archeological resource that is an historical resource because of its prehistoric or historical information value, that is, its scientific data, a significant effect is impairment of the potential information value of the resource.

The depositional context of an archeological resource, especially soils stratigraphy can be informationally important to the resource in terms of datation and reconstructing the characteristics of the resource present at the time of deposition and interpreting the impacts of later deposition events on the resource. Thus, for an archeological resource eligible to the CRHR under Criterion 4, a significant adverse effect to its significance may not be limited to impacts on the artefactual material but may include effects on the soils matrix in which the artefactual matrix is situated.

⁸⁵ U.S. Department of Interior, National Park Service, *The Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings*, Washington, D.C.: U.S Government Printing Office, 6.

⁸⁶ Architectural Resources Group, *1500 Mission Street: Part 2 Historic Resource Evaluation*, June 8, 2016, 8-12.

Preservation in place is the preferred treatment of an archeological resource (CEQA and Guidelines Sections 21083.2(b); 15126.4 (b)(3)(a)). When preservation in place of an archeological resource is not feasible, data recovery, in accord with a data recovery plan prepared and adopted by the lead agency prior to any soils disturbance, is the appropriate mitigation (CEQA Section 15126.4 (b)(3)(C)). In addition to data recovery, under CEQA, the mitigation of effects to an archeological resource that is significant for its scientific value, requires curation of the recovered scientifically significant data in an appropriate curation facility (CEQA Section 15126.4(b)(3)(C), that is a curation facility compliant with the Guidelines for the Curation of Archaeological Collections (California Office of Historic Preservation 1993). Final studies reporting the interpretation, results, and analysis of data recovered from the archeological site are to be deposited in the California Historical Resources Regional Information Center (CEQA Guidelines Section 15126.4(b)(3)(C).

Tribal Cultural Resources

CEQA Section 21074.2 requires the lead agency to consider the effects of a project on tribal cultural resources. As defined in Section 21074, tribal cultural resources are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are listed, or determined to be eligible for listing, on the national, state, or local register of historical resources.

Once a resource has been identified as a tribal cultural resource, public agencies shall, when feasible, avoid damaging effects and consider measures to mitigate that impact (Public Resources Code, Section 21084.3). A lead agency could minimize significant adverse impacts by avoiding the resource; treating the resource with culturally appropriate dignity, which includes protecting the cultural character and integrity of the resource; protecting the traditional use of the resource; and protecting the confidentiality of the resource.

Under AB 52's provisions to evaluate project impacts on tribal cultural resources, the condition for analysis applies only to projects with a Notice of Preparation (NOP) filed on or after July 1, 2015. As the NOP for the 1500 Mission Street EIR was published on May 13, 2015, the 1500 Mission Street project is not subject to a tribal cultural resources consultation; however, the project is subject to an analysis of tribal cultural resources, which is provided below.

Human Remains

Human remains, including those buried outside of formal cemeteries, are protected under several state laws, including Public Resources Code, Section 5097.98 and *Health and Safety Code* Section 7050.5. These laws are identified above in Section 5.5.2.2, State Regulations and Legal Compliance. This analysis considers impacts including intentional disturbance, mutilation, or removal of interred human remains.

Impact Evaluation

The proposed project would demolish the 1580 Mission Street building and most of the historic 1500 Mission Street building and construct a mixed-use development with two components. The two components would include a new 39-story residential and retail/restaurant tower with mid-rise podium elements at the corner of Mission Street and South Van Ness Avenue, and a new 16-story office tower on 11th Street between Market and Mission Streets with mid-rise podium elements extending west from the tower. The proposed project

would also retain and rehabilitate a portion of the 1500 Mission Street building, including the clock tower, for conversion from industrial to retail/restaurant use.

Impact CR-1: The proposed project would not cause a substantial adverse change in the significance of a historical resource due to the demolition of the 1580 Mission Street building, which is not considered a historical resource, as defined in CEQA Guidelines Section 15064.5(b). (No Impact)

The property at 1580 Mission Street does not meet the CEQA definition of a historic resource; therefore, demolition of the building would not cause a substantial adverse change in the significance of a historical resource and there would be *no impact* to a historical resource.

Impact CR-2: The proposed project would demolish most of the historic 1500 Mission Street building, which would cause a substantial adverse change in the significance of a historical resource, as defined in CEQA Guidelines Section 15064.5(b). (Significant and Unavoidable)

The proposed project would demolish most of the historic 1500 Mission Street building. The proposed project would retain six bays along Mission Street, which represents approximately 130 linear feet, or 60 percent, of the existing building's 215 linear foot Mission Street façade. The proposed project would retain five bays along 11th Street, which represents approximately 95 linear feet, or 35 percent, of the existing building's 275-linear-foot 11th Street facade. Of the 95 feet of the existing building's façade retained along 11th Street, an approximately 43-foot-deep portion of the existing building interior would be retained and reused as part of the new residential and retail/restaurant's building for space dedicated to the latter use. The remaining 55 feet of the existing building's retained façade would cover the lower portion of the new office and permit center building (see **Figure II-16, South Elevations as Viewed from Mission Street**, and **Figure II-18, East Elevations as Viewed from 11th Street**, in Chapter II, *Project Description*). Overall, approximately 90 percent of the historic resource would be demolished. In addition, interior spaces and architectural elements identified as character-defining features would be removed, altered, and/or demolished, including wire glass skylights, exposed steel truss work, and structural framing. Several of the exterior multi-pane, industrial steel-sash windows would also be removed.⁸⁷ The proposed project would also demolish other character-defining features including the overall form and massing of the building as viewed from Mission and 11th Streets; the horizontal emphasis and asymmetrical arrangement along Mission Street; many of the building's rounded corners and curved surfaces; and the rounded corner at the west end of Mission Street facade.⁸⁸ No character-defining features of the retained portion of the building would be removed or altered and some previously removed features, such as the basement level windows, would be restored.

The proposed project's demolition of approximately 90 percent of the existing 1500 Mission Street building would "remove historic materials, features, and spaces that characterize the property and would result in physical destruction, damage or alteration such that the significance of the individual historical resource would be materially impaired."⁸⁹ These changes would not be compliant with the Standards for Rehabilitation. Given that the significance of the individual historical resource would be materially impaired, the proposed

⁸⁷ Planning Department, *HRER*, p. 8; and Architectural Resources Group, *1500 Mission Street, San Francisco, CA, Historic Resource Evaluation – Part 2*, June 8, 2016, p. 3.

⁸⁸ Planning Department, *HRER*, p. 9.

⁸⁹ *Ibid.*

project would result in a significant and unavoidable impact to the historical architectural resource.⁹⁰ Implementation of **Mitigation Measures M-CR-2a, Documentation; M-CR-2b, Historic Preservation Plan and Protective Measures; M-CR-2c, Video Recordation of the Historic Resource; and M-CR-2d, Historic Resource Interpretation**, would reduce some impacts to the historic architectural resource, but not to a less-than-significant level. Thus, the impact would remain *significant and unavoidable*.

Mitigation Measures

Mitigation Measure M-CR-2a – Documentation. Prior to the issuance of demolition or site permits, the project sponsor shall undertake Historic American Building Survey (HABS) documentation of the subject property, structures, objects, materials, and surrounding context. The project sponsor shall retain a professional who meets the Secretary of the Interior’s Professional Qualifications Standards for Architectural History, as set forth by the Secretary of the Interior’s Professional Qualification Standards (36 CFR, Part 61), to prepare written and photographic documentation of 1500 Mission Street. The document shall consist of the following:

- *Measured Drawings:* A set of measured drawings that depict the existing size, scale, and dimension of the subject property. Planning Department Preservation staff will accept the original architectural drawings or an as-built set of architectural drawings (plan, section, elevation, etc.). Planning Department Preservation staff will assist the consultant in determining the appropriate level of measured drawings;
- *HABS-Level Photograph:* Either HABS standard large format or digital photography shall be used. The scope of the digital photographs shall be reviewed by Planning Department Preservation staff for concurrence, and all digital photography shall be conducted according to the latest National Park Service Standards. The photography shall be undertaken by a qualified professional with demonstrated experience in HABS photography. Photograph views for the dataset shall include (a) contextual views; (b) views of each side of the building and interior views, where possible; (c) oblique views of the building; and (d) detail views of character-defining features, including features on the interior. All views shall be referenced on a photographic key. This photographic key shall be on a map of the property and shall show the photograph number with an arrow to indicate the direction of the view. Historic photographs shall also be collected, reproduced, and included in the dataset; and
- *HABS Historical Report:* A written historical narrative and report, per HABS Historical Report Guidelines.

The project sponsor shall transmit such documentation, in both printed and electronic form, to the History Room of the San Francisco Public Library, San Francisco Architectural Heritage, and the Northwest Information Center of the California Historical Information Resource System. All documentation will be reviewed and approved by the San Francisco Planning Department’s Preservation Coordinator prior to granting any demolition or site permit.

Mitigation Measure M-CR-2b – Historic Preservation Plan and Protective Measures. A historic preservation plan and protective measures shall be prepared and implemented to aid in preserving those portions of the individual historical resource that would be retained and rehabilitated as part of the project. The Historic Preservation Plan shall be prepared by a qualified architectural historian who

⁹⁰ The substantial alterations to the 1500 Mission Street building also would constitute a de facto demolition according to *Planning Code* Section 1005(f).

meets the Secretary of Interior's Professional Qualification Standards (36 CFR, Part 61). The project sponsor shall ensure that the contractor follows these plans. The preservation and protection plan, specifications, monitoring schedule, and other supporting documents shall be incorporated into the building or site permit application plan sets. The documentation shall be reviewed and approved by Planning Department Preservation staff.

The historic preservation plan shall be prepared and implemented to aid in preserving those portions of the historical resource that would be rehabilitated as part of the project. The plan shall establish measures to protect the retained building façades and character-defining features from vibration effects as well as construction equipment inadvertently coming in contact with the remaining portions of the resource. If deemed necessary upon further condition assessment of the building, the plan shall include the preliminary stabilization of the retained portion prior to construction to prevent further deterioration or damage. The historic preservation plan shall also further investigate and incorporate preservation recommendations regarding the historic materials that comprise the façades and other elements of the historical resource to be retained.

Specifically, the Preservation Plan shall incorporate construction specifications for the proposed project with a requirement that the construction contractor(s) use all feasible means to avoid damage to the historic building, including, but not necessarily limited to, staging of equipment and materials as far as possible from historic buildings to avoid direct impact damage; using techniques in demolition, excavation, shoring, and construction that not exceed a vibration level that would damage the retained structure; maintaining a buffer zone when possible between heavy equipment and historical resource(s) within 50 feet, as identified by the Planning Department; appropriately shoring excavation sidewalls to prevent movement of adjacent structures; design and installation of the new foundation to minimize uplift of adjacent soils; ensuring adequate drainage from adjacent sites; covering the roof of adjacent structures to avoid damage from falling objects; and ensuring appropriate security to minimize risks of vandalism and fire. The consultant shall conduct regular periodic inspections of the retained portion of the 1500 Mission Street building during ground-disturbing activity on the project site. Should damage to the building occur, the building shall be remediated to its preconstruction condition at the conclusion of ground-disturbing activity on the site.

Mitigation Measure M-CR-2c – Video Recordation of the Historic Resource. Video recordation shall be undertaken prior to the issuance of demolition or site permits. The project sponsor shall undertake video documentation of the affected historical resource and its setting. The documentation shall be conducted by a professional videographer, one with experience recording architectural resources. The documentation shall be narrated by a qualified professional who meets the standards for history, architectural history, or architecture (as appropriate) set forth by the Secretary of the Interior's Professional Qualification Standards (36 Code of Federal Regulations, Part 61). The documentation shall include as much information as possible—using visuals in combination with narration—about the materials, construction methods, current condition, historic use, and historic context of the historical resource. Archival copies of the video documentation shall be submitted to the Planning Department, and to repositories including but not limited to the History Room of the San Francisco Public Library, San Francisco Architectural Heritage, Northwest Information Center of the California Historical Information Resource System.

Mitigation Measure M-CR-2d – Historic Resource Interpretation. The project sponsor shall provide a permanent display of interpretive materials concerning the history and architectural features of the building at 1500 Mission Street, and its operation during the period of significance. The historic interpretation shall be supervised by an architectural historian or historian who meets the Secretary of

the Interior's Professional Qualification Standards, and shall be conducted in coordination with an exhibit designer. The interpretative materials (which may include, but are not limited to, a display of photographs, news articles, Coca-Cola bottling memorabilia, history of streamline modern industrial style, video) shall be placed in a prominent, public setting within new building. A proposal describing the general parameters of the interpretive program shall be approved by Planning Department Preservation staff prior to issuance of a Site Permit. The substance, media and other elements of such interpretive display shall be approved by Planning Department Preservation staff prior to issuance of a Temporary Certificate of Occupancy.

Significance after Mitigation: Significant and Unavoidable. Per CEQA, the demolition or substantial alteration of a historical resource would remain a significant and unavoidable impact on the environment even after the HABS documentation and the Historic Preservation Plan and Protective Measures have been completed; therefore, the impact would remain *significant and unavoidable*.

Impact CR-3: The proposed project would not cause a substantial adverse change in the significance of an adjacent historical resource (Less than Significant).

The demolition of 1500 Mission Street and construction of the proposed project would not affect nearby historic resources, including individually eligible buildings on the south side of Mission Street opposite the project site or the Western SoMa Light Industrial and Residential Historic District.⁹¹ Although the design and scale of the project would not be compatible in massing or details with nearby historic resources, the physical separation between new construction and such resources reduces the potential for direct or indirect substantial adverse impacts. The proposed project may alter the setting of these nearby individual buildings and Western SoMa historic district, however, the overall integrity of these resources would not be affected by the proposed project.⁹² Therefore, the proposed project would not result in a substantial adverse change in the significance of adjacent historical resources, and the impact would be *less than significant*.

Mitigation: None required.

Impact CR-4: The proposed project could cause a substantial adverse change in the significance of an archeological resource pursuant to Section 15064.5(f). (Less than Significant with Mitigation)

The potential for encountering archeological resources is determined by several relevant factors including archeological sensitivity criteria and models, local geology, site history, and the extent of potential projects soils disturbance/modification, as well as any documented information on known archeological resources in the area. This sensitivity assessment is based on the preliminary archeological review (PAR) completed by a Planning Department archeologist for the proposed project.⁹³

Based on the review provided in the PAR, the proposed project has the potential to adversely affect legally-significant archeological resources due to proposed project-related basement and foundation excavations. The proposed project would require approximately 86,000 cubic yards of excavation for the building foundation

⁹¹ Planning Department, *HREER*, p. 9.

⁹² *Ibid.*

⁹³ Planning Department, *Environmental Planning Preliminary Archeological Review Checklist for 1500-1580 Mission Street*, August 12, 2015.

and two basement levels. The excavation for the proposed below-grade parking and mat foundation would range from 19 to 32 feet bgs.

Specifically, there is the potential to affect prehistoric archeological deposits within the dune sand and the top three to five feet of the native Colma Formation, which is at 15 to 28 feet bgs. Additionally, the proposed project has a moderate potential to impact historical archeological resources. However, it is possible that much of the late-19th-century development was removed with the construction of the basement in the eastern portion of the parcel. In the event that construction activities disturb unknown archeological sites, any inadvertent damage would be considered a significant impact.

In order to reduce the potential impact on archeological resources to a less-than-significant level, archeological testing of the project site is required to identify any archeological resources potentially present. Therefore, per **Mitigation Measure M-CR-4, Archeological Testing Program**, the project sponsor would be required to engage an archeologist from the Department Qualified Archeological Consultants List to develop and implement a testing plan. With implementation of **Mitigation Measure M-CR-4**, the proposed project would have a *less-than-significant* impact on archeological resources.

Mitigation Measure

Mitigation Measure M-CR-4 – Archeological Testing Program. Based on a reasonable presumption that archeological resources may be present within the project site, the following measures shall be undertaken to avoid any potentially significant adverse effect from the proposed project on buried or submerged historical resources. The project sponsor shall retain the services of an archeological consultant from the rotational Department Qualified Archeological Consultants List (QACL) maintained by the Planning Department archeologist. The project sponsor shall contact the Department archeologist to obtain the names and contact information for the next three archeological consultants on the QACL. The archeological consultant shall undertake an archeological testing program as specified herein. In addition, the consultant shall be available to conduct an archeological monitoring and/or data recovery program if required pursuant to this measure. The archeological consultant's work shall be conducted in accordance with this measure at the direction of the Environmental Review Officer (ERO). All plans and reports prepared by the consultant as specified herein shall be submitted first and directly to the ERO for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO. Archeological monitoring and/or data recovery programs required by this measure could suspend construction of the project for up to a maximum of four weeks. At the direction of the ERO, the suspension of construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce to a less-than-significant level potential effects on a significant archeological resource as defined in CEQA Guidelines Section 15064.5(a)(c).

Consultation with Descendant Communities: On discovery of an archeological site (the term "archeological site" is intended here to minimally include any archeological deposit, feature, burial, or evidence of burial) associated with descendant Native Americans, the Overseas Chinese, or other potentially interested descendant group an appropriate representative of the descendant group and the ERO shall be contacted. (An "appropriate representative" of the descendant group is here defined to mean, in the case of Native Americans, any individual listed in the current Native American Contact List for the City and County of San Francisco maintained by the California Native American Heritage Commission and in the case of the Overseas Chinese, the Chinese Historical Society of

America.) An appropriate representative of other descendant groups should be determined in consultation with the Department archeologist. The representative of the descendant group shall be given the opportunity to monitor archeological field investigations of the site and to consult with ERO regarding appropriate archeological treatment of the site, of recovered data from the site, and, if applicable, any interpretative treatment of the associated archeological site. A copy of the Final Archeological Resources Report shall be provided to the representative of the descendant group.

Archeological Testing Program. The archeological consultant shall prepare and submit to the ERO for review and approval an archeological testing plan (ATP). The archeological testing program shall be conducted in accordance with the approved ATP. The ATP shall identify the property types of the expected archeological resource(s) that potentially could be adversely affected by the proposed project, the testing method to be used, and the locations recommended for testing. The purpose of the archeological testing program will be to determine to the extent possible the presence or absence of archeological resources and to identify and to evaluate whether any archeological resource encountered on the site constitutes an historical resource under CEQA.

At the completion of the archeological testing program, the archeological consultant shall submit a written report of the findings to the ERO. If based on the archeological testing program the archeological consultant finds that significant archeological resources may be present, the ERO in consultation with the archeological consultant shall determine if additional measures are warranted. Additional measures that may be undertaken include additional archeological testing, archeological monitoring, and/or an archeological data recovery program. If the ERO determines that a significant archeological resource is present and that the resource could be adversely affected by the proposed project, at the discretion of the project sponsor either:

- A. The proposed project shall be re-designed so as to avoid any adverse effect on the significant archeological resource; or
- B. A data recovery program shall be implemented, unless the ERO determines that the archeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.

Archeological Monitoring Program. If the ERO in consultation with the archeological consultant determines that an archeological monitoring program shall be implemented the archeological monitoring program shall minimally include the following provisions:

- The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the AMP reasonably prior to any project-related soils disturbing activities commencing. The ERO in consultation with the archeological consultant shall determine what project activities shall be archeologically monitored. In most cases, any soils- disturbing activities, such as demolition, foundation removal, excavation, grading, utilities installation, foundation work, driving of piles (foundation, shoring, etc.), site remediation, etc., shall require archeological monitoring because of the risk these activities pose to potential archeological resources and to their depositional context;
- The archeological consultant shall advise all project contractors to be on the alert for evidence of the presence of the expected resource(s), of how to identify the evidence of the expected resource(s), and of the appropriate protocol in the event of apparent discovery of an archeological resource;

- The archeological monitor(s) shall be present on the project site according to a schedule agreed upon by the archeological consultant and the ERO until the ERO has, in consultation with project archeological consultant, determined that project construction activities could have no effects on significant archeological deposits;
- The archeological monitor shall record and be authorized to collect soil samples and artefactual/ecofactual material as warranted for analysis; and
- If an intact archeological deposit is encountered, all soils-disturbing activities in the vicinity of the deposit shall cease. The archeological monitor shall be empowered to temporarily redirect demolition/excavation/pile driving/construction activities and equipment until the deposit is evaluated. If in the case of pile driving activity (foundation, shoring, etc.), the archeological monitor has cause to believe that the pile driving activity may affect an archeological resource, the pile driving activity shall be terminated until an appropriate evaluation of the resource has been made in consultation with the ERO. The archeological consultant shall immediately notify the ERO of the encountered archeological deposit. The archeological consultant shall make a reasonable effort to assess the identity, integrity, and significance of the encountered archeological deposit, and present the findings of this assessment to the ERO.

Whether or not significant archeological resources are encountered, the archeological consultant shall submit a written report of the findings of the monitoring program to the ERO.

Archeological Data Recovery Program. The archeological data recovery program shall be conducted in accord with an archeological data recovery plan (ADRP). The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the ADRP prior to preparation of a draft ADRP. The archeological consultant shall submit a draft ADRP to the ERO. The ADRP shall identify how the proposed data recovery program will preserve the significant information the archeological resource is expected to contain. That is, the ADRP will identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the proposed project. Destructive data recovery methods shall not be applied to portions of the archeological resources if nondestructive methods are practical.

The scope of the ADRP shall include the following elements:

- *Field Methods and Procedures.* Descriptions of proposed field strategies, procedures, and operations.
- *Cataloguing and Laboratory Analysis.* Description of selected cataloguing system and artifact analysis procedures.
- *Discard and Deaccession Policy.* Description of and rationale for field and post-field discard and deaccession policies.
- *Interpretive Program.* Consideration of an on-site/off-site public interpretive program during the course of the archeological data recovery program.
- *Security Measures.* Recommended security measures to protect the archeological resource from vandalism, looting, and non-intentionally damaging activities.
- *Final Report.* Description of proposed report format and distribution of results.

- *Curation.* Description of the procedures and recommendations for the curation of any recovered data having potential research value, identification of appropriate curation facilities, and a summary of the accession policies of the curation facilities.

Final Archeological Resources Report. The archeological consultant shall submit a Draft Final Archeological Resources Report (FARR) to the ERO that evaluates the historical significance of any discovered archeological resource and describes the archeological and historical research methods employed in the archeological testing/monitoring/data recovery program(s) undertaken. Information that may put at risk any archeological resource shall be provided in a separate removable insert within the final report.

Once approved by the ERO, copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. The Environmental Planning division of the Planning Department shall receive one bound, one unbound and one unlocked, searchable PDF copy on CD of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest in or the high interpretive value of the resource, the ERO may require a different final report content, format, and distribution than that presented above.

Significance after Mitigation: Less than Significant. Implementation of **Mitigation Measure M-CR-4** would ensure that the significant archeological impact would be reduced to a less-than-significant level.

Impact CR-5: The proposed project could result in a substantial adverse change in the significance of a tribal cultural resource. (Less than Significant with Mitigation)

CEQA Section 21074.2 requires the lead agency to consider the effects of a project on tribal cultural resources. As defined in Section 21074, tribal cultural resources are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are listed, or determined to be eligible for listing, on the national, state, or local register of historical resources.

Based on the background research there are no known tribal cultural resources on the project site; however based on the archeological sensitivity assessment there is the potential for prehistoric archeological resources to be present on the project site. Prehistoric archeological resources may also be considered tribal cultural resources. In the event that construction activities disturb unknown archeological sites that are considered tribal cultural resources, any inadvertent damage would be considered a significant impact. With implementation of **Mitigation Measure M-CP-5, Tribal Cultural Resources Interpretive Program**, the proposed project would have a *less-than-significant* impact on previously unknown tribal cultural resources.

Mitigation Measure

Mitigation Measure M-CR-5 – Tribal Cultural Resources Interpretive Program. If the ERO determines that a significant archeological resource is present, and if in consultation with the affiliated Native American tribal representatives, the ERO determines that the resource constitutes a tribal cultural resource (TCR) and that the resource could be adversely affected by the proposed project, the

proposed project shall be redesigned so as to avoid any adverse effect on the significant tribal cultural resource, if feasible.

If the Environmental Review Officer (ERO), in consultation with the affiliated Native American tribal representatives and the Project Sponsor, determines that preservation-in-place of the tribal cultural resources is not a sufficient or feasible option, the Project Sponsor shall implement an interpretive program of the TCR in consultation with affiliated tribal representatives. An interpretive plan produced in consultation with the ERO and affiliated tribal representatives, at a minimum, and approved by the ERO would be required to guide the interpretive program. The plan shall identify, as appropriate, proposed locations for installations or displays, the proposed content and materials of those displays or installation, the producers or artists of the displays or installation, and a long-term maintenance program. The interpretive program may include artist installations, preferably by local Native American artists, oral histories with local Native Americans, artifacts displays and interpretation, and educational panels or other informational displays.

Significance after Mitigation: Less than Significant. Implementation of **Mitigation Measure M-CR-5** would ensure that the significant tribal cultural impact would be reduced to a less-than-significant level.

Impact CR-6: The proposed project could disturb human remains, including those interred outside of formal cemeteries. (Less than Significant with Mitigation)

There are no known human remains, including those interred outside of formal cemeteries, located in the immediate vicinity of the project site. However, because of the proposed depth of excavation, there is a possibility that previously unknown human remains could be discovered during excavation. In the event that construction activities disturb unknown human remains within the project area, any inadvertent damage to human remains would be considered a significant impact. With implementation of **Mitigation Measure M-CR-6, Inadvertent Discovery of Human Remains**, the proposed project would have a *less-than-significant* impact in the event of an inadvertent discovery of human remains.

Mitigation Measure

Mitigation Measure M-CR-6 – Inadvertent Discovery of Human Remains. The treatment of human remains and of associated or unassociated funerary objects discovered during any soils disturbing activity shall comply with applicable State and Federal laws. This shall include immediate notification of the Coroner of the City and County of San Francisco and the ERO, and in the event of the Coroner's determination that the human remains are Native American remains, notification of the California State Native American Heritage Commission (NAHC) who shall appoint a Most Likely Descendant (MLD) (Public Resource Code Section 5097.98). The archeological consultant, project sponsor, ERO, and MLD shall have up to but not beyond six days of discovery to make all reasonable efforts to develop an agreement for the treatment of human remains and associated or unassociated funerary objects with appropriate dignity (CEQA Guidelines Section 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. Nothing in existing State regulations or in this mitigation measure compels the project sponsor and the ERO to accept recommendations of an MLD. The archeological consultant shall retain possession of any Native American human remains and associated or unassociated burial objects until completion of any scientific analyses of the human remains or objects as specified in the treatment agreement if such

as agreement has been made or, otherwise, as determined by the archeological consultant and the ERO.

Significance after Mitigation: Less than Significant. Implementation of **Mitigation Measure M-CR-6** would ensure that the significant impact to human remains would be reduced to a less-than-significant level.

Cumulative Impacts

Impact C-CR-1: The proposed project, in combination with past, present, and reasonably foreseeable projects in the area, would not result in a significant cumulative impact on historic architectural resources. (Less than Significant)

The building at 1500 Mission Street has been determined eligible for listing in the California Register under Criterion 3 (architecture) for its architectural merit as a good, intact example of a Streamlined Moderne industrial building that embodies the distinctive characteristics of this style. As shown on **Figure IV-1, Cumulative Projects**, in Chapter IV, *Environmental Setting, Impacts, and Mitigation Measures*, approximately 22 cumulative projects are located within a quarter-mile radius of the project site. Although some of these cumulative projects could adversely impact historic architectural resources, there are no cumulative projects known at this time that would demolish buildings determined to be significant for their Streamlined Moderne architecture. As such, cumulative impacts to historic architectural resources significant for their Streamlined Moderne architecture would not occur. Therefore, the proposed project, in combination with past, present, and reasonably foreseeable projects, would result in a *less-than-significant* cumulative impact on historic architectural resources.

Mitigation: None required.

Impact C-CR-2: The proposed project, in combination with past, present, and reasonably foreseeable projects in the area, would not result in significant cumulative impacts on archeological resources, tribal cultural resources, or human remains. (Less than Significant)

Similar to the proposed project as described under Impacts CR-4, CR-5, and CR-6, cumulative projects in the project vicinity could have a significant impact on both recorded and unrecorded archeological resources, including human remains interred outside of formal cemeteries and tribal cultural resources, given the substantial amount of construction-related ground disturbance that could occur for many of the cumulative projects. Project-related impacts on buried archeological resources, human remains, and tribal cultural resources would be site-specific and limited to the project construction areas. For these reasons, the proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not have a significant cumulative impact on archeological resources, tribal cultural resources, or human remains.

Mitigation: None required.

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IV.B Transportation and Circulation

IV.B.1 Introduction

This section summarizes and incorporates by reference the results of the Transportation Impact Study (TIS) prepared by the transportation consultant for the proposed project in accordance with the San Francisco Planning Department's *2002 Transportation Impact Analysis Guidelines for Environmental Review (SF Guidelines 2002)*.⁹⁴ The transportation analysis examines project impacts on vehicle miles traveled (VMT), traffic, transit, pedestrians, bicycles, loading, and emergency vehicle access, as well as the impacts of construction activities. All of these transportation subtopics are considered in the discussions of existing conditions; existing plus project; and year 2040 cumulative conditions. This section also includes a parking demand analysis, presented for informational purposes in this EIR.

IV.B.2 Environmental Setting

The transportation study area is generally two blocks north of the project site, to Hayes Street; two blocks east of the project site, to Ninth Street; one block south of the project site, to Howard Street; and one block west of the project site, to Gough/Otis Streets.

Roadway Network

Regional Access

The following regional highway transportation facilities link San Francisco with other parts of the Bay Area, as well as Northern and Southern California: Interstate 80 (I-80), United States Highway 101 (U.S. 101), and Interstate 280 (I-280). The project site is accessible by local streets with connections to and from these regional freeways.

Interstate 80 (I-80) and **U.S. Highway 101 (U.S. 101)** provide the primary regional access to the project area. U.S. 101 serves San Francisco and the Peninsula/South Bay, and extends north via the Golden Gate Bridge to the North Bay. Van Ness Avenue serves as U.S. 101 between Market Street and Lombard Street, and South Van Ness Avenue serves as U.S. 101 between Market Street and the Central Freeway (at 13th Street). I-80 connects San Francisco to the East Bay and points east via the San Francisco-Oakland Bay Bridge. U.S. 101 and I-80 merge south of the project site. The closest access to U.S. 101 from the project site is via the ramps at Market Street and Octavia Boulevard, at South Van Ness Avenue and 13th/Division Street, and Mission Street and Duboce/13th Streets.

Interstate 280 (I-280) provides regional access from the South of Market area to southern San Francisco, the Peninsula and the South Bay. I-280 has an interchange with U.S. 101 approximately three miles south of the

⁹⁴ LCW Consulting, *1500 Mission Street Transportation Impact Study, Case No. 2014.000362E*, November 4, 2016 (hereinafter referred to as "TIS").

project area. The closest access to I-280 from the project site is provided via the ramps at the intersection of Sixth/Brannan.

Local Access

South of Market Street streets that run in the northwest/southeast direction are generally considered north/south streets, whereas streets that run in the southwest/northeast direction are generally considered east/west streets. The grid offers multiple route options for getting from place to place, with numerous one-way streets and with multiple travel lanes. A number of north/south streets serve as access routes to and from the regional highway network (e.g., Ninth and 10th Streets). The *San Francisco General Plan (General Plan)* contains definitions and regulatory requirements for a variety of roadway classifications that make up the city's street network, and designation of streets.⁹⁵ Within the transportation study area, Howard and Folsom Streets are identified as Major Arterials. Market, Mission, and 11th Streets are identified as Transit Preferential Streets. Market and Mission Streets are also identified as part of the Citywide Pedestrian Network.⁹⁶ Detailed descriptions are provided below for the streets adjacent to the project site: Mission Street, South Van Ness Avenue, and 11th Street.

Mission Street is a four-lane arterial that runs east to west (in a curving route with some north/south segments) between The Embarcadero and John Daly Boulevard in Daly City. In the eastbound direction, Mission Street has a bus lane between 11th Street and Fifth Street that operates on weekdays from 7:00 to 9:00 a.m. and from 4:00 to 6:00 p.m., and between Fifth and Beale Streets from 7:00 a.m. to 6:00 p.m. In the westbound direction, Mission Street has a bus lane between Main and Fourth Streets that operates on weekdays from 7:00 a.m. to 6:00 p.m. and between Fourth and 11th Streets from 4:00 to 6:00 p.m. On-street, metered parking is available, but prohibited on weekdays between 3:00 and 6:00 p.m. In the *General Plan*, Mission Street is classified as a Major Arterial in the CMP Network, and is part of the MTS Network. It is also designated as a Neighborhood Commercial Street, a Primary Transit Street – Transit Oriented, and is part of the Citywide Pedestrian Network.

South Van Ness Avenue is a north/south major arterial that runs between Market and Cesar Chavez Streets. It has two travel lanes in each direction. In the *General Plan*, South Van Ness Avenue is classified as a Major

⁹⁵ City roadway designations include (listed in the order of potential vehicle capacity) Freeways, Major Arterials, Transit Conflict Streets, Secondary Arterials, Recreational Streets, Collector Streets, and Local Streets. Each of these roadways has a different potential capacity for mixed-flow traffic and for changes that might alter traffic patterns on the given roadway. The *General Plan* also identifies certain Transit Preferential Streets from among the city's various roadways, each of which is identified as a Primary Transit Street—Transit Oriented, Primary Transit Street—Transit Important, or Secondary Transit Street. The Pedestrian Network is a classification of streets throughout the City used to identify streets developed to be primarily oriented to pedestrian use, and includes Citywide Pedestrian Network Streets and Neighborhood Pedestrian Streets. City and County of San Francisco, *San Francisco General Plan*, 2007 Transportation Element. Available at http://www.sf-planning.org/ftp/General_Plan/I4_Transportation.htm.

⁹⁶ In the summer and fall of 2015, the San Francisco Municipal Transportation Agency (SFMTA) implemented turn restrictions and transit-only lane extensions on Market Street between Third and Eighth Streets as part of the Safer Market Street Project (with the exception that turn restrictions from northbound Fifth Street onto eastbound Market Street, and from southbound Ellis Street onto westbound Market Street will be implemented following completion of the Central Subway project work in the area). The Safer Market Street Project will help achieve the City's adopted Vision Zero policy, which aims to eliminate all traffic-related fatalities by 2024. On Market Street, prior to implementation of Safer Market Street, most collisions occurred at midblock locations and were caused by vehicles proceeding straight through on Market Street, rather than turning movements at intersections. Available at <https://www.sfmta.com/projects-planning/projects/safer-market-street>, accessed August 22, 2016.

Arterial in the CMP Network, and a MTS Network Street. Between Market and 13th Streets, South Van Ness Avenue is part of U.S. 101. **Van Ness Avenue** continues north of Market Street to Beach Street. The roadway is part of U.S. 101 between Lombard Street and the Central Freeway (via South Van Ness Avenue). In the vicinity of the proposed project, Van Ness Avenue has three travel lanes in each direction separated by a center median, and parking on both sides of the street. Left turns from Van Ness Avenue are limited; in the project vicinity, southbound left turns are allowed at Fell, Grove, and McAllister Streets, and northbound left turns are allowed at Hayes, Grove, and Turk Streets; left turns also are allowed from South Van Ness Avenue to go west on Mission Street. Van Ness Avenue is designated as a Major Arterial in the CMP Network, part of the MTS Network, a Primary Transit Street (transit important), part of the Citywide Pedestrian Network, and a Neighborhood Commercial Street in the *General Plan*.

11th Street is a north/south roadway extending from Market Street to Division Street and operates in both directions. In the vicinity of the project site, 11th Street has one to two travel lanes in each direction with on-street metered parking on both sides of the street. In the *General Plan*, 11th Street is designated as a Transit Preferential Street—Secondary Transit Street, a Neighborhood Network Connection Street between Market and Mission Streets. There is a Class II bicycle lane on northbound 11th Street between Division and Market Streets and on southbound 11th Street between Division and Minna Streets.

Vehicle Miles Traveled

Many factors affect travel behavior. These factors include density, diversity of land uses, design of the transportation network, access to regional destinations, distance to high-quality transit, development scale, demographics, and transportation demand management. Typically, low-density development at great distance from other land uses, located in areas with poor access to non-private vehicular modes of travel, generate more automobile travel compared to development located in urban areas, where a higher density, mix of land uses, and travel options other than private vehicles are available.

Given these travel behavior factors, San Francisco has a lower VMT ratio than the nine-county San Francisco Bay Area region. In addition, some areas of the City have lower VMT ratios than other areas of the City. These areas of the City can be expressed geographically through transportation analysis zones. Transportation analysis zones are used in transportation planning models for transportation analysis and other planning purposes. The zones vary in size from single city blocks in the downtown core, multiple blocks in outer neighborhoods, to even larger zones in historically industrial areas like the Hunters Point Shipyard.

The San Francisco County Transportation Authority (Transportation Authority) San Francisco Chained Activity Modeling Process (SF-CHAMP) travel demand model was used to estimate existing average daily VMT per capita for the traffic analysis zone (TAZ) in which the project is located. VMT per capita is used to measure the amount and distance that a resident, employee, or visitor drives, accounting for the number of passengers within a vehicle. **Table IV.B-1, Daily VMT per Capita—Existing Conditions**, presents the existing average daily VMT per capita for residents, employees, and visitors for the nine-county San Francisco Bay Area and for TAZ 591 in which the project site is located. For residential development, the regional average

daily VMT per capita is 17.2.⁹⁷ For office development, regional average daily work-related VMT per employee is 19.1. For retail development, regional average daily retail VMT per employee is 14.9.⁹⁸

As shown on **Table IV.B-1**, the current average daily VMT per capita is less than the citywide and regional Bay Area averages for the nine-county San Francisco Bay Area.

TABLE IV.B-1 DAILY VMT PER CAPITA—EXISTING CONDITIONS

Trip Type (Land Use)	Bay Area Regional Average	Citywide Average	TAZ 591 ^a
Households (residential)	17.2	7.9	3.1
Employment (office)	19.1	8.8	7.7
Visitors (retail)	14.9	5.4	9.0

SOURCES: San Francisco Planning Department Resolution Modifying Transportation Impact Analysis, Attachment E: Screening Criteria for Circulation Analysis and Methodology for Travel Demand Analysis (March 2016), and San Francisco Planning Department Transportation Information Map (TIM), <http://www.sfrtransportationmap.org>.

NOTE:

a. The Traffic Analysis Zone (TAZ) in which the project site is located.

Transit Network

The project site is well-served by public transit. Local service is provided by the San Francisco Municipal Railway (Muni) light rail and bus routes, which can be used to transfer to other bus lines, cable car lines, the F Market & Wharves historic streetcar line, and Muni Metro light rail lines J Church, K/T Ingleside/Third, L Taraval, M Ocean View, and N Judah at the Muni Van Ness station (approximately 300 feet north of the project site). Service to and from the East Bay is provided by BART under Market Street, and AC Transit buses from the Transbay Terminal. Service to and from the North Bay is provided by Golden Gate Transit along Van Ness Avenue and at the Transbay Terminal, and ferry service from the Ferry Building. Service to and from the Peninsula and South Bay is provided by Caltrain at its terminal located at Fourth and Townsend Streets, and by the San Mateo County Transit District (SamTrans) at the Transbay Terminal and along Mission Street.

Local Transit

Muni provides transit service within the City and County of San Francisco (“City”), including bus routes (diesel, diesel-hybrid electric, and electric trolley) and cable car, light rail, and historic streetcar lines. Muni operates numerous bus routes in the vicinity of the project site, including routes on Market Street, Mission Street, 11th Street and on South Van Ness Avenue, adjacent to the project site.

Figure IV.B-1, Existing Transit Network, presents the transit service in the vicinity of the project site. The service frequencies and nearest stop location for the routes that operate in the vicinity of the project site are shown in **Table IV.B-2, Muni Service in Project Vicinity—Weekday Frequency**.

⁹⁷ Includes the VMT generated by the households in the development.

⁹⁸ Retail travel is not explicitly captured in SF-CHAMP, rather, there is a generic “Other” purpose which includes retail shopping, medical appointments, visiting friends or family, and all other non-work, non-school tours. The retail efficiency metric captures all of the “Other” purpose travel generated by Bay Area households. The denominator of employment (including retail; cultural, institutional, and educational; and medical employment; school enrollment, and number of households) represents the size, or attraction, of the zone for this type of “Other” purpose travel.

TABLE IV.B-2 MUNI SERVICE IN PROJECT VICINITY – WEEKDAY FREQUENCY

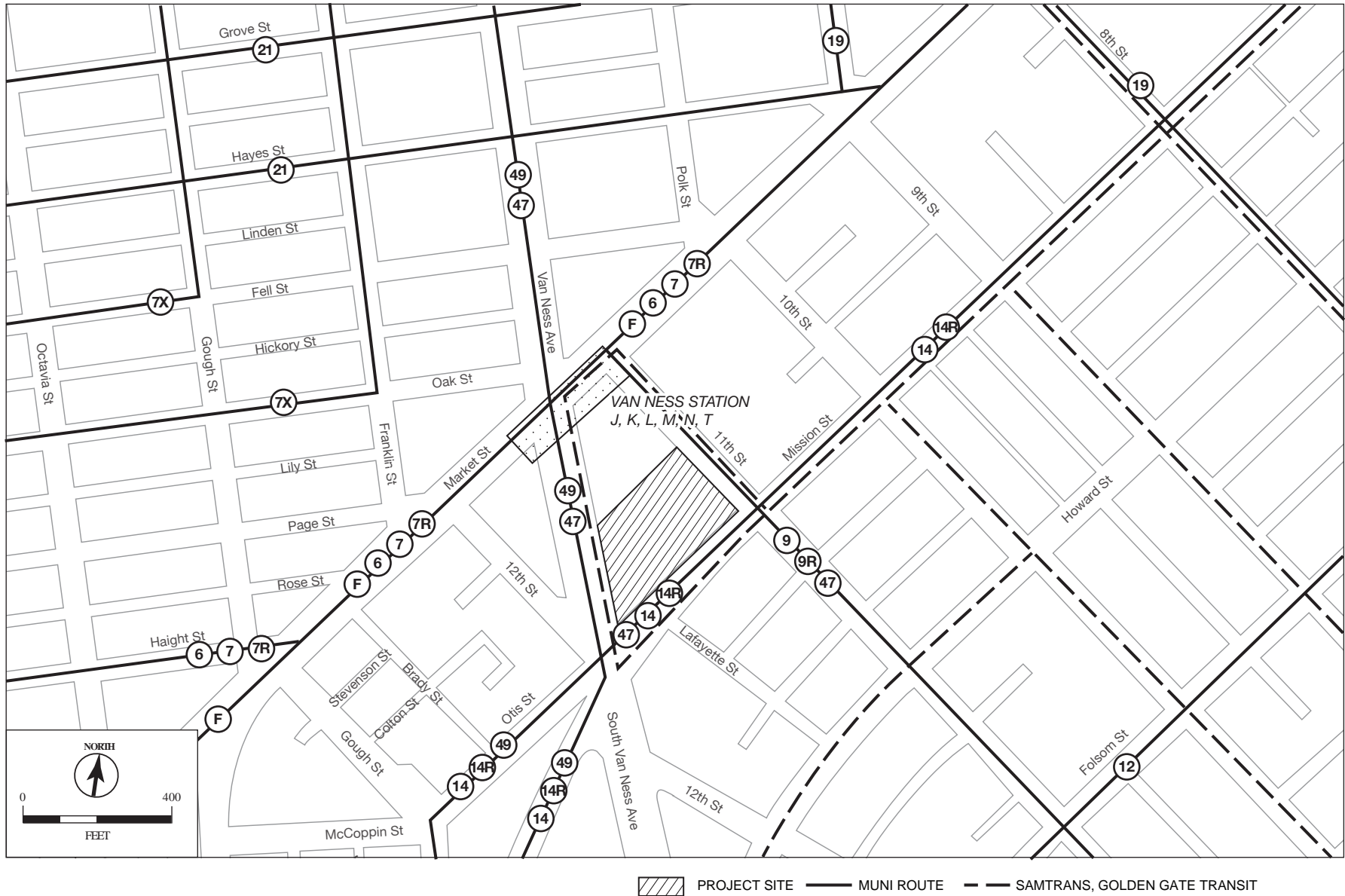
Route ^a	Service Frequency (minutes)		Nearest Stop Location (inbound, outbound)
	AM (7:00 to 9:00 a.m.)	PM (4:00 to 6:00 p.m.)	
6 Parnassus	10.5	10	Market/Van Ness, Market/Van Ness
7/7R Haight-Noriega	10.5	10	Market/Van Ness, Market/Van Ness
9 San Bruno	12	12	11th/Market, 11th/Market
9R San Bruno Rapid	8	8	11th/Market, 11th/Market
14 Mission	6	7.5	Mission/11th, Mission/11th
14R Mission Rapid	7.5	7.5	Mission/11th, Mission/11th
19 Polk	20	15	Seventh/Mission, Eighth/Mission
21 Hayes	8	8.5	Oak/Franklin, Fell/Gough
47 Van Ness	10	10	Van Ness/Market, 11th/Mission
49 Van Ness-Mission	8	8	South Van Ness/Market, Otis/Mission
F Market	6.5	6	Market/Van Ness, Market/Van Ness
J Church	9.5	8	Van Ness station
K/T Ingleside/Third	8	8	Van Ness station
L Taraval	8	7	Van Ness station
M Ocean View	8.5	8.5	Van Ness station
N Judah	7.5	7	Van Ness station

SOURCE: SF Planning Department, *Transit Effectiveness Project Draft EIR*, July 10, 2013, Case No. 2011.0558E. Updated <https://www.sfmta.com/projects-planning/projects/muni-forward-0>.

NOTE:

- a. Service frequencies include Muni Forward service improvements on the 9R San Bruno Rapid, 14R Mission Rapid, 21 Hayes, and K/T Ingleside/Third. Muni Forward service changes on the 6 Parnassus, 7/7R Haight-Noriega, 9 San Bruno, 47 Van Ness, 49 Van Ness-Mission, F Market, J Church, L Taraval, M Ocean View, and N Judah have been approved, but not implemented as of September 2016.

Adjacent to the project site on South Van Ness Avenue directly north of Mission Street, there is a bus stop (about 100 feet in length) for the 47 Van Ness, the 49 Van Ness-Mission, and the 90 San Bruno Owl bus routes traveling in the northbound direction. Adjacent to the project site on Mission Street directly west of 11th Street, there is a bus stop (about 160 feet in length) for the 14 Mission and the 14R Mission Rapid routes traveling in the westbound direction on Mission Street, as well as for the 47 Van Ness and 90 San Bruno Owl routes that travel northbound on 11th Street and turn left onto westbound Mission Street. There are no bus stops on 11th Street adjacent to the project site, however, north of the project site (directly south of Market Street), there is a bus stop for the 9 San Bruno and 9R San Bruno Rapid routes in the southbound direction. On 11th Street north of the project site, there are also historic streetcar tracks within the southbound travel lanes that allow for the F Market & Wharves historic streetcar trains to turn around and layover.



SOURCE: SFMTA

1500 Mission Street; Case No. 2014-000362ENV

Figure IV.B-1
Existing Transit Network

Regional Transit

East Bay. Transit service to and from the East Bay is provided by BART, AC Transit, and by the ferries of the San Francisco Bay Area Water Emergency Transportation Authority (WETA). BART operates regional rail transit service between the East Bay (from Pittsburg/Bay Point, Richmond, Dublin/Pleasanton and Fremont) and San Francisco, and between San Mateo County (Millbrae and San Francisco Airport) and San Francisco. The nearest BART station to the project site is the BART/Muni Civic Center station (about 0.3 mile east of the project site). AC Transit is the primary bus operator for the East Bay, including Alameda and western Contra Costa Counties. AC Transit operates 37 routes between the East Bay and San Francisco, all of which terminate at the (temporary) Transbay Terminal (about 1.8 miles northeast of the project site, accessed via the 14 Mission and 14R Mission Rapid Muni bus routes). WETA ferries provide service between San Francisco and Alameda and between San Francisco and Oakland from the Ferry Building located on The Embarcadero near Market Street (about 2.0 miles northeast of the project site, accessed via multiple Market Street routes).

South Bay. Transit service to and from the South Bay is provided by BART, SamTrans, Caltrain, and WETA. SamTrans provides bus service between San Mateo County and San Francisco, including 14 bus lines that serve San Francisco (12 routes serve the downtown area). The SamTrans stop closest to the project site is located on 11th Street south of Market Street. In general, SamTrans service to downtown San Francisco operates along South Van Ness Avenue, Potrero Avenue, and Mission Street to the Transbay Terminal. SamTrans cannot pick up northbound passengers at San Francisco stops. Similarly, passengers boarding in San Francisco (and destined to San Mateo) may not disembark in San Francisco. WETA ferries provide service between South San Francisco and the San Francisco Ferry Building.

Caltrain provides rail passenger service on the Peninsula between Gilroy and San Francisco, and operates a combination of “baby bullet”, express and local service. Headways during the evening peak period are approximately five to 30 minutes. The Caltrain terminus station in San Francisco is located at Fourth and King Streets (about 1.3 miles northeast of the project site, and accessed via Muni route 47 Van Ness).

North Bay. Transit service to and from the North Bay is provided by the Golden Gate Bridge, Highway, and Transportation District (GGBHTD) buses and ferries, and WETA ferries. Between the North Bay (Marin and Sonoma Counties) and San Francisco, Golden Gate Transit operates 22 commute bus routes, nine basic bus routes and 16 ferry feeder bus routes, most of which serve the Van Ness Avenue corridor or the Financial District. Golden Gate Transit bus service to downtown San Francisco operates along Mission, Howard and Folsom Streets. The Golden Gate Transit stop closest to the project site is located on Eighth Street south of Mission Street. GGBHTD also operates ferry service between the North Bay and San Francisco. During the morning and evening peak periods, ferries run between Larkspur and San Francisco and between Sausalito and San Francisco. WETA ferries provide service between Vallejo and San Francisco. The San Francisco ferry terminal is located at the Ferry Building.

Local and Regional Capacity Utilization Analysis

The assessments of existing and future transit conditions for proposed projects in San Francisco is typically performed through the analysis of local transit (Muni) and regional transit (BART, AC Transit, Golden Gate

Transit, SamTrans, Caltrain, and ferry service) screenlines.⁹⁹ Each screenline is further subdivided into major transit corridors (Muni) or service provider (regional transit). Screenline values represent service capacity, ridership, and capacity utilization at the maximum load point (MLP) according to the direction of travel for each of the routes that comprise the transit corridor.

Muni Downtown Screenlines. Four screenlines have been established in San Francisco to analyze potential impacts of projects on Muni service: Northeast, Northwest, Southwest, and Southeast, with subcorridors within each screenline. The analysis of Muni downtown screenlines assesses the effect of project-generated transit-trips on transit capacity in the inbound direction (i.e., towards downtown) during the a.m. peak hour, and in the outbound direction (i.e., away from downtown) during the p.m. peak hour.

The existing transit passenger load, capacity, and capacity utilization at each screenline and corridor during the weekday a.m. and p.m. peak hours are presented in **Table IV.B-3, Muni Downtown Screenline Analysis, Existing Conditions—Weekday AM and PM Peak Hours**. Muni’s established capacity utilization standard for peak period operations is 85 percent. It should be noted that the 85 percent utilization accounts for seated and standing passengers, so at 85 percent utilization all seats are taken and there are many standees. Under existing conditions, the Muni downtown screenlines operate below the 85 percent capacity utilization standard, with the exception of the Southwest screenline during the a.m. peak hour that operates at 93.6 percent. In addition, a number of corridors, such as the Subway Lines (a.m. peak hour at 102.0 percent capacity utilization), Fulton/Hayes (p.m. peak hour at 89.5 percent capacity utilization), and Third Street (p.m. peak hour at 98.6 percent capacity utilization) corridors operate above the 85 percent capacity standard.

Local Muni Corridors. The local Muni analysis also examined transit conditions on corridors specifically serving the project vicinity. For the purposes of this study, the Muni routes serving the vicinity of the proposed project site were grouped into two corridors, and the capacity utilization was determined. The Muni routes included in each group are:

- **North/South Corridor:** 9 San Bruno, 9R San Bruno Rapid, 19 Polk, 47 Van Ness, and 49 Van Ness-Mission; and
- **East/West Corridor:** 6 Parnassus, 14 Mission, 14R Mission Rapid, 21 Hayes, 7/7R Haight-Noriega/Haight-Noriega Rapid, F Market, J Church, K Ingleside, L Taraval, M Ocean View, and the N Judah.

Table IV.B-4, Muni Corridor Analysis, Existing Conditions—AM and PM Peak Hours, presents the ridership and capacity utilization at the MLP for the north/south and east/west corridors during the weekday a.m. and p.m. peak hours. During the a.m. peak hour, the capacity utilization of the eastbound direction of the east/west corridor (i.e., in the inbound direction towards downtown) currently exceeds the 85 percent capacity utilization standard (i.e., at 92.0 percent capacity utilization). As noted above, during the a.m. peak hour, all five Muni light rail lines (Subway Lines) that stop at the Muni Van Ness station (i.e., the J Church, K Ingleside, L Taraval, M Ocean View, and N Judah lines) current exceed the 85 percent capacity utilization standard in the inbound direction. During the p.m. peak hour, the corridors currently operate below the 85 percent capacity utilization standard, and have available capacity to accommodate additional passengers.

⁹⁹ The concept of screenlines is used to describe the magnitude of travel to or from the greater downtown area, and to compare estimated transit ridership to available capacities. Screenlines are hypothetical lines that would be crossed by persons traveling between downtown and its vicinity and other parts of San Francisco and the region.

TABLE IV.B-3 MUNI DOWNTOWN SCREENLINE ANALYSIS, EXISTING CONDITIONS—WEEKDAY AM AND PM PEAK HOURS

Screenline/Corridor	AM			PM		
	Hourly Ridership ^a	Hourly Capacity ^a	Capacity Utilization	Hourly Ridership ^a	Hourly Capacity ^a	Capacity Utilization
Northeast						
Kearny/Stockton	2,211	3,050	72.5%	2,245	3,227	67.5%
Other	538	1,141	47.2%	683	1,078	63.4%
<i>Subtotal</i>	<i>2,749</i>	<i>4,191</i>	<i>65.6%</i>	<i>2,928</i>	<i>4,405</i>	<i>66.5%</i>
Northwest						
Geary	1,821	2,490	73.2%	1,964	2,623	74.9%
California	1,610	2,010	80.1%	1,322	1,752	75.5%
Sutter/Clement	480	630	76.2%	425	630	67.5%
Fulton/Hayes	1,277	1,680	76.0%	1,184	1,323	89.5%
Balboa	758	1,019	74.4%	625	974	64.2%
<i>Subtotal</i>	<i>5,946</i>	<i>7,828</i>	<i>76.0%</i>	<i>5,520</i>	<i>7,302</i>	<i>75.8%</i>
Southeast						
Third	350	793	44.1%	782	793	98.6%
Mission	1,643	2,509	65.5%	1,407	2,601	54.1%
San Bruno/Bayshore	1,689	2,134	79.1%	1,536	2,134	72.0%
Other	1,466	1,756	83.5%	1,084	1,675	64.7%
<i>Subtotal</i>	<i>5,147</i>	<i>7,193</i>	<i>71.6%</i>	<i>4,809</i>	<i>7,203</i>	<i>66.8%</i>
Southwest						
Subway	6,330	6,205	102.0%	4,904	6,164	79.6%
Haight/Noriega	1,121	1,554	72.1%	977	1,554	62.9%
Other	465	700	66.5%	555	700	79.3%
<i>Subtotal</i>	<i>7,916</i>	<i>8,459</i>	<i>93.6%</i>	<i>6,436</i>	<i>8,418</i>	<i>76.5%</i>
Total All Screenlines	21,758	27,671	78.6%	19,693	27,328	72.1%

SOURCE: SF Planning Department Memorandum, Transit Data for Transportation Impact Studies, May 2015.

NOTES:

Bold indicates capacity utilization greater than the Muni 85 percent capacity utilization standard.

a. Peak-hour ridership and capacity in passengers per hour.

TABLE IV.B-4 MUNI CORRIDOR ANALYSIS, EXISTING CONDITIONS—AM AND PM PEAK HOURS

Corridor/Direction of Travel	Hourly Ridership	Hourly Capacity	Capacity Utilization
AM PEAK HOUR			
North/South Corridor^a			
Northbound	1,298	1,965	61.1%
Southbound	1,110	1,965	56.5%
East/West Corridor^b			
Eastbound	9,172	9,974	92.0%
Westbound	2,613	10,206	25.6%
PM PEAK HOUR			
North/South Corridor^a			
Northbound	1,132	1,965	57.6%
Southbound	1,167	1,965	59.4%
East/West Corridor^b			
Eastbound	3,930	9,839	39.9%
Westbound	7,523	10,170	74.0%

SOURCE: SF Planning Department Memorandum, Transit Data for Transportation Impact Studies, May 2015.

NOTES:

Bold indicates capacity utilization greater than the Muni 85 percent capacity utilization standard.

- The north/south corridor includes the 9 San Bruno, 9R San Bruno Rapid, 19 Polk, 47 Van Ness and the 49 Van Ness-Mission.
- The east/west corridor includes the 6 Parnassus, 14 Mission, 14R Mission Rapid, 21 Hayes, 71/71R Haight-Noriega/Haight-Noriega Rapid, F Market, J Church, K Ingleside, L Taraval, M Ocean View, and the N Judah.

Regional Screenlines. Three regional screenlines have been established around San Francisco to analyze potential impacts on the regional transit agencies: East Bay (BART, AC Transit, ferries), North Bay (Golden Gate Transit buses and ferries), and the South Bay (BART, Caltrain, SamTrans). For all regional transit operators, the capacity is based on the number of seated passengers per vehicle. All of the regional transit operators have a one-hour load factor standard of 100 percent, which would indicate that all seats are full. The a.m. and p.m. peak hour regional screenlines currently operate below their capacity utilization threshold of 100 percent. **Table IV.B-5, Regional Transit Screenline Analysis, Existing Conditions—Weekday AM and PM Peak Hours**, presents the existing weekday a.m. and p.m. peak-hour ridership and capacity information for each regional screenline.

As indicated on Table IV.B-5, with the exception of BART, all regional transit providers operate at less than their load factor standards during the a.m. and p.m. peak hours, which indicates that seats are generally available. BART ridership capacity utilization in the inbound direction from the East Bay during the a.m. peak hour (i.e., towards downtown San Francisco) and in the outbound direction to the East Bay during the p.m. peak hour (i.e., leaving downtown San Francisco) exceeds the 100 percent capacity utilization standard, which indicates that all seats are full and many passengers are standing. As shown on Table IV.B-5, the overall East Bay screenline during the a.m. peak hour also exceeds the 100 percent capacity utilization standard.

TABLE IV.B-5 REGIONAL TRANSIT SCREENLINE ANALYSIS, EXISTING CONDITIONS—WEEKDAY AM AND PM PEAK HOURS

Screenline/Operator	AM			PM		
	Hourly Ridership	Hourly Capacity	Capacity Utilization	Hourly Ridership	Hourly Capacity	Capacity Utilization
East Bay						
BART	25,399	23,256	109.2%	24,488	22,784	107.5%
AC Transit	1,568	2,829	55.4%	2,256	3,926	57.5%
Ferry	810	1,170	69.2%	805	1,615	49.8%
<i>Subtotal</i>	<u>27,777</u>	<u>27,255</u>	<u>101.9%</u>	<u>27,549</u>	<u>28,325</u>	<u>97.3%</u>
North Bay						
GGT buses	1,330	2,543	52.3%	1,384	2,817	49.1%
Ferry	1,082	1,959	55.2%	968	1,959	49.4%
<i>Subtotal</i>	<u>2,412</u>	<u>4,502</u>	<u>53.6%</u>	<u>2,352</u>	<u>4,776</u>	<u>49.2%</u>
South Bay						
BART	14,150	19,367	73.1%	13,500	18,900	71.4%
Caltrain	2,171	3,100	70.0%	2,377	3,100	76.7%
SamTrans	255	520	49.0%	141	320	44.1%
<i>Subtotal</i>	<u>16,576</u>	<u>22,987</u>	<u>72.1%</u>	<u>16,018</u>	<u>22,320</u>	<u>71.8%</u>
Total All Screenlines	<u>46,765</u>	<u>54,744</u>	<u>85.4%</u>	<u>45,919</u>	<u>55,421</u>	<u>82.9%</u>

SOURCE: SF Planning Department Memoranda, Transit Data for Transportation Impact Studies, May 2015; Updated BART Regional Screenlines, October 2016.

NOTE:

Bold indicates capacity utilization greater than the regional operator 100 percent capacity utilization standard.

Pedestrian Conditions

Adjacent to the project site, sidewalks widths adjacent to the project site are 23 feet nine inches wide on South Van Ness Avenue, 14 feet eight inches wide on Mission Street, and seven feet 10 inches wide on 11th Street. The existing sidewalk widths on South Van Ness Avenue and Mission Street currently meet the minimum and recommended sidewalk width in the *San Francisco Better Streets Plan (Better Streets Plan)* (minimum of 12 feet, and recommended of 15 feet for a commercial thoroughfare); however, the seven-foot-10-inch sidewalk width on 11th Street does not meet the *Better Streets Plan* minimum recommendation of 12 feet.¹⁰⁰

Pedestrian crosswalks, Americans with Disabilities Act (ADA)-accessible curb ramps, and pedestrian signals (including countdown signals) are provided at the signalized intersections in the project vicinity. While pedestrian signals are provided at the intersection of Van Ness/Market in all directions of travel, pedestrian

¹⁰⁰ The *San Francisco Better Streets Plan*, which was adopted in 2010, creates a unified set of standards, guidelines, and implementation strategies to govern how the City designs, builds, and maintains its pedestrian environment. A key goal of the *Better Streets Plan* is to prioritize the needs of walking, bicycling, transit use, and the use of streets as public spaces for social interaction and community life, following San Francisco's *General Plan*, *Transit First Policy*, and *Better Streets Policy*.

signals are generally not provided along Van Ness Avenue north of Market Street for pedestrians crossing Van Ness Avenue.

Because South Van Ness Avenue runs diagonally between 11th and 12th Streets, and because Mission Street eastbound and westbound travel lanes are split on either side of the triangular parcels between South Van Ness Avenue and Otis Street, the adjacent intersection of South Van Ness/Mission/12th is a six-legged intersection (i.e., six different vehicular travel paths or directions at the intersection), which results in greater crossing distances for pedestrians than a conventional four-legged intersection. In addition, because Market Street runs diagonally, and because it is the boundary of two street grids, the many nearby intersections along Market Street are five-legged or six-legged intersections, or have the southern leg of the intersection offset from the northern leg.

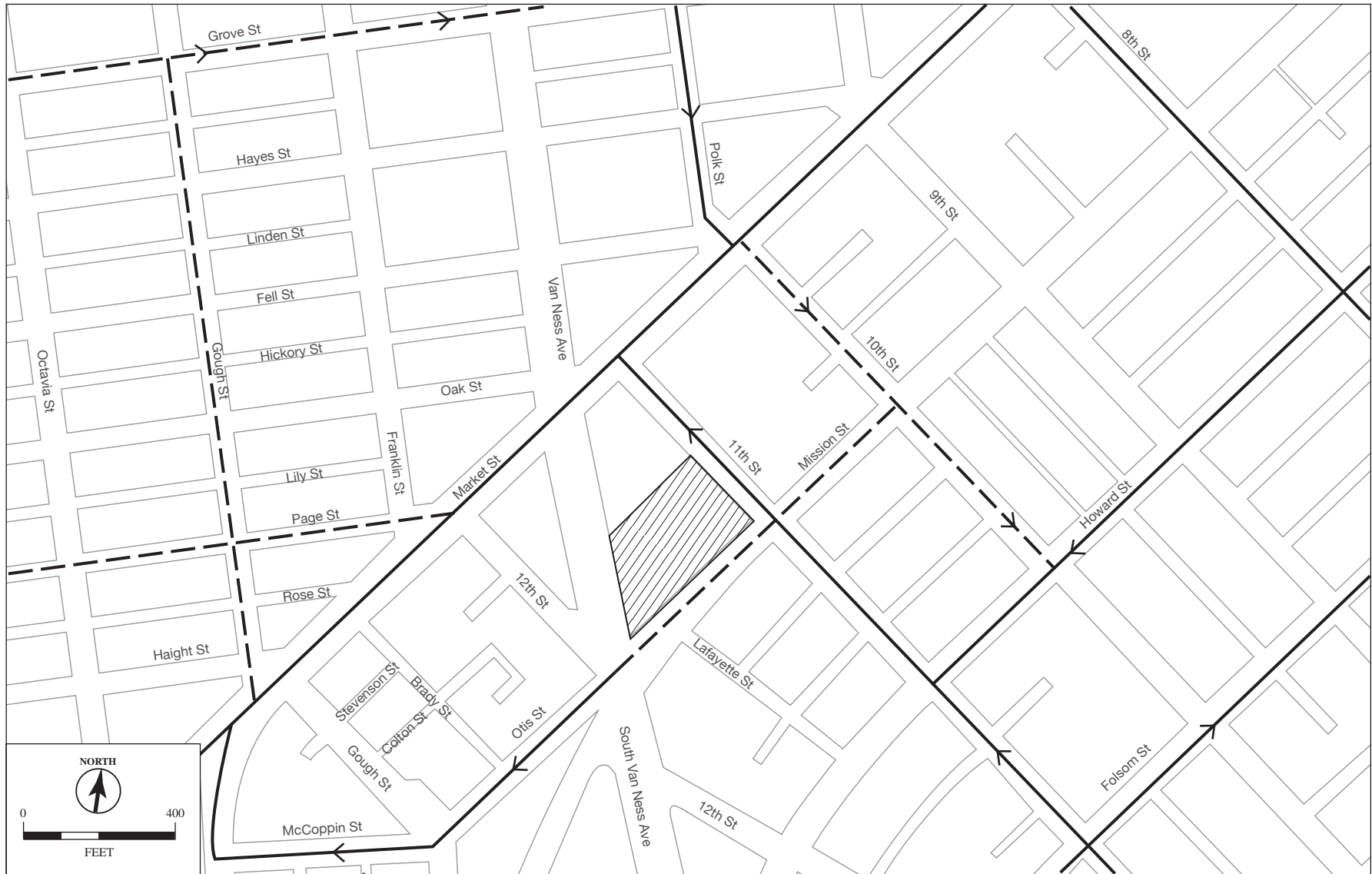
A qualitative evaluation of existing pedestrian conditions in the vicinity of the project site was conducted during field visits to the site during the weekday midday and p.m. peak periods in May and July 2015. Pedestrian volumes in the project vicinity vary, but generally are low to moderate (pedestrian counts conducted in November 2014 on Market Street in the vicinity of the Muni Van Ness station entrance were about 500 pedestrians during the midday peak hour, and about 760 pedestrians during the p.m. peak hour). Pedestrian volumes are greatest at the intersection of South Van Ness/Van Ness/Market and along Market Street, and lower south of Market Street at the intersections adjacent to the project site. During field observations, both crosswalks and sidewalks were observed to be operating at generally unconstrained conditions; at normal walking speeds and with freedom to bypass other pedestrians. However, as noted above, some pedestrians crossing at the intersection of South Van Ness/Mission/Otis/12th may have difficulty crossing the street, particularly the north and south legs of South Van Ness Avenue and the east leg of Mission Street during the pedestrian green signal due to the long crossing distance (about 125 to 155 feet), long cycle time (i.e., 120 seconds), and lack of a pedestrian refuge area.




Bicycle Conditions

Figure IV.B-2, Existing Bicycle Network, presents the bicycle network in the vicinity of the project site. Bikeways are typically classified into four classes, primarily based on the level of separation from vehicular traffic.¹⁰¹ Class I bikeways are bike paths with exclusive right-of-way for use by bicyclists or pedestrians. Class II bikeways are bike lanes striped within the paved areas of roadways and established for the preferential use of bicycles. Class III bikeways are signed bike routes that allow bicycles to share streets or sidewalks with vehicles or pedestrians. Class IV separated bikeway/cycle tracks are separated from vehicular traffic by grade separation, flexible posts, inflexible physical barriers, or on-street parking.

In the vicinity of the project site, Class II bicycle lanes are provided on Polk Street (northbound and southbound), Eighth Street (southbound), 11th Street (northbound and southbound, except northbound only between Market and Mission Street), Howard Street (westbound), and Folsom Street (eastbound). Class III bicycle routes are provided on 10th Street (southbound) between Market and Howard Streets, and on Octavia

¹⁰¹ Bicycle facilities are defined by the State of California in the California Streets and Highway Code Section, 890.4.



 PROJECT SITE
  BICYCLE LANE (CLASS II)
  BICYCLE ROUTE (CLASS III)

Boulevard. Mission Street has painted sharrows (Class III route) in the westbound direction between 11th Street and South Van Ness Avenue, and west of South Van Ness Avenue, McCoppin and Otis Streets have Class II bicycle lanes in the westbound direction.

Market Street has Class II bicycle lanes in both directions between Eighth Street and Castro Street. In the section between Eighth and Dolores Streets, the bicycle lanes are buffered from vehicle traffic. On Market Street east of Eighth Street, Class III facilities are provided in each direction.

Adjacent to the project site, there are two on-street bicycle racks on the sidewalks on Mission Street, and two bicycle racks on 11th Street. Four bicycle racks are provided north of the project site on the east sidewalk of South Van Ness Avenue near the entrance to the One South Van Ness Avenue building, and one bicycle rack is provided north of the project site on the west sidewalk of 11th Street just south of Market Street. Additionally, there are two Bay Area Bike Share stations in the project vicinity: on the east side of South Van Ness Avenue south of Market Street (about 70 feet north of the project site accommodating about 20 bicycles/docks) and on the south side of Market Street east of 10th Street (about 600 feet east of the project site accommodating about 30 bicycles/docks).

Bicycle facilities in the project vicinity are well-utilized. In 2013, the SFMTA counted about 1,400 bicyclists on Market Street at Valencia Street during the during the two-hour period between 4:30 and 6:30 p.m.¹⁰² The 2013 count at this location is about seven percent higher than counts conducted in 2011.

Loading Conditions

There are no on-street commercial loading spaces adjacent to the project site, or between the project site and Market Street on either South Van Ness Avenue or 11th Street. The existing buildings on the project block have on-site loading areas that are accessed via a driveway off Mission Street. The project site is currently occupied by two existing buildings used by Goodwill Industries: a two-story, 29,000-square-foot building at 1580 Mission Street constructed in 1997 that contains a Goodwill retail store on the ground level and offices above, and an approximately 57,000-square-foot, largely single-story warehouse building at 1500 Mission Street currently used by Goodwill for processing donated items. The warehouse building has approximately six on-site surface loading spaces, accessed from Mission Street.

There is one passenger loading/unloading zone, approximately 30 feet in length, located on the east side of South Van Ness Avenue, north of the project site. This passenger loading/unloading zone is adjacent to the One South Van Ness Avenue building.

Emergency Vehicle Access

The project site has frontages on South Van Ness Avenue, Mission Street, and 11th Street. Emergency vehicle access to the project site is primarily from South Van Ness Avenue. The nearest San Francisco Fire Department (SFFD) station is Station 36 at 109 Oak Street between Franklin and Gough Streets, about two blocks west of the project site. Station 36 is interconnected with adjacent traffic signals at Franklin Street and at Gough Street to facilitate emergency vehicle access from the station in both directions (i.e., to travel eastbound against traffic

¹⁰² SFMTA, *2011 Bicycle Count Report*, December 2011.

flow on Oak Street to access Gough Street, and to travel eastbound on Oak Street to Franklin Street). The one-block segment of Oak Street between Franklin Street and Van Ness Avenue is used by fire trucks from Station 36 to access South Van Ness Avenue southbound (towards the project site) or Market Street eastbound (towards the 11th Street side of the project site). Other nearby fire stations include Station 3 at 1067 Post Street located about a mile north of the project site, and Station 7 at 2300 Folsom Street located about a mile south of the project site.

Parking Conditions

On-Street Parking Conditions

On-street parking conditions adjacent to the project site are as follows:

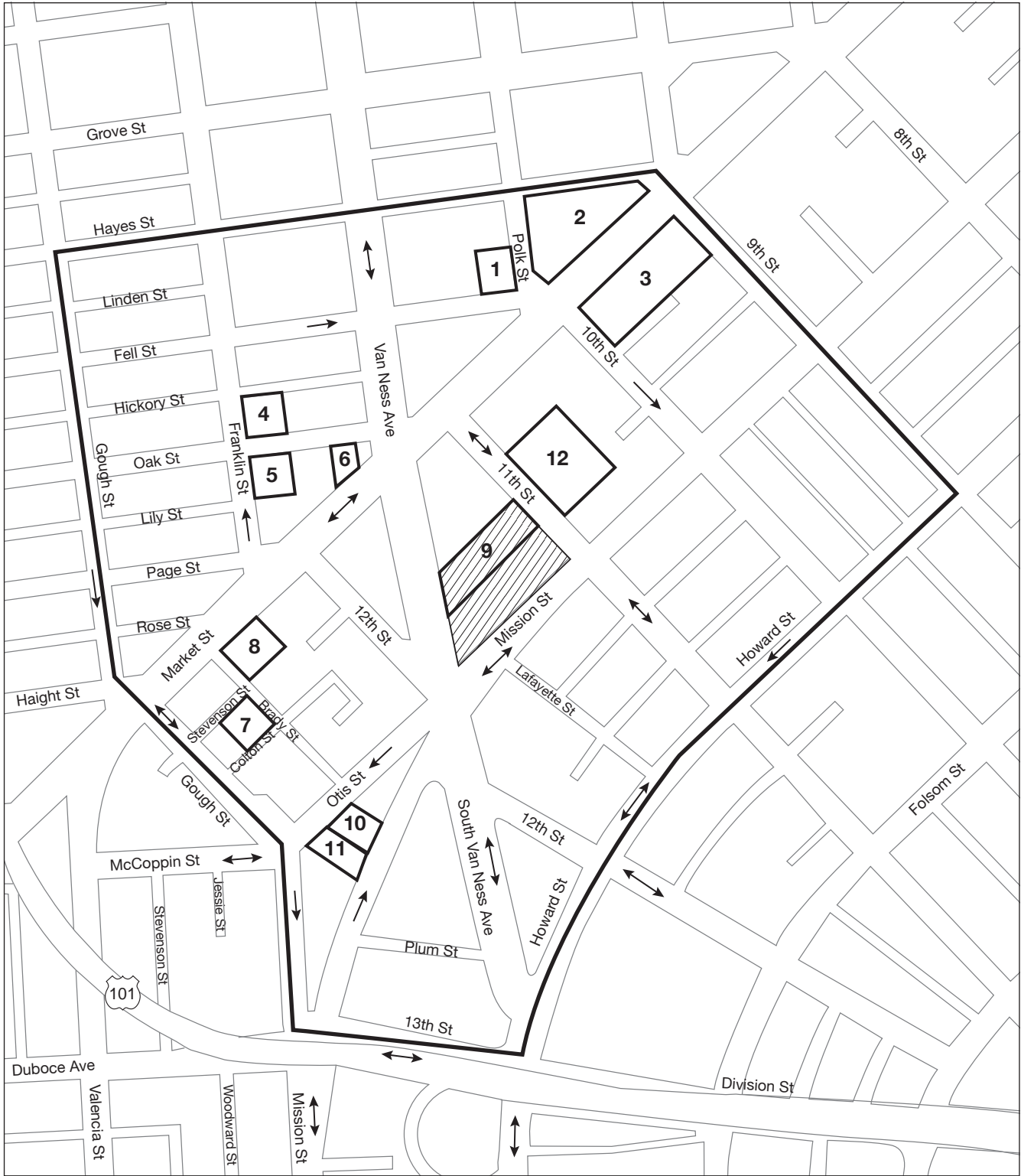
- On the east side of South Van Ness Avenue adjacent to the project site, there are eight general metered parking spaces. Between the project site and Market Street, there are seven general metered parking spaces, and a passenger loading/unloading zone. At the approach to Market Street, there is a curbside right-turn-only pocket approximately 60 feet in length.
- On the north side of Mission Street between South Van Ness Avenue and 11th Street, there are 11 general metered parking spaces and three 30-minute metered parking spaces. On-street parking is not allowed on Mission Street between 4:00 and 6:00 p.m.
- On the west side of 11th Street adjacent to the project site, there are 20 diagonal general metered parking spaces. Between the project site and Market Street, there are two car-share parking spaces.

On-street parking in the project vicinity is generally well-utilized.

Off-Street Parking Conditions

The existing off-street parking conditions were examined within a parking study area generally bounded by Hayes, Larkin/Ninth, Howard, and Gough Streets. Parking occupancy conditions were assessed for the weekday midday (1:00 to 3:00 p.m.) and evening (7:00 to 9:00 p.m.) periods. **Figure IV.B-3, Existing Public Parking Facilities**, presents the publicly-accessible off-street parking facilities within the study area, and **Table IV.B-6, Off-Street Public Parking Supply and Utilization, Weekday Midday and Evening Conditions**, presents the total parking supply for these facilities and the midday and evening parking occupancies. Overall, there are about 1,600 off-street parking spaces within these facilities, with an average occupancy of about 82 percent during the weekday midday. Overnight, about 930 of the 1,600 off-street parking spaces are accessible, with an average occupancy of about 45 percent during the weekday evening period.

In addition to these public off-street facilities, there are three larger public parking facilities within a half-mile of the project site that also have availability. These include the SFMTA Performing Arts Garage (600 parking spaces, located about 0.4 mile northwest of the project site), the SFMTA Civic Center Garage (845 parking spaces located about 0.5 mile north of the project site), and the 12th/Kissling Garage (875 parking spaces located about 0.25 mile south of the project site).



 PROJECT SITE
  PARKING STUDY AREA
 DIRECTION OF VEHICULAR TRAVEL



TABLE IV.B-6 OFF-STREET PUBLIC PARKING SUPPLY AND UTILIZATION, WEEKDAY MIDDAY AND EVENING CONDITIONS

Facility (garage or surface lot)	Supply	Occupancy ^a	
		Midday	Evening
1. One Polk Street (garage)	133	100%	74%
2. Fox Plaza (garage)	400	84%	56%
3. Market Square (garage) ^b	350	81%	—
4. Franklin & Oak NE Corner (surface lot)	43	72%	21%
5. Franklin & Oak SE Corner (surface lot)	74	62%	28%
6. Oak St & Van Ness Ave (surface lot)	30	147%	3%
7. Brady St between Market & Mission (surface lot)	110	77%	28%
8. Market St between 12th & Brady (surface lot)	68	65%	29%
9. 59 South Van Ness (garage, project site) ^b	110	66%	—
10. 1650 Mission (garage)	70	89%	26%
11. 1660 Mission (garage) ^c	60	90%	—
12. 1455 Market Street/55 11th Street (garage) ^c	100	84%	—
<i>Total</i>	<i>1,578</i>	<i>82%</i>	<i>45%</i>

SOURCE: LCW Consulting, 2016.

NOTES:

- a. Midday period between 1:00 and 3:00 p.m., and evening period between 7:00 and 9:00 p.m.
- b. Facilities close at 7:00 p.m.
- c. Facilities close at 6:00 p.m.
- d. Parking occupancy of more than 100 percent indicates that more vehicles than the striped number of self-parking spaces were observed, and generally represent valet operations at the facility.

IV.B.3 Regulatory Framework

CEQA Section 21099(b)(1) (Senate Bill 743)

CEQA Section 21099(b)(1) requires that the State Office of Planning and Research (OPR) develop revisions to the CEQA Guidelines establishing criteria for determining the significance of transportation impacts of projects that “promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses.” CEQA Section 21099(b)(2) states that upon certification of the revised guidelines for determining transportation impacts pursuant to Section 21099(b)(1), automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment under CEQA.

In January 2016, OPR published for public review and comment a Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA recommending that transportation impacts for projects be measured using a VMT metric.¹⁰³ On March 3, 2016, based on compelling evidence in that

¹⁰³ OPR, *Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA, Implementing Senate Bill 743* (Steinberg, 2013), January 20, 2016.

document and on the City's independent review of the literature on LOS and VMT, the San Francisco Planning Commission adopted OPR's recommendation to use the VMT metric instead of automobile delay to evaluate the transportation impacts of projects (Resolution 19579). (Note: the VMT metric does not apply to the analysis of impacts on non-automobile modes of travel such as riding transit, walking and bicycling.)

Transit First Policy

In 1998, the San Francisco voters amended the City Charter (Charter Article 8A, Section 8A.115) to include a Transit First Policy, which was first articulated as a City priority policy by the Board of Supervisors in 1973. The Transit First Policy is a set of principles that underscore the City's commitment to give priority to travel by transit, bicycle, and foot over the private automobile. These principles are embodied in the policies and objectives of the Transportation Element of the *General Plan*. All City boards, commissions, and departments are required, by law, to implement transit first principles in conducting City affairs.

Vision Zero Policy

Vision Zero is San Francisco's road safety policy.¹⁰⁴ The City adopted Vision Zero as a policy in 2014, committing to build better and safer streets, educate the public on traffic safety, enforce traffic laws, and adopt policy changes that save lives. The goal is to create a culture that prioritizes traffic safety and to ensure that mistakes on roadways do not result in serious injuries or death. Vision Zero sets a policy to eliminate traffic fatalities by 2024.

San Francisco General Plan

The Transportation Element of the *General Plan* is composed of objectives and policies that relate to the eight aspects of the citywide transportation system: General Regional Transportation, Congestion Management, Vehicle Circulation, Transit, Pedestrian, Bicycles, Citywide Parking, and Goods Management. The Transportation Element references San Francisco's Transit First Policy in its introduction, and contains objectives and policies that are directly pertinent to consideration of the proposed project, including objectives related to locating development near transit facilities, encouraging transit use, and timing traffic signals to emphasize transit, pedestrian, and bicycle traffic as part of a balanced multimodal transportation system. The *General Plan* also emphasizes alternative transportation through the positioning of building entrances, making improvements to the pedestrian environment, and providing safe bicycle parking facilities.

San Francisco Bicycle Plan

The San Francisco Bicycle Plan (Bicycle Plan) describes a City program to provide the safe and attractive environment needed to promote bicycling as a transportation mode. The Bicycle Plan identifies the citywide bicycle route network and establishes the level of treatment (i.e., Class I, Class II, or Class III facility) on each route. The Bicycle Plan also identifies near-term improvements that could be implemented within five years, as well as policy goals, objectives, and actions to support these improvements. It also includes long-term improvements, and minor improvements that would be implemented to facilitate bicycling in San Francisco.

¹⁰⁴ Information on Vision Zero is available at <http://visionzerosf.org/about/what-is-vision-zero/>.

San Francisco Better Streets Plan

The *Better Streets Plan* focuses on creating a positive pedestrian environment through measures such as careful streetscape design and traffic calming measures to increase pedestrian safety. The *Better Streets Plan* includes guidelines for the pedestrian environment, which it defines as the areas of the street where people walk, sit, shop, play, or interact. Generally speaking, the guidelines are for the design of sidewalks and crosswalks; however, in some cases, the *Better Streets Plan* includes guidelines for certain areas of the roadway, particularly at intersections.

Transportation Sustainability Program

The Transportation Sustainability Program is an initiative aimed at improving and expanding the transportation system to help accommodate new growth, and create a policy framework for private development to contribute to minimizing its impact on the transportation system, including helping to pay for the system's enhancement and expansion. The Transportation Sustainability Program is a joint effort by the Mayor's Office, the San Francisco Planning Department, the SFMTA, and the San Francisco County Transportation Authority (Transportation Authority), comprised of the following three objectives:

- **Fund Transportation Improvements to Support Growth**—The Transportation Sustainability Fee (TSF) is assessed on new development, including residential development, to help fund improvements to transit capacity and reliability as well as bicycle and pedestrian improvements. The TSF was passed by the Board of Supervisors and signed into law by the Mayor on November 25, 2015 (Board of Supervisors File No. 150790).¹⁰⁵ The new TSP replaces the Transit Impact Development Fee (TIDF) that was levied on most new non-residential development citywide to offset new development's impacts on the transit system. The TSF is applicable to the proposed project.
- **Modernize Environmental Review**—This component of the Transportation Sustainability Program changes how the City analyzes impacts of new development on the transportation system under the California Environmental Quality Act (CEQA). This reform has been helped by California Senate Bill 743, which requires that the existing transportation review standard, focused on automobile delay (vehicular level of service), be replaced with VMT. VMT is a measure of the amount and distance that a project causes potential residents, tenants, employees, and visitors of a project to drive, including the number of passengers within a vehicle. Resolution 19579 regarding this reform was adopted at the Planning Commission hearing on March 3, 2016.
- **Encourage Sustainable Travel**—This component of the Transportation Sustainability Program would help manage demand on the transportation network through a Transportation Demand Management (TDM) Program, making sure new developments are designed to make it easier for new residents, tenants, employees, and visitors to get around by sustainable travel modes such as transit, walking, and biking. Each measure that would be included in the TDM program is intended to reduce VMT traveled from new development. *Planning Code* amendments to implement the TDM program were approved by the Planning Commission on August 4, 2016, (Resolutions 19715 and 19716) and the *Planning Code* amendments have been forwarded to the Board of Supervisors for legislative approval.

¹⁰⁵ Two additional files were created at the Board of Supervisors from TSF regarding hospitals and health services, grandfathering, and additional fees for large projects: 151121 and 151257.

IV.B.4 Impacts and Mitigation Measures

Significance Thresholds

The significance criteria listed below are organized by mode to facilitate explanation of the transportation impact analysis; however, the transportation significance thresholds are essentially the same as the ones in the environmental checklist (state CEQA Guidelines Appendix G). For the purpose of this analysis, the following applicable thresholds were used to determine whether implementing the proposed project would result in a significant impact on transportation and circulation:

- **VMT**—The project would have a significant effect on the environment if it would cause substantial additional VMT; or

The project would have a significant effect on the environment if it would substantially induce additional automobile travel by increasing physical roadway capacity in congested areas (i.e., by adding new mixed-flow travel lanes) or by adding new roadways to the network;
- **Traffic**—The project would have a significant adverse impact if it would cause major traffic hazards;
- **Transit**—A project would have a significant effect on the environment if it would cause a substantial increase in transit demand that could not be accommodated by adjacent transit capacity, resulting in unacceptable levels of transit service; or cause a substantial increase in delays or operating costs such that significant adverse impacts in transit service levels could result. With the Muni and regional transit screenlines analyses, the project would have a significant effect on the transit provider if project-related transit trips would cause the capacity utilization standard to be exceeded during the peak hour, or contribute considerably (i.e., a contribution of five percent or more) to ridership at a screenline or corridor currently operating, or projected to operate under cumulative conditions, at greater than the transit provider’s capacity utilization standard;
- **Pedestrians**—A project would have a significant effect on the environment if it would result in substantial overcrowding on public sidewalks, create potentially hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility to the site and adjoining areas;
- **Bicycles**—A project would have a significant effect on the environment if it would create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas;
- **Loading**—A project would have a significant effect on the environment if it would result in a loading demand during the peak hour of loading activities that could not be accommodated within proposed on-site loading facilities or within convenient on-street loading zones, and if it would create potentially hazardous traffic conditions or significant delays affecting traffic, transit, bicycles or pedestrians;
- **Emergency Vehicle Access**—A project would have a significant effect on the environment if it would result in inadequate emergency access; or
- **Construction**—Construction of the project would have a significant effect on the environment if, in consideration of the project site location and other relevant project characteristics, the temporary construction activities’ duration and magnitude would result in substantial interference with pedestrian, bicycle, or vehicle circulation and accessibility to adjoining areas thereby resulting in potentially hazardous conditions.

The project site is not located within an area covered by an airport land use plan or within two miles of a public airport or public use airport; nor is it within the vicinity of a private airstrip. Therefore, implementation of the proposed project would not result in a change in air traffic patterns, including either an increase in traffic levels, obstructions to flight, or a change in location, that results in substantial safety risks, and these issues are not addressed further in this EIR.

Approach to Analysis

This section presents the methodology for analyzing transportation impacts and information considered in developing travel demand forecasts for the proposed project. The impacts of the proposed project on the surrounding roadways were analyzed using the guidelines set forth in the *SF Guidelines* and Planning Commission Resolution 19579 and supporting materials, which provide direction for analyzing transportation conditions and identifying the transportation impacts of a proposed project in San Francisco.

The analysis of the proposed project was conducted for existing and 2040 cumulative conditions. “Existing plus project” conditions assess the near-term impacts of the proposed project, while “2040 cumulative” conditions assess the long-term impacts of the proposed project in combination with other reasonably foreseeable development. Additionally, some cumulative projects were considered during the programming of the streets adjacent to the project site, as discussed further below.

As discussed above, Senate Bill 743 amended CEQA by adding Public Resources Code Section 21099 regarding the analysis of parking impacts for certain urban infill projects in transit priority areas.¹⁰⁶ Public Resources Code Section 21099(d), effective January 1, 2014, provides that “... parking impacts of a residential, mixed-use residential, or employment center project on an infill site located within a transit priority area shall not be considered significant impacts on the environment.” Accordingly, parking is no longer to be considered in determining if a project has the potential to result in significant environmental effects for projects that meet all three criteria established in the statute. The proposed project meets all of the criteria, and thus the transportation impact analysis does not consider the adequacy of parking in determining the significance of project impacts under CEQA.¹⁰⁷ However, the Planning Department acknowledges that parking conditions may be of interest to the public and the decision-makers. Therefore, this EIR presents a parking demand analysis for informational purposes and considers any secondary physical impacts associated with constrained supply (e.g., queuing by drivers waiting for scarce on-site parking spaces that affects the public right-of-way) as applicable in the following transportation impact analysis.

¹⁰⁶ A “transit priority area” is defined as an area within one-half mile of an existing or planned major transit stop. A “major transit stop” is defined in California Public Resources Code Section 21064.3 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 periods. A map of San Francisco’s Transit Priority Areas is available at <http://sfmea.sfplanning.org/Map%20of%20San%20Francisco%20Transit%20Priority%20Areas.pdf>.

¹⁰⁷ San Francisco Planning Department, Eligibility Checklist: CEQA Section 21099 – Modernization of Transportation Analysis for 1500 Mission, September 14, 2016. This document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400 as part of Case File No. 2014.00362ENV.

Project Design

Due to the impending implementation of a number of transportation improvements on the streets adjacent to the project site, the project transportation elements were subject to SFMTA review, and the transportation impact assessment accounts for these planned and funded transportation improvements. Specifically, the project transportation elements were designed to account for the Van Ness BRT project, the SFMTA Mission Street/South Van Ness Avenue/Otis Street Intersection Improvements, and the Muni Forward Travel Time Reduction Proposal TTRP.14 project on Mission Street. Therefore, the existing plus project analysis assumes implementation of these projects as it relates to conflicts with designs. However, the existing plus project analysis does not assume implementation of the transit capacity increases from these projects (e.g., Van Ness BRT). Those transit capacity increases are assumed in the cumulative analysis. Descriptions of these projects are provided below. All three projects are scheduled to be constructed in 2018.

Van Ness Bus Rapid Transit Project. The Van Ness BRT project is a program to improve Muni bus service (i.e., for the 47 Van Ness and the planned 49R Van Ness-Mission Rapid routes) along Van Ness Avenue between Mission and Lombard Streets through the implementation of operational improvements and physical improvements. The operational improvements consist of (1) designating bus-only lanes to allow buses to travel with fewer impediments, (2) adjusting traffic signals to give buses more green light time at intersections, and (3) providing real-time bus arrival and departure information to passengers to allow them to manage their time more efficiently. The physical improvements consist of (1) building high-quality and well-lit bus stations to improve passenger safety and comfort and (2) providing streetscape improvements and amenities to make the street safer and more comfortable for pedestrians and bicyclists who access the transit stations. In the vicinity of the project site, the BRT station in the northbound direction of South Van Ness Avenue will be at Market Street, and the existing curbside bus stop on South Van Ness Avenue north of Mission Street will be discontinued.

SFMTA Mission Street/South Van Ness Avenue/Otis Street Intersection Improvements. The SFMTA is planning implementation of various improvements at the intersection of Mission/South Van Ness/Otis as well as along Otis and Mission Street in the vicinity of this intersection. Key improvements include:

- Extending and/or creating a bulb out at the northeast corner of the intersection by up to 25 feet into the roadway to shorten the northern crosswalk, and potentially include landscaping/sidewalk furniture and bicycle racks and benches;
- Conversion of the existing Class III route (sharrows) along westbound Mission Street to a Class II bicycle route located adjacent to the planned right-turn-only lane;
- Redesign of the existing median on the east edge of the intersection of South Van Ness Avenue and Mission Street and relocate the median to the south to accommodate the westbound right-turn-only lane, the planned westbound Class II bicycle lane and allow for two-stage pedestrian crossing along the east crosswalk with a new pedestrian refuge island;
- Extending the sidewalk (or bulb out) on the west side of the intersection between westbound Otis Street and eastbound Mission Street north into the roadway up to 12 feet to shorten the crossing distance between this sidewalk and the northwest corner of the intersection;
- Widen the north sidewalk along westbound Otis Street by five feet, from 10 feet to 15 feet wide. The sidewalk widening would extend from South Van Ness Avenue to Brady Street;

- Installation of an eight-foot-wide transit island that would be five to six feet from the widened sidewalk on the north side of Otis Street and the transit island would be approximately 120 feet long; and
- Relocate the existing parking on the north side of Otis Street from approximately 200 feet east of Brady Street to Gough Street from the curb to nine to 12 feet south of the curb to allow for a parking-separated bikeway.

Muni Forward. In the vicinity of the project site, Muni Forward includes a Travel Time Reduction Proposal (TTRP) along Mission Street adjacent to the project site for the 14R Mission Rapid route. The SFMTA is currently implementing transit priority and traffic safety improvements between 11th and Randall Streets. On Mission Street between 11th Street and South Van Ness Avenue, the TTRP project would convert the westbound (outbound) curbside mixed-flow lanes into a transit-only lane and remove all on-street parking spaces on the north side of Mission Street between 11th Street and South Van Ness Avenue (i.e., adjacent to the project site).

Vehicle Miles Traveled Analysis

Land use projects and plans may cause substantial additional VMT. The following discussion identifies thresholds of significance and screening criteria used to determine if a land use project would result in significant impacts under the VMT metric.

For residential projects, a project would generate substantial additional VMT if it exceeds the regional household VMT per capita minus 15 percent.¹⁰⁸ For office projects, a project would generate substantial additional VMT if it exceeds the regional VMT per employee minus 15 percent. As documented in the Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA (“proposed transportation impact guidelines”), a 15 percent threshold below existing development is “both reasonably ambitious and generally achievable.”¹⁰⁹ For retail projects, the Planning Department uses a VMT efficiency metric approach for retail projects: a project would generate substantial additional VMT if it exceeds the regional VMT per retail employee minus 15 percent. This approach is consistent with CEQA Section 21099 and the thresholds of significance for other land uses recommended in OPR’s proposed transportation impact guidelines. For mixed-use projects, each proposed land use is evaluated independently, per the significance criteria described above.

¹⁰⁸ OPR’s proposed transportation impact guidelines state a project would cause substantial additional VMT if it exceeds both the existing City household VMT per capita minus 15 percent and existing regional household VMT per capita minus 15 percent. In San Francisco, the City’s average VMT per capita is lower (8.4) than the regional average (17.2). Therefore, the City average is irrelevant for the purposes of the analysis.

¹⁰⁹ Governor’s Office of Planning and Research, *Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA*, January 20, 2016, p. III:20. Available at https://www.opr.ca.gov/s_sb743.php.

OPR's proposed transportation impact guidelines provides screening criteria to identify types, characteristics, or locations of land use projects that would not exceed these VMT thresholds of significance. OPR recommends that if a project or land use proposed as part of the project meets any of the screening criteria shown below, then VMT impacts are presumed to be less than significant for that land use and a detailed VMT analysis is not required. These screening criteria and how they are applied in San Francisco are as follows:

- **Map-Based Screening for Residential, Office, and Retail Projects.** OPR recommends mapping areas that exhibit where VMT is less than the applicable threshold for that land use. Accordingly, the Transportation Authority has developed maps depicting existing VMT levels in San Francisco for residential, office, and retail land uses based on the SF-CHAMP 2012 base-year model run. The Planning Department uses these maps and associated data to determine whether a proposed project is located in an area of the city that is below the VMT threshold.
- **Small Projects.** OPR recommends that lead agencies may generally assume that a project would not have significant VMT impacts if the project would either (1) generate fewer trips than the level for studying consistency with the applicable congestion management program or (2) where the applicable congestion management program does not provide such a level, generate fewer than 100 vehicle trips per day. The Transportation Authority's Congestion Management Program, December 2015, does not include a trip threshold for studying consistency. Therefore, the Planning Department uses the 100 vehicle trip per day screening criterion as a level generally where projects would not generate a substantial increase in VMT.
- **Proximity to Transit Stations.** OPR recommends that residential, retail, and office projects, as well projects that are a mix of these uses, proposed within 0.5 mile of an existing major transit stop (as defined by CEQA Section 21064.3) or an existing stop along a high quality transit corridor (as defined by CEQA 21155) would not result in a substantial increase in VMT. However, this presumption would not apply if the project (1) would have a floor area ratio of less than 0.75; (2) include more parking for use by residents, customers, or employees of the project than required or allowed, without a conditional use; or (3) is inconsistent with the applicable Sustainable Communities Strategy.¹¹⁰

OPR's proposed transportation impact guidelines does not provide screening criteria or thresholds of significance for other types of land uses, other than those projects that meet the definition of a small project. Therefore, the Planning Department provides additional screening criteria and thresholds of significance to determine if land uses similar in function to residential, office, and retail would generate a substantial increase in VMT. These screening criteria and thresholds of significance are consistent with CEQA Section 21099 and the screening criteria recommended in OPR's proposed transportation impact guidelines.

The Planning Department applies the Map-Based Screening and Proximity to Transit Station screening criteria to the following land use types applicable to the project:

- **Childcare** – Trips associated with these land uses typically function similarly to office. While some of these uses may have some visitor/customer trips associated with them (e.g., childcare and school drop-off, patient visits, etc.), those trips are often a side trip within a larger tour. For example, the visitor/customer trips are influenced by the origin (e.g., home) and/or ultimate destination (e.g., work) of those tours. Therefore, these land uses are treated as office for screening and analysis.

¹¹⁰ A project is considered to be inconsistent with the Sustainable Communities Strategy if development is located outside of areas contemplated for development in the Strategy.

Induced Automobile Travel Analysis

Transportation projects may substantially induce additional automobile travel. The following identifies thresholds of significance and screening criteria used to determine if transportation projects would result significant impacts by inducing substantial additional automobile travel. Pursuant to OPR's proposed transportation impact guidelines, a transportation project would substantially induce automobile travel if it would generate more than 2,075,220 VMT per year. This threshold is based on the fair share VMT allocated to transportation projects required to achieve California's long-term greenhouse gas emissions reduction goal of 40 percent below 1990 levels by 2030.

OPR's proposed transportation impact guidelines include a list of transportation project types that would not likely lead to a substantial or measureable increase in VMT. If a project fits within the general types of projects (including combinations of types) described below, then it is presumed that VMT impacts would be less than significant and a detailed VMT analysis is not required.

- Active Transportation, Rightsizing (aka Road Diet), and Transit Projects:
 - Infrastructure projects, including safety and accessibility improvements, for people walking or bicycling; and
- Other Minor Transportation Projects:
 - Removal of off-street or on-street parking spaces; and
 - Adoption, removal, or modification of on-street parking or loading restrictions (including meters, time limits, accessible spaces, and preferential/reserved parking permit programs).

Transit Analysis

The impact of additional weekday a.m. and p.m. peak-hour transit ridership generated by the proposed project on local and regional transit providers was assessed by comparing the projected ridership to the available transit capacity, using the screenline and corridor analysis used to describe existing conditions (see Environmental Setting). In addition, the impact of the proposed project vehicular access to on-site garages and loading areas on Muni transit routes that run adjacent to the project site were assessed qualitatively.

Local Transit

Capacity utilization relates the number of passengers per transit vehicle to the design capacity of the vehicle. The capacity per vehicle includes both seated and standing capacity, where standing capacity is between 30 to 80 percent of seated capacity (depending upon the specific transit vehicle configuration). Muni has established a peak period capacity utilization standard of 85 percent of the design capacity of the vehicle.¹¹¹

Muni Downtown Screenlines. The availability of Muni service capacity was analyzed in terms of a series of screenlines. The concept of screenlines is used to describe the magnitude of travel to or from the greater downtown area, and to compare estimated transit volumes to available capacities. Screenlines are hypothetical lines that would be crossed by persons traveling between downtown and its vicinity and other parts of San

¹¹¹ The average load during any 15-minute time interval should not exceed 119 passengers for a light rail vehicle, 94 passenger for a 60-foot motor or trolley coach, 63 passengers for a 40-foot motor or trolley coach, and 45 passengers for a 30-foot motor coach (see *SF Guidelines 2002*, p. F-6).

Francisco and the region. Four screenlines have been established in San Francisco to analyze potential impacts of projects on Muni service: northeast, northwest, southwest, and southeast, with sub-corridors within each screenline. The bus routes and light rail lines used in this screenline analysis are considered the major commute routes from the downtown area. Other bus lines, such as “community connector”¹¹² routes and routes with greater than 10-minute headways between buses are not included, due to their generally lower ridership.

The screenline analysis generally compares the total ridership on routes crossing a given screenline with the available capacity. The ridership for each route in the screenline analysis was taken at the MLP, which is the location of greatest ridership demand for the route. For the purpose of this analysis, Muni ridership measured at the four San Francisco screenlines and sub-corridors represents the peak direction of travel and patronage loads for the Muni system which corresponds with the morning commute in the inbound direction towards downtown San Francisco, and the evening commute in the outbound direction from the downtown area to other parts of San Francisco.

As noted above, Muni’s established capacity utilization standard for peak period operations is 85 percent. It should be noted that the 85 percent utilization is of seated and standing loads, so at 85 percent, all seats are taken, and there are many standees. Muni screenlines and subcorridors at or near 85 percent capacity operate under noticeably crowded conditions with many standees. Because each screenline and most sub-corridors include multiple lines, each with several vehicles operating during the peak hour, some individual vehicles may operate at or above 85 percent of capacity and are extremely crowded, while others operate under less crowded conditions. Moreover, the extent of crowding is exacerbated whenever target headways are not met through either missed runs and/or bunching in service. Thus, in common with other types of transportation operations such as roadways and parking facilities, transit operators may experience substantial problems in service delivery even when operating at less than 85 percent of capacity.

Regional Screenlines. A screenline analysis was also performed on the regional transit carriers (AC Transit, BART, Caltrain, Golden Gate Transit and SamTrans), in order to determine the current service volumes and capacity. Three regional screenlines have been established around San Francisco to analyze potential impacts of projects on the regional transit carriers. For the purpose of this analysis, the ridership and capacity at the three screenlines represents the peak direction of travel and patronage loads, which corresponds with the morning commute in the inbound direction towards downtown San Francisco and the evening commute in the outbound direction from downtown San Francisco to the region. For regional operators, the maximum load point is typically at the San Francisco city limit (i.e., the East Bay maximum load point is at the Transbay Tube and on the Bay Bridge; the North Bay maximum load point is at the Golden Gate Bridge; and the South Bay maximum load point is generally at the southern city border). As a means to determine the amount of available space for each regional transit provider, capacity utilization is also used. For all regional transit operators, the capacity is based on the number of seated passengers per vehicle. All of the regional transit operators have a one-hour load factor standard of 100 percent, which would indicate that all seats are full.

¹¹² The category of community connector routes includes lightly used bus routes that circulate through San Francisco’s hillside residential neighborhoods to fill in gaps in coverage and connect passengers to the core network.

Pedestrian Analysis

Pedestrian conditions were assessed qualitatively, including an assessment of safety and right-of-way issues, potential worsening of existing or creation of new safety hazards, and conflicts with bicycles, transit, and vehicles.

Bicycle Analysis

Bicycle conditions were assessed qualitatively as they relate to the project site, including bicycle routes, safety and right-of-way issues, and conflicts with vehicular traffic.

Loading Analysis

Loading was analyzed by comparing the on-site loading spaces supplied by the proposed project to *Planning Code* requirements and projected loading demand. Any potential for hazards resulting from loading vehicle movements or shortfalls of available loading spaces are analyzed in this section.

Emergency Vehicle Access Analysis

Potential impacts on emergency vehicle access were assessed qualitatively.

Construction Analysis

Potential short-term construction impacts were assessed qualitatively based on impacts of construction-related activity, including staging locations, daily truck and worker volumes, travel lane and/or sidewalk closures, and duration.

Parking Assessment

As explained under Approach to Analysis, the EIR does not consider the adequacy of the parking supply in determining the significance of impacts of the proposed project. Because parking conditions may be of interest to some members of the public and decision-makers, a parking demand analysis is presented for informational purposes. The parking assessment was conducted by comparing the proposed parking supply to both the amount allowed under the *Planning Code* and to the projected demand that would be generated by the proposed project, based on the *SF Guidelines*, which may be an overestimation of parking demand.

Project Travel Demand

Travel demand refers to the new vehicle, transit, pedestrian and bicycle trips generated by the proposed project. This section provides an estimate of the project-generated person and vehicle trips that would travel to and from the project site. Parking demand and delivery/service vehicle-trips for the new uses are also presented. The travel demand estimates were based on the methodology and information contained in *SF Guidelines*.

The project site is currently occupied by two buildings used by Goodwill Industries. Therefore, person-trip counts were conducted on Tuesday January 27, 2015, during the p.m. peak period to determine the travel

demand associated with the existing uses on the project site (i.e., into and out of the 1500 Mission Street and 1580 Mission Street buildings) to potentially net out those existing trips from proposed project trips. In addition, vehicle trips into and out of the public parking garage driveway on South Van Ness Avenue and the Goodwill drop off/loading area driveway on Mission Street were conducted at the same time. During the p.m. peak hour, there were 315 person-trips (286 person-trips associated with the retail store and 29 person trips with the 1570 Mission Street and 1500 Mission Street office uses and the Goodwill drop off/loading area), and 40 vehicle trips associated with the existing uses (37 vehicle trips associated with the public parking garage and three with the Goodwill loading area). For a.m. peak hour conditions, counts associated with existing uses were not conducted. As a conservative assessment, the persons and vehicles traveling to and from the project site were not subtracted from the trips that would be generated by the new uses, as the vehicle trips are associated with activities that may continue to operate in the area and may remain in the project vicinity (e.g., vehicles parking within the public parking garage may park on-street or in other nearby parking facilities).

Methodology

Trip Generation Rates. The daily, a.m., and p.m. peak hour person-trip generation for the proposed project accounts for residents, employees, and visitors. The person-trip generation rates from the *SF Guidelines* were applied to the residential units (with different rates for the new studio/one-bedroom and two-or-more-bedroom units), and restaurant, retail, and childcare uses in the proposed project. Because the *SF Guidelines* does not provide trip generation rates for a.m. peak hour conditions, the weekday a.m. peak hour travel demand for these uses was based on the p.m. peak hour trip generation rates provided in the *SF Guidelines*, adjusted based on the ratio of a.m. to p.m. peak hour trip generation for the residential, restaurant, retail and childcare uses from the *Institute of Transportation Engineers (ITE) Trip Generation Manual*.

The trip generation rates used in the analysis represent the number of person-trips that would be generated by each project component as a stand-alone use. Some of the visitor trips entering and exiting the project's proposed restaurant and retail uses would be made by individuals destined to other components of the proposed project (referred to as linked trips), such as the residential or office uses at the project site, or other nearby uses. Thus, to account for the linked visitor trips, based on studies of non-work (visitor) trips conducted along the San Francisco waterfront and at the San Francisco Center at Powell and Market Streets,¹¹³ the type of retail and restaurant uses accessory to the residential and office land uses, a daily 67 percent linked trips reduction was applied to non-work (i.e., visitor) trips for the restaurant and retail uses (i.e., 33 percent of the visitor trips are considered new trips to the area unrelated to other nearby uses). For the childcare use that would be located within the office and permit center component of the project, a trip reduction factor of 50 percent was applied, because the childcare facility would serve employees at the proposed City office uses, but may also accommodate other City departments in the vicinity (e.g., City Hall), or available to the general public. No linked trip factors were assumed for the office and residential uses.

The a.m. and p.m. peak hour trip generation rates for the City office uses were based on new surveys conducted as part of this study at two existing City office buildings—1650 Mission Street and 1660 Mission Street—which were determined to reflect similar City office uses as those proposed for the office and permit

¹¹³ San Francisco Boudin Bakery and Café at Fisherman's Wharf Transportation Study, prepared by Wilbur Smith Associates for the San Francisco Planning Department, Case Number 2003.0186, September 19, 2003, and the City Place Cross Shopping Survey Results, Technical memorandum prepared by AECOM for the SF Planning Department, October 18, 2007.

center component of the proposed project. The City office building at 1650 Mission Street currently houses offices for the Department of Social Services, the Planning Department, and the Board of Permit Appeals. The City office building at 1660 Mission Street currently houses the Permit Center (offices where members of the public can bring building permit applications for multi-departmental review) and the Department of Building Inspection. It is anticipated that the Permit Center, Department of Building Inspection, and the Planning Department would move to the proposed project at 1500 Mission Street from their existing offices at 1650 and 1660 Mission Street. Other City departments, such as Public Works, Health Service System, Retirement, and Emergency Management would also potentially move to 1500 Mission Street from other office space in the project vicinity (Civic Center area). Travel demand was measured at both 1650 Mission Street and 1660 Mission Street because travel behavior at these buildings is generally typical of City office buildings and the buildings contain high-volume uses such as the Permit Center, which would relocate to 1500 Mission Street upon completion of the proposed project.

Mode Split. The project-generated person-trips were assigned to travel modes in order to determine the number of auto, transit, walk and “other” trips. “Other” includes bicycle, motorcycle, taxi and additional modes. Mode split information for the residential uses was based on the 2009–2013 American Community Survey (ACS) data for census tract 177 in which the project is located. Mode split information for the retail/restaurant, office and childcare uses was based on information contained in the *SF Guidelines* for employee and visitor trips to C-3. An average vehicle occupancy rate, as obtained from the American Community Survey (for residential uses) and *SF Guidelines* (for the retail/restaurant, office and childcare uses) was applied to the number of auto person-trips to determine the number of vehicle-trips generated by the proposed project.

Trip Distribution. The directional distribution of the project-generated trips were obtained from the 1990 Census data for the residential uses, and from the *SF Guidelines* for the retail/restaurant, office, and childcare uses. Distributions are based on the origin/destination of the trip, and are separated into the four geographic quadrants of San Francisco (Superdistricts 1 through 4), East Bay, North Bay, South Bay, and outside the region. The majority of the project-generated retail/restaurant and residential trips would be to and from San Francisco. These patterns were used as the basis for assigning project-generated vehicle trips to the local streets in the study area, and transit trips for the transit corridor analysis.

Loading Demand. The delivery/service vehicle demand is estimated based on the methodology and truck trip generation rates presented in the *SF Guidelines*. Delivery and service vehicle demand is based on the types and amount of land use.

Parking Demand. Parking demand consists of both long-term demand (typically residents and employees) and short-term demand (typically visitors and patrons). The parking demand for the new uses associated with the proposed project was determined based on the methodology presented in the *SF Guidelines*. The results of these calculations likely overestimate the actual parking demand generated by the proposed project, and therefore are conservative.

- For residential units, the long-term parking demand is based on the number and size of the units at a rate of 1.1 and 1.5 spaces per unit for studios/one bedroom and 2+ bedroom units, respectively. The proposed project would comply with the City’s Residential Inclusionary Affordable Housing Program requirements (*Planning Code* Sections 415 et seq.) by including 112 below-market-rate (BMR) units on-site, or 20 percent of the total number of units, as required by *Planning Code* Section 415.6. For the BMR

units, the long-term parking demand is based on a ratio of 0.45 and 0.92 space per unit for studios/one-bedroom and 2+ bedroom units, respectively.

- For the office, retail/restaurant, and childcare uses, the long-term parking demand was derived by estimating the number of employees, and applying the trip mode split and average vehicle occupancy from the trip generation calculations. The short-term parking was estimated from the total daily visitor trips by private automobile and an average turnover rate of 5.5 vehicles per space.

Project Trip Generation

Table IV.B-7, Proposed Project Daily, AM and PM Peak Hour Person Trip Generation, summarizes the weekday daily, a.m. and p.m. peak hour trip generation for the proposed project by project component. Overall, the proposed project would generate about 19,710 daily person trips, of which 2,210 trips would occur during the a.m. peak hour, and 2,400 trips would occur during the p.m. peak hour. The office and permit center component would generate about 34 percent more daily and 11 percent more a.m. peak hour person trips than the residential and retail/restaurant component; however, during the p.m. peak hour, the residential and retail/restaurant component would generate more person-trips than the office and permit center component (i.e., about 15 percent more trips).

TABLE IV.B-7 PROPOSED PROJECT DAILY, AM AND PM PEAK HOUR PERSON TRIP GENERATION

Land Use	Size	Daily	AM Peak Hour	PM Peak Hour
Residential and Retail/Restaurant Component				
Residential (560 units)	626,200 gsf	4,823	709	834
Retail: ^a				
Restaurant	9,660 gsf	2,068	201	279
General Retail	28,340 gsf	1,517	137	137
	<i>Subtotal Retail</i>	<i>3,585</i>	<i>338</i>	<i>416</i>
	<i>Subtotal Residential and Retail</i>	<i>8,408</i>	<i>1,047</i>	<i>1,250</i>
Office and Permit Center Component				
City Office	449,800 gsf	11,155	1,138	1,060
Childcare ^a	4,400 gsf	146	27	26
	<i>Subtotal Office and Permit Center</i>	<i>11,301</i>	<i>1,165</i>	<i>1,086</i>
	Total Proposed Project	19,709	2,212	2,336

SOURCE: LCW Consulting, *SF Guidelines*.

NOTE:

a. Includes linked trip reductions as appropriate.

Table IV.B-8, Proposed Project Trip Generation by Mode, Weekday AM and PM Peak Hours, summarizes the weekday a.m. and p.m. peak hour trip generation by mode for the proposed project.

- During the weekday a.m. peak hour, about 32 percent of all person-trips would be by auto, 48 percent by transit, 12 percent by walking, and eight percent by other modes (including bicycling). During the a.m. peak hour, the proposed project would generate about 511 new vehicle-trips (294 inbound and 217 outbound).

- During the weekday p.m. peak hour, about 32 percent of all person-trips would be by auto, 46 percent by transit, 13 percent by walking, and nine percent by other modes (including bicycling). During the p.m. peak hour, the proposed project would generate about 541 new vehicle-trips (224 inbound and 317 outbound).

TABLE IV.B-8 PROPOSED PROJECT TRIP GENERATION BY MODE, WEEKDAY AM AND PM PEAK HOURS

Peak Hour/Land Use	Person-Trips				Total	Vehicle Trips ^b
	Auto	Transit	Walk	Other ^a		
AM PEAK HOUR						
Residential and Retail/Restaurant Component						
Residential	230	308	67	104	709	191
Retail: ^c						
Restaurant	58	40	81	22	201	33
General Retail	39	27	56	15	137	23
<i>Subtotal Retail</i>	97	67	137	37	338	56
<i>Subtotal Residential and Retail</i>	327	375	204	141	1,047	247
Office and Permit Center Component						
City Office	374	660	65	39	1,138	258
Childcare ^c	9	15	2	1	27	6
<i>Subtotal Office and Permit Center</i>	383	675	67	40	1,165	264
Total Proposed Project	710	1,050	271	181	2,212	511
PM PEAK HOUR						
Residential and Retail/Restaurant Component						
Residential	270	362	79	123	834	225
Retail: ^c						
Restaurant	80	56	113	30	279	46
General Retail	39	28	55	15	137	23
<i>Subtotal Retail</i>	119	84	168	45	416	69
<i>Subtotal Residential and Retail</i>	389	446	247	168	1,250	294
Office and Permit Center Component						
City Office	349	614	61	36	1,060	241
Childcare ^c	9	15	1	1	26	6
<i>Subtotal Office and Permit Center</i>	358	629	62	37	1,086	247
Total Proposed Project	747	1,075	309	205	2,336	541

SOURCE: LCW Consulting, *SF Guidelines*.

NOTES:

- "Other" mode includes bicycles, motorcycles, and taxis.
- Vehicle trips were estimated by applying an average vehicle occupancy rate, as obtained from the American Community Survey (for residential uses) and from the SF Guidelines (for the retail/restaurant, office, and childcare uses) to the number of auto person trips.
- Travel demand for retail/restaurant and childcare uses includes linked trip reductions.

As shown in **Table IV.B-9, Proposed Project Delivery/Service Vehicle-Trips and Loading Space Demand**, the uses associated with the proposed project would generate about 155 delivery and service vehicle-trips to the project site per day. Overall, for both project components, this corresponds to a demand for nine loading spaces during the peak hour of loading activities, and seven loading spaces during an average hour of loading activity. It is anticipated that most of the delivery and service vehicles that would be generated by the proposed project would consist of small trucks and vans. In addition, the residential uses would generate a demand for large and small moving vans.

TABLE IV.B-9 PROPOSED PROJECT DELIVERY/SERVICE VEHICLE-TRIPS AND LOADING SPACE DEMAND

Land Use	Daily Truck Trip Generation	Peak Hour Loading Spaces	Average Hour Loading Spaces
Residential and Retail/Restaurant Component			
Residential	18.8	1.09	0.87
Retail/restaurant	41.0	2.37	1.90
<i>Subtotal Residential and Retail</i>	<i>59.8</i>	<i>3.46</i>	<i>2.77</i>
Office and Permit Center Component			
<i>Subtotal Office and Permit Center</i>	<i>95.4</i>	<i>5.52</i>	<i>4.42</i>
Total Proposed Project	155.2	8.98	7.19

SOURCE: LCW Consulting, *SF Guidelines*.

Table IV.B-10, Proposed Project Parking Demand, presents the estimated parking demand for the proposed project based on the *SF Guidelines*. The 560 residential units would generate a parking demand for about 646 spaces during the overnight hours, and about 517 spaces during the midday period (i.e., about 80 percent of the overnight demand). During the midday period, the retail/restaurant and office uses would generate a parking demand of about 595 spaces, for a total midday demand of approximately 1,112 parking spaces.

TABLE IV.B-10 PROPOSED PROJECT PARKING DEMAND

Period/Project Component/Land Use	Long-Term Parking Spaces	Short-Term Parking Spaces	Total
MIDDAY			
Residential and Retail/Restaurant Component			
Residential	517	0	517
Retail/restaurant	23	46	69
<i>Subtotal Residential and Retail</i>	<i>540</i>	<i>46</i>	<i>586</i>
Office and Permit Center Component			
<i>Subtotal Office and Permit Center</i>	<i>398</i>	<i>128</i>	<i>526</i>
Midday Total	938	174	1,112
OVERNIGHT			
Residential	646	0	646

SOURCE: LCW Consulting, *SF Guidelines*.

NOTE:

The methodology used for estimating parking demand likely overestimates the actual parking demand generated by the proposed project and is therefore conservative.

The results of these calculations may overestimate the actual parking demand generated by the proposed project and therefore are conservative.

Project-Level Impact Evaluation

This subsection presents an assessment of VMT, traffic, transit, pedestrian, bicycle, loading, emergency vehicle access, and construction impacts generated by the proposed project. A parking demand analysis is presented for informational purposes and considers any secondary physical impacts associated with constrained supply (e.g., queuing by drivers waiting for scarce on-site parking spaces, which affects the public right-of-way).

VMT Impacts

Impact TR-1: The proposed project would not cause substantial additional VMT nor substantially induce automobile travel. (Less than Significant)

VMT Analysis

As described above under Approach to Analysis, for development projects in San Francisco, a project would result in a significant impact related to substantial additional VMT if it would exceed the regional VMT per capita or employee for the particular land use (i.e., residential, office, or retail) less 15 percent. **Table IV.B-11, Daily VMT per Capita—Existing and 2040 Cumulative Conditions**, presents the average daily VMT per capita for the residential, office, and retail land uses for the TAZ within which the proposed project is located, as well as the Bay Area regional average, as obtained from the SF-CHAMP model.

TABLE IV.B-11 DAILY VMT PER CAPITA—EXISTING AND 2040 CUMULATIVE CONDITIONS

Trip Type (Land Use)	Existing Conditions		2040 Cumulative Conditions	
	Bay Area Regional Average	TAZ 591 ^a	Bay Area Regional Average	TAZ 591 ^a
Households (residential)	17.2	3.1	16.1	2.7
Employment (office)	19.1	7.7	17.0	6.9
Visitors (retail)	14.9	9.0	14.6	8.9

SOURCE: San Francisco Transportation Authority SF-CHAMP model, 2016.

NOTE:

a. The Traffic Analysis Zone (TAZ) in which the project site is located.

As presented in **Table IV.B-11**, the existing average daily VMT per capita for the TAZ 591, in which the proposed project is located, is substantially below the existing regional average daily VMT:

- For the residential uses, the average daily VMT per capita is 3.1, which is about 82 percent below the existing regional average daily VMT per capita of 17.2;
- For the office uses, the average daily work-related VMT per employee is 7.7, which is about 60 percent below the existing regional average daily work-related VMT per employee of 19.1; and
- For the retail uses, the average daily retail VMT per employee is 9.0, which is about 40 percent below the existing regional average daily retail VMT per employee of 14.9.

Thus, as described above, the project site is located within an area of the city where the existing VMT is more than 15 percent below the regional VMT thresholds, and the proposed project residential, office, retail/restaurant, and childcare land uses would not generate a substantial increase in VMT.¹¹⁴ Furthermore, the project site meets the Proximity to Transit Stations screening criterion, which also indicates the proposed project's uses would not cause substantial additional VMT.¹¹⁵

Induced Automobile Travel Analysis

The proposed project is not a transportation project. However, the proposed project would include features that would alter the transportation network. These features include sidewalk widening, on-street commercial loading spaces and passenger loading/unloading zones, and curb cuts. These features fit within the general types of projects identified above that would not substantially induce automobile travel. Therefore, impacts would be less than significant.

Mitigation: None required.

Traffic Impacts

Impact TR-2: The proposed project would not cause major traffic hazards. (Less than Significant)

As presented above under the Significance Thresholds, traffic impacts were assessed based on whether the proposed project would create traffic hazards. As noted above under Regulatory Framework, automobile delay is no longer used as a significance criterion in San Francisco.

The proposed project would not change adjacent travel lanes or include any features that would cause a major traffic hazard. Vehicular access to both proposed project garages would be via two driveways on 11th Street. The residential building garage driveway width at the building line would be 24 feet 10 inches, and the curb cut would be 29 feet wide at the curb to facilitate bicycle access to the adjacent bicycle ramps. The office building garage driveway width at the building line would be 22 feet two inches, and the curb cut would be 28 feet wide at the curb to facilitate truck turning into and out of the driveway. The ramps to the first basement level would be about 130 feet in length, which would accommodate about six vehicles on the ramp, and both ramps would have 7.5 to 15 percent grades. The residential building garage would be gated and accessed remotely, the vehicle parking spaces associated with the retail/restaurant uses (i.e., 14 spaces) would be for employees and not for public parking. The office building garage would be a public paid parking garage (except for the City's fleet vehicle parking spaces), although the mechanism for payment and how loading vehicles would bypass the ticket dispensing machine has not yet been determined (e.g., if the parking garage is valet operated, payment mechanisms would not be required). Due to the number of vehicle parking

¹¹⁴ The Map-Based Screening for Residential, Office, and Retail Projects was applied to the proposed project. The project site is located within TAZ 591, which is within an area of the City where the existing VMT is more than 15 percent below the regional VMT thresholds, as documented in Executive Summary Resolution Modifying Transportation Impact Analysis, Attachment F (Methodologies, Significance Criteria, Thresholds of Significance, and Screening Criteria for Vehicle Miles Traveled and Induced Automobile Travel Impacts), Appendix A (SFCTA Memo), March 3, 2016. Available at http://commissions.sfplanning.org/cpcpackets/Align-CPC%20exec%20summary_20160303_Final.pdf, accessed March 21, 2016.

¹¹⁵ San Francisco Planning Department, Eligibility Checklist: CEQA Section 21099 – Modernization of Transportation Analysis for 1500 Mission, September 14, 2016. This document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.00362ENV.

spaces, it is not anticipated that queues entering the garage would exceed the six vehicles that can be accommodated on the access ramps. Therefore, garage operations are not anticipated to affect 11th Street traffic and transit flow, and thus result in a traffic hazard.

The project sponsor is pursuing the possibility of obtaining a joint operating agreement between the residential building owner and the City that would allow the residential building garage users to access the garage via the office building; the residential building garage users would exit the residential garage via a one-way exit ramp. This shared access concept would require modifications to the basement level to provide for access from the office building to the residential building, and the residential building garage ramp would be modified to provide for only one lane at the street level (i.e., outbound only). The shared ingress via the office building garage ramp would reduce the potential for conflicts between vehicles accessing the residential garage ramp (located about 40 feet north of Mission Street), and southbound vehicles on 11th Street. The office building garage ramp would be located about 250 feet north of Mission Street, which would provide for additional queuing for vehicles waiting to turn into the garage. As for the proposed project as currently designed (i.e., with separate garage ingress/egress ramps for each building), under the shared ingress concept, valets would park all vehicles in the residential building. The joint operating agreement would include provisions for the residential garage to utilize its ramps for both ingress and egress in the event that either party determines that the shared use of the office building garage ramp results in unacceptable garage operating conditions.

In summary, the proposed project would not cause traffic hazards, and therefore, proposed project impacts related to traffic hazards would be *less than significant*.

While the proposed project's impacts on traffic hazards would be less than significant, **Improvement Measures I-TR-2a, Monitoring and Abatement of Queues**, and **I-TR-2b, Transportation Demand Management (TDM) Program**, would further reduce the less-than-significant impacts related to potential conflicts between vehicles accessing the proposed project and bicyclists, pedestrians, and transit, and to further encourage sustainable travel modes. Implementation of a TDM Program would increase travel options and provide incentives and information to encourage and help individuals modify their travel behavior. Implementation of a TDM Program would reduce the number of vehicles traveling to and from the project garages, decreasing the potential for conflicts and potential traffic hazards, while Improvement Measure I-TR-2b would include monitoring and abatement of queues, should they affect pedestrian and vehicular circulation. Thus, **Improvement Measures I-TR-2a** and **I-TR-2b** would further reduce the proposed project's less-than-significant impacts related to traffic hazards.

As noted under Regulatory Framework, the Planning Department is currently pursuing an ordinance amending the *Planning Code* to establish a citywide TDM Program. *Planning Code* amendments to implement the TDM Program were approved by the Planning Commission on August 4, 2016 (Resolutions 19715 and 19716), and the *Planning Code* amendments have been forwarded to the Board of Supervisors for legislative approval. If the proposed *Planning Code* amendments are legislated by the Board of Supervisors, the proposed project would be subject to the requirements of the TDM Program.

Improvement Measures

Improvement Measure I-TR-2a – Monitoring and Abatement of Queues. As an improvement measure to reduce the potential for queuing of vehicles accessing the project site, it should be the responsibility of the project sponsor to ensure that recurring vehicle queues or vehicle conflicts do not occur adjacent to the site. A vehicle queue is defined as one or more vehicles blocking any portion of adjacent sidewalks or travel lanes for a consecutive period of three minutes or longer on a daily and/or weekly basis.

If recurring queuing occurs, the owner/operator of the facility should employ abatement methods as needed to abate the queue. Appropriate abatement methods would vary depending on the characteristics and causes of the recurring queue, as well as the characteristics of the parking and loading facility, the street(s) to which the facility connects, and the associated land uses (if applicable).

Suggested abatement methods include, but are not limited to the following: redesign of facility to improve vehicle circulation and/or on-site queue capacity; employment of parking attendants; installation of LOT FULL signs with active management by parking attendants; use of valet parking or other space-efficient parking techniques; use of off-site parking facilities or shared parking with nearby uses; use of parking occupancy sensors and signage directing drivers to available spaces; travel demand management strategies as discussed in **Improvement Measure I-TR-2b, Transportation Demand Management (TDM) Program**; and/or parking demand management strategies such as parking time limits, paid parking, time-of-day parking surcharge, or validated parking.

If the Planning Director, or his or her designee, determines that a recurring queue or conflict may be present, the Planning Department should notify the project sponsor in writing. Upon request, the owner/operator should hire a qualified transportation consultant to evaluate the conditions at the site for no less than seven days. The consultant should prepare a monitoring report to be submitted to the Planning Department for review. If the Planning Department determines that a recurring queue or conflict does exist, the project sponsor should have 90 days from the date of the written determination to abate the recurring queue or conflict.

Improvement Measure I-TR-2b – Transportation Demand Management (TDM) Program. As an improvement measure to encourage use of sustainable modes, the project sponsor and subsequent property owners, should develop and implement a TDM Plan. The scope and number of TDM measures included in the TDM Plan should be in accordance with the Planning Commission Standards for the TDM Program (TDM Program) for the type of development proposed.¹¹⁶ The TDM Program Standards may be refined as planning for the proposed TDM Ordinance goes through the legislative process. The proposed project's TDM Plan should conform to the most recent version of the TDM Program Standards available at the time of the project's approval, as defined in the proposed TDM Ordinance. The Planning Department should review and approve the TDM Plan, as well as any subsequent revisions to the TDM Plan, pursuant to the TDM Program Standards. The TDM Plan should target a reduction in the vehicle miles traveled (VMT) rate (e.g., VMT per capita), monitor and evaluate project performance (actual VMT), and adjust TDM measures over time to attempt to meet VMT target reduction.

¹¹⁶ San Francisco Planning Department, *Draft TDM Program Standards*, July 2016. Available at <http://sf-planning.org/tdm-materials-and-resources>, accessed September 19, 2016. Note: The July 2016 TDM Program Standards were adopted unanimously at the Planning Commission August 4, 2016, and the legislative amendments, which reference the TDM Program Standards, are awaiting Board of Supervisors hearings.

This improvement measure may be superseded if a comparable TDM Ordinance is adopted that applies to the proposed project.

The TDM Plan may include, but is not limited to the types of measures summarized below for explanatory example purposes. Actual TDM measures selected should include those from the TDM Program Standards, which describe the scope and applicability of candidate measures in detail and include:

1. Active Transportation: Provision of streetscape improvements to encourage walking, secure bicycle parking, shower and locker facilities for cyclists, subsidized bike share memberships for project occupants, bicycle repair and maintenance services, and other bicycle-related services
2. Car-Share: Provision of car-share parking spaces and subsidized memberships for project occupants
3. Delivery: Provision of amenities and services to support delivery of goods to project occupants
4. Family-Oriented Measures: Provision of on-site childcare and other amenities to support the use of sustainable transportation modes by families
5. High-Occupancy Vehicles: Provision of carpooling/vanpooling incentives and shuttle bus service
6. Information and Communications: Provision of multimodal wayfinding signage, transportation information displays, and tailored transportation marketing services
7. Land Use: Provision of on-site affordable housing and healthy food retail services in underserved areas
8. Parking: Provision of unbundled parking, short term daily parking provision, parking cash out offers, and reduced off-street parking supply.

Mitigation: None required.

Transit Impacts

Impact TR-3: The proposed project would not result in a substantial increase in transit demand that could not be accommodated by adjacent local and regional transit capacity, but could cause a substantial increase in delays or operating costs such that significant adverse impacts to local or regional transit service could occur. (Less than Significant with Mitigation)

Capacity Utilization Analysis

The proposed project would generate about 1,050 transit trips (663 inbound to the project site and 387 outbound from the project site) during the a.m. peak hour, and about 1,075 transit trips (380 inbound to the project site and 695 outbound from the project site) during the p.m. peak hour. Based on the location of the project site and the origins and destinations of the residents, employees and visitors of the proposed project, under existing plus project conditions, it was assumed that 687 of the 1,050 a.m. peak hour transit trips would utilize Muni routes (i.e., trips within San Francisco), and 712 of the 1,075 p.m. peak hour transit trips would utilize Muni routes during the p.m. peak hour. Trips to and from the East Bay (253 a.m. peak hour and 248 p.m. peak hour trips) and South Bay (83 a.m. peak hour and 86 p.m. peak hour trips) were assumed to take

BART at the Civic Center station, and trips to the North Bay (27 a.m. peak hour and 29 p.m. peak hour trips) were assumed to take Golden Gate Transit routes on Van Ness Avenue.

Muni Corridors and Downtown Screenlines

Table IV.B-12, Muni Corridor Analysis, Existing plus Project Conditions—Weekday AM and PM Peak Hours, presents the weekday a.m. and p.m. peak hour ridership and capacity utilization for the north/south and east/west corridors for existing and existing plus project conditions. For purposes of the corridor analysis, all transit trips with origins or destinations within San Francisco were conservatively assigned to the corridor analysis. During the a.m. peak hour, the proposed project would add 277 transit trips to the north/south corridor, and 410 transit trips to the east/west corridor (total of 687 a.m. peak hour transit trips on Muni routes). During the a.m. peak hour, with the addition of the project trips on the northbound, southbound and westbound corridors would remain at less than the 85 percent capacity utilization standard. However, during the a.m. peak hour, the eastbound direction (inbound towards downtown) of the east/west corridor currently operates at more than the 85 percent capacity utilization standard, and therefore the project's contribution to ridership was examined to determine if the contribution would be considered significant (i.e., more than five percent) and therefore a project impact. The additional 236 trips assigned to the eastbound direction (i.e., towards downtown) on east/west corridor would increase the capacity utilization from 92.0 to 94.3 percent, the project contribution would not be considered substantial (236 transit trips out of a total of 9,408 trips on the eastbound corridor = 2.5 percent), and the proposed project's contribution would not be considered a significant project impact.

TABLE IV.B-12 MUNI CORRIDOR ANALYSIS, EXISTING PLUS PROJECT CONDITIONS—WEEKDAY AM AND PM PEAK HOURS

Corridor/Direction of Travel	Existing Capacity Utilization	Project Trips	Existing plus Project Capacity Utilization
AM PEAK HOUR			
North/South Corridor^a			
Northbound	66.1%	178	75.1%
Southbound	56.5%	99	61.5%
East/West Corridor^b			
Eastbound	92.0%	236	94.3%
Westbound	25.6%	175	27.3%
PM PEAK HOUR			
North/South Corridor^a			
Northbound	57.6%	95	62.4%
Southbound	59.4%	185	68.8%
East/West Corridor^b			
Eastbound	39.9%	181	41.8%
Westbound	74.0%	251	76.4%

SOURCE: SF Planning Department Memorandum, Transit Data for Transportation Impact Studies, May 2015, LCW Consulting.

NOTES:

- The North/South corridor includes the 9 San Bruno, 9R San Bruno Rapid, 19 Polk, 47 Van Ness and the 49 Van Ness-Mission.
- The East/West corridor includes the 6 Parnassus, 14 Mission, 14R Mission Rapid, 21 Hayes, 71/71R Haight-Noriega/Haight-Noriega Rapid, F Market, J Church, K Ingleside, L Taraval, M Ocean View, and the N Judah.

During the p.m. peak hour, the proposed project would add 280 transit trips to the north/south corridor, and 432 transit trips to the east/west corridor (total of 712 p.m. peak hour transit trips on Muni routes). With the addition of project trips, the capacity utilization for both directions of both corridors would remain at less than the 85 percent capacity utilization standard. The transit routes have available capacity during the weekday p.m. peak hour that could be used to accommodate any transit trips that would be generated by the proposed project.

Table IV.B-13, Muni Downtown Screenline Analysis, Existing plus Project Conditions – Weekday AM and PM Peak Hours, presents the Muni downtown screenline analysis for the Southeast and Southwest screenlines for existing plus project conditions for weekday a.m. and p.m. peak hours. As noted in “Approach to Analysis”, above, the Muni downtown screenline analysis is used to describe the magnitude of travel between the greater downtown area and other parts of San Francisco, and to compare estimated transit ridership to available capacities. Because the project is located just west of greater downtown area, project-generated transit trips traveling to the project site during the a.m. peak hour or leaving the project site during the p.m. peak hour would only cross the Southeast and Southwest screenlines (i.e., trips to and from Superdistricts 3 and 4—the southeast and southwest quadrants of San Francisco), and therefore, the Southeast and Southwest screenlines are the only screenlines included in the analysis. Trips traveling to or from Superdistrict 1 or Superdistrict 2 (i.e., the northeast and northwest quadrants of San Francisco) would not cross the downtown screenlines (i.e., they would be traveling to downtown from Superdistrict 1 or Superdistrict 2 during the a.m. peak hour, or be traveling from downtown to Superdistrict 1 or Superdistrict 2 during the p.m. peak hour).

During the a.m. peak hour, about 687 of the 1,050 a.m. peak hour transit trips generated by the proposed project would utilize Muni routes to travel between the project site and other parts of San Francisco. Of the 687 a.m. peak hour transit trips, 414 trips would be inbound to the project site and 273 trips would be outbound from the project site. The a.m. peak hour downtown screenlines are for the inbound direction to downtown, and therefore of the 414 inbound trips, the 201 inbound trips traveling towards the project site (i.e., inbound to downtown) from Superdistricts 3 and 4 were assigned to the Southeast and Southwest screenlines. During the a.m. peak hour, the Subway corridor of the Southwest screenline and the Southwest screenline, currently operate at more than the 85 percent capacity utilization standard, and therefore the project’s contributions to ridership on the Subway corridor and the Southwest screenline were examined to determine if the contributions would be considered significant (i.e., more than five percent) and therefore a project impact. The additional 97 trips assigned to the Subway corridor would increase the capacity utilization from 102.0 to 103.6 percent, the project contribution would not be substantial (97 transit trips out of a total of 6,427 trips = 1.5 percent), and this contribution would not be considered a significant project impact. Similarly, for the Southwest screenline, the additional 122 trips would increase the capacity utilization of the Southwest screenline 93.6 to 95.0 percent, the project contribution would not be substantial (122 transit trips out of a total of 8,038 trips = 1.5 percent), and this contribution would not be considered a significant project impact.

**TABLE IV.B-13 MUNI DOWNTOWN SCREENLINE ANALYSIS, EXISTING PLUS PROJECT CONDITIONS—
WEEKDAY AM AND PM PEAK HOURS**

Screenline/Corridor	Existing Ridership	Project Trips	Existing plus Project Ridership	Capacity	Capacity Utilization
AM PEAK HOUR					
Southeast					
Third	350	5	355	793	44.8%
Mission	1,643	25	1,668	2,509	66.5%
San Bruno/Bayshore	1,689	26	1,715	2,134	80.4%
Other	1,466	23	1,489	1,756	84.8%
<i>Subtotal</i>	<u>5,148</u>	<u>79</u>	<u>5,227</u>	<u>7,192</u>	<u>72.7%</u>
Southwest					
Subway	6,330	97	6,427	6,205	103.6%
Haight/Noriega	1,121	17	1,138	1,554	73.2%
Other	465	7	472	700	67.5%
<i>Subtotal</i>	<u>7,916</u>	<u>122</u>	<u>8,038</u>	<u>8,459</u>	<u>95.0%</u>
PM PEAK HOUR					
Southeast					
Third	782	6	788	793	99.3%
Mission	1,407	26	1,433	2,601	55.1%
San Bruno/Bayshore	1,536	27	1,563	2,134	73.2%
Other	1,084	23	1,107	1,675	66.1%
<i>Subtotal</i>	<u>4,810</u>	<u>82</u>	<u>4,891</u>	<u>7,203</u>	<u>67.9%</u>
Southwest					
Subway	4,904	101	5,005	6,164	81.2%
Haight/Noriega	977	18	995	1,554	64.0%
Other	555	7	562	700	80.3%
<i>Subtotal</i>	<u>6,435</u>	<u>126</u>	<u>6,562</u>	<u>8,418</u>	<u>78.0%</u>

SOURCE: SF Planning Department, LCW Consulting, 2016.

NOTE:

Bold indicates capacity utilization greater than the Muni 85 percent capacity utilization standard.

During the p.m. peak hour, 712 of the 1,075 p.m. peak hour transit trips would utilize Muni routes to travel between the project site and other parts of San Francisco. Of the 712 p.m. peak hour transit trips, 276 trips would be inbound to the project site and 436 trips would be outbound from the project site. The p.m. peak hour downtown screenlines are for the outbound direction from downtown, and therefore of the 436 outbound trips, the 208 outbound trips traveling away from the project site (i.e., outbound from downtown) to destinations in Superdistricts 3 and 4 were assigned to the Southeast and Southwest screenlines. During the p.m. peak hour, the Third Street corridor of the Southeast currently operate at more than the 85 percent capacity utilization standard, and therefore the project's contributions to ridership on the Third Street corridor

were examined to determine if the contributions would be considered significant (i.e., more than five percent) and therefore a project impact. The additional six trips assigned to the Third Street corridor would increase the capacity utilization from 98.6 to 99.3 percent, the project contribution would not be substantial (six transit trips out of a total of 788 trips = 0.8 percent), and this contribution would not be considered a significant project impact.

Regional Screenlines

Similar to Muni, the analysis of regional transit screenlines assess the effect of project-generated transit-trips on transit conditions in the inbound direction (i.e., towards downtown San Francisco and the project site) during the a.m. peak hour and in the outbound direction (i.e., away from downtown San Francisco and the project site) during the weekday p.m. peak hour. Based on the origins/destinations of the transit trips generated by the proposed project, the regional transit trips were assigned to the three regional transit screenlines. **Table IV.B-14, Regional Transit Screenline Analysis, Existing plus Project Conditions—Weekday AM and PM Peak Hours**, presents the existing plus project screenline analysis for the regional transit carriers for the a.m. and p.m. peak hours.

During the weekday a.m. peak hour, there would be 180 transit trips arriving to the project site from the East Bay, 18 transit trips from the North Bay, and 51 transit trips from the South Bay. The addition of these 249 project-related trips would not have a substantial effect on the regional transit providers during the weekday a.m. peak hour, as the capacity utilization for all screenlines would remain similar to those under existing conditions. During the a.m. peak hour, the East Bay screenline would continue to operate at more than the regional transit service provider capacity utilization standard of 100 percent, while the North Bay and South Bay screenlines would operate under 100 percent capacity utilization. The additional 165 trips assigned to BART from the East Bay would increase the capacity utilization of BART from 109.2 to 109.9 percent, the project contribution would not be substantial (165 transit trips out of a total of 25,564 trips = 0.6 percent). Similarly, the additional 180 trips assigned to the overall East Bay screenline would not be substantial (180 trips out of a total of 27,957 trips = 0.6 percent). These contributions to the regional screenlines would not be considered a significant impact.

During the weekday p.m. peak hour, there would be 185 transit trips destined to the East Bay, 20 transit trips to the North Bay, and 54 transit trips to the South Bay. In general, the addition of the 259 project-related passengers would not have a substantial effect on the regional transit providers during the weekday p.m. peak hour. During the p.m. peak hour, the overall regional screenlines would operate under 100 percent. However, during the p.m. peak hour, BART to the East Bay would continue to operate at more than 100 percent capacity utilization. The additional 165 trips assigned to BART to the East Bay would increase the capacity utilization from 107.5 percent under existing conditions to 108.2 percent, the project contribution would not be substantial (165 transit trips out of a total of 24,653 trips = 0.7 percent). Therefore, these project contributions to regional screenlines would not be considered a significant impact.

**TABLE IV.B-14 REGIONAL TRANSIT SCREENLINE ANALYSIS, EXISTING PLUS PROJECT CONDITIONS—
WEEKDAY AM AND PM PEAK HOURS**

Screenline/Operator	Existing Ridership	Project Trips	Existing plus Project Ridership	Capacity	Capacity Utilization
AM PEAK HOUR					
East Bay					
BART	25,399	165	25,564	23,256	109.9%
AC Transit	1,568	10	1,578	2,829	55.8%
Ferries	810	5	815	1,170	69.7%
<i>Subtotal</i>	<u>27,777</u>	<u>180</u>	<u>27,957</u>	<u>27,255</u>	102.6%
North Bay					
GGT buses	1,330	10	1,340	2,543	52.7%
GGT ferries	1,082	6	1,090	1,959	55.6%
<i>Subtotal</i>	<u>2,412</u>	<u>18</u>	<u>2,430</u>	<u>4,502</u>	<u>54.0%</u>
South Bay					
BART	14,150	44	14,194	19,367	73.3%
Caltrain	2,171	7	2,178	3,100	70.3%
SamTrans	255	1	256	520	49.2%
<i>Subtotal</i>	<u>16,576</u>	<u>51</u>	<u>16,627</u>	<u>22,987</u>	<u>72.3%</u>
Total All Screenlines	<u>46,765</u>	<u>249</u>	<u>47,014</u>	<u>54,744</u>	<u>85.9%</u>
PM PEAK HOUR					
East Bay					
BART	24,488	165	24,653	22,784	108.2%
AC Transit	2,256	15	2,271	3,926	57.8%
Ferries	805	5	810	1,615	50.2%
<i>Subtotal</i>	<u>27,549</u>	<u>185</u>	<u>27,734</u>	<u>28,325</u>	<u>97.9%</u>
North Bay					
GGT buses	1,384	12	1,396	2,817	49.5%
GGT ferries	968	8	976	1,959	49.8%
<i>Subtotal</i>	<u>2,352</u>	<u>20</u>	<u>2,372</u>	<u>4,776</u>	<u>49.7%</u>
South Bay					
BART	13,500	46	13,546	18,900	71.7%
Caltrain	2,377	8	2,385	3,100	76.9%
SamTrans	141	0	141	320	44.2%
<i>Subtotal</i>	<u>16,018</u>	<u>54</u>	<u>16,072</u>	<u>22,320</u>	<u>72.0%</u>
Total All Screenlines	<u>45,919</u>	<u>259</u>	<u>46,178</u>	<u>55,421</u>	<u>83.3%</u>

SOURCE: SF Planning Department, LCW Consulting.

NOTE:

Bold indicates capacity utilization greater than the regional operator 100 percent capacity utilization standard.

Muni Operations

The 14 Mission and 14R Mission Rapid Muni bus routes run in both directions on Mission Street, and the 47 Van Ness and 90 San Bruno Owl routes run westbound on Mission Street between 11th Street and South Van Ness Avenue. Adjacent to the project site, there is a bus stop (about 100 feet in length) for the westbound direction located directly west of 11th Street for these routes.

The 9 San Bruno and 9R San Bruno Rapid routes run on 11th Street, and both the northbound and southbound stops are located north of the project site, just south of Market Street. The 47 Van Ness, 49 Van Ness-Mission and 90 San Bruno Owl routes run on South Van Ness Avenue, and adjacent to the project site, a bus stop (about 160 feet in length) for the northbound direction is located to the north of Mission Street. With the implementation of the planned Van Ness BRT, the stop will be relocated to a center median stop at the approach to Market Street. In addition, the ongoing implementation of the Muni Forward Travel Time Reduction Proposal TTRP.14 project will remove all on-street parking spaces on the north side of Mission Street between 11th Street and South Van Ness Avenue (i.e., adjacent to the project site), and install a transit-only lane and bicycle lane on this segment of Mission Street.

The proposed project would not substantially affect Muni transit operations on South Van Ness Avenue or 11th Street, but could result in delays to Muni buses on Mission Street. On Mission Street, the existing Goodwill drop off/loading and surface parking area would be eliminated with the proposed project, and only truck/loading access to the off-street loading area for the residential/retail building would be provided. The project sponsor would also request on-street commercial vehicle loading spaces on South Van Ness Avenue and on 11th Street to accommodate large trucks and non-scheduled deliveries. Unrestricted truck access into the on-site loading spaces via Mission Street and the mid-block alley has the potential for blocking the bus stop adjacent to the project site on Mission Street west of 11th Street, and staging within the transit-only lane while waiting to access the on-site loading facility. In addition, instead of accessing the on-site loading facility, some truck drivers may conduct loading activities within the curb travel lane along Mission Street, which may result in queues within the Mission Street travel lanes. These conditions could potentially delay westbound Muni bus routes on Mission Street and result in a significant impact on Muni transit operations. **Mitigation Measure M-TR-3, Avoidance of Conflicts Associated with On-Site Loading Operations** (described below) would manage loading access and activities for the residential building, and includes monitoring to ensure that loading activities would not affect Muni operations on Mission Street, and would mitigate proposed project impacts on Muni transit operations to *less than significant with mitigation*.

The proposed project would eliminate existing driveways on South Van Ness Avenue and Mission Street and would not propose any new driveways on South Van Ness Avenue or Mission Street (except for access to the residential/retail loading) and would not conflict with the existing 47 Van Ness and 49 Van Ness-Mission bus routes on South Van Ness Avenue (the proposed project assumes the implementation of the planned and funded Van Ness BRT project, at which point the curbside bus stop will be moved to the center of the roadway, adjacent to transit-only lanes).

On 11th Street, the proposed project would include two driveways: one for the office building containing up to 120 parking spaces, and one for the residential building containing 300 parking spaces. North of the project site, there are also non-revenue streetcar rail tracks within the southbound travel lanes (the southbound right-of-way is not striped, but is wide enough for two travel lanes in order to accommodate the rails) that allow for

the F Market & Wharves historic streetcar to layover and turn around. The southbound 9 San Bruno and 9R San Bruno Rapid buses may experience increased delays associated with the additional vehicles traveling to and from the project site. However, due to the generally low volumes on southbound 11th Street, the additional delay would not increase transit travel times by half the 12-minute peak period headway for the 9 San Bruno and 9R San Bruno Rapid, so that additional transit vehicles would not be required to maintain existing headways between transit vehicles.¹¹⁷ Thus, the travel times on the 9 San Bruno and 9R San Bruno Rapid would not increase by more than half of the existing route headway, and transit impacts would be less than significant. Implementation of **Improvement Measure I-TR-2a, Monitoring and Abatement of Queues** (described in Impact TR-2), would monitor driveway operations along 11th Street to further reduce project-generated vehicles impacts with vehicular (including transit) travel on 11th Street.

Mitigation Measure

Mitigation Measure M-TR-3 – Avoidance of Conflicts Associated with On-Site Loading Operations. The project sponsor shall design and operate the mid-block alley with access from Mission Street in a way that shall not result in ongoing conflicts between project-related loading activities and people riding transit, bicycling, walking, or driving adjacent and near the project site. Examples of ongoing conflicts include, but are not limited to, project-related loading designs and operations that:

- Delay transit operations (e.g., by blocking the bus stop along Mission Street, precluding buses from pulling out of or into the bus stop, conducting loading activities at the curb along Mission Street, staging in the transit-only lane while waiting to access the on-site loading dock, etc.);
- Interfere with bicycle movements (e.g., blocking bicycle access to on-street bicycle facilities, not yielding to bicyclists when pulling out of the mid-block alley, etc.);
- Interfere with pedestrian movements (e.g., blocking the sidewalk and forcing pedestrians onto the street, not yielding to pedestrians when pulling out of the mid-block alley, etc.); and
- Interfere with vehicles within the westbound right-turn-only lane along Mission Street at the intersection of South Van Ness Avenue, if applicable.

In order to avoid ongoing conflicts, the project sponsor shall implement the following design actions:

1. Design access into the mid-block alley such that restrictions for loading vehicles (e.g., trucks) are easily enforceable. This may include, but not be limited to, installation of hydraulic bollards that are programmed to allow access to the loading dock during approved hours and/or signage;
2. Design access into the mid-block alley in a way that alerts pedestrians and loading vehicle operators to the potential for conflicts (e.g., pavement texture or other indicators that alert people with hearing impairments; in-pavement flashing lighting or other indicators that alert people with visual impairments; signage; etc.);

¹¹⁷ In San Francisco, an increase in transit vehicle travel time is considered a significant impact if the project's travel time increases due to traffic congestion delay, transit re-entry delay, and passenger boarding delays would not be greater than half of the existing route headways, or the added travel time would require provision of one or more additional transit vehicles to maintain scheduled serve, as determined by SFMTA's scheduling spreadsheets.

3. Design the loading dock area to include sufficient storage space for deliveries to be consolidated for coordinated deliveries internal to project facilities (i.e., retail and residential); and
4. Design the loading dock area to allow for unassisted delivery systems (i.e., a range of delivery systems that eliminate the need for human intervention at the receiving end), particularly for use when the receiver site (e.g., retail space) is not in operation. Examples could include the receiver site providing a key or electronic fob to loading vehicle operators, which enables the loading vehicle operator to deposit the goods inside the business or in a secured area that is separated from the business, but can be accessed from the mid-block alley;

In addition, the on-site loading dock could be designed to include electrification abilities for commercial refrigeration units, so that the loading vehicle operators do not need to run their diesel engines while making deliveries.

In addition to the above-listed design actions, the project sponsor should explore the feasibility of providing a door along South Van Ness Avenue and a service corridor between South Van Ness Avenue and the proposed on-site delivery drop-off room for UPS, United States Parcel Service, Federal Express, and other similar services, and the residential building concierge should be instructed not to accept deliveries via the front door on Mission Street. These changes should be made in order to discourage drivers from stopping on Mission Street in front of the residential building lobby.

In order to avoid ongoing conflicts, prior to receiving the building certificate of occupancy, the project sponsor shall develop a Loading Management Plan to address operational actions for City review and approval. The Loading Management Plan shall incorporate, but not be limited to, the following ongoing actions:

1. Allow access into the mid-block alley for loading vehicles only between the hours of 10:00 a.m. and 3:00 p.m., and 7:00 p.m. and 7:00 a.m. on weekdays. On Saturdays and Sundays access into the mid-block alley and on-site loading spaces shall not be restricted.

In addition, the Loading Management Plan should include best management practices (e.g., standards set in PIEK certification scheme in the Netherlands) to reduce noise for night-time delivery activities;

2. On weekdays between 10:00 a.m. and 3:00 p.m., allow access to a maximum of nine loading vehicles less than or equal to 30 feet in length to the mid-block alley. At all other times, excluding the hours where access to the mid-block alley for loading vehicles is completely restricted, access to the maximum number of loading vehicles less than or equal to 30 feet in length to the mid-block alley shall not be limited, as long as the other requirements of the Loading Management Plan are met. At all times, loading vehicles more than 30 feet in length shall not be permitted to access the mid-block alley;
3. Establish a scheduling and loading vehicle assignment system for project-related loading activities, including the size and type of loading vehicles that shall be required to use the on-street commercial loading spaces on South Van Ness Avenue and 11th Street (e.g., UPS, USPS, and Federal Express), as a means of reducing the number of loading vehicular entries and exits to the on-site loading facility;
4. Direct residential building lobby attendants and retail tenants to notify any delivery personnel illegally stopping at the curb along Mission Street (i.e., in the red zones) that delivery vehicles

should be parked within the on-street commercial loading spaces on South Van Ness Avenue or 11th Street;

5. Inform residents and retail tenants of the restricted hours of access to the mid-block alley and associated on-site loading facility for deliveries;
6. Direct residents to schedule all move-in and move-out activities and deliveries of large items (e.g., furniture) with building management. For move-in and move-out activities that will result in loading vehicles larger than 30 feet in length, building management shall obtain a reserved curbside permit for South Van Ness Avenue or 11th Street from the San Francisco Municipal Transportation Agency (SFMTA) in advance. To the extent feasible, these activities should occur during non-peak hours (i.e., the hours specified above for access to the mid-block alley);
7. Direct retail tenants to schedule deliveries, to the extent feasible;
8. Ensure that no loading vehicles access the mid-block alley without assistance by building personnel, or at times when the on-site loading facility is full;
9. Use an adequate number of building personnel to alert people using the mid-block alley and pedestrians and bicyclists on Mission Street adjacent to the project site of approaching loading vehicles;
10. Ensure that loading vehicles' paths through the mid-block alley remains clear of obstructions at all times during permitted on-site loading hours;
11. Ensure that loading vehicles enter the mid-block alley from Mission Street front-first, and exit from the mid-block alley onto Mission Street front-first;
12. Ensure that loading vehicles entering the mid-block alley load and unload within the designated loading spaces, and not in the mid-block alley; and
13. During hours when loading vehicles are not allowed via the mid-block alley, ensure that loading vehicles use the curbside commercial loading spaces on South Van Ness Avenue or 11th Street, rather than on Mission Street.

The Loading Management Plan shall be evaluated by a qualified transportation professional, retained by the project sponsor and approved by the SFMTA, after the residential building reaches 50 percent occupancy and once a year going forward until such time that the SFMTA determines that the evaluation is no longer necessary or could be done at less frequent intervals. The content of the evaluation report shall be determined by SFMTA staff, in consultation with the Planning Department, and generally shall include an assessment of on-site and on-street loading conditions, including actual loading demand, loading operation observations, and an assessment of how the project meets this mitigation measure. If ongoing conflicts are occurring based on the assessment, the Loading Management Plan evaluation report shall put forth additional measures to address ongoing conflicts associated with loading operations. The evaluation report shall be reviewed by SFMTA staff, which shall make the final determination whether ongoing conflicts are occurring. In the event that the ongoing conflicts are occurring, the above Loading Management Plan requirements may be altered (e.g., the hour and day restrictions listed above, number of loading vehicle operates permitted during certain hours listed above, etc.).

Further, revisions to the Loading Management Plan for the mid-block alley shall be made as necessary to reflect changes in generally accepted technology or operation protocols, or changes in street or

circulation conditions (e.g., City implemented transportation projects). The Loading Management Plan and all revisions shall be reviewed and approved by the Environmental Review Officer or designee of the Planning Department and the Sustainable Streets Director or designee of the SFMTA.

Significance after Mitigation: Less than Significant. Implementation of **Mitigation Measure M-TR-3** would ensure that the significant transit impact would be reduced to a less-than-significant level.

Pedestrian Impacts

Impact TR-4: The proposed project would not result in substantial overcrowding on public sidewalks, but could create potential hazardous conditions for pedestrians, and otherwise interfere with pedestrian accessibility to the site and adjoining areas. (Less than Significant with Mitigation)

Figure II-4, Proposed Site Plan, in Chapter II, *Project Description*, identifies the pedestrian access points for both the residential and retail/restaurant and office and permit center components of the proposed project. Pedestrian access to the ground-floor entrance of the proposed residential building would be through lobby entrance doors located along the Mission Street right-of-way. The proposed ground floor retail/restaurant uses would be accessed from both Mission Street and South Van Ness Avenue. Pedestrian access to the office building would be via multiple entrances within the mid-block concourse between 25 and 40 feet in width that would be accessible from both South Van Ness Avenue and 11th Street. In addition, pedestrians would be able to access the mid-block concourse from Mission Street via the 26-foot-wide mid-block pedestrian/service alley.

Adjacent to the project site, sidewalks widths are 23 feet nine inches wide on South Van Ness Avenue, 14 feet eight inches wide on Mission Street, and seven feet 10 inches wide on 11th Street. The existing sidewalk widths on South Van Ness Avenue and on Mission Street currently meet the minimum and recommended sidewalk width in the *Better Streets Plan* (minimum of 12 feet, and recommended of 15 feet for a commercial thoroughfare). As depicted on **Figure II-4**, the residential building would be set back approximately 15 feet along South Van Ness Avenue to allow for the widening of the South Van Ness Avenue sidewalk from 22 to 37 feet along this portion of the project site. Street trees, wind canopies, wind screens, benches, and bicycle racks would be located within the 37-foot-wide sidewalk, within an approximately 12-foot-wide street furniture/curb zone (i.e., the area between the curb and the pedestrian through/walking zone). The increase in the sidewalk width to 15 feet along South Van Ness Avenue would be in addition to the planned SFMTA improvements at the intersection of Mission Street/South Van Ness Avenue/Otis Street. Specifically, the SFMTA project includes a sidewalk extension (i.e., a bulbout) that would be constructed adjacent to the project site along South Van Ness Avenue to shorten the northern crosswalk across South Van Ness Avenue.

In addition to the residential building setback on South Van Ness Avenue, the proposed project includes widening of the sidewalk adjacent to the project site on 11th Street from seven feet 10 inches to 15 feet. The increase from seven feet 10 inches to 15 feet for the sidewalk width on 11th Street adjacent to the project site would meet the *Better Streets Plan* recommended sidewalk width of 15 feet.¹¹⁸

¹¹⁸ The San Francisco *Better Streets Plan*, which was adopted in 2010, creates a unified set of standards, guidelines, and implementation strategies to govern how the City designs, builds, and maintains its pedestrian environment. A key goal of the *Better Streets Plan* is to prioritize the needs of walking, bicycling, transit use, and the use of streets as public spaces for social interaction and community life, following San Francisco's *General Plan*, *Transit First Policy*, and *Better Streets Policy*.

Pedestrian trips generated by the proposed project would include walk trips to and from the new uses, plus walk trips to and from the bus stops and the Muni Metro Van Ness station and the Civic Center BART/Muni station. The new uses would add about 1,502 new pedestrian trips to the sidewalks and crosswalks in the vicinity of the proposed project (including about 1,056 trips destined to and from the transit lines and 452 walk/other trips) during the a.m. peak hour, and about 1,589 new pedestrian trips during the p.m. peak hour (1,075 trips to transit and 514 walk/other trips).

The new pedestrian trips would not substantially affect the sidewalk conditions in the project vicinity. The majority of the pedestrian trips would be added to the South Van Ness Avenue and Mission Street sidewalks, although a portion of trips to and from the office and permit center component would also travel on 11th Street between the office building concourse/entrance and Market Street. As noted above, the sidewalk adjacent to the project site on 11th Street would be widened to 15 feet, which would enhance walking conditions for pedestrians on this segment of 11th Street. On South Van Ness Avenue the sidewalk adjacent to the residential building would be set back, resulting in a total sidewalk width of 37 feet. About 12 feet of the 37-foot-wide sidewalk adjacent to the curb would contain trees, benches, wind screens, and bicycle racks, and 22 feet would be available for pedestrian through circulation. The 22-foot-wide sidewalk would be adequate to accommodate existing and proposed pedestrian volumes at acceptable levels. Based on field observations conducted in May and July 2015, sidewalks in the project vicinity operate at acceptable levels of service and could accommodate additional pedestrians without substantially affecting pedestrian flows. As noted above, the SFMTA has recently approved safety improvements at the intersection of Mission Street/South Van Ness Avenue/Otis Street. In addition to the planned sidewalk extension that would shorten the crossing distance for pedestrians crossing South Van Ness Avenue across the north leg of the intersection, the existing median on Mission Street at the approach to South Van Ness Avenue would be relocated slightly to the south in order to accommodate the planned westbound right turn lane onto northbound South Van Ness Avenue, the bicycle lane, as well as the two travel lanes and the left turn lane. The relocation of the median, and construction of a new pedestrian refuge area with the median, would allow for a two-stage pedestrian crossing¹¹⁹ across Mission Street at the east leg of the intersection.

The proposed project would provide three truck loading spaces for the residential building that would be accessed via Mission Street and a mid-block alley. Unrestricted truck access to the on-site loading spaces has the potential for interfering with pedestrian circulation on Mission Street and in the mid-block alley, creating potentially hazardous conditions for pedestrians. For example, trucks entering and exiting the mid-block alley may block the Mission Street sidewalk, thereby forcing pedestrians onto the street, and trucks may not yield to pedestrians when traveling within the mid-block alley or pulling out onto the street. These conditions could potentially create hazardous conditions for pedestrians on Mission Street and interfere with pedestrian accessibility adjacent to the project site, and therefore result in a significant impact on pedestrians. **Mitigation Measure M-TR-3, Avoidance of Conflicts Associated with On-Site Loading Operations** (described in Impact TR-3), would manage loading access and activities for the residential building, and includes

¹¹⁹ A two-stage crossing across a roadway will be provided for the intersection of Mission Street/South Van Ness Avenue/Otis Street by SFMTA, where part of the pedestrian population can be reasonably expected to cross the roadway in one stage, but others need two stages. For two-stage pedestrian crossings, the pedestrian clearance time is set to accommodate crossing the entire roadway, but a supplemental pedestrian detector is placed in the median to accommodate pedestrians needing to cross in two stages.

monitoring to ensure that loading activities would not affect pedestrians on Mission Street, and would mitigate proposed project impacts on pedestrians to *less than significant with mitigation*.

Significance after Mitigation: Less than Significant. Implementation of **Mitigation Measure M-TR-3** would ensure that the significant impact on pedestrians would be reduced to a less-than-significant level.

Bicycle Impacts

Impact TR-5: The proposed project could result in potentially hazardous conditions for bicyclists, or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas. (Less than Significant with Mitigation)

In total, the proposed project would provide 553 Class 1 and 67 Class 2 bicycle parking spaces.^{120,121}

- **Residential and Retail/Restaurant Component Class 1 Bicycle Parking Spaces**—A total of 247 Class 1 bicycle parking spaces would be provided for the residential and retail/restaurant uses. The bicycle spaces would be located on the first basement level of the garage, and would be accessed via a dedicated bicycle ramp from 11th Street (to the south of the vehicle ramp serving the residential building garage). In addition, six showers and 38 lockers would be provided in the first basement level for the retail/restaurant uses.
- **Office and Permit Center Component Class 1 Bicycle Parking Spaces**—A total of 306 Class 1 bicycle parking spaces, 15 showers, and 76 lockers would be located on the first basement level for the office and childcare uses. The bicycle spaces would be located on the first basement level of the garage, and would be accessed via a dedicated bicycle ramp from 11th Street (to the north of the vehicle ramp serving the residential building garage).
- **Class 2 Bicycle Parking Spaces**—In addition to the Class 1 bicycle parking spaces provided within the project garages, a total of 67 Class 2 bicycle parking spaces in 34 bicycle racks would be provided on 11th Street, Mission Street, and South Van Ness Avenue, subject to SFMTA approval. It is currently proposed that 16 racks be located on 11th Street, seven racks on Mission Street, and 11 racks on South Van Ness Avenue.

The project site is within convenient bicycling distance of other office and retail buildings in the Civic Center and downtown San Francisco, and residential neighborhoods to the north, west and south of the project site. As such, it is anticipated that a portion of the “other” trips generated by the proposed project in **Table IV.B-8**,

¹²⁰ Per *San Francisco Planning Code* Section 155.1, Bicycle Parking Definitions and Standards, Class 1 bicycle parking facilities are spaces in secure, weather-protected facilities intended for use as long-term, overnight, and workday bicycle storage by dwelling unit residents, non-residential occupants, and employees. Class 2 spaces are bicycle racks located in publicly-accessible, highly visible location intended for transient or short-term use by visitors, guests, and patrons to the building or use. Class 2 bicycle racks allow the bicycle frame and one wheel to be locked to the rack (with one u-shaped lock), and provide support to bicycles without damage to the wheels, frame, or components.

¹²¹ Per *Planning Code* Section 155.2, the proposed project would be required to provide 215 Class 1 and 28 Class 2 bicycle parking spaces for the 560 dwelling units, five Class 1 and 24 Class 2 spaces for the retail/restaurant uses, 90 Class 1 and 11 Class 2 spaces for the office uses, and four Class 1 and four Class 2 spaces for the childcare uses, for a total of 314 Class 1 and 67 Class 2 bicycle parking spaces. Because the proposed project would provide 553 Class 1 and 67 Class 2 bicycle parking spaces, the proposed project would meet the *Planning Code* requirements for Class 2 spaces, and exceed the requirements for Class 1 spaces. In addition, the proposed project would be required to provide one shower and six lockers for the retail/restaurant uses, and four showers and 24 lockers for the office uses, and the proposed project would meet and exceed these requirements.

Proposed Project Trip Generation by Mode, Weekday AM and PM Peak Hours) would be bicycle trips (i.e., a portion of the 181 trips during the a.m. peak hour and 205 trips during the p.m. peak hour). There are a number of bicycle routes in the project vicinity. Although the proposed project would result in an increase in the number of vehicles in the vicinity of the project site (up to 511 vehicle trips during the a.m. peak hour and 541 vehicle trips during the p.m. peak hour), this increase would not be substantial enough to adversely affect bicycle facilities in the area.

There is an existing northbound bicycle lane on 11th Street between Mission and Market Streets, and some bicyclists traveling to the project site would utilize this bicycle lane. Because the bicycle lane is located on the east side of 11th Street, vehicle access to and from the two proposed garage driveways would not substantially affect the bicycle operations within this lane (i.e., vehicles turning into and out of the garage driveways would not cross the bicycle lane).

The SFMTA's Mission Street/South Van Ness Avenue/Otis Street and Muni Forward TTRP.14 projects include removal of all on-street parking spaces on the north side of Mission Street between 11th Street and South Van Ness Avenue and restriping the westbound right-of-way to provide for a curbside right-turn-only lane to South Van Ness Avenue, a bicycle lane, a transit-only lane, and two westbound mixed-flow travel lanes. The proposed project would provide an on-site loading facility for the residential building that would be accessed via Mission Street and a mid-block alley. Unrestricted truck access into the on-site loading spaces has the potential to block bicycle access to on-street bicycle parking and block bicycle travel on Mission Street, thereby increasing the potential for conflicts and potential safety hazards between bicyclists, buses, and other vehicles on Mission Street. In addition, instead of accessing the on-site loading facility, some truck drivers may conduct loading activities at the curb travel lane along Mission Street, which may result in queues within the Mission Street vehicle and bicycle lanes. These conditions could result in potentially hazardous conditions for bicyclists, and would therefore result in a significant impact on bicyclists. **Mitigation Measure M-TR-3, Avoidance of Conflicts Associated with On-Site Loading Operations**, would ensure that trucks accessing the loading area do not double-park within the planned bicycle lane while awaiting access into the mid-block alley, or otherwise create hazardous conditions for bicyclists, and would mitigate impacts on bicyclists to *less than significant with mitigation*.

Significance after Mitigation: Less than Significant. Implementation of **Mitigation Measure M-TR-3** would ensure that the significant impact to bicyclists would be reduced to a less-than-significant level.

Loading Impacts

Impact TR-6: The proposed project would not result in a loading demand that could not be accommodated within the proposed on-site loading facilities or within convenient on-street loading zones, but could create potentially hazardous conditions or significant delays for traffic, transit, bicyclists, or pedestrians. (Less than Significant with Mitigation)

Proposed Project Supply. In total, the proposed project would provide six on-site truck loading spaces and four service-vehicle spaces.¹²²

- Residential and Retail/Restaurant Component**—Three at-grade off-street residential/retail freight loading spaces would be provided within the residential building, which would be accessed via a 26-foot-wide mid-block alley connecting Mission Street and the mid-block concourse located between the office and residential buildings. Each loading space would be 12 feet wide, 40 feet in length, and with a vertical clearance of 15 feet. The loading area would have direct access to the service corridor connecting the back of house functions of the retail and residential spaces fronting Mission Street and South Van Ness Avenue. Two of the three off-street loading spaces would be accessible by trucks 30 feet in length; however, due to the turns required to access the northernmost space and column spacing, the third space would be accessible only by a smaller van/service vehicle (e.g., utility repair vans).

A dedicated trash/recycling/compost room would be provided within the basement level for the residential and retail/restaurant uses, and would be accessed via the garage ramp to and from the 11th Street curb. A separate trash/recycling/compost room would be provided adjacent to the on-site loading area for the retail uses, and would be accessed via the mid-block alley to the Mission Street curb.

- Office and Permit Center Component**—Three truck loading spaces and four service vehicle loading spaces, for a total of seven loading spaces, would be provided within the first basement level within a dedicated loading area. See **Figure II-6, Basement Level 1 Plan**, in Chapter II, *Project Description*. Loading for the office building would be accessed from the 11th Street driveway into the office building garage. The truck loading spaces would be 12 feet wide, 30 feet in length, and with a vertical clearance of 13 feet, while the service vehicle spaces would be eight feet wide, 20 feet in length, and with a vertical clearance of 13 feet.

A dedicated trash/recycling/compost room would be provided on the first basement level, and would be accessed via the garage ramp to and from the 11th Street curb.

In addition to the on-site loading spaces in each building, the project sponsor would request the curb space adjacent to the project site on South Van Ness Avenue and 11th Street be designated for commercial and passenger loading/unloading. The proposed location and dimensions of the on-street loading spaces are presented on **Figure II-4, Proposed Site Plan**. The project sponsor would request the following curb changes

¹²² Per *Planning Code* Section 152.1, the proposed project would be required to provide three on-site loading spaces for the residential uses, and two loading spaces for the 38,000 gsf of retail/restaurant uses, and five loading spaces for the office uses. The *Planning Code* requirements of five loading spaces would be met for the proposed office and permit center component (three truck loading and four service vehicle spaces—per *Planning Code* Section 153(a)(6), within the C-3 zoning district two service vehicle spaces could be substituted for one truck space). However, the residential and retail/restaurant component would only provide three of the five *Planning Code*-required loading spaces (i.e., three for the residential uses and two for the retail/restaurant uses), and would therefore not meet the *Planning Code* requirement. As part of project approvals (i.e., *Planning Code* Section 309), the project sponsor would request an exception to the loading space requirement.

for South Van Ness Avenue and 11th Street, which would need to be approved at a public hearing through the SFMTA:

- On 11th Street, 20 diagonal parking spaces would be removed and four commercial loading spaces (approximately 80 feet) would be provided north of the residential garage driveway.
- On South Van Ness Avenue, the existing bus stop will be removed as part of the Van Ness BRT project, and the project sponsor would request that the eight existing general parking spaces be removed. The curb along the project frontage would be reallocated to provide a passenger loading/unloading zone 72 feet in length adjacent to the residential building, five commercial loading spaces, and a second passenger loading/unloading zone 100 feet in length adjacent to the office building. Both passenger loading/unloading zones would be designed to accommodate ADA requirements for passenger loading.

Loading Demand vs. Supply. The new uses associated with the proposed project would generate about 155 delivery/service vehicle-trips to the project site per day, including 60 trips to the residential and retail/restaurant component, and 95 trips to the office and permit center component.

- **Residential and Retail/Restaurant Component**—The 60 daily delivery/service vehicle trips to the residential building corresponds to a demand for four loading space during the peak hour of loading activities and three spaces during the average hour of loading activities. The peak loading space demand for three spaces would be accommodated within the three on-site truck loading spaces, as well as within the proposed nine on-street commercial vehicle loading spaces on South Van Ness Avenue (five spaces) and 11th Street (four spaces).

Residential move-in and move-out activities are anticipated to occur from the on-site truck loading spaces for trucks 30 feet in length or shorter, and on-street on South Van Ness Avenue or 11th Street for trucks more than 30 feet in length. The project sponsor anticipates that move-in and move-out activities would occur Monday through Friday (throughout the day, with the exception of the morning and evening peak periods), and on Saturdays and Sundays.

Vehicles accessing the residential and retail/restaurant component's on-site loading spaces could conflict with bicyclists, buses, and other vehicles on Mission Street, as well as with pedestrians on the Mission Street sidewalk adjacent to the project site and within the mid-block alley. These conflicts would include trucks stopping within the bicycle lane or transit-only lane while awaiting clearance to access the mid-block alley, trucks stopping within the bus stop or curbside right-turn-only lane thereby blocking and delaying transit and increasing vehicle-bicycle conflicts, and conflicts with pedestrians on Mission Street or in the mid-block alley. Thus, the potential exists that the conflicts noted above would occur and could result in potentially hazardous conditions for bicyclists and pedestrians, and delay transit on Mission Street, a street with transit running frequently. This would be considered a significant loading impact.

Implementation of **Mitigation Measure M-TR-3, Avoidance of Conflicts Associated with On-Site Loading**, would ensure that a Loading Operations Plan is implemented that would accommodate deliveries to the residential building within on-site and on-street loading spaces in such a way that does not result in significant conflicts with transit, bicyclists, pedestrians, or other vehicles, or result in potentially hazardous conditions. Monitoring and assessment of building loading operations would provide information to identify areas where improvements are needed, and would ensure that the performance standard identified in this measure could be met. Implementation of **Mitigation Measure M-TR-3** would mitigate the significant loading impacts to *less than significant with mitigation*.

- **Office and Permit Center Component**—The 95 daily delivery/service vehicle trips to the office building result in a demand for six loading spaces during the peak hour of loading activities and five spaces during the average hour of loading activities. The peak loading space demand of six spaces would be accommodated within the three truck loading spaces and four service vehicle spaces within the building's loading area within the first basement level. Deliveries to the office building would also be able to utilize the four on-street commercial loading spaces on 11th Street.

Trash, Recycling, and Compost Pick-Up. Each building would contain a dedicated trash/recycling/compost room.

- **Residential and Retail/Restaurant Component**—Trash, recycling, and compost for the residential uses would be stored on-site within a trash/recycling/compost room on the first basement level. Trash, recycling, and compost chutes would be located on each floor which lead into the basement level trash/recycling/compost room. Trash, recycling, and compost for the retail uses would be stored on-site within a trash/recycling/compost room on the ground floor adjacent to the loading area. For trash/recycling/compost pickup, the property management company would transport the containers from the basement level up the garage ramp and to the 11th Street curb for pick up, and would cart the containers from the ground level retail trash/recycling/compost room through the mid-block alley to Mission Street for pick up.
- **Office and Permit Center Component**—A dedicated trash/recycling/compost room would be provided on the first basement floor and would be accessed via the ramp from 11th Street. For trash/recycling/compost pickup, the property management company would cart the containers from the first basement level up the garage ramp to 11th Street.

Passenger Loading/Unloading. As described above, the project sponsor worked with the SFMTA to identify on-street passenger loading/unloading zones to accommodate each building. See **Figure II-4, Proposed Site Plan.**

- **Residential and Retail/Restaurant Component**—A passenger loading/unloading zone about 72 feet in length, accommodating about three vehicles at one time, would be provided on South Van Ness Avenue directly north of Mission Street to serve the residential and retail uses. The passenger loading/unloading zone would be in effect at all times, and would accommodate taxis, TNC vehicles¹²³ and other vehicles involved in short-term passenger loading/unloading activities. Because the residential building lobby would be located on Mission Street, the potential exists that passenger loading/unloading would occur illegally within the planned curb right-turn-only lane, which could block vehicles accessing the lane and conflict with bicyclists and/or transit in the adjacent lanes. Residents would be instructed to use the South Van Ness Avenue passenger loading/unloading zone for all pickups and drop-offs. Passenger loading/unloading activities on South Van Ness Avenue are not anticipated to result in double-parking or conflict with transit or traffic flow on northbound South Van Ness Avenue, as the zone could accommodate three vehicles at one time, and, as part of the planned and funded Van Ness BRT project, transit would be operating within the median of South Van Ness Avenue.
- **Office and Permit Center Component**—A passenger loading/unloading zone about 100 feet in length, accommodating five vehicles at one time, would be provided on South Van Ness Avenue adjacent to the office building concourse to serve the office and permit center uses. The passenger loading/

¹²³ Transportation Network Company (TNC) is a company or organization that provides transportation services using an online-enabled platform to connect passengers with drivers using their personal vehicles (e.g., Lyft, SideCar, Uber).

unloading zone would be in effect at all times, and would accommodate taxis, TNC vehicles, and other vehicles involved in short-term passenger loading/unloading activities. As noted above, passenger loading/unloading activities on South Van Ness Avenue are not anticipated to result in double-parking or conflict with transit or traffic flow on northbound South Van Ness Avenue, as the zone could accommodate five vehicles at one time, and, as part of the planned and funded Van Ness BRT project, transit would be operating within the median of South Van Ness Avenue.

Significance after Mitigation: Less than Significant. Implementation of **Mitigation Measure M-TR-3** would ensure that the significant impact related to loading operations would be reduced to a less-than-significant level.

Emergency Vehicle Access Impacts

Impact TR-7: The proposed project would not result in significant impacts on emergency vehicle access. (Less than Significant)

Emergency vehicle access to the block containing the project site would remain unchanged from existing conditions, and the proposed project would not change adjacent travel lanes. Emergency vehicle access to the project site is primarily from South Van Ness Avenue. With implementation of the planned and funded Van Ness BRT project two mixed-flow lanes (one northbound and one southbound) on South Van Ness Avenue between Market and Mission Streets would be converted into two dedicated transit-only lanes. Emergency service providers would continue to be able to pull up to the project site, as well as to other buildings on the project block, from South Van Ness Avenue, 11th Street, or Mission Street. Although the proposed project would result in additional vehicles on the adjacent streets, because multiple travel lanes are provided on most streets in the vicinity of the project site, the increases would not impede or hinder emergency vehicle travel. Because there are multiple travel lanes on adjacent streets, vehicles would be able to pull over to the side of the street (or within the SFMTA planned bicycle lanes adjacent to the project site on Mission Street) and provide a clear travel path when an emergency vehicle with sirens is approaching, and, therefore, would not substantively delay emergency vehicles. Therefore, the proposed project impacts on emergency vehicle access would be *less than significant*.

Mitigation: None required.

Construction Impacts

Impact TR-8: The proposed project construction activities would not result in substantial interference with pedestrian, bicycle, or vehicle circulation and accessibility to adjoining areas, and would not result in potentially hazardous conditions. (Less than Significant)

It is anticipated that construction of the proposed project would take approximately 24 months (2 years). The project sponsor proposes to construct both buildings simultaneously. There would be five primary construction phases, which would partially overlap: demolition (two months), excavation and shoring (five months), foundation and below-grade construction (two months), base building construction (seven months), and exterior and interior finishing (15 months).

The construction impact assessment is based on currently available information from the project sponsor and requirements that are part of the City's permitting process and regulations. Prior to construction, as part of the building permit process, the project sponsor and construction contractor(s) would be required to meet with Public Works and SFMTA staff to develop and review truck routing plans for demolition, disposal of excavated materials, materials delivery and storage, as well as staging for construction vehicles. The construction contractor would be required to meet the City of San Francisco's Regulations for Working in San Francisco Streets, (the Blue Book), including those regarding sidewalk and lane closures, and would meet with SFMTA staff to determine if any special traffic permits would be required.¹²⁴ In addition to the regulations in the Blue Book, the contractor would be responsible for complying with all city, state, and federal codes, rules and regulations. The project sponsor would be responsible for reimbursing the SFMTA for all temporary striping and signage during project construction.

Construction-related activities would typically occur Monday through Friday, between 7:00 a.m. and 7:00 p.m., although some work is anticipated to occur overnight and on Saturdays. For example, the pouring of concrete for the foundation mat would most likely occur during a continuous 24-hour period, and may occur during the overnight hours and/or on a Saturday. Some weekend work, including equipment and material deliveries would be expected in order to minimize the impact on adjacent traffic, including transit. Construction is not anticipated to occur on major legal holidays, but may occur on an as-needed basis. The hours of construction would be stipulated by the Department of Building Inspection, and the contractor would need to comply with the San Francisco Noise Ordinance and the Blue Book, including requirements to avoid peak hour construction activities on adjacent streets.¹²⁵ Night noise permits would be required for select construction activities.

Construction staging would occur on-site and on the sidewalks adjacent to the project site (i.e., on South Van Ness Avenue, Mission Street, and 11th Street). On South Van Ness Avenue and 11th Street, the sidewalks adjacent to the project site would be closed for the duration of the construction period, and protected pedestrian walkways would be provided, per Blue Book regulations, within the adjacent parking lane. The removal of all on-street parking spaces on the north side of Mission Street between 11th Street and South Van Ness Avenue by SFMTA as part of the ongoing Muni Forward TTRP.14 project to implement transit-only lane on Mission Street would preclude a temporary pedestrian walkway within the parking lane, and therefore, only a portion of the sidewalk adjacent to the project site on Mission Street would be closed. Thus, pedestrian access on Mission Street would be maintained on the sidewalk throughout the construction period. Construction activities may require temporary travel lane closures, which would be coordinated with the City in order to minimize the impacts on local traffic and transit. Construction activities, such as delivery of large construction equipment and oversized construction materials that would require one or more temporary lane closures on South Van Ness Avenue or Mission Street, would need to be conducted on weekend days when pedestrian, transit and traffic activity is lower. Prior to construction, the project contractor would coordinate with Muni's Street Operations and Special Events Office to coordinate construction activities and reduce any impacts to transit operations on South Van Ness Avenue or Mission Street. The sidewalk and travel lane closures would be required to coordinate with the City in order to minimize the impacts on traffic. In general, travel lane and sidewalk closures are subject to review and approval by the SFMTA's Transportation Advisory Staff Committee (TASC) for permanent travel and sidewalk closures, and the Interdepartmental Staff

¹²⁴ The *SFMTA Blue Book*, 8th Edition (2012), is available online through SFMTA (www.sfmta.com).

¹²⁵ The San Francisco Noise Ordinance allows construction activities seven days a week, between 7:00 a.m. and 8:00 p.m.

Committee on Traffic and Transportation (ISCOTT) for temporary sidewalk and travel lane closures. Both TASC and ISCOTT are interdepartmental committees that include representatives from Public Works, SFMTA, the Police Department, the Fire Department, and the Planning Department.

There are currently two bus stops located adjacent to the project site: one on South Van Ness Avenue north of Mission Street, and one on Mission Street west of 11th Street. Because the sidewalk adjacent to the site on South Van Ness Avenue would be closed during the construction period and a walkway provided within the adjacent parking lane, the existing Muni bus stop would need to be temporarily relocated during construction. The 110-foot-long Muni bus stop on northbound South Van Ness Avenue north of Mission Street could be relocated further north adjacent to the One South Van Ness Avenue building, and would require temporary displacement of five to six metered parking spaces. Alternatively, prior to 1500 Mission Street construction, the planned and funded Van Ness BRT project may move the curbside bus stop to the center of the roadway, adjacent to the transit-only lanes. On Mission Street, only a portion of the sidewalk would be temporarily closed during construction, with pedestrian access maintained; however, it is anticipated that the 130-foot-long Muni bus stop on westbound Mission Street west of 11th Street would also need to be relocated, as sufficient width to accommodate pedestrians and riders waiting for the bus would not be available. Thus this bus stop, which is currently utilized by the 14 Mission, 14R Mission Rapid, 47 Van Ness, and 90 San Bruno Owl routes, could be relocated to a near-side stop east of 11th Street. The temporary relocation of the bus stop to the east would require temporary displacement of four to six metered parking spaces on Mission Street. Relocation of this bus stop, would result in the elimination of a bus stop for the 47 Van Ness and 90 San Bruno Owl, which travel northbound on 11th Street and make a left turn onto Mission Street westbound directly into the bus stop. The closest bus stops for the 47 Van Ness and 90 San Bruno Owl routes are on 11th Street south of Howard Street, and South Van Ness Avenue north of Mission Street. A number of support poles for overhead wires are located on South Van Ness Avenue, Mission Street, and 11th Street, and these would be maintained during project construction. The construction contractor currently anticipates that the two support poles located at the corner of South Van Ness Avenue and Mission Street adjacent to the project site would need to be temporarily relocated.

During the construction period, there would be a flow of construction-related trucks into and out of the site. There would be an average of between 32 and 60 construction trucks traveling to the site on a daily basis, with the greatest number of construction truck trips occurring during the foundation mat pour, with about 300 truck trips per day. The impact of construction truck traffic would be a temporary lessening of the capacities of streets due to the slower movement and larger turning radii of trucks, which may block travel lanes, and affect both traffic and Muni operations. Current construction plans anticipate that most construction trucks would enter the site mid-block on Mission Street and exit onto 11th Street, make a right on Mission Street and a left onto southbound South Van Ness. In general, trucks traveling to the project site would use U.S. 101 or I-80 to the Eight Street (from the east), Ninth Street (from the south), or Mission Street (from the east or south) exits in San Francisco. Within San Francisco they would travel northbound on Ninth Street and turn left onto Mission Street, or northbound on South Van Ness Avenue. Trucks leaving the site would exit onto 11th Street or Mission Street and turn left onto South Van Ness Avenue, and continue southbound to the U.S. 101 on-ramp at the intersection of South Van Ness/13th.

There would be an average of between 15 and 375 construction workers per day at the project site, with peak days seeing as many as 600 construction workers. The trip distribution and mode split of construction workers

are not known. It is anticipated that the addition of the worker-related vehicle- or transit-trips would not substantially affect transportation conditions, as any impacts on local intersections or the transit network would be similar to, or less than, those associated with the proposed project (once completed) and would be temporary in nature. Construction workers who drive to the site would cause a temporary parking demand increase. The time-limited and residential parking restrictions in the vicinity of the project site would restrict all-day parking by construction personnel. Construction workers who drive to the project site would likely choose to park in nearby parking facilities, such as the 12th/Kissling or Civic Center garages.

Overall, proposed project construction would maintain pedestrian circulation adjacent to the project site, and would not require travel lane closures for extended durations that would disrupt or substantially delay vehicles, including transit, and bicyclists traveling on South Van Ness Avenue, Mission and 11th Streets. Furthermore, construction activities would be required to meet City rules and guidance so that work can be done safely and with the least possible interference with pedestrians, bicyclists, vehicles and transit, and would therefore not result in potentially hazardous conditions. For the reasons described above, the proposed project's construction-related transportation impacts would be *less than significant*.

While the proposed project's construction-related transportation impacts would be less than significant, **Improvement Measure I-TR-8, Construction Management Plan and Public Updates**, would further reduce the less-than-significant impacts related to potential conflicts between construction activities and pedestrians, bicyclists, transit, and autos. **Improvement Measure I-TR-8** would further reduce the proposed project's less-than-significant impacts related to potential conflicts between construction activities and pedestrians, transit, and autos by including provisions for construction truck management, a construction worker parking plan, project construction updates for adjacent businesses and residents, and encouraging construction worker travel via non-motorized modes. Implementation of this improvement measure would further reduce the magnitude of the proposed project's less-than-significant construction-related transportation impacts, and would not result in any secondary transportation-related impacts.

Improvement Measure

Improvement Measure I-TR-8 – Construction Management Plan and Public Updates.

- *Construction Management Plan*—The project sponsor should develop and, upon review and approval by the SFMTA and Public Works, implement a Construction Management Plan, addressing transportation-related circulation, access, staging and hours of delivery. The Construction Management Plan would disseminate appropriate information to contractors and affected agencies with respect to coordinating construction activities to minimize overall disruption and ensure that overall circulation in the project area is maintained to the extent possible, with particular focus on ensuring transit, pedestrian, and bicycle connectivity. The Construction Management Plan would supplement and expand, rather than modify or supersede, and manual, regulations, or provisions set forth by the SFMTA, Public Works, or other City departments and agencies, and the California Department of Transportation. Management practices could include: best practices for accommodating pedestrians and bicyclists, identifying routes for construction trucks to utilize, minimizing deliveries and travel lane closures during the a.m. (7:30 a.m. to 9:00 a.m.) and p.m. (4:30 p.m. to 6:00 p.m.) peak periods along South Van Ness Avenue and Mission Street (Monday through Friday).

- *Carpool, Bicycle, Walk, and Transit Access for Construction Workers*—To minimize parking demand and vehicle trips associated with construction workers, the construction contractor could include as part of the Construction Management Plan methods to encourage carpooling, bicycle, walk and transit access to the project site by construction workers (such as providing secure bicycle parking spaces, participating in free-to-employee and employer ride matching program from www.511.org, participating in emergency ride home program through the City of San Francisco (www.sferh.org), and providing transit information to construction workers.
- *Construction Worker Parking Plan*—As part of the Construction Management Plan that would be developed by the construction contractor, the location of construction worker parking could be identified as well as the person(s) responsible for monitoring the implementation of the proposed parking plan. The use of on-street parking to accommodate construction worker parking could be discouraged. The project sponsor could provide on-site parking once the below grade parking garage is usable.
- *Project Construction Updates for Adjacent Businesses and Residents*—To minimize construction impacts on access to nearby residences and businesses, the project sponsor could provide nearby residences and adjacent businesses with regularly-updated information regarding project construction, including construction activities, peak construction vehicle activities (e.g., concrete pours), travel lane closures, and parking lane and sidewalk closures. A regular email notice could be distributed by the project sponsor that would provide current construction information of interest to neighbors, as well as contact information for specific construction inquiries or concerns.

Mitigation: None required.

Cumulative Impact Evaluation

The geographic context for the analysis of cumulative transportation impacts includes the sidewalks and roadways adjacent to the project site, and the local roadway and transit network in the vicinity of the project site. The discussion of cumulative transportation impacts assesses the degree to which the proposed project would affect the transportation network in conjunction with overall citywide growth and other reasonably foreseeable future projects. See Chapter IV, *Environmental Setting, Impacts, and Mitigation Measures*, for the approach to the cumulative analysis and a more detailed description of the reasonably foreseeable development projects. In addition to these projects, the cumulative analysis includes planned and proposed transportation network changes. The foreseeable development projects and transportation network changes are those known at this time. The cumulative analysis includes the transportation network changes described below.

Muni Forward. Muni Forward (previously referred to as the Transit Effectiveness Project—TEP) presents a thorough review of San Francisco’s public transit system, initiated by SFMTA in collaboration with the City Controller’s Office. Muni Forward is aimed at improving reliability, reducing travel times, providing more frequent service and updating Muni bus routes and rail lines to better match current travel patterns. Implementation of Muni Forward was initiated in 2015, and components would be implemented based on funding and resource availability. Muni Forward recommendations include new routes and route realignments, increased service frequency and speed on busy routes, and elimination or consolidation of

certain routes or route segments with low ridership. The following changes are either planned or have already been implemented by Muni Forward for routes in the proposed project vicinity:

- Minor frequency changes on the F Market & Wharves, J Church, K Ingleside, L Taraval, M Ocean View, and N Judah.
- 6 Parnassus—The route was realigned to follow Stanyan Street instead of Masonic Avenue.
- 14 Mission—Service will operate using motor coaches rather than trolley buses.
- 14R Mission Rapid—Service will operate using trolley rather than motor buses.
- 47 Van Ness—Route will be realigned. Route will terminate at Van Ness Avenue and North Point Street and will share a terminal with the 49R Van Ness-Mission Rapid. A common terminal for both routes serving Van Ness Avenue would improve reliability by allowing line management from a single point; the North Point segment will be covered by new route 11 Downtown Connector. The midday frequency will change from 10 to nine minutes, and the proposed route change will coordinate with planned Van Ness BRT project.
- 49R Van Ness-Mission Rapid—The existing 49 Van Ness-Mission route will be redesigned and rebranded as the 49R Van Ness Mission Rapid (as planned in the Van Ness BRT project), making local stops on Van Ness Avenue and on Ocean Avenue and making limited stops on Mission Street.
- 7/7R Haight-Noriega—The 7R Haight-Noriega Rapid, which operates only in the peak period and peak direction, was replaced by the 7 Haight-Noriega with all day limited-stop service on Haight Street in both directions. The service makes limited stops between Stanyan and Market Streets. The midday frequency was changed from 12 to 10 minutes.

Polk Street Improvement Project. The SFMTA is finalizing design of streetscape improvements on Polk Street between Union and McAllister Streets to create a thriving and active corridor, enhance the pedestrian experience, complement bicycle and transit mobility, and support commercial activities. Interim safety improvements part of the overall streetscape improvement have been implemented, and include leading pedestrian intervals,¹²⁶ daylighting at signalized and stop-controlled intersections,¹²⁷ loading zone improvements, new accessible parking spaces, new shared lane markings, and a new right turn on northbound Polk Street at Broadway. The final streetscape design includes protected bikeways in the northbound direction between McAllister and Pine Streets, a new green bike lane in the southbound direction between Union and Post Streets, upgrades to existing facilities such as green paint, painter buffers, and green backed sharrows, transit enhancements such as bus stop consolidation, relocation and bus bulbs, and public realm improvements such as landscaping, street lights, and alley enhancements. Construction is beginning fall 2016 and anticipated to last two years.

Better Market Street Project. San Francisco Public Works, in coordination with the San Francisco Planning Department and the SFMTA proposes to redesign and provide various transportation and streetscape improvements to the 2.2-mile segment of Market Street between Octavia Boulevard and The Embarcadero,

¹²⁶ Leading pedestrian intervals typically give pedestrians a 3- to 5-second head start when entering an intersection with a corresponding green signal in the same direction of travel. They also enhance the visibility of pedestrians in the intersection and reinforce their right-of-way over turning vehicles, especially in locations with a history of conflict. An example is the pedestrian signal at the corner of Harrison and Fourth Streets.

¹²⁷ Daylighting at intersections involves creating a no-parking zone at the curbs in front of the crosswalks at an intersection to clear sightlines between pedestrians crossing and oncoming vehicles.

and potentially to the 2.3-mile segment of Mission Street between Valencia Street and The Embarcadero, as well as Valencia Street between McCoppin and Market Streets, and 10th Street between Market and Mission Streets. Better Market Street project elements consist of both transportation and streetscape improvements, including changes to roadway configuration and private vehicle access; traffic signals; surface transit, including transit-only lanes, stop spacing, service, stop location, stop characteristics and infrastructure; bicycle facilities; pedestrian facilities; streetscapes; commercial and passenger loading; vehicular parking; plazas; and utilities. Environmental review has recently been initiated, and will analyze three possible alternatives for the project.

Alternatives 1 and 2 involve redesign and improvement of Market Street only, while Alternative 3 would redesign and improve Mission Street in addition to providing the Alternative 1 improvements to Market Street. Alternatives 1 and 2 each have two design options for bicycle facilities on Market Street. Alternative 1 would remove all commercial and passenger loading zones on Market Street, with the exception of paratransit users, and new commercial loading spaces and passenger loading zones would be created on adjacent cross streets and alleys. Under Alternative 2 some commercial loading spaces and passenger loading zones would remain on Market Street, and some commercial loading spaces and passenger loading zones would be created on adjacent cross streets and alleys.

Alternatives 1 and 2 each include two designs for the bicycle facilities on Market Street: Design Option A and Design Option B. Under Alternatives 1 and 2 Design Option A, an enhanced version of the existing shared vehicle and bicycle lane with painted sharrows (shared lane pavement markings) would be provided at locations where a dedicated bicycle facility is not already present. Under Alternatives 1 and 2 Design Option B, a new raised cycle track (an exclusive bicycle facility that is physically separated from motor traffic and is distinct from the sidewalk for the exclusive or primary use of bicycles) the entire length of Market Street would be provided, except at locations where the BART/Muni entrances or other obstructions would not allow it. Alternative 3 includes the proposed bicycle facilities on Market Street described under Alternative 1, Design Option A and adds a cycle track in both directions and a floating parking lane (located between the travel lane and the cycle track on one side of the street) on Mission Street. Under Alternative 3, the existing transit-only lanes on Mission Street would be removed and Muni, Golden Gate Transit, and SamTrans bus routes would be moved to Market Street. Design, environmental review, selection of the preferred alternative, and approvals will continue through 2017, and construction of improvements is currently anticipated to start in 2018.¹²⁸

Central SoMa Plan. The Central SoMa Plan would establish a land use and transportation planning framework for the Central SoMa Plan area. The Central SoMa Plan area encompasses 17 city blocks, and is bounded by Second Street on the east, Sixth Street on the west, Townsend Street on the south, and by an irregular border that generally jogs along Folsom, Howard, and Stevenson Streets to the north. This plan proposes to rezone the area along the southern portion of the proposed Central Subway transit line along Fourth Street to increase the amount of allowable residential and commercial development by (1) removing land use restrictions to support a greater mix of uses while also emphasizing office uses in the central portion of the Plan area; (2) increasing height limits on certain sites, primarily south of Harrison Street; and (3) modifying the system of streets and circulation to meet the needs and goals of a dense transit-oriented

¹²⁸ Better Market Street Project information available at <http://www.bettermarketstreetsf.org/about-common-questions.html>, accessed February 4, 2015.

district. The Central SoMa Plan would also include public realm improvements; new open space; and policies to preserve neighborhood character, preserve historic structures, improve public amenities, and promote sustainability. The Central SoMa Plan recommends street network changes extending beyond the Plan area with specific designs for Folsom, Howard, Harrison, Bryant, Brannan, Third, and Fourth Streets. On Howard and Folsom Street, proposed street network changes would extend west to 11th Street. The Planning Department published a Notice of Preparation of an Environmental Impact Report on April 24, 2013, and an Initial Study on February 12, 2014. Environmental review of the Central SoMa Plan is proceeding.¹²⁹

Cumulative VMT Impacts

Impact C-TR-1: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not contribute to regional VMT in excess of expected levels. (Less than Significant)

VMT Analysis

VMT by its very nature is largely a cumulative impact. The amount and distance past, present, and future projects might cause people to drive contribute to the physical secondary environmental impacts associated with VMT. It is likely that no single project by itself would be sufficient in size to prevent the region or state in meeting its VMT reduction goals. Instead, a project's individual VMT contributes to cumulative VMT impacts. The VMT and induced automobile travel project-level thresholds are based on levels at which new projects are not anticipated to conflict with state and regional long-term greenhouse gas emission reduction targets and statewide VMT per capita reduction targets set in 2020. Therefore, because the proposed project would not exceed the project-level thresholds for VMT and induced automobile travel (Impact TR-1), the proposed project would not be considered to result in a cumulatively considerable contribution to VMT impacts.

Furthermore, as shown in **Table IV.B-11, Daily VMT per Capita—Existing and 2040 Cumulative Conditions**, presents the existing and 2040 cumulative average daily VMT per capita for the residential, office, and retail land uses for the TAZ within which the proposed project is located, as well as the Bay Area regional average. San Francisco 2040 cumulative conditions were projected using a SF-CHAMP model run, including residential and job growth estimates and reasonably foreseeable transportation investments through 2040.

- Projected 2040 average daily VMT per capita for residential land uses is 2.7 for the transportation analysis zone the project site is located in, TAZ 591. This is 83 percent below the projected 2040 regional average daily VMT per capita of 16.1.
- Projected 2040 average daily work-related VMT per employee for the office use is 6.9 for TAZ 591. This is 60 percent below the projected 2040 regional average daily work-related VMT per employee of 17.0.
- Projected 2040 average daily retail VMT per employee for the retail use is 8.9 for TAZ 591. This is 40 percent below the projected 2040 regional average daily retail VMT per employee of 14.6.

Overall, because the project site is located in an area where VMT is greater than 15 percent below the projected 2040 regional average, the proposed project's residential, office, and restaurant/retail uses would not result in substantial additional VMT. Therefore, the proposed project, in combination with past, present, and

¹²⁹ San Francisco Planning Department, Central SoMa Plan Initial Study, February 12, 2014 (Case File No. 2011.1356E). Available at http://sfmea.sfplanning.org/2011.1356E_IS.pdf, accessed June 2, 2016.

reasonably foreseeable development projects, would not contribute to any substantial cumulative increase in VMT.

The proposed project is not a transportation project. However, the proposed project would include features that would alter the transportation network. As discussed in the existing plus project conditions, these features fit within the general types of projects identified above that would not substantially induce automobile travel.¹³⁰ Therefore, the proposed project would not have a considerable contribution to any substantial cumulative increase in automobile travel.

Mitigation: None required.

Cumulative Traffic Impacts

Impact C-TR-2: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not cause major traffic hazards. (Less than Significant)

As described above on pp. IV.B-58 to IV-12, a number of cumulative transportation network projects are currently underway, planned, or proposed that would enhance the transportation network in the project vicinity, particularly for pedestrians and bicyclists. These include the SFMTA Mission Street/South Van Ness Avenue/Otis Street Improvements, Polk Street Improvement Project, and the Better Market Street project, among others that are targeted at reducing existing hazards. Cumulative transportation projects, including the proposed project's sidewalk improvements and driveways, would not introduce unusual design features, and these projects would be designed to meet City, NACTO, and FHWA standards, as appropriate. Other development projects proposing street changes in the area would be subject to these requirements as well. Increases in vehicle, pedestrian and bicycle travel associated with cumulative development, including the proposed project, could result in the potential for increased vehicle-pedestrian and vehicle-bicycle conflicts, but the increased potential for conflicts would not be considered new or substantial worsening of a traffic hazard. Therefore, the proposed project, in combination with past, present, and reasonably foreseeable development projects, would result in *less-than-significant* cumulative traffic hazard impacts.

Mitigation: None required.

Cumulative Transit Impacts

Impact C-TR-3: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant transit impacts. (Less than Significant)

The 2040 cumulative transit screenline analysis accounts for ridership and/or capacity changes associated with such projects as Muni Forward, the Van Ness BRT, Central Subway Project (which is scheduled to open in 2019), the new Transbay Transit Center, the electrification of Caltrain, and expanded WETA ferry service. Existing and 2040 cumulative conditions for the weekday a.m. and p.m. peak hours for the Muni and regional

¹³⁰ San Francisco Planning Department, Central SoMa Plan Initial Study, February 12, 2014 (Case File No. 2011.1356E). Available at http://sfmea.sfplanning.org/2011.1356E_IS.pdf, accessed June 2, 2016.

screenlines are presented in tables below. The 2040 cumulative transit analysis was developed by SFMTA based on the SFCTA travel demand model analysis conducted as part of the Central SoMa Plan effort.

Muni

As indicated in **Table IV.B-15, Muni Downtown Screenline Analysis, Existing and 2040 Cumulative Conditions—Weekday AM Peak Hour**, for 2040 cumulative conditions at Muni screenlines during the a.m. peak hour, the capacity utilization of the Northeast screenline and corridors within the screenlines would be less than Muni's 85 percent capacity utilization standard. However, under 2040 cumulative conditions, the capacity utilization on a number of corridors within the Northwest, Southeast, and Southwest screenlines, and on the Northwest screenline, would exceed the 85 percent capacity utilization standard during the a.m. peak hour. The proposed project's contribution to ridership on the corridors and screenline were examined to determine if the contribution would be considered significant (i.e., more than five percent), and therefore a cumulative project impact. The proposed project would add between five and 97 transit trips to the Southeast and Southwest corridors, and the contribution would be less than two percent, and therefore cumulative impacts on the Muni screenlines during the a.m. peak hour would be *less than significant*.

The proposed project would not contribute riders at the maximum load point to the Northeast or Northwest screenlines and/or corridors during the a.m. or p.m. peak hours. Proposed project trips traveling to or from Superdistrict 1 or Superdistrict 2 (i.e., the northeast and northwest quadrants of San Francisco) would not cross the downtown screenlines (i.e., they would be traveling to downtown from Superdistrict 1 or Superdistrict 2 during the a.m. peak hour, or be traveling from downtown to Superdistrict 1 or Superdistrict 2 during the p.m. peak hour).

As indicated in **Table IV.B-16, Muni Downtown Screenline Analysis, Existing and 2040 Cumulative Conditions—Weekday PM Peak Hour**, for 2040 cumulative conditions at Muni screenlines during the p.m. peak hour, the capacity utilization of the Northeast and Southwest screenlines and corridors within the screenlines would be less than Muni's 85 percent capacity utilization standard. However, under 2040 cumulative conditions, the capacity utilization of a number of corridors within the Northwest and Southeast screenlines and on the Northwest screenline would increase and exceed the 85 percent capacity utilization standard during the p.m. peak hour. The proposed project would add between six and 101 transit trips to the Southeast and Southwest corridors, and the contribution would be less than two percent, and therefore, as for a.m. peak hour conditions, cumulative impacts on the Muni screenlines during the p.m. peak hour would also be *less than significant*.

TABLE IV.B-15 MUNI DOWNTOWN SCREENLINE ANALYSIS, EXISTING AND 2040 CUMULATIVE CONDITIONS—WEEKDAY AM PEAK HOUR

Screenline/Corridor	Existing			2040 Cumulative		
	Ridership	Capacity	Utilization	Ridership	Capacity	Utilization
Northeast						
Kearny/Stockton	2,211	3,050	72.5%	7,394	9,473	78.1%
Other	538	1,141	47.2%	758	1,785	42.5%
<i>Subtotal</i>	<i>2,749</i>	<i>4,191</i>	<i>65.6%</i>	<i>8,152</i>	<i>11,258</i>	<i>72.4%</i>
Northwest						
Geary	1,821	2,490	73.2%	2,673	3,763	71.0%
California	1,610	2,010	80.1%	1,989	2,306	86.3%
Sutter/Clement	480	630	76.2%	581	756	76.9%
Fulton/Hayes	1,277	1,680	76.0%	1,962	1,977	99.2%
Balboa	758	1,019	74.4%	690	1,008	68.5%
<i>Subtotal</i>	<i>5,946</i>	<i>7,828</i>	<i>76.0%</i>	<i>7,895</i>	<i>9,810</i>	<i>80.5%</i>
Southeast						
Third	350	793	44.1%	2,422	5,712	42.4%
Mission	1,643	2,509	65.5%	3,117	3,008	103.6%
San Bruno/Bayshore	1,689	2,134	79.1%	1,952	2,197	88.8%
Other	1,466	1,756	83.5%	1,795	2,027	88.6%
<i>Subtotal</i>	<i>5,147</i>	<i>7,193</i>	<i>71.6%</i>	<i>9,286</i>	<i>12,944</i>	<i>71.2%</i>
Southwest						
Subway	6,330	6,205	102.0%	6,314	7,020	89.9%
Haight/Noriega	1,121	1,554	72.1%	1,415	1,596	88.7%
Other	465	700	66.5%	175	560	31.3%
<i>Subtotal</i>	<i>7,916</i>	<i>8,459</i>	<i>93.6%</i>	<i>7,904</i>	<i>9,176</i>	<i>86.11</i>
<i>Total All Screenlines</i>	<i>21,758</i>	<i>27,671</i>	<i>78.6%</i>	<i>33,237</i>	<i>43,188</i>	<i>77.0%</i>

SOURCE: SF Planning Department Memorandum, Transit Data for Transportation Impact Studies, May 2015.

NOTE:

Bold indicates capacity utilization greater than the Muni 85 percent capacity utilization standard.

In summary, considering cumulative Muni screenline and corridor conditions, the proposed project would generate new transit trips during the a.m. and p.m. peak hours that would cross the corridors and screenlines that are projected to operate at more than the 85 percent capacity utilization standard. As discussed above, the proposed project would not contribute considerably to these corridors and screenlines, and therefore, the proposed project would not contribute considerably to significant cumulative Muni transit impacts. SFMTA would, over time and as part of their operational practices, continue to monitor Muni service citywide and reporting on meeting service goals and capacity utilization standards, with the goal of providing additional capacity or other service changes which would thereby reduce peak hour capacity utilization to less than the performance standard, where feasible.

TABLE IV.B-16 MUNI DOWNTOWN SCREENLINE ANALYSIS, EXISTING AND 2040 CUMULATIVE CONDITIONS – WEEKDAY PM PEAK HOUR

Screenline/Corridor	Existing			2040 Cumulative		
	Ridership	Capacity	Utilization	Ridership	Capacity	Utilization
Northeast						
Kearny/Stockton	2,245	3,227	67.5%	6,295	8,329	75.6%
Other	683	1,078	63.4%	1,229	2,065	59.5%
<i>Subtotal</i>	<i>2,928</i>	<i>4,405</i>	<i>66.5%</i>	<i>7,524</i>	<i>10,394</i>	<i>72.4%</i>
Northwest						
Geary	1,964	2,623	74.9%	2,996	3,621	82.7%
California	1,322	1,752	75.5%	1,766	2,021	87.4%
Sutter/Clement	425	630	67.5%	749	756	99.1%
Fulton/Hayes	1,184	1,323	89.5%	1,762	1,878	93.8%
Balboa	625	974	64.2%	776	974	79.7%
<i>Subtotal</i>	<i>5,520</i>	<i>7,302</i>	<i>75.8%</i>	<i>8,049</i>	<i>9,250</i>	<i>87.0%</i>
Southeast						
Third	782	793	98.6%	2,300	5,712	40.3%
Mission	1,407	2,601	54.1%	2,673	3,008	88.9%
San Bruno/Bayshore	1,536	2,134	72.0%	1,817	2,134	85.1%
Other	1,084	1,675	64.7%	1,582	1,927	82.1%
<i>Subtotal</i>	<i>4,809</i>	<i>7,203</i>	<i>66.8%</i>	<i>8,372</i>	<i>12,781</i>	<i>65.5%</i>
Southwest						
Subway	4,904	6,164	79.6%	5,692	6,804	83.7%
Haight/Noriega	977	1,554	62.9%	1,265	1,596	79.3%
Other	555	700	79.3%	380	840	45.2%
<i>Subtotal</i>	<i>6,436</i>	<i>8,418</i>	<i>76.5%</i>	<i>7,337</i>	<i>9,240</i>	<i>79.4%</i>
Total All Screenlines	19,693	27,328	72.1%	31,282	41,665	75.1%

SOURCE: SF Planning Department Memorandum, Transit Data for Transportation Impact Studies, May 2015.

NOTE:

Bold indicates capacity utilization greater than the Muni 85 percent capacity utilization standard.

No other projects are proposed along South Van Ness Avenue or Mission Street near the project site other than the three planned projects analyzed in existing plus project conditions as relates potential conflicts with transit operations.

As noted above, the Better Market Street project is currently undergoing environmental review, and would result in changes in the transit network on Market Street and, depending on the alternative selected for implementation, on Mission Street. Alternative 3 would relocate all existing Muni, Golden Gate Transit and SamTrans routes on Mission Street to Market Street. The proposed project would not preclude implementation of the Better Market Street project transit changes on Market and Mission Streets.

The Central SoMa Plan includes street network changes that extend west of the Plan area, to the south of the project site. The Central SoMa Plan includes two different options for the couplet of Howard and Folsom Streets between Third and 11th Street, both of which would result in fewer mixed-flow travel lanes, and transit-only lane on Folsom Street under the Howard/Folsom One-way Option. In the vicinity of the project site, transit-only lanes would also be provided on Harrison Street (between Second and 10th Streets) and on Bryant Street (between Second and Seventh Streets). The proposed project would not change the configurations of these streets, and therefore would not preclude implementation of the proposed Central SoMa Plan's street network changes in the project vicinity.

Regional Transit

Regional screenlines are presented in **Table IV.B-17, Regional Screenline Analysis, Existing and 2040 Cumulative Conditions—Weekday AM Peak Hour**, for the a.m. peak hour and **Table IV.B-18, Regional Screenline Analysis, Existing and 2040 Cumulative Conditions—Weekday PM Peak Hour**, for the p.m. peak hour. Under 2040 cumulative conditions, with exception of BART from the East Bay during the a.m. peak hour, and to the East Bay during the p.m. peak hour, no regional transit providers are expected to exceed their established capacity utilization thresholds (i.e., 100 percent). The proposed project would add 249 new transit trips to the regional transit providers during the a.m. peak hour (180 trips to the East Bay, 18 trips to the North Bay, and 51 trips to the South Bay), and would add 259 new transit trips to the regional transit providers during the p.m. peak hour (185 trips to the East Bay, 20 trips to the North Bay, and 54 trips to the South Bay).

During the a.m. peak hour, the proposed project would add 165 trips to BART from the East Bay, which would be a contribution of 0.4 percent, and would not be a considerable contribution to BART capacity utilization exceeding the 100 percent standard. During the p.m. peak hour, the proposed project would add 165 trips to BART to the East Bay, and the contribution would be 0.5 percent, and would also not be considered a considerable contribution to BART capacity utilization exceeding the 100 percent standard. Therefore, for both a.m. and p.m. peak hour conditions, the proposed project would not contribute considerably to cumulative impacts on the regional screenlines. Therefore, the cumulative impacts to regional transit would be *less than significant*.

Overall, the proposed project would not contribute considerably to these corridors and screenlines, and therefore, the proposed project in combination with past, present and reasonably foreseeable development in San Francisco, would result in *less-than-significant cumulative transit impacts*.

Mitigation: None required.

**TABLE IV.B-17 REGIONAL SCREENLINE ANALYSIS, EXISTING AND 2040 CUMULATIVE CONDITIONS—
WEEKDAY AM PEAK HOUR**

Screenline/Corridor	Existing			2040 Cumulative		
	Ridership	Capacity	Utilization	Ridership	Capacity	Utilization
East Bay						
BART	25,399	23,256	109.2%	38,000	32,100	118.4%
AC Transit	1,568	2,829	55.4%	7,000	12,000	58.3%
Ferries	810	1,170	69.2%	4,682	5,940	78.8%
<i>Subtotal</i>	<u>27,777</u>	<u>27,255</u>	<u>101.9%</u>	<u>49,682</u>	<u>50,040</u>	<u>99.3%</u>
North Bay						
GGT buses	1,330	2,543	52.3%	1,990	2,543	78.3%
Ferries	1,082	1,959	55.2%	1,619	1,959	82.6%
<i>Subtotal</i>	<u>2,412</u>	<u>4,502</u>	<u>53.6%</u>	<u>3,609</u>	<u>4,502</u>	<u>80.2%</u>
South Bay						
BART	14,150	19,367	73.1%	21,000	28,808	72.9%
Caltrain	2,171	3,100	70.0%	2,310	3,600	64.2%
SamTrans	255	520	49.0%	271	520	52.1%
Ferries	0	0	0%	59	200	29.5%
<i>Subtotal</i>	<u>16,576</u>	<u>22,987</u>	<u>72.1%</u>	<u>23,640</u>	<u>33,120</u>	<u>71.4%</u>
Total All Screenlines	46,765	54,744	85.4%	76,931	87,662	87.8%

SOURCE: SF Planning Department Memoranda, Transit Data for Transportation Impact Studies, May 2015; and Updated BART Regional Screenlines, October 2016.

NOTE:

Bold indicates capacity utilization greater than the regional operator 100 percent capacity utilization standard.

**TABLE IV.B-18 REGIONAL SCREENLINE ANALYSIS, EXISTING AND 2040 CUMULATIVE CONDITIONS—
WEEKDAY PM PEAK HOUR**

Screenline/Corridor	Existing			2040 Cumulative		
	Ridership	Capacity	Utilization	Ridership	Capacity	Utilization
East Bay						
BART	24,488	22,784	107.5%	36,000	32,100	112.1%
AC Transit	2,256	3,926	57.5%	7,000	12,000	58.3%
Ferries	805	1,615	49.8%	5,319	5,940	89.5%
<i>Subtotal</i>	<i>27,549</i>	<i>28,325</i>	<i>97.3%</i>	<i>48,319</i>	<i>50,040</i>	<i>96.6%</i>
North Bay						
GGT buses	1,384	2,817	49.1%	2,070	2,817	73.5%
Ferries	968	1,949	49.4%	1,619	1,959	82.6%
<i>Subtotal</i>	<i>2,352</i>	<i>4,776</i>	<i>49.2%</i>	<i>3,689</i>	<i>4,776</i>	<i>77.2%</i>
South Bay						
BART	13,500	18,900	71.4%	20,000	28,808	69.4%
Caltrain	2,377	3,100	76.7%	2,529	3,600	70.3%
SamTrans	141	320	44.1%	150	320	46.9%
Ferries	0	0	0%	59	200	29.5%
<i>Subtotal</i>	<i>16,018</i>	<i>22,320</i>	<i>71.8%</i>	<i>22,738</i>	<i>32,928</i>	<i>69.1%</i>
Total All Screenlines	45,919	55,421	82.9%	74,746	87,744	85.2%

SOURCE: SF Planning Department Memoranda, Transit Data for Transportation Impact Studies, May 2015; and Updated BART Regional Screenlines, October 2016.

NOTE:

Bold indicates capacity utilization greater than the regional operator 100 percent capacity utilization standard.

Cumulative Pedestrian Impacts

Impact C-TR-4: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant pedestrian impacts. (Less than Significant)

Pedestrian circulation impacts by their nature are site-specific and generally do not contribute to impacts from other development projects. The proposed project would not result in overcrowding of sidewalks or create new potentially hazardous conditions for pedestrians under existing or cumulative conditions. Instead, the proposed project would set back the residential building, resulting in a wider sidewalk on South Van Ness Avenue adjacent to the project site that would accommodate cumulative pedestrian growth. In addition, the sidewalk adjacent to the project site on 11th Street would be widened. Cumulative projects are projected to further enhance pedestrian conditions in the project vicinity. The proposed Better Market Street project would not widen sidewalks on Market or Mission Streets, and may result in slight narrowing of the sidewalk, depending on the alternative, but would enhance pedestrian conditions via streetscape improvements and transit stop reconfigurations. In addition, cumulative land use projects would be required to comply with the *Better Streets Plan*.

Walk trips may increase between the completion of the proposed project and the 2040 cumulative conditions due to growth in area and proposed project. Between existing plus project and 2040 cumulative conditions, the number of vehicles on study area roadways is projected to increase. The overall increase in traffic volumes under 2040 cumulative conditions would result in an increase in the potential for vehicle-pedestrian conflicts at intersections in the study area. While this general increase in vehicle traffic that is expected through the future 2040 cumulative conditions, the proposed project would not create potentially hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility to the site and adjoining areas. For the above reasons, the proposed project, in combination with past, present and reasonably foreseeable development in San Francisco, would result in *less-than-significant cumulative pedestrian impacts*.

Mitigation: None required.

Cumulative Bicycle Impacts

Impact C-TR-5: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not result in cumulative bicycle impacts. (Less than Significant with Mitigation)

The proposed project would not significantly contribute to cumulative bicycle circulation or conditions in the area, although some of the project travel demand would occur by bicycle. Bicycling trips in the area may increase between the completion of the project and the cumulative conditions due general growth in the area. Implementation of SFMTA's planned safety improvements at the intersection of Mission Street/South Van Ness Avenue/Otis Street will provide a Class II bicycle lane on Mission Street adjacent to the project site. Implementation of the Polk Street Improvement Project by SFMTA would enhance conditions for bicyclists on the segment of Polk Street between Union and McAllister Streets, and are projected to begin in 2016. The proposed project would not conflict with these plans.

While there are no San Francisco Bicycle Plan projects planned on streets in the vicinity of the project site, the Better Market Street project, if implemented, would improve the existing Class II bicycle facilities on Market Street and/or Mission Street, depending on the alternative selected for implementation. Alternative 3 would add a cycle track in both directions of Mission Street. It is unknown at this time which alternative, if any, the City will approve for the Better Market Street design. In addition, given the preliminary nature of the design of Alternative 3, the exact dimensions of this proposal are not yet known. However, unrestricted truck access into the on-site loading spaces has the potential to conflict with the cycle track and block bicycle travel on Mission Street, thereby increasing the potential for conflicts and potential safety hazards between bicyclists, buses, and other vehicles on Mission Street. In addition, instead of accessing the on-site loading facility, some truck drivers may conduct loading activities at or near the proposed cycle track along Mission Street, which may result in queues within the Mission Street proposed cycle track. These conditions could result in potentially hazardous conditions for bicyclists, and would therefore result in a significant cumulative impact on bicyclists. **Mitigation Measure M-TR-3, Avoidance of Conflicts Associated with On-Site Loading Operations**, would ensure that trucks accessing the loading area do not double-park within the proposed cycle track while awaiting access into the mid-block alley, or otherwise create hazardous conditions for bicyclists, and would mitigate impacts on bicyclists to *less than significant with mitigation*. As part of project site plan review with the SFMTA, although not a project identified in the Bicycle Plan, the SFMTA presented preliminary plans for implementing a southbound bicycle lane on 11th Street south of the office building

garage driveway. Thus, vehicles accessing the project garages would cross the path of bicycles accessing or traveling within the bicycle lane. Given the preliminary nature of these plans and that an environmental evaluation application has not been filed with the Planning Department, it is speculative to analyze the potential conflicts between the bicycle lanes and the design of the driveways of the project garages.

As noted above, under 2040 cumulative conditions, there is a projected increase in vehicles at many of the intersections in the vicinity of the proposed project, which may result in an increase in vehicle-bicycle conflicts at intersections and driveways in the study area. While there would be a general increase in vehicle traffic that is expected through the future 2040 cumulative conditions, the additional vehicles would not create potentially hazardous conditions for bicycles, or otherwise interfere with bicycle accessibility to the site and adjoining areas. Therefore, for the above reasons, the proposed project, in combination with past, present and reasonably foreseeable development in San Francisco, would result in *less-than-significant with mitigation cumulative impacts on bicyclists*.

Significance after Mitigation: Less than Significant. Implementation of **Mitigation Measure M-TR-3** would ensure that the significant cumulative impacts on bicyclists would be reduced to a less-than-significant level.

Cumulative Loading Impacts

Impact C-TR-6: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant impacts on loading. (Less than Significant)

Loading impacts, like pedestrian impacts, are by their nature localized and site-specific, and would not contribute to impacts from other development projects near the project site. As described in Impact TR-6, the proposed project's estimated loading demand would be met on-site and within the proposed on-street commercial loading spaces on South Van Ness Avenue and 11th Street. No cumulative development projects would contribute to loading demand on the project block, or utilize the proposed project's mid-block alley. Therefore, for the above reasons, the proposed project, in combination with past, present and reasonably foreseeable development in San Francisco, would result in *less-than-significant cumulative loading impacts*.

Mitigation: None required.

Cumulative Emergency Vehicle Access Impacts

Impact C-TR-7: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant impacts on emergency vehicle access. (Less than Significant)

The proposed project would not significantly contribute to cumulative emergency vehicle access conditions in the area. With implementation of the proposed project, emergency vehicle access to the project site would be maintained. Adjacent to the project site, the Muni Forward 14R Mission Rapid project (i.e., the TTRP.14 project) would convert one of the two travel lanes on Mission Street from a mixed-flow travel lane to a transit-only lane. With implementation of transit-only lanes and turn restrictions emergency vehicle providers may adjust travel routes to respond to incidents; however, emergency vehicle access in the area would not be substantially affected. Emergency vehicles would be allowed full use of transit-only lanes and would not be

subject to any turn restrictions. Because multiple travel lanes would remain on adjacent streets, vehicles would be able to pull over to the side of the street and provide a clear travel path when an emergency vehicle with sirens is approaching, and emergency vehicles would not be substantively delayed. Therefore, for the above reasons, the proposed project, in combination with past, present and reasonably foreseeable development in San Francisco, would result in *less-than-significant cumulative impacts on emergency vehicle access*.

Mitigation: None required.

Cumulative Construction Impacts

Impact C-TR-8: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would contribute considerably to significant cumulative construction-related transportation impacts. (Significant and Unavoidable with Mitigation)

Construction of the proposed project may overlap with the construction of other cumulative projects, including, among others, 1601 Mission Street building across the street from the project site, 1629 Market Street, 10 South Van Ness Avenue, and One Oak Street projects. In addition, streetscape improvements associated with the Van Ness BRT project will be implemented, and service is expected to begin on Van Ness Avenue by early 2018. According to preliminary information on construction of the proposed Better Market Street project improvements are projected to occur in 2018, and, depending on the phasing of construction, may partially overlap with proposed project construction. Given the magnitude of projected cumulative development and transportation/streetscape projects anticipated to occur within a few blocks of the project site, and the uncertainty concerning construction schedules, cumulative construction activities could result in multiple travel lane closures, high volumes of trucks in the project vicinity, and travel lane and sidewalk closures, which in turn could disrupt or delay transit, pedestrians, or bicyclists, or result in potentially hazardous conditions (e.g., high volumes of trucks turning at intersections). Despite the best efforts of the project sponsors and project construction contractors, it is possible that simultaneous construction of the cumulative projects could result in significant disruptions to transit, pedestrian, and bicycle circulation, even if each individual project alone would not have significant impacts. In some instances, depending on construction activities, construction overlap of two or more projects may not result in significant impacts. However, for conservative purposes, given the concurrent construction of multiple buildings and transportation projects, some in close proximity to each other, the expected intensity (i.e., the projected number of truck trips) and duration, and likely impacts to transit, bicyclists, and pedestrians, cumulative construction-related transportation impacts would be considered significant. Construction of the proposed project, which would include construction of two buildings simultaneously adjacent to three streets (i.e., South Van Ness Avenue, Mission Street, and 11th Street) for a period of 24 months, would contribute considerably to these significant cumulative construction-related transportation impacts.

Mitigation Measure M-C-TR-8, Construction Coordination, would require the project sponsor, or its contractor(s) to consult with various City departments such as SFMTA and Public Works through ISCOTT, and other interdepartmental meetings, as needed, to develop coordinated plans that would address construction-related vehicle routing, detours, and transit, bicycle, and pedestrian movements adjacent to the construction area for the duration of construction overlap. These construction coordination measures would not result in secondary transportation impacts. Key coordination meetings would be held jointly between

project sponsors and contractors of other projects for which the City departments determine impacts could overlap. Implementation of **Mitigation Measure M-C-TR-8** would minimize, but would not eliminate, the significant cumulative impacts related to conflicts between construction activities and pedestrians, transit, bicyclists, and autos. Other measures, such as imposing sequential (i.e., non-overlapping) construction schedules for all projects in the vicinity, were considered but deemed infeasible due to potentially lengthy delays in project implementation. Therefore, construction of the proposed project, in combination with past, present and reasonably foreseeable development in San Francisco, could contribute considerably to cumulative construction-related transportation impacts, which would remain *significant and unavoidable with mitigation*.

Mitigation Measure

Mitigation Measure M-C-TR-8 – Construction Coordination. If construction of the proposed project is determined to overlap with nearby adjacent project(s) as to result in temporary construction-related transportation impacts, the project sponsor or its contractor(s) shall consult with various City departments such as the SFMTA and Public Works through ISCOTT, and other interdepartmental meetings as deemed necessary by the SFMTA, Public Works, and the Planning Department, to develop a Coordinated Construction Management Plan. The Coordinated Construction Management Plan shall address construction-related vehicle routing, detours, and maintaining transit, bicycle, vehicle, and pedestrian movements in the vicinity of the construction area for the duration of the construction period overlap. Key coordination meetings would be held jointly between project sponsors and contractors of other projects for which the City departments determine impacts could overlap. The Coordinated Construction Management Plan shall consider other ongoing construction in the project vicinity, including development and transportation infrastructure projects, and shall include, but not be limited to, the following:

- *Restricted Construction Truck Access Hours*—Limit construction truck movements to the hours between 9:00 a.m. and 4:30 p.m., or other times if approved by the SFMTA, to minimize disruption to vehicular traffic, including transit, during the a.m. and p.m. peak periods.
- *Construction Truck Routing Plans*—Identify optimal truck routes between the regional facilities and the project site, taking into consideration truck routes of other development projects and any construction activities affecting the roadway network.
- *Coordination of Temporary Lane and Sidewalk Closures* – The project sponsor shall coordinate lane closures with other projects requesting concurrent lane and sidewalk closures through the ISCOTT and interdepartmental meetings process above, to minimize the extent and duration of requested lane and sidewalk closures. Travel lane closures shall be minimized especially along transit and bicycle routes, so as to limit the impacts to transit service and bicycle circulation and safety.
- *Maintenance of Transit, Vehicle, Bicycle, and Pedestrian Access* – The project sponsor/construction contractor(s) shall meet with Public Works, SFMTA, the Fire Department, Muni Operations and other City agencies to coordinate feasible measures to include in the Coordinated Construction Management Plan to maintain access for transit, vehicles, bicycles and pedestrians. This shall include an assessment of the need for temporary transit stop relocations or other measures to reduce potential traffic, bicycle, and transit disruption and pedestrian circulation effects during construction of the project.

- *Carpool, Bicycle, Walk and Transit Access for Construction Workers* – The construction contractor shall include methods to encourage carpooling, bicycling, walk and transit access to the project site by construction workers (such as providing secure bicycle parking spaces, participating in free-to-employee and employer ride matching program from www.511.org, participating in emergency ride home program through the City of San Francisco (www.sferh.org), and providing transit information to construction workers).
- *Construction Worker Parking Plan* – The location of construction worker parking shall be identified as well as the person(s) responsible for monitoring the implementation of the proposed parking plan. The use of on-street parking to accommodate construction worker parking shall be discouraged. The project sponsor could provide on-site parking once the below grade parking garage is usable.
- *Project Construction Updates for Adjacent Businesses and Residents* – To minimize construction impacts on access for nearby institutions and businesses, the project sponsor shall provide nearby residences and adjacent businesses with regularly-updated information regarding project construction, including construction activities, peak construction vehicle activities (e.g., concrete pours), travel lane closures, and lane closures. At regular intervals to be defined in the Coordinated Construction Management Plan, a regular email notice shall be distributed by the project sponsor that shall provide current construction information of interest to neighbors, as well as contact information for specific construction inquiries or concerns.

Significance after Mitigation: Even with mitigation, impacts would remain *significant and unavoidable*.

Parking Discussion

As noted above, Senate Bill 743 amended CEQA by adding Public Resources Code Section 21099 regarding the analysis of parking impacts for certain urban infill projects in transit priority areas.¹³¹ Public Resources Code Section 21099(d), effective January 1, 2014, provides that "... parking impacts of a residential, mixed-use residential, or employment center project on an infill site located within a transit priority area shall not be considered significant impacts on the environment." Accordingly, parking is no longer to be considered in determining if a project has the potential to result in significant environmental effects for projects that meet all three criteria established in the statute. However, the Planning Department acknowledges that parking conditions may be of interest to the public and the decision-makers, and therefore, a parking demand analysis is provided for informational purposes and considers any secondary physical impacts associated with constrained supply.

¹³¹ A "transit priority area" is defined as an area within one-half mile of an existing or planned major transit stop. A "major transit stop" is defined in California Public Resources Code Section 21064.3 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 periods. A map of San Francisco's Transit Priority Areas is available at <http://sfmea.sfplanning.org/Map%20of%20San%20Francisco%20Transit%20Priority%20Areas.pdf>.

Proposed Project Supply

The residential and retail/restaurant component of the proposed project would include 280 residential parking spaces and 14 spaces for the retail/restaurant uses, as well as six car-share parking spaces.¹³² As required by the *Planning Code* Section 167, the parking spaces would be leased separately from the dwelling units. The office and permit center component would provide up to 120 parking spaces. Up to 12 of the parking spaces within the office building garage would be short-term spaces dedicated to the childcare uses for drop-off and pick-up activities, up to 54 spaces would be reserved for City vehicles, and up to 54 spaces would be available to the general public. Vehicle access to the two garages would be provided via separate driveways on 11th Street. The driveway to the residential and retail/restaurant component would be located about 40 feet north of Mission Street, while driveway into the office and permit center component would be located about 250 feet north of Mission Street and 320 feet south of Market Street.

The proposed project would eliminate the existing public parking garage containing 110 spaces on the project site (which currently has access via South Van Ness Avenue). In addition, the proposed widening of the sidewalk on 11th Street adjacent to the project site, combined with SFMTA's planned southbound bicycle lane on 11th Street would eliminate the 20 existing diagonal parking spaces (general metered spaces), and four parallel-parked commercial loading spaces would be provided north of the residential building garage driveway. In addition, on South Van Ness Avenue, the eight existing general metered parking spaces would be removed, and replaced with two passenger loading/unloading zones serving the two buildings. In addition, five commercial loading spaces would be provided between the two passenger loading/unloading zones (the existing bus stop will be removed as part of the Van Ness BRT project, which will start construction in 2016 and BRT service will begin in early 2018).

Parking Supply vs. Demand

Midday Conditions. For weekday midday conditions, the overall parking demand of 1,112 spaces would not be accommodated within the total parking supply of 414 vehicle parking spaces (i.e., 294 parking spaces within the residential and retail/restaurant component, and up to 120 parking spaces parking spaces, within

¹³² **Residential and Retail/Restaurant Component.** Under *Planning Code* Section 151.1, there is no minimum amount of parking required and the residential and retail/restaurant component would be allowed to provide up to one parking space per each two units in the C-3-G district and up to one parking space per each four units, and up to 0.5 space per dwelling unit subject to criteria and procedures related to Conditional Use Authorization, in the Van Ness & Market Downtown Residential Special Use District and would be allowed to provide up to 14 parking spaces for the retail/restaurant uses. Per *Planning Code* Section 166, the residential and retail/restaurant component would also be required to provide four car-share parking spaces. The residential and retail/restaurant component would provide 280 residential and 14 retail/restaurant parking spaces, and six car-share spaces (including two for the office and permit center component), and therefore would meet the *Planning Code* requirements with a Conditional Use Authorization. As part of the proposed 294 vehicle parking spaces for the residential and retail/restaurant uses, 11 ADA-accessible parking spaces (one of each 25 spaces) would be required and the project would meet this requirement.

Office and Permit Center Component. Under *Planning Code* Section 151.1, there is no minimum amount of parking required and the office and permit center component would be allowed to provide parking within an area not to exceed seven percent of the gross square area (i.e., about 31,500 gsf, or about 90 parking spaces assuming use of valet), and the project would exceed this maximum, necessitating a *Planning Code* amendment in the proposed Mission and South Van Ness Special Use District to permit additional parking. Depending on the number of vehicle parking spaces provided (i.e., the garage would contain up to 120 vehicle parking spaces), and four ADA-accessible spaces would be required. Per *Planning Code* Section 166, the proposed project would also be required to provide two car-share parking spaces (i.e., for non-residential parking facilities with more than 50 spaces, one car-share space, plus one additional space for every 50 parking spaces over 50 spaces are required to be provided), and the proposed project would meet the *Planning Code* requirement for car-share spaces.

the office and permit center component, including ADA-accessible parking spaces), which would result in a shortfall of 698 spaces. In addition to the unmet parking demand associated with the proposed project land uses, the parking demand associated with the existing public parking garage containing 110 spaces on the project site and on-street parking spaces on South Van Ness Avenue and on 11th Street that would be eliminated would need to be accommodated elsewhere in other off-street facilities and on-street. As a result, off-street and on-street parking occupancy would increase. Due to difficulty in finding on-street parking in the study area, some drivers may park outside of the study area or switch to transit, carpool, bicycle or other forms of travel. As discussed above, the project site is well served by public transit and bicycle facilities. Thus, the parking demand may be overestimated.

Overnight Conditions. For the residential and retail/restaurant component of the proposed project, the greatest long-term residential parking demand generally occurs during the overnight hours. The residential demand of 646 spaces for the 560 residential units would not be accommodated within the residential parking supply of 280 parking spaces, which would result in a shortfall of 366 spaces. A portion of the overnight parking shortfall could be accommodated within the non-residential component of the proposed project garage (i.e., 14 parking spaces), and a portion of the overnight parking demand could be accommodated in the garage within the office and permit center component of the proposed project (i.e., up to 120 parking spaces), if public parking were to be available overnight. In addition, a portion of the overnight parking demand would need to be accommodated on-street and/or in other nearby garages and surface parking lots in area. As indicated on **Table IV.B-6, Off-Street Public Parking Supply and Utilization, Weekday Midday and Evening Conditions**, a number of the existing surface parking lots and garages that serve the nearby office uses during the day have capacity during the overnight hours.

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IV.C Air Quality

IV.C.1 Introduction

This section evaluates the potential air quality and health risks impact that would result from short-term construction and long-term operation of the proposed project. This section discusses the existing air quality conditions in the project area, presents the regulatory framework for air quality management, and analyzes the potential for the proposed project to affect existing air quality conditions, both regionally and locally, from activities that emit criteria and non-criteria air pollutants. It also analyzes the types and quantities of emissions that would be generated on a temporary basis from proposed construction activities, as well as those generated over the long term from the proposed operation of project elements. The analysis determines whether those emissions are significant in relation to applicable air quality standards and identifies feasible mitigation measures for significant adverse impacts. The section also includes an assessment of the potential for odor impacts and an analysis of cumulative air quality impacts.

The analysis in this chapter is based on a review of existing air quality conditions in the Bay Area region and air quality regulations administered by the U.S. Environmental Protection Agency (USEPA), the California Air Resources Board (ARB), and the Bay Area Air Quality Management District (BAAQMD). This analysis includes methodologies identified in the updated BAAQMD *CEQA Air Quality Guidelines*¹³³ and its companion documentation, as well as the health risk assessment (HRA) guidelines promulgated by the California Office of Environmental Health Hazard Assessment (OEHHA).¹³⁴ Additionally, an Air Quality Technical Memorandum (AQTm) was prepared for the proposed project; this report quantitatively assesses the air quality contributions of the proposed project and forms the basis of much of the assessment of air quality impacts herein.¹³⁵

IV.C.2 Environmental Setting

The project site and vicinity is within the jurisdiction of the BAAQMD. The BAAQMD is the regional agency with jurisdiction for regulating air quality within the nine-county San Francisco Bay Area Air Basin (SFBAAB), which includes San Francisco, Alameda, Contra Costa, Marin, San Mateo, Santa Clara, and Napa Counties. As part of the region's efforts to achieve and maintain federal and state ambient air quality standards, the BAAQMD maintains the regional emission inventory of air pollution sources, including stationary, mobile, and area-wide sources. The BAAQMD is also responsible for issuing permits to construct and operate stationary sources of pollutants, and for implementing the programs to permit and review the air quality impacts of new stationary sources.

¹³³ Bay Area Air Quality Management District (BAAQMD), *California Environmental Quality Act Air Quality Guidelines* (hereinafter *CEQA Air Quality Guidelines*), May 2011. Available at <http://www.baaqmd.gov/~media/Files/Planning%20and%20Research/CEQA/BAAQMD%20CEQA%20Guidelines%20May%202011.ashx?la=en>. Accessed September 24, 2016.

¹³⁴ California Office of Health Hazard Assessment (OEHHA), *Air Toxics Hot Spots Program: Risk Assessment Guidelines and Guidance Manual for reparation of Health Risk Assessments*, February 2015. Available at <http://oehha.ca.gov/media/downloads/crnrr/2015guidancemanual.pdf>, accessed September 22, 2016.

¹³⁵ Ramboll Environ, *Air Quality Technical Memorandum, 1500 Mission Street Project*, November 8, 2016.

Climate, Topography, and Meteorology

The project site is in the SFBAAB. The air basin's moderate climate steers storm tracks away from the region for much of the year, although storms generally affect the region from November through April. San Francisco's proximity to the onshore breezes stimulated by the Pacific Ocean provides for generally very good air quality in the city and at the project site.

Annual temperatures in the project area average in the mid-50s, generally ranging from the low 40s on winter mornings to the mid-70s during summer afternoons. Daily and seasonal oscillations of temperature are small because of the moderating effects of the nearby San Francisco Bay. In contrast to the steady temperature regime, rainfall is highly variable and confined almost exclusively to the "rainy" period from November through April. Precipitation may vary widely from year to year as a shift in the annual storm track of a few hundred miles can mean the difference between a very wet year and drought conditions.

Atmospheric conditions such as wind speed, wind direction, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants regionally. The project area lies within the Peninsula climatological subregion. Marine air traveling through the Golden Gate is a dominant weather factor affecting dispersal of air pollutants within the region. Wind measurements collected on the San Francisco mainland indicate a prevailing wind direction from the west and an average annual wind speed of 10.3 miles per hour (mph).¹³⁶ Increased temperatures create the conditions in which ozone formation can increase.

Ambient Air Quality – Criteria Air Pollutants

As required by the 1970 Federal Clean Air Act, the USEPA initially identified six criteria air pollutants that are pervasive in urban environments and for which state and federal health-based ambient air quality standards have been established. The USEPA calls these pollutants *criteria air pollutants* because they have regulated them by developing specific public-health-based and welfare-based criteria for setting permissible emission levels. Ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter (PM), and lead are the six criteria air pollutants originally identified by USEPA. Since that time, subsets of PM have been identified for which permissible levels have been established. These include particulate matter measuring 10 microns in diameter or less (PM₁₀) and particulate matter measuring 2.5 microns in diameter or less (PM_{2.5}).

The ARB regional air quality monitoring network provides information on ambient concentrations of non-attainment criteria air pollutants. The monitoring station that includes data representative of the proposed project site is located on Arkansas Street (monitors ozone, PM₁₀, PM_{2.5}, CO, and NO₂), approximately 1.2 miles southeast of the project site. **Table IV.C-1, Summary Air Quality Monitoring Data (2011–2015)**, presents a five-year summary of the highest air pollutant (concentration) data collected at these monitoring station for ozone, CO, PM₁₀, PM_{2.5}, and NO₂. **Table IV.C-1** also compares measured pollutant concentrations with the most stringent applicable ambient air quality standards (state or federal). Concentrations shown in bold indicate an exceedance of the standard.

¹³⁶ Western Regional Climate Center, Website query, Prevailing Wind Direction in California, Available at <http://www.wrcc.dri.edu/htmlfiles/westwinddir.html#CALIFORNIA>, accessed November 19, 2015.

TABLE IV.C-1 SUMMARY AIR QUALITY MONITORING DATA (2011–2015)

Pollutant	Applicable National/ State Standard	Number of Days Standards Were Exceeded and Maximum Concentrations Measured ^a				
		2011	2012	2013	2014	2015
Ozone – San Francisco-Arkansas Street						
Days 1-hour State Std. Exceeded	>90 ppb ^b	0	0	0	0	0
Max. 1-hour Conc. (ppm)		70	69	69	79	85
Days 8-hour National Std. Exceeded	>70 ppb ^c	0	0	0	0	0
Days 8-hour State Std. Exceeded	>0.07 ppm ^b	0	0	0	0	0
Max. 8-hour Conc. (ppm)		54	48	59	69	67
Suspended Particulates (PM₁₀) – San Francisco-Arkansas Street						
Estimated Days Over 24-hour National Std. ^a	>150 µg/m ³ ^c	0	0	0	0	0
Estimated Days Over 24-hour State Std. ^a	>50 µg/m ³ ^b	0	6	0	0	0
Max. 24-hour Conc. National/State (µg/m ³)		45.6	50.6	44.3	35.9	47
State Annual Average (µg/m ³)	>20 µg/m ³ ^b	19.5	17.5	18.3	17.0	19.2
Suspended Particulates (PM_{2.5}) – San Francisco-Arkansas Street						
Estimated Days Over 24-hour National Std.	>35 µg/m ³ ^c	2	1	2	0	0
Max. 24-hour Conc. National/State (µg/m ³)		47.5	35.7	48.5	33.2	35.4
Annual Average (µg/m ³)	>12 µg/m ³ ^b	9.5	8.2	10.1	7.7	7.6
Carbon Monoxide (CO) – San Francisco-Arkansas Street						
Days 8-hour Std. Exceeded	>9 ppm ^b	0	0	0	0	0
Max. 8-hour Conc. (ppm)		1.2	1.2	1.4	1.2	1.3
Days 1-hour Std. Exceeded	>20 ppm ^b	1.8	2	1.8	1.6	1.8
Max. 1-hour Conc. (ppm)		0	0	0	0	0
Nitrogen Dioxide (NO₂) – San Francisco-Arkansas Street						
Days NO ₂ State Std. Exceeded	>0.180 ppm ^b	0	0	0	0	0
Days NO ₂ National Std. Exceeded	>0.100 ppm ^b	0	0	0	0	0
Annual Average Concentration (ppb)	>30 ppb ^b	14	12	13	12	12

SOURCE: California Air Resources Board (ARB), *Summaries of Air Quality Data, 2011–2015*, 2016. Available at www.arb.ca.gov/adam/cgi-bin/db2www/polltrends.d2w/start, accessed July 13, 2016; U.S. Environmental Protection Agency, *AirData Monitor Value Report*, 2016. Available at https://www3.epa.gov/airdata/ad_rep_mon.html, accessed July 5, 2016; Bay Area Air Quality Management District (BAAQMD), Annual Air Quality Summary Reports. Available at <http://www.baaqmd.gov/about-air-quality/air-quality-summaries>. Reviewed September 22, 2016.

NOTES:

Bold values are in excess of applicable standard. "NA" indicates that data is not available.

conc. = concentration; ppm = parts per million; ppb=parts per billion;

µg/m³ = micrograms per cubic meter

NA- = No data or insufficient data.

ppm- = parts per million

ppb = parts per billion

- Number of days exceeded is for all days in a given year, except for particulate matter. PM₁₀ was monitored every six days prior to 2013 and every 12 days thereafter. Therefore the number of days exceeded is out of approximately 60 annual samples and 30 annual samples during these respective periods.
- State standard, not to be exceeded.
- National standard, not to be exceeded.

Ozone. Ozone is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG) and oxides of nitrogen (NO_x). The main sources of ROG and NO_x, often referred to as ozone precursors, are combustion processes (including combustion in motor vehicle engines) and the evaporation of solvents, paints, and fuels. In the Bay Area, automobiles are the single largest source of ozone precursors. Ozone is referred to as a regional air pollutant because its precursors are transported and diffused by wind concurrently with ozone production through the photochemical reaction process. Ozone causes eye irritation, airway constriction, and shortness of breath and can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema.¹³⁷

Table IV.C-1 shows that, according to published data, the most stringent applicable standards for ozone (state one-hour standard of 0.09 parts per million [ppm] and the federal eight-hour standard of 0.075 ppm) were not exceeded in San Francisco between 2011 and 2015. In 2015, the USEPA strengthened the eight-hour ozone standard to 0.070 ppm, and the new standard became effective December 28, 2015.

Carbon Monoxide. Carbon monoxide is an odorless, colorless gas usually formed as the result of the incomplete combustion of fuels. The single largest source of CO is motor vehicles; the highest emissions occur during low travel speeds, stop-and-go driving, cold starts, and hard accelerations. Exposure to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause headaches, nausea, dizziness, and fatigue, impair central nervous system function, and induce angina (chest pain) in persons with serious heart disease. Very high levels of CO can be fatal. As shown in **Table IV.C-1**, the more stringent state CO standards were not exceeded between 2011 and 2015.

Particulate Matter (PM₁₀ and PM_{2.5}). Particulate matter is a class of air pollutants that consists of heterogeneous solid and liquid airborne particles from manmade and natural sources. Course PM (PM₁₀) consists of particles that are 10 microns or less in diameter. A subset of PM₁₀, PM_{2.5}, consists of particles 2.5 microns or less in diameter. In the Bay Area, motor vehicles generate about one-half of the SFBAAB's particulates through tailpipe emissions as well as brake pad and tire wear. Wood burning in fireplaces and stoves, industrial facilities, and ground-disturbing activities, such as construction (described further in the fugitive dust section below), are other sources of such fine particulates. These fine particulates are small enough to be inhaled into the deepest parts of the human lung and can cause adverse health effects.¹³⁸ PM_{2.5} is of particular concern because epidemiologic studies have demonstrated that people who live near freeways and high-traffic roadways have poorer health outcomes, including increased asthma symptoms and respiratory infections and decreased pulmonary function and lung development in children.¹³⁹

Table IV.C-1 shows that an exceedance of the state 24-hour PM₁₀ standard occurred on one monitored occasion between 2011 and 2015 in San Francisco. It is estimated that the state 24-hour PM₁₀ standard of 50 micrograms per cubic meter (µg/m³) may have been exceeded on up to six days per year between 2011 and 2015.¹⁴⁰ Unlike PM₁₀, PM_{2.5} is continuously monitored daily. The federal 24-hour PM_{2.5} standard was not

¹³⁷ BAAQMD, *CEQA Air Quality Guidelines*, May 2011.

¹³⁸ BAAQMD, *CEQA Air Quality Guidelines*, May 2011.

¹³⁹ San Francisco Department of Public Health, *Assessment and Mitigation of Air Pollutant Health Effects from Intra-Urban Roadways: Guidance for Land Use Planning and Environmental Review*, May 6, 2008. Available at http://www.gsweventcenter.com/Draft_SEIR_References%5C2008_0501_SFDPH.pdf, accessed July 13, 2016.

¹⁴⁰ PM₁₀ was sampled every sixth day prior to 2013 and every 12 days thereafter; therefore, actual days over the standard can be estimated to be six times the numbers listed in the table for years 2011 and 2012, and 12 times the numbers listed in the table for year 2013, 2014, and 2015.

exceeded until 2006, when the standard was lowered from 65 $\mu\text{g}/\text{m}^3$ to 35 $\mu\text{g}/\text{m}^3$. The federal 24-hour $\text{PM}_{2.5}$ standard was exceeded on five days per year between 2011 and 2015. The state annual average standard was not exceeded between 2011 and 2015. The federal and state annual average standards were not exceeded between 2011 and 2015.

Fugitive Dust. Fugitive dust is PM suspended in the air by wind action and human activities. Fugitive dust does not come out of a vent or a stack, instead fugitive dust particles are mainly composed of soil minerals suspended in the air by wind action and human activities (e.g., demolition, excavation, grading, and other construction activities). Fugitive dust exposure contributes to the same health effects as described for PM above.

Nitrogen Dioxide (NO_2). Nitrogen dioxide is a reddish brown gas that is a byproduct of combustion processes. Mobile sources (motor vehicles and other transportation sources) and industrial operations are the main sources of nitrogen oxides, which include NO_2 . Aside from its contribution to ozone formation, NO_2 can increase the risk of acute and chronic respiratory disease and reduce visibility. NO_2 may be visible as a coloring component on high pollution days, especially in conjunction with high ozone levels. The current state one-hour standard for NO_2 (0.18 ppm) is being met in San Francisco. In 2010, the USEPA implemented a new one-hour NO_2 standard (0.100 ppm), which is presented in **Table IV.C-1**. Currently, the ARB is recommending that the SFBAAB be designated as an attainment area for the new standard.¹⁴¹ **Table IV.C-1** shows that this new federal standard was not exceeded on any day at the San Francisco station between 2011 and 2015.

Sulfur Dioxide (SO_2). Sulfur Dioxide is a colorless acidic gas with a strong odor. It is produced by the combustion of sulfur-containing fuels such as oil, coal, and diesel. Sulfur dioxide has the potential to damage materials and can cause health effects in high concentrations. Sulfur dioxide can irritate the lung tissue and increase the risk of acute and chronic respiratory disease.¹⁴² Pollutant trends suggest that the SFBAAB currently meets and will continue to meet the state standard for SO_2 for the foreseeable future.

Lead. Leaded gasoline (phased out in the United States beginning in 1973), paint (on older houses and cars), smelters (metal refineries), and the manufacture of lead storage batteries have been the primary sources of lead released into the atmosphere. Lead has multiple adverse neurotoxic health effects, and children are at special risk. Some lead-containing chemicals cause cancer in animals. Lead levels in the air have decreased substantially since leaded gasoline was eliminated. Ambient lead concentrations are only monitored on an as-warranted, site-specific basis in California.

Ambient Air Quality—Toxic Air Contaminants

Toxic air contaminants (TACs) are defined in *California Health and Safety Code* Section 39655 as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a present or potential hazard to human health. Potential human health effects of TACs include birth defects, neurological damage, cancer, and death. There are hundreds of different types of TACs with varying degrees of toxicity.

¹⁴¹ California Air Resources Board (ARB), *Recommended Area Designations for the 2010 Nitrogen Dioxide Standards*, Technical Support Document, January 2011. Available at http://www.airquality.org/plans/federal/no2/NO2Enclosure_1.pdf, accessed January 19, 2016.

¹⁴² BAAQMD, *CEQA Air Quality Guidelines*, May 2011, p. C-16.

Individual TACs vary greatly in the health risk they present; at a given level of exposure, one TAC may pose a hazard that is many times greater than another.

TACs do not have ambient air quality standards, but are regulated by the BAAQMD using a risk-based approach. This approach uses an HRA to determine what sources and pollutants to control, as well as the degree of control. An HRA is an analysis in which human health exposure to toxic substances is estimated and considered together with information regarding the toxic potency of the substances in order to provide a quantitative estimate of health risks.¹⁴³

Air pollution does not affect every individual in the population in the same way, and some groups are more sensitive to adverse health effects than others. Land uses such as residences, schools, children's day care centers, hospitals, and nursing and convalescent homes are considered to be the most sensitive to air quality because the population groups associated with these uses have increased susceptibility to respiratory distress or, as in the case of residential receptors, their exposure time is greater than for other land uses. Therefore, these groups are referred to as sensitive receptors. Exposure assessment guidance assumes that residences would be exposed to air pollution 24 hours per day, 350 days per year, for 30 or 70 years. Therefore, assessments of air pollutant exposure to residents typically result in the greatest adverse health outcomes of all population groups.

Both the BAAQMD and the ARB operate TAC monitoring networks in the San Francisco Bay Area. These stations measure 10 to 15 TACs, depending on the specific station. The TACs selected for monitoring are those that have traditionally been found in the highest concentrations in the ambient air and, therefore, tend to be the primary contributors to community health risk.

The ARB collects ambient TAC emissions data at its 16th and Arkansas Street monitoring station in San Francisco, which is the only monitoring site for air toxics in San Francisco. **Table IV.C-2, Carcinogenic Toxic Air Contaminants—Annual Average Ambient Concentrations**, shows ambient concentrations of carcinogenic TACs measured at the Arkansas Street monitoring station and the estimated cancer risks from lifetime (70-year exposure, including second trimester of pregnancy) exposure to these substances.

¹⁴³ In general, a health risk assessment is required if the BAAQMD concludes that projected emissions of a specific air toxic compound from a proposed new or modified source suggests a potential public health risk. Such an assessment generally evaluates chronic, long-term health effects, calculating the increased risk of cancer as a result of exposure to one or more TACs for the source in question.

TABLE IV.C-2 CARCINOGENIC TOXIC AIR CONTAMINANTS — ANNUAL AVERAGE AMBIENT CONCENTRATIONS

Substance	Mean Concentration ^b	Cancer Risk per Million ^a
Gaseous TACs		
Acetaldehyde	0.50	2
Benzene	0.195	18
1,3-Butadiene	0.038	14
Para-Dichlorobenzene	0.15	10
Carbon Tetrachloride	0.094	25
Ethylene Dibromide	0.006	3
Formaldehyde	1.28	9
Perchloroethylene	0.015	0.6
Methylene Chloride	0.127	0.4
Methyl tertiary-Butyl Ether (MTBE)	0.26	0.2
Chloroform	0.030	0.8
Trichloroethylene	0.012	0.1
Particulate TACs^c		
Chromium (Hexavalent)	0.078	12

SOURCE: ARB, *Ambient Air Toxics Summary*, 2015. Available at www.arb.ca.gov/adam/toxics/sitesubstance.html, accessed July 13, 2016.

NOTES:

All values are from BAAQMD 2015 monitoring data from the Arkansas Street monitoring station; values may be based on data from different years.

- The risks shown in ARB's annual toxics summary pages are estimated chronic cancer risk resulting from the inhalation pathway. These risks are expressed in terms of expected cancer cases per million population based on exposure to the annual mean concentration over 70 years. They are calculated using unit risk factors provided to the Air Resources Board by the California Office of Environmental Health Hazard Assessment.
- ppb = parts per billion.
- ng/m³ = nanograms per cubic meter.

When TAC measurements at the Arkansas Street monitoring station are compared to ambient concentrations of various TACs for the Bay Area as a whole, the cancer risks associated with mean TAC concentrations in San Francisco are similar to those for the Bay Area as a whole. Therefore, the estimated average lifetime cancer risk resulting from exposure to TAC concentrations monitored at the Arkansas Street monitoring station does not appear to be any greater or less than that for the Bay Area as a region.

Roadway-Related Pollutants. Motor vehicles contribute significantly to air pollution through tailpipe emissions, road dust, and brake and tire wear. Vehicle tailpipe emissions contain numerous TACs, including benzene, 1,3-butadiene, formaldehyde, acetaldehyde, acrolein, naphthalene, and diesel exhaust. Engine exhaust from diesel, gasoline, and other combustion engines is a complex mixture of particles and gasses with collective and individual toxicological characteristics. While each constituent pollutant in engine exhaust may have a unique toxicological profile, health effects have been associated with proximity, or exposure, to vehicle-related pollutants collectively as a mixture. Exposures to PM_{2.5} are strongly associated with mortality, respiratory diseases, lung development in children, and other endpoints such as hospitalization for cardiopulmonary disease. As discussed previously, people living in proximity to freeways or busy roadways have poorer health outcomes. Air pollution monitoring done in conjunction with epidemiological studies has

confirmed that roadway-related health effects vary with modeled exposure to particulate matter and NO₂. In traffic-related studies, the additional non-cancer health risk attributable to roadway proximity was seen within 1,000 feet of the roadway and was strongest within 300 feet. As a result, the ARB recommends that new sensitive land uses not be located within 500 feet of a freeway or urban road carrying 100,000 vehicles per day.

In addition to PM_{2.5}, diesel particulate matter (DPM) is also of concern. The ARB identified DPM as a TAC in 1998, primarily based on evidence demonstrating cancer effects in humans.¹⁴⁴ The exhaust from diesel engines includes hundreds of different gaseous and particulate components, many of which are toxic. Mobile sources such as trucks and buses are among the primary sources of diesel emissions, and concentrations of DPM are higher near heavily traveled highways. The estimated cancer risk from exposure to diesel exhaust is much higher than the risk associated with any other toxic air pollutant routinely measured in the region. The ARB estimated the average Bay Area cancer risk from DPM, based on a population-weighted average ambient diesel particulate concentration, at about 480 in one million as of 2000, having declined from 750 in one million in 1990 and 570 in one million in 1995. In 2000, ARB estimated the average statewide cancer risk from DPM at 540 in one million.^{145, 146}

San Francisco Modeling of Air Pollutant Exposure Zone. In an effort to identify areas of San Francisco most adversely affected by sources of TACs, San Francisco partnered with the BAAQMD to inventory and assess air pollution and exposures from vehicles, stationary, and area sources within San Francisco. Citywide dispersion modeling (citywide modeling) was conducted using AERMOD¹⁴⁷ to assess the emissions from the following primary sources: roadways, permitted stationary sources, port and maritime sources, and Caltrain. Emissions of PM₁₀ (DPM is assumed equivalent to PM₁₀), PM_{2.5}, and total organic gases (TOG) were modeled on a 20-meter by 20-meter receptor grid covering the entire city. Therefore, the results represent a comprehensive assessment of existing cumulative exposures to air pollution throughout the city. The methodology and technical documentation for modeling citywide air pollution is available in the document titled the *San Francisco Community Risk Reduction Plan: Technical Support Documentation*.¹⁴⁸ Areas with poor air quality, termed the Air Pollutant Exposure Zone (APEZ), were then identified based on two health-protective criteria: (1) excess cancer risk from the contribution of emissions from all modeled sources greater than 100 per one million population, and/or (2) cumulative PM_{2.5} concentrations greater than 10 micrograms per cubic meter (µg/m³). To provide an added measure of health protection, the thresholds for identification of the APEZ are lower—excess cancer risk of 90 in one million and/or cumulative PM_{2.5} concentrations greater than nine µg/m³—in areas where the City has identified health-vulnerable populations, primarily the Bayview,

¹⁴⁴ ARB, Fact Sheet, “The Toxic Air Contaminant Identification Process: Toxic Air Contaminant Emissions from Diesel-fueled Engines,” October 1998. Available at <http://www.arb.ca.gov/toxics/dieseltac/factsht1.pdf>, accessed July 14, 2016.

¹⁴⁵ ARB, *California Almanac of Emissions and Air Quality—2009 Edition*, Table 5-44. Available at www.arb.ca.gov/aqd/almanac/almanac09/pdf/chap509.pdf, accessed July 13, 2016.

¹⁴⁶ This calculated cancer risk value from ambient air exposure in the Bay Area can be compared against the lifetime probability of being diagnosed with cancer in the United States from all causes, which is more than 40 percent (based on sampling of 17 regions nationwide), or greater than 400,000 in 1 million according to the National Cancer Institute.

¹⁴⁷ AERMOD is the USEPA’s preferred/recommended steady state air dispersion plume model. For more information on AERMOD and to download the AERMOD Implementation Guide, refer to https://www3.epa.gov/scram001/dispersion_prefrec.htm, accessed July 13, 2016.

¹⁴⁸ BAAQMD, San Francisco Department of Public Health, and San Francisco Planning Department, *The San Francisco Community Risk Reduction Plan: Technical Support Documentation*, December 2012. Available at http://www.gsweventcenter.com/Appeal_Response_References%5C2012_1201_BAAQMD.pdf.

Tenderloin, and much of the South of Market (SoMa) area, including the project site.¹⁴⁹ Finally, the APEZ also includes all parcels that are within 500 feet of freeways. As a result, the APEZ includes, among other locations, nearly the entirety of the 94103 and 94102 zip codes, located south and north of Market Street, respectively, in the project vicinity.

Excess Cancer Risk. The above 100 per one million persons (100 excess cancer risk) criteria is based of USEPA guidance for conducting air toxic analyses and making risk management decisions at the facility- and community-scale level.¹⁵⁰ As described by the BAAQMD, USEPA considers a cancer risk of 100 per million to be within the acceptable range of cancer risk. Furthermore, in the 1989 preamble to the benzene National Emissions Standards for Hazardous Air Pollutants (NESHAP) rulemaking,¹⁵¹ USEPA states that it "... strives to provide maximum feasible protection against risks to health from hazardous air pollutants by (1) protecting the greatest number of persons possible to an individual lifetime risk level no higher than approximately one in one million and (2) limiting to no higher than approximately one in ten thousand (100 in one million) the estimated risk that a person living near a plant would have if he or she were exposed to the maximum pollutant concentrations for 70 years." The 100 per one million excess cancer cases is also consistent with the ambient cancer risk in the most pristine portions of the Bay Area based on BAAQMD regional modeling.¹⁵²

Fine Particulate Matter. The APEZ for San Francisco is based on the health protective PM_{2.5} standard of 11 µg/m³, as supported by the USEPA's Particulate Matter Policy Assessment, although lowered to 10 µg/m³ to account for uncertainty in accurately predicting air pollutant concentrations using emissions modeling programs.

Air Pollutant Exposure in the Project Vicinity

The primary sources of air pollutants in the project vicinity are vehicle emissions on major roadways and permitted stationary sources. Emissions from these sources exceed the health protective standards identified above, resulting in the project site and its immediate environs being within the APEZ. However, some of the residential parcels along Lafayette Street beyond 500 feet from the project site are not within the APEZ. Existing modeled cancer risk at and in the vicinity of the project site (within 1,000 feet) ranges from 43 in one million to 202 in one million. As noted above, in the project area, values in excess of 90 in one million are within the APEZ. Existing modeled concentrations of PM_{2.5} within 1,000 feet of the site range from 8.44–10.18 µg/m³, with values in excess of nine µg/m³ being within the Exposure Zone.

Sensitive Receptors. Population subgroups sensitive to the health effects of air pollutants include the elderly and the young, those with higher rates of respiratory disease such as asthma and chronic obstructive pulmonary disease, and with other environmental or occupational health exposures (e.g., indoor air quality) that affect cardiovascular or respiratory diseases.

¹⁴⁹ Health vulnerable areas were identified as those Bay Area zip codes in the worst quintile of Bay Area Health Vulnerability Scores. San Francisco Departments of Public Health and Planning. *Memorandum Re: 2014 Air Pollutant Exposure Zone Map*, April 9, 2014.

¹⁵⁰ BAAQMD, *Revised Draft Options and Justification Report*, California Environmental Quality Act Thresholds of Significance, October 2009, p. 67.

¹⁵¹ 54 Federal Register 38044, September 14, 1989.

¹⁵² BAAQMD, *Revised Draft Options and Justification Report*, California Environmental Quality Act Thresholds of Significance, October 2009, p. 67.

As discussed previously, land uses such as schools, children's day care centers, hospitals, and nursing and convalescent homes are considered to be the most sensitive to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress. Parks and playgrounds are considered moderately sensitive to poor air quality because persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality; however, exposure times are generally far shorter in parks and playgrounds than in residential locations and schools, which typically reduces the overall health risk associated with exposure to pollutants. Residential areas are considered more sensitive to air quality conditions because people generally spend longer periods of time at their residences, with associated greater exposure to ambient air quality conditions.

As shown in **Figure IV.C-1, Sensitive Receptors in Project Vicinity**, the nearest existing sensitive receptors to the project site are upper-story residential units in the building at 1551–1559 Mission Street, approximately 100 feet (the width of Mission Street at Lafayette Street plus sidewalks) south of the project site, and several two- to five-story residential buildings on Lafayette and Minna Streets southeast of the project site, as close as 165 feet from the project site. Additional nearby residential receptors are located on Natoma and Howard Streets farther to the south; on Natoma Street between 10th and 11th Streets and on 10th Street between Market and Minna Streets to the east; on South Van Ness Avenue and Howard Streets to the south; at 12th and Market Streets and on Brady Street to the west; and on Market, Franklin, and Polk Streets and Van Ness Avenue to the north.¹⁵³ **Figure IV.C-1** also identifies parcels that are currently not occupied, could be occupied by sensitive receptors during the construction period of the proposed project.

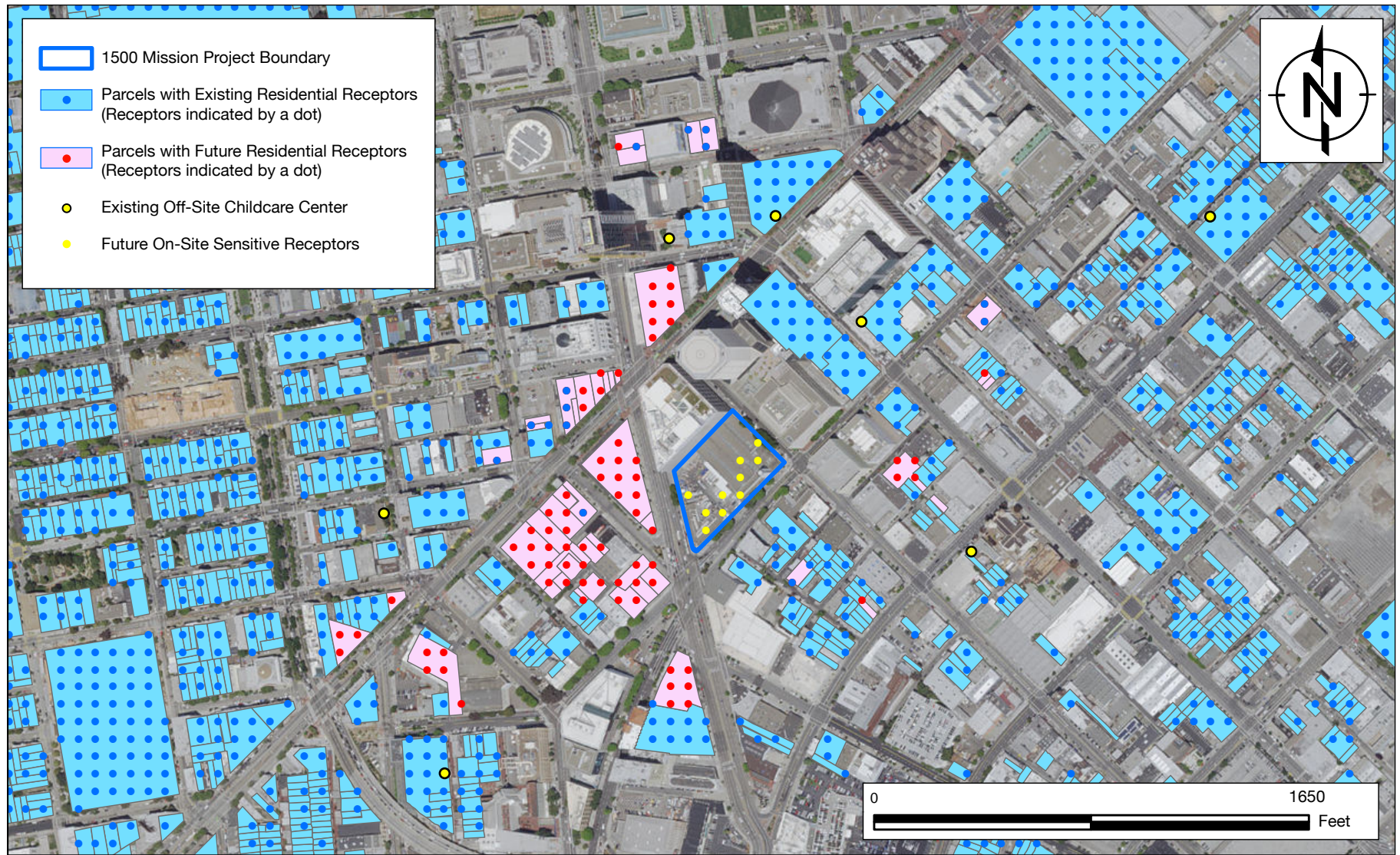
IV.C.3 Regulatory Framework

Federal Regulations

Federal Clean Air Act

The 1970 Clean Air Act (as amended in 1990) requires that regional planning and air pollution control agencies prepare a regional air quality plan to outline the measures by which both stationary and mobile sources of pollutants would be controlled in order to achieve all ambient air quality standards by the specified deadlines. The ambient air quality standards are intended to protect the public health and welfare, and they specify the concentration of pollutants (with an adequate margin of safety) to which the public can be exposed without adverse health effects. The standards are designed to protect those segments of the public most susceptible to respiratory distress, including asthmatics, the very young, the elderly, people weak from other illness or disease, or persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollution levels that are somewhat above ambient air quality standards before adverse health effects are observed.

¹⁵³ There is a medical facility currently under construction at 1563 Mission Street. However, this facility would operate for out-patient services and would not be considered a sensitive receptor because there would be no overnight stays or emergency nighttime care.



SOURCE: Ramboll Environ, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure IV.C-1
Sensitive Receptors in Project Vicinity

The current attainment status for the SFBAAB, with respect to state and federal standards, is summarized in **Table IV.C-3, San Francisco Attainment Status**. The SFBAAB is designated as *nonattainment* for the ozone and PM_{2.5} state and federal standards and PM₁₀ state standards, *unclassified* for federal PM₁₀, NO₂, standards, and *attainment* for state and federal standards of other criteria pollutants.

TABLE IV.C-3 SAN FRANCISCO ATTAINMENT STATUS

Pollutant	Averaging Time	State (SAAQS ^a)		Federal (NAAQS ^b)	
		Standard	Attainment Status	Standard	Attainment Status
Ozone	1-hour	0.09 ppm	N	NA	See Note c
	8-hour	0.070 ppm	N	0.070 ppm ^d	N/Marginal
Carbon Monoxide (CO)	1-hour	20 ppm	A	35 ppm	A
	8-hour	9 ppm	A	9 ppm	A
Nitrogen Dioxide (NO ₂)	1-hour	0.18 ppm	A	0.100 ppm	U
	Annual	0.030 ppm	NA	0.053 ppm	A
Sulfur Dioxide (SO ₂)	1-hour	0.25 ppm	A	0.075 ppm	A
	24-hour	0.04 ppm	A	0.14 ppm	A
	Annual	NA	NA	0.03 ppm	A
Particulate Matter (PM ₁₀)	24-hour	50 µg/m ³	N	150 µg/m ³	U
	Annual ^e	20 µg/m ³ ^f	N	NA	NA
Fine Particulate Matter (PM _{2.5})	24-hour	NA	NA	35 µg/m ³	N
	Annual	12 µg/m ³	N	12 µg/m ³	U/A
Sulfates	24-hour	25 µg/m ³	A	NA	NA
	30-day	1.5 µg/m ³	A	NA	NA
Lead	Cal. Quarter	NA	NA	1.5 µg/m ³	A
	Rolling 3-month average	NA	NA	0.15	U
Hydrogen Sulfide	1-hour	0.03 ppm	U	NA	NA
Visibility-Reducing Particles	8-hour	See Note g	U	NA	NA

NOTES:

A = Attainment; N = Non-attainment; U = Unclassified; NA = Not Applicable, no applicable standard; ppm = parts per million; µg/m³ = micrograms per cubic meter

- SAAQS = state ambient air quality standards (California). SAAQS for ozone, CO (except Lake Tahoe), SO₂ (one-hour and 24-hour), NO₂, PM, and visibility-reducing particles are values that are not to be exceeded. All other state standards shown are values not to be equaled or exceeded.
- NAAQS = national ambient air quality standards. NAAQS, other than ozone and particulates, and those based on annual averages or annual arithmetic means, are not to be exceeded more than once a year. The eight-hour ozone standard is attained when the three-year average of the fourth highest daily concentration is 0.08 ppm or less. The 24-hour PM₁₀ standard is attained when the three-year average of the 99th percentile of monitored concentrations is less than the standard. The 24-hour PM_{2.5} standard is attained when the three-year average of the 98th percentile is less than the standard.
- USEPA revoked the national one-hour ozone standard on June 15, 2005.
- This federal 8-hour ozone standard was approved by USEPA in October 2015 and became effective on December 28, 2015.
- State standard = annual geometric mean; national standard = annual arithmetic mean.
- In June 2002, the CARB established new annual standards for PM_{2.5} and PM₁₀.
- Statewide visibility-reducing particle standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70 percent. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

State Regulations

California Clean Air Act

Although the Federal Clean Air Act established national ambient air quality standards, individual states retained the option to adopt more stringent standards and to include other regulated pollution sources. California had already established its own air quality standards when the federal standards were established. Because of differing implementing authorities in California, there is considerable diversity between state and national ambient air quality standards, as shown in **Table IV.C-3**. California ambient air quality standards tend to be more stringent than federal standards.

The federal New Source Review (NSR) program was created by the Federal Clean Air Act to ensure that stationary sources of air pollution are constructed in a manner that is consistent with attainment of federal health based ambient air quality standards. For PM₁₀ and PM_{2.5}, the emissions limit under NSR is 15 tons per year (tpy) (82 pounds per day [ppd]) and 10 tpy (54 ppd), respectively. These emissions limits represent levels at which a source is not expected to have an impact on air quality.¹⁵⁴

In 1998, California passed the California Clean Air Act (*California Health and Safety Code* Sections 39000 et seq.), which, like its federal counterpart, called for the designation of areas as attainment or nonattainment based on state ambient air quality standards rather than federal standards. As indicated in **Table IV.C-3**, the SFBAAB is designated as nonattainment for state ozone, PM₁₀, and PM_{2.5} standards and attains the state standards for other pollutants.

Regional and Local Regulations and Plans

Bay Area Air Quality Management District

The BAAQMD is responsible for developing a Clean Air Plan (CAP), which guides the region's air quality planning efforts to attain the California Ambient Air Quality Standards. The BAAQMD's 2010 CAP is the latest CAP, which contains district-wide control measures and strategies to reduce ozone precursor emissions (i.e., ROG and NO_x), particulate matter, and GHG emissions.¹⁵⁵ Control strategies include discreet measures that work in consort to reduce emissions to reach attainment of air quality standards.

The Bay Area 2010 CAP,¹⁵⁶ which was adopted on September 15, 2010, by the BAAQMD's board of directors, accomplishes the following:

- Updates the *Bay Area 2005 Ozone Strategy* in accordance with the requirements of the California Clean Air Act to implement "all feasible measures" to reduce ozone;
- Provides a control strategy to reduce ozone, particulate matter (PM), air toxics, and GHGs in a single, integrated plan;

¹⁵⁴ BAAQMD, *Revised Draft Options and Justification Report*, California Environmental Quality Act Thresholds of Significance, October 2009, p. 16.

¹⁵⁵ BAAQMD, *Bay Area Clean Air Plan*, September 2010. Available at <http://www.baaqmd.gov/plans-and-climate/air-quality-plans/current-plans>, accessed July 13, 2016.

¹⁵⁶ BAAQMD is preparing the *2016 Clean Air Plan/Regional Climate Protection Strategy*, which is anticipated to be adopted in late 2016.

- Reviews progress in improving air quality in recent years; and
- Establishes emission control measures that were to be adopted or implemented.

San Francisco is within the jurisdiction of the BAAQMD. Air quality conditions in the San Francisco Bay Area have improved significantly since the BAAQMD was created in 1955. Ambient concentrations of air pollutants and the number of days during which the region exceeds air quality standards have fallen dramatically. Exceedances of air quality standards occur primarily during meteorological conditions conducive to high pollution levels, such as cold, windless winter nights or hot, sunny summer afternoons.

The BAAQMD regulates backup emergency generators, fire pumps and other sources of TACs through its New Source Review (Regulation 2, Rule 5) permitting process. Although emergency generators are intended to be used only during periods of power outages, monthly testing of each generator is required; however, the BAAQMD limits testing to no more than 50 hours per year. As part of the permitting process, the BAAQMD limits the excess cancer risk from any facility to no more than 10 per one million population for any permits that are applied for within a two-year period and would require any source that would result in an excess cancer risk greater than one per one million to install Best Available Control Technology for Toxics (TBACT).

San Francisco General Plan Air Quality Element

San Francisco has a number of policies and regulations related to air quality, including those within the City's *General Plan Air Quality Element* and the City's Building and Health Codes.

The *San Francisco General Plan (General Plan)* includes the Air Quality Element.¹⁵⁷ The objectives specified by the City include the following:

- **Objective 1:** Adhere to State and Federal air quality standards and regional programs.
- **Objective 2:** Reduce mobile sources of air pollution through implementation of the Transportation Element of the *General Plan*.
- **Objective 3:** Decrease the air quality impacts of development by coordination of land use and transportation decisions.
- **Objective 4:** Improve air quality by increasing public awareness regarding the negative health effects of pollutants generated by stationary and mobile sources.
- **Objective 5:** Minimize particulate matter emissions from road and construction sites.
- **Objective 6:** Link the positive effects of energy conservation and waste management to emission reductions.

San Francisco Health Code

The *San Francisco Health Code* Article 22B and *San Francisco Building Code* Section 106A.3.2.6 collectively constitute the Construction Dust Control Ordinance (adopted in July 2008). The Ordinance requires that all site preparation work, demolition, or other construction activities within San Francisco that have the potential to create dust or to expose or disturb more than 10 cubic yards or 500 square feet of soil comply with specific

¹⁵⁷ City and County of San Francisco, Planning Department, Air Quality, An element of the *General Plan of the City and County of San Francisco*. Available at http://generalplan.sfplanning.org/I10_Air_Quality.htm, accessed July 13, 2016.

dust control measures whether or not the activity requires a permit from the Department of Building Inspection (DBI). For projects over 0.5 acre, the Dust Control Ordinance requires that the project sponsor submit a Dust Control Plan for approval by DPH prior to issuance of a building permit by DBI.

Building permits will not be issued without written notification from the Director of Public Health that the applicant has a site-specific Dust Control Plan, unless the Director waives the requirement. The Construction Dust Control Ordinance requires project sponsors and contractors responsible for construction activities to control construction dust on the site or implement other practices that result in equivalent dust control that are acceptable to the Director of Public Health. Dust suppression activities may include watering all active construction areas sufficiently to prevent dust from becoming airborne; increased watering frequency may be necessary whenever wind speeds exceed 15 mph. Reclaimed water must be used if required by Article 21, Sections 1100 et seq. of the *San Francisco Public Works Code*.

San Francisco adopted Article 38 of the *San Francisco Health Code* in 2008, and amended it in 2014, to protect new sensitive uses from existing sources of air pollution by requiring enhanced ventilation and filtration systems in certain areas of the city. The recent amendments make the *Health Code* and *Building Code* consistent with the results of the air quality modeling undertaken to identify the City's APEZ. As revised in 2014, Article 38 applies to all development that includes "sensitive uses," as defined in the *Health Code*, including all residential units; adult, child and infant care centers; schools; and nursing homes. The revised Article 38 considers all existing sources of TACs and PM_{2.5}, and requires "enhanced ventilation," including filtration of outdoor air, for all such projects located in the APEZ. The filtration requirement of Article 38 specifies Minimum Efficiency Reporting Value 13 or equivalent, based on American Society of Heating, Refrigerating and Air-Conditioning Engineers Standard 52.2, and requires DPH to confer with other City departments and report to the Board of Supervisors concerning technologies it has identified or evaluated that may comply with the requirements of the *Health Code*. Article 38 also requires periodic updating of the APEZ Map (about every five years) to account for changes in sources of TACs and PM_{2.5} emissions or updated health risk quantification methodologies.

IV.C.4 Impacts and Mitigation Measures

Significance Thresholds

The proposed project would have a significant effect on air quality if it would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal, state, or regional ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations;
- Create objectionable odors affecting a substantial number of people; or
- Result in a cumulative air quality impact in combination with past, present and reasonably foreseeable future projects in the vicinity.

Approach to Analysis

In general, the proposed project would result in two types of air quality impacts. First, the proposed project would result in air pollution emitted by construction activity. Second, the proposed project would generate air pollutants during project operation, due to increased vehicle travel and new stationary sources (i.e., two new emergency standby diesel generators).

Each of these types of direct impacts is in turn separated into impacts from criteria air pollutant emissions, which are generally regional in nature, and into impacts associated with exposure to TACs and PM_{2.5}, which is a localized health impact expressed in terms of exposure to PM_{2.5} concentrations and the probability of contracting cancer per one million population exposed to TAC concentrations. The assessment of criteria air pollutant impacts addresses the second and third bulleted significance thresholds identified above. The assessment of localized health risk and exposure to PM_{2.5} concentrations addresses the fourth bulleted significance threshold identified.

Air quality analysis conducted for this impact assessment employs the emission factors, models, and tools distributed by a variety of agencies including ARB, California Air Pollution Officers Association, BAAQMD, OEHHA, and USEPA.¹⁵⁸

In the *California Building Industry Association v. Bay Area Air Quality Management District* case decided in 2015,¹⁵⁹ the California Supreme Court held that CEQA does not generally require lead agencies to consider how existing environmental conditions might impact a project's users or residents, except where the proposed project would significantly exacerbate an existing environmental condition. Accordingly, the identified significance criteria related to exposure of sensitive receptors to substantial pollutant concentrations are valid only to the extent that the project significantly exacerbates air quality conditions. For this EIR, air quality impacts of the environment on the proposed residences were considered in the context of the contributions from project operational emissions.

The following discusses the criteria used in this EIR to evaluate the significance thresholds listed above.

Air Quality Plan

The applicable air quality plan is the BAAQMD's 2010 CAP, which identifies measures to reduce emissions and reduce ambient concentrations of air pollutants; safeguard public health by reducing exposure to air pollutants that pose the greatest health risk, with an emphasis on protecting the communities most heavily affected by air pollution; and reduce GHG emissions to protect the climate. Consistency with the CAP can be determined if the proposed project supports the goals of the CAP, includes applicable control measures from the CAP, and if the proposed project would not disrupt or hinder implementation of any control measures from the CAP. Consistency with this plan is the basis for determining whether the proposed project would conflict with or obstruct implementation of an applicable air quality plan. The 2010 CAP is currently in the process of being updated with a Final Draft expected to be circulated in late 2016. However, until a final revised Plan is adopted, this analysis will assess impacts related to the 2010 CAP.

¹⁵⁸ BAAQMD, *CEQA Air Quality Guidelines*, May 2011.

¹⁵⁹ *California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal.4th 369. Opinion Filed December 17, 2015.

Criteria Air Pollutants

As described previously under Regulatory Framework, the SFBAAB experiences low concentrations of most pollutants when compared to federal or state standards and is designated as either in attainment or unclassified for most criteria pollutants with the exception of ozone, PM_{2.5}, and PM₁₀, for which these pollutants are designated as non-attainment for either the state or federal standards.

By definition, regional air pollution is largely a cumulative impact in that no single project is sufficient in size to, by itself, result in non-attainment of air quality standards. Instead, a project's individual emissions are considered to contribute to the existing, cumulative air quality conditions. If a project's contribution to cumulative air quality conditions is considerable, then the proposed project's impact on air quality would be considered significant.¹⁶⁰

Table IV.C-4, Criteria Air Pollutant Significance Thresholds, identifies criteria air pollutant significance thresholds followed by a discussion of each threshold. Projects that would result in criteria pollutant emissions below these significance thresholds would not violate an air quality standard, contribute substantially to an air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants within the SFBAAB.

The potential for a project to result in a cumulatively considerable net increase in criteria air pollutants that may contribute to an existing or projected air quality violation is based on the state and federal Clean Air Act emissions limits for stationary sources. To ensure that new stationary sources do not cause or contribute to a violation of an air quality standard, BAAQMD Regulation 2, Rule 2, requires that any new source that emits criteria air pollutants above a specified emissions limit must offset those emissions. For ozone precursors ROG and NO_x, the offset emissions level is an annual average of 10 tpy (or 54 ppd).¹⁶¹ These levels represent emissions below which new sources are not anticipated to contribute to an air quality violation or result in a considerable net increase in criteria air pollutants which could result in an increased health effects.

TABLE IV.C-4 CRITERIA AIR POLLUTANT SIGNIFICANCE THRESHOLDS

Pollutant	Construction Thresholds Average Daily Emissions (pounds per day)	Operational Thresholds	
		Average Daily Emissions (pounds per day)	Maximum Annual Emissions (tons per year)
ROG	54	54	10
NO _x	54	54	10
PM ₁₀	82 (exhaust)	82	15
PM _{2.5}	54 (exhaust)	54	10
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices		

SOURCE: BAAQMD, *CEQA Air Quality Guidelines*, May 2011, p. 2-2. Available at <http://www.baaqmd.gov/~media/Files/Planning%20and%20Research/CEQA/BAAQMD%20CEQA%20Guidelines%20May%202011.ashx?la=en>, accessed February 6, 2016.

NOTE:

ROG = reactive organic gases; NO_x = oxides of nitrogen; PM₁₀ = particulate matter with diameter equal to or less than 10 microns; PM_{2.5} = particulate matter with diameter equal to or less than 2.5 microns.

¹⁶⁰ BAAQMD, *CEQA Air Quality Guidelines*, May 2011.

¹⁶¹ BAAQMD, *Revised Draft Options and Justification Report*, California Environmental Quality Act Thresholds of Significance, October 2009, p. 17.

As previously discussed under the Regulatory Framework section, PM₁₀ and PM_{2.5} emissions are limited under the federal NSR program. For PM₁₀ and PM_{2.5}, the emissions limit under NSR is 15 tpy (82 ppd) and 10 tpy (54 ppd), respectively. These emissions limits represent levels below which a source is not expected to have an impact on air quality.¹⁶²

Although the regulations specified above apply to new or modified stationary sources, land use development projects result in ROG, NO_x, PM₁₀, and PM_{2.5} emissions as a result of increases in vehicle trips, energy use, architectural coating, and construction activities. Therefore, the above thresholds can be applied to the construction and operational phases of land use projects. Those projects that result in emissions below these thresholds would not be considered to contribute to an existing or projected air quality violation or result in a considerable net increase in ozone precursors or particulate matter. Due to the temporary nature of construction activities, only the average daily thresholds are applicable to construction phase emissions.

Fugitive dust emissions are typically generated during construction phases. Studies have shown that the application of best management practices (BMPs) at construction sites significantly control fugitive dust.¹⁶³ Individual measures have been shown to reduce fugitive dust by anywhere from 30 to 90 percent.¹⁶⁴ The BAAQMD has identified a number of BMPs to control fugitive dust emissions from construction activities.¹⁶⁵ San Francisco's Construction Dust Control Ordinance, including approval of a dust control plan by DPH, requires a number of fugitive dust control measures to ensure that construction projects do not result in visible dust.

Local Health Risks and Hazards

The threshold of significance used to evaluate health risks from new sources of TACs is based on the potential for the proposed project to substantially affect the geography and severity of the APEZ at sensitive receptor locations. For projects that could result in sensitive receptor locations meeting the APEZ criteria that otherwise would not without the project, a project that would emit PM_{2.5} concentration above 0.3 µg/m³ or result in an excess cancer risk greater than 10.0 per million would be considered a significant impact. For those locations already meeting the APEZ criteria, such as the project site, a lower significance standard is required to ensure that a proposed project's contribution to existing health risks would not be significant. In these areas a proposed project's PM_{2.5} concentrations above 0.2 µg/m³ or an excess cancer risk greater than 7.0 per million would be considered a significant impact.¹⁶⁶ Because the project site and vicinity are within the APEZ, these more stringent thresholds of significance are applicable to the proposed project.

¹⁶² BAAQMD, *Revised Draft Options and Justification Report*, California Environmental Quality Act Thresholds of Significance, October 2009, p. 16.

¹⁶³ Western Regional Air Partnership, *WRAP Fugitive Dust Handbook*, September 7, 2006. Available at wrapair.org/forums/dejtf/fdh/content/FDHHandbook_Rev_06.pdf, accessed July 13, 2016.

¹⁶⁴ BAAQMD, *Revised Draft Options and Justification Report*, California Environmental Quality Act Thresholds of Significance, October 2009, p. 27.

¹⁶⁵ BAAQMD, *CEQA Air Quality Guidelines*, May 2011.

¹⁶⁶ A 0.2 µg/m³ increase in PM_{2.5} would result in a 0.28 percent increase in non-injury mortality or an increase of about twenty-one excess deaths per 1,000,000 population per year from non-injury causes in San Francisco. This information is based on Jerrett, M et al., *Spatial Analysis of Air Pollution and Mortality in Los Angeles*, *Epidemiology* 16 (2005): 727-736. The excess cancer risk has been proportionally reduced to result in a significance criterion of 7 per million persons exposed.

Odors

With respect to odors, the analysis qualitatively evaluates the types of land uses proposed to evaluate whether major sources of anticipated odors would be present and, if so, whether they would likely generate objectionable odors.

Cumulative Air Quality Impacts

Regional air quality impacts are by their very nature cumulative impacts. Emissions from past, present and future projects contribute to adverse regional air quality impacts on a cumulative basis. No single project by itself would be sufficient in size to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulative adverse air quality impacts. As described previously, the project-level thresholds for criteria air pollutants are based on levels below which new sources are not anticipated to contribute to an air quality violation or result in a considerable net increase in criteria air pollutants. Therefore, if a project's emissions are below the project-level thresholds, the project would not be considered to result in a considerable contribution to cumulative regional air quality impacts.

The HRA takes into account the localized health risks to sensitive receptors from sources included in the citywide modeling plus the proposed project's sources. Thus, the citywide modeling accounts for cumulative localized health risk impacts. The cumulative analysis also considers other projects in the immediate vicinity and their potential to increase local health risks.¹⁶⁷ However, similar to criteria air pollutants above, if a project's emissions are below the project-level thresholds, the project would not be considered to result in a considerable contribution to cumulative localized air quality impacts.

Impact Evaluation

The following analysis evaluates potential air quality impacts, including those related to criteria air pollutants, toxic air contaminants, and odors, that could result from construction and operation of the proposed project.

Impact AQ-1: The proposed project's construction activities would generate fugitive dust and criteria air pollutants but would not violate an air quality standard, contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants. (Less than Significant)

Construction activities required for the proposed project would include demolition, site preparation, excavation, grading, placement of infrastructure, placement of foundations for structures, fabrication of structures, and paving. These construction activities would require the use of heavy trucks, excavating and grading equipment, material loaders, dozers, and other mobile and stationary construction equipment. Fugitive dust emissions during construction would be generated during ground-disturbing activities, materials handling, and mobile equipment use on unimproved surfaces. Fugitive ROG emissions would be

¹⁶⁷ As noted in the discussion of Air Pollutant Exposure in the Project Vicinity, existing modeled cancer risk within 1,000 feet of the project site ranges from 43 in one million to 202 in one million, and existing modeled concentrations of PM_{2.5} within 1,000 feet of the site range from 8.44–10.18 µg/m³. Modeling for 2040 indicates that cancer risk would be no higher than 95 in one million and PM_{2.5} concentration would be no higher than 9.55 µg/m³. Therefore, the analysis herein, which is based on existing cancer risk and PM_{2.5} concentration, is conservative.

generated during application of architectural coatings. Equipment exhaust would be generated from construction worker vehicle trips, material truck trips, and the operation of construction equipment on-site.

Demolition and construction of the proposed project are estimated to take approximately 24 months from ground breaking, which is anticipated to occur in 2017. The proposed project would be constructed in one continuous phase with both the residential and retail/restaurant component and office and permit center component being constructed at the same time, and all construction materials accommodated on-site.

Fugitive Dust

Project-related demolition, excavation, grading, and other construction activities may cause wind-blown dust that could contribute PM into the local atmosphere. Despite the established federal standards for air pollutants and ongoing implementation of state and regional air quality control plans, air pollutants continue to have impacts on human health throughout the country. California has found that PM exposure can cause health effects at lower levels than national standards. The current health burden of PM demands that, where possible, public agencies take feasible, available actions to reduce sources of PM exposure. According to the ARB, reducing ambient PM from 1998–2000 levels to natural background concentrations in San Francisco would prevent over 200 premature deaths.

Dust can be an irritant causing watering eyes or irritation to the lungs, nose, and throat. Demolition, excavation, grading, and other construction activities can cause wind-blown dust that adds PM to the local atmosphere. Depending on exposure, adverse health effects can occur due to this PM in general as well as due to specific contaminants, such as lead or asbestos that may be constituents of dust.

In response to these concerns, the San Francisco Board of Supervisors approved a series of amendments to the San Francisco Building and Health Codes, generally referred hereto as the Construction Dust Control Ordinance (Ordinance 176-08, effective July 30, 2008), with the intent of reducing the quantity of dust generated during site preparation, demolition, and overall construction work in order to protect the health of the general public and on-site workers, to minimize public nuisance complaints, and to avoid orders to stop work by DBI.

The ordinance requires that all site preparation work, demolition, or other construction activities within San Francisco that have the potential to create dust or to expose or disturb more than 10 cubic yards or 500 square feet of soil comply with specified dust control measures whether or not the activity requires a permit from DBI.

To comply with the Construction Dust Control Ordinance, the project sponsor and construction contractor would be required to undertake dust control activities. For projects over 0.5 acre, such as the proposed project, the Dust Control Ordinance requires that the project sponsor submit a dust control plan for approval by San Francisco Department of Public Health. DBI will not issue a building permit without written notification from the Director of Public Health that the applicant has a site-specific dust control plan, unless the Director waives the requirement.

The site-specific dust control plan would require the project sponsor to: submit a map to the Director of Public Health showing all sensitive receptors within 1,000 feet of the site. If the proposed project is determined to be within 1,000 feet of sensitive receptors, the site-specific dust control plan shall be submitted to the Director of

Health. This plan shall contain the following measures specified in Section 106.3.2.6.3 of the Building Code: designate an individual who will be responsible for monitoring compliance with dust control requirements; water all active construction areas sufficiently to prevent dust from becoming airborne, using reclaimed water whenever possible, as required by Article 21, Sections 1100 et seq. of the *San Francisco Public Works Code*; during excavation and dirt-moving activities, wet sweep or vacuum streets and sidewalks where work is in process; cover any inactive stockpiles; and use dust enclosures, curtains and dust collectors as necessary. In addition, the site-specific dust control plan may require the project sponsor to: wet down areas of soil at least three times per day; provide an analysis of wind direction and install upwind and downwind particulate dust monitors; record particulate monitoring results; hire an independent, third-party to conduct inspections and keep a record of those inspections; establish shut-down conditions based on wind, soil migration, etc.; establish a hotline for surrounding community members who may be potentially affected by project-related dust; limit the area subject to construction activities at any one time; install dust curtains and windbreaks on the property lines, as necessary; limit the amount of soil in hauling trucks to the size of the truck bed and securing with a tarpaulin; enforce a 15 mph speed limit for vehicles entering and exiting construction areas; sweep affected streets with water sweepers at the end of the day; install and utilize wheel washers to clean truck tires; terminate construction activities when winds exceed 25 mph; apply soil stabilizers to inactive areas; and sweep off adjacent streets to reduce particulate emissions.

Implementation of dust control measures in compliance with the regulations and procedures set forth by the San Francisco Dust Control Ordinance would ensure that potential dust-related construction air quality impacts of the proposed project would be *less than significant*.

Criteria Air Pollutants

Emissions from construction and operational activities were estimated using a methodology consistent with the CalEEMod 2013.2.2 model.¹⁶⁸ The emission estimates combine information on construction equipment and schedule with daily hours of vehicle operation. Construction-related emissions of criteria pollutants were estimated using a project construction-phasing schedule provided by the applicant's contractor. As previously discussed, project construction would require 24 months, beginning in September 2017 and concluding in August 2019. The applicant's contractor also provided a detailed list of construction equipment that would be used for each construction phase, which was input into the CalEEMod model.

Using the annual emissions results from CalEEMod, average daily construction emissions were calculated by converting the project emissions over the total 24-month period from tons to pounds, then dividing the result by 532, which would be the total number of days of construction (five days per week for 24 months). Construction emissions are presented in **Table IV.C-5, Project Construction Average Daily Emissions Estimates**. The majority of construction-generated ROG emissions would result from architectural coating. The emissions presented in **Table IV.C-5** also include exhaust emissions from off-road construction equipment and on-road vehicle trips (including construction worker commute trips, vendor trips [e.g., concrete], and export of excavated soil).

¹⁶⁸ Ramboll Environ, *Air Quality Technical Memorandum, 1500 Mission Street Project*, November 8, 2016.

TABLE IV.C-5 PROJECT CONSTRUCTION AVERAGE DAILY EMISSIONS ESTIMATES

Emission Category	Estimated Average Daily Emissions (pound per day)			
	ROG	NO _x	PM ₁₀	PM _{2.5}
Average Daily Emissions from the Project	33.0	18.0	0.45	0.41
Significance Threshold	54	54	82	54
Above Threshold?	No	No	No	No

SOURCE: Ramboll Environ, October 2016.

NOTES:
 ROG = reactive organic gases; NO_x = oxides of nitrogen; PM₁₀ = particulate matter with diameter equal to or less than 10 microns; PM_{2.5} = particulate matter with diameter equal to or less than 2.5 microns.

As shown in **Table IV.C-5**, the significance thresholds would not be exceeded for any of the criteria pollutants. Therefore, construction emissions from these pollutants would not violate air quality standards or contribute significantly to an existing or projected air quality violation and impacts are considered *less than significant*, and no mitigation is necessary.

Mitigation: None required.

Impact AQ-2: During project operations, the proposed project would result in emissions of criteria air pollutants, but not at levels that would violate an air quality standard, contribute to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants. (Less than Significant)

Project operation would increase the number of vehicle trips to and from the project site and would therefore generate operational emissions. In addition, operation of the residential, office, and retail land uses would generate emissions associated with area sources (natural gas combustion for space and water heating), and landscaping maintenance equipment operation (primarily gasoline combustion). Building heights would exceed 70 feet; therefore a diesel-fired engine generator set would be required for each tower building to serve code required egress lighting, fire alarm system, life safety ventilation fans, stairwell pressurization fans, one elevator (at a time) within each elevator lift bank, tenant emergency egress lighting, fire and jockey pumps, necessary sump pumps, and sewage ejectors. The generator set for the office tower would be approximately 2,000 kW, while the generator set for the residential tower would be approximately 1,000 kW.

Daily average operational emissions from CalEEMod were calculated by dividing the annual emissions by 365 days/year. Generator emissions were calculated using emission factors from USEPA AP 42 Compilation of Air Pollutant Emission Factors, Section 3.4 Large Stationary Diesel and All Stationary Dual-Fuel Engines and assuming generator with Tier 2 engines and Level 3 Verified Diesel Emission Controls Strategies that would be in operation 50 hours per year for routine testing.

Table IV.C-6, Project Operational Daily and Annual Criteria Pollutant Emissions, shows average daily operational criteria pollutant emissions and total annual operational criteria pollutant emissions that would result from the proposed project. Mobile sources would contribute the largest percentage of NO_x, PM₁₀, and PM_{2.5}, whereas area sources would contribute the largest percentage of ROG emissions.

TABLE IV.C-6 PROJECT OPERATIONAL DAILY AND ANNUAL CRITERIA POLLUTANT EMISSIONS

	ROG	NO _x	PM ₁₀	PM _{2.5}
Area Sources (ppd)	21.59	0.26	0.13	0.13
Energy (ppd)	0.57	5.05	0.40	0.40
Mobile (ppd)	10.65	21.99	18.07	5.13
Generators	0.03	5.54	0.03	0.03
Average Daily Emissions (ppd)	33.0	33.0	19.0	6.0
Significance Threshold (ppd)	54	54	82	54
Exceed Threshold (Yes or No)?	No	No	No	No
Area Sources (tpy)	3.94	0.05	0.02	0.02
Energy (tpy)	0.10	0.92	0.07	0.07
Mobile (tpy)	1.94	4.01	3.30	0.94
Generators	0.01	1.01	0.005	0.005
Maximum Annual Emissions (tpy)	6.0	6.0	3.4	1.04
Significance Threshold (ppd)	10	10	15	10
Exceed Threshold (Yes or No)?	No	No	No	No

SOURCE: Ramboll Environ, October 2016.

NOTES:
ppd = pounds per day, tpy = tons per year; ROG = reactive organic gases; NO_x = oxides of nitrogen; PM₁₀ = particulate matter with diameter equal to or less than 10 microns; PM_{2.5} = particulate matter with diameter equal to or less than 2.5 microns

As shown in **Table IV.C-6**, operational emissions would not exceed the significance thresholds for ROG, NO_x, PM_{2.5}, and PM₁₀ exhaust emissions. Therefore, operational emissions from these pollutants would not violate air quality standards or contribute significantly to an existing or projected air quality violation and operational air quality impacts are considered *less than significant*.

Mitigation: None required.

Impact AQ-3: The proposed project would generate toxic air contaminants, including diesel particulate matter, exposing sensitive receptors to substantial air pollutant concentrations. (Less than Significant with Mitigation)

As discussed above, the project site is located within an APEZ. The nearest sensitive receptors to the project site are residential uses approximately 100 feet south of the project site located at 1553 Mission Street and residences are located along Lafayette and Minna Streets further south. Additionally, the project proposes new residential uses and daycare uses within the proposed office tower that would be considered sensitive receptors, although these uses would not be occupied until construction is completed.

Sources of Toxic Air Contaminants—Proposed Project

Construction TAC Sources

Construction of the proposed project would require the use of off-road and on-road vehicles and equipment that would emit TACs, and more specifically DPM. With regard to construction emissions, off-road equipment (which includes construction-related equipment) is a large contributor to DPM emissions in California, although since 2007, the ARB has found the emissions to be substantially lower than previously expected.¹⁶⁹ Newer and more refined emission inventories have substantially lowered the estimates of DPM emissions from off-road equipment such that off-road equipment is now considered the sixth largest source of DPM emissions in California.¹⁷⁰ For example, revised PM emission estimates for the year 2010 (DPM is a major component of total PM), decreased by 83 percent from previous 2010 emissions estimates for the SFBAAB.¹⁷¹ Approximately half of the reductions in emissions were attributed to updated methodologies used to better assess construction emissions, and the remainder to the recession then under way.¹⁷²

Additionally, a number of federal and state regulations are requiring cleaner off-road equipment. Specifically, both the USEPA and ARB have set emissions standards for new off-road equipment engines, ranging from Tier 1 to Tier 4. Tier 1 emission standards were phased in between 1996 and 2000, Tier 2 and Tier 3 standards, between 2000 and 2008, and Tier 4 Interim and Final emission standards for all new engines were phased in between 2008 and 2015. To meet the Tier 4 emission standards, engine manufacturers are required to produce new engines with advanced emission-control technologies. Although the full benefits of these regulations will not be realized for several years, the USEPA estimates that by implementing the federal Tier 4 standards, NO_x and PM emissions will be reduced by more than 90 percent.¹⁷³

Operational TAC Sources

The proposed project would result in operational TACs as a result of emissions from an increase in vehicle trips and backup diesel generators at each of the two proposed towers. The residential building generator would be located on the ground floor, within and at the northeast corner of the building, near the rear of the mid-block alley extending north from Mission Street, and the office building generator would be located on the roof of the office building wing extending west toward South Van Ness Avenue, at a height of about 130 feet above grade.

The proposed project's 3,852 daily vehicle trips would marginally contribute to localized TAC emissions but were nonetheless considered in an HRA prepared for the proposed project to determine the overall contribution of the project's TAC emissions that could affect nearby sensitive receptors.

¹⁶⁹ ARB, *Staff Report: Initial Statement of Reasons for Proposed Rulemaking, Proposed Amendments to the Regulation for In-Use Off-Road Diesel-Fueled Fleets and the Off-Road Large Spark-Ignition Fleet Requirements*, October 2010, p. 1 and p. 13 (Figure 4).

¹⁷⁰ ARB, *Staff Report: Initial Statement of Reasons for Proposed Rulemaking, Proposed Amendments to the Regulation for In-Use Off-Road Diesel-Fueled Fleets and the Off-Road Large Spark-Ignition Fleet Requirements*, October 2010.

¹⁷¹ ARB, "In-Use Off-Road Equipment, 2011 Inventory Model," online query, http://www.arb.ca.gov/msei/categories.htm#inuse_or_category, accessed April 2, 2012.

¹⁷² ARB, *Staff Report: Initial Statement of Reasons for Proposed Rulemaking, Proposed Amendments to the Regulation for In-Use Off-Road Diesel-Fueled Fleets and the Off-Road Large Spark-Ignition Fleet Requirements*, October 2010.

¹⁷³ USEPA, "Clean Air Nonroad Diesel Rule: Fact Sheet," May 2004.

Modeling of Toxic Air Contaminants and Health Risk Assessment

The proposed project is located within and APEZ and, as discussed above, construction activities and operations may emit air pollutants which would adversely affect populations that are already at a higher risk for adverse long-term health risks from existing sources of air pollution.

Therefore, Ramboll Environ conducted an HRA for the proposed project to provide quantitative estimates of health risks from exposures to TACs. The results have been included in an Air Quality Technical Report (AQTR).¹⁷⁴ The HRA examined all sensitive receptors within 1,000 meters of the project boundary. Exposure assessment guidance establishes the assumption that people in residences would be exposed to air pollution 24 hours per day, 350 days per year, for 30 years as the basis for calculating cancer risk in all HRAs.¹⁷⁵ Therefore, cancer risk impact from both construction and operation are considered together to identify the overall excess cancer risk from emissions generated by all project activities. The thresholds for assessment of localized PM_{2.5} impacts are in terms of concentrations that are annual averages for a given worst-case year. Consequently, separate concentrations are presented for construction and operation because the emissions from these sources would not occur simultaneously.

An HRA is used to determine if a particular chemical poses a significant risk to human health and, if so, under what circumstances. The HRA prepared for this project focuses on PM_{2.5} and TACs because these more so than other types of air pollutants, pose significant health impacts at the local level.¹⁷⁶ Near-field air dispersion modeling of DPM from project sources was conducted using the USEPA's AERMOD model (version 15181, USEPA 2012).^{27F.177} The methodologies for this dispersion modeling were based on the most recent BAAQMD Recommended Methods for Screening and Modeling Local Risks and Hazards, which recommends the use of USEPA's AERMOD model.¹⁷⁸ AERMOD is also the model that was used by BAAQMD in the citywide modeling discussed in the Setting section above. This model requires inputs such as source parameters, meteorological parameters, topography information, and receptor parameters. Construction activities were modeled in AERMOD as area sources, haul trips and operational trips as adjacent volume sources, and operational generators as point sources.¹⁷⁹

The dispersion modeling assists with calculating the estimated DPM, speciated TOG, and PM_{2.5} concentrations at sensitive receptor locations.¹⁸⁰ Concentrations of emissions from construction and operational project

¹⁷⁴ Ramboll Environ, *Air Quality Technical Report, 1500 Mission Street Project*, November 8, 2016.

¹⁷⁵ California Environmental Protection Agency, *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessment*, February 2015. Available at http://oehha.ca.gov/air/hot_spots/2015/2015GuidanceManual.pdf, accessed January 18, 2016.

¹⁷⁶ Bay Area Air Quality Management District, *CEQA Air Quality Guidelines*, May 2011, page 4-21.

¹⁷⁷ On November 9, 2005, the USEPA promulgated final revisions to the federal Guideline on Air Quality Models, in which it recommended that AERMOD be used for dispersion modeling evaluations of criteria air pollutant and toxic air pollutant emissions from typical industrial facilities. USEPA Preferred/Recommended Models, AERMOD Modeling System, http://www.epa.gov/ttn/scram/dispersion_prefrec.htm#aermod.

¹⁷⁸ BAAQMD, *Recommended Methods for Screening and Modeling Local Risks and Hazards*, May 2012. Available at <http://www.baaqmd.gov/~media/Files/Planning%20and%20Research/CEQA/BAAQMD%20Modeling%20Approach.ashx>, accessed January 18, 2016.

¹⁷⁹ In dispersion modeling, a point source is a source emanated from a discrete point on the modeling grid. An area source is a two-dimensional emissions source that is represented by polygon vertices. A volume source is a three-dimensional emissions source that is represented by a location, release height, and initial lateral and vertical plume sizes.

¹⁸⁰ Only certain compounds, or species, of total organic gases are also TACs.

vehicle traffic were based on data generated by CalEEMod. Operational emissions from emergency standby generators were based on calculations using emission rates published by USEPA.¹⁸¹ DPM, TOG, and PM_{2.5} emissions rates were used as inputs into AERMOD to predict worst-case DPM, TOG, and PM_{2.5} concentrations, respectively.

The proposed project would require construction activities for an approximate 24-month construction period. Project construction activities would result in short-term emissions of DPM and other TACs. DPM and PM_{2.5} concentrations for each phase of construction due to construction activities and haul trips were modeled separately by year of construction, to account for emissions specific to construction activities occurring in specific time periods. Emissions from operational on-road traffic and emergency generators were also modeled at on- and off-site receptor locations.

DPM and speciated TOG concentrations were then used to determine excess lifetime cancer risk based on the HRA methodology published by OEHHA in 2015. Exposure parameters include daily breathing rate, exposure time, exposure frequency, exposure duration, average time, and inhalation intake factors. Off-site child residents (living adjacent to the project site and not within any of the project's phases) were assumed to be present at one location during the entire construction period. Off-site and on-site residents were assumed to be present at one location for 30 years, consistent with OEHHA guidance. The excess cancer risk and PM_{2.5} concentrations from all sources (ambient [for PM_{2.5} only] plus emissions from existing sources plus emissions from project construction, operation, and traffic sources) for each receptor point was then determined. Details of the AERMOD modeling inputs, toxics analysis, and exposure parameters are included in the AQTR.

Health Risk Assessment Results

The HRA evaluated health risks to on-site receptors (residents and children in the childcare facility) that would result from operation (routine testing) of the generators and from project-generated traffic. The HRA also evaluated risks to off-site receptors—nearby residents—from the combination of project construction activities and project operation (generators and traffic). The results of this analysis were then added to background levels to generate total cancer risk and PM_{2.5} concentrations at receptor points. The results of the HRA are shown in **Table IV.C-7, Health Risk Assessment Results**.

¹⁸¹ USEPA, *AP-42 Compilation of Air Pollutant Emission Factors*, 3.3 Gasoline and Diesel Industrial Engines & 3.4 Large Stationary Diesel and All Stationary Dual-Fuel Engines, October 1996.

TABLE IV.C-7 HEALTH RISK ASSESSMENT RESULTS

Receptor Type	Source Category	Unmitigated Scenario		Mitigated Scenario	
		Lifetime Excess Cancer Risk Increases	PM _{2.5} Concentration	Lifetime Excess Cancer Risk Increases	PM _{2.5} Concentration
Off-Site Resident	Background	153	9.0	153	9.0
	Construction	11	0.05	1.9	0.0096
	Operation	0.13	0.00039	0.068	< 0.0001
	Traffic	0.17	0.0027	0.17	0.0028
	<i>Project Contribution Subtotal</i>	<i>11</i>	<i>0.055</i>	<i>2.2</i>	<i>0.012</i>
Total with Background		164	9.0	155	9.0
On-Site Resident	Background	165	9.0	165	9.0
	Construction ^a	N/A	N/A	N/A	N/A
	Operation	6.3	0.0085	5.5	0.0074
	Traffic	0.18	0.003	0.18	0.003
	<i>Project Contribution Subtotal</i>	<i>6.5</i>	<i>0.011</i>	<i>5.7</i>	<i>0.010</i>
Total with Background		171	9.0	170	9.0
On-Site Child	Background	184	9.0	184	8.9
	Construction ^a	N/A	N/A	N/A	N/A
	Operation	15	0.033	1.3	0.003
	Traffic	0.095	0.0026	0.095	0.0026
	<i>Project Contribution Subtotal</i>	<i>15</i>	<i>0.035</i>	<i>1.4</i>	<i>0.0056</i>
Total with Background		199	9.0	186	8.9

SOURCE: Ramboll Environ, October 2016.

NOTES:

PM_{2.5} = particulate matter with diameter equal to or less than 2.5 microns

a. On-site receptors would not be exposed to construction risks or PM_{2.5} because they would not occupy the buildings until after construction is complete; therefore, no health risk values are provided for these receptors.

PM_{2.5} Exposure Concentrations

As shown in Table IV.C-7, localized PM_{2.5} concentrations during project construction would be 0.05 µg/m³ at the most impacted off-site receptor. This contribution would be below the 0.2 µg/m³ threshold for impacts to a receptor within an area meeting the APEZ criteria. Localized PM_{2.5} concentrations during project operations would be 0.003 µg/m³ at the most impacted off-site receptor.

On-site receptors would not be exposed to construction-related PM_{2.5} because they would not occupy the buildings until after construction is completed. Localized PM_{2.5} concentrations during project operations would be 0.036 µg/m³ at the most impacted on-site receptor. This contribution would be below the 0.2 µg/m³ threshold for impacts to a receptor within an area meeting the APEZ criteria. Consequently there would be *less than significant* impact with regard to PM_{2.5} exposure to both on-site and off-site receptors.

Increased Cancer Risk Estimates

As shown in **Table IV.C-7**, the combination of unmitigated construction-related and operational TAC emissions at the most impacted off-site receptor would result in an increased cancer risk of 11 in one million. This increased risk exceeds the seven in one million threshold for impacts to a receptor within an area meeting the APEZ criteria. Consequently, the unmitigated cancer risk impact to off-site receptors would be *significant*.

On-site receptors would not be exposed to increased cancer risks from construction emissions because they would not occupy the buildings until after construction is complete. As shown in **Table IV.C-7**, operational emissions would result in incremental cancer risk increase that would exceed the applicable significance threshold for on-site receptors at the proposed childcare facility and health risks from unmitigated operational emissions at on-site receptors would therefore result in a *significant impact*.

Health risk impacts to off-site receptors would be mitigated to a less-than-significant level with implementation of **Mitigation Measure M-AQ-3a, Construction Air Quality**. As indicated in **Table IV.C-7**, increased cancer risks at off-site receptors with mitigation would be reduced to 2.2 in one million, which is below the seven in one million threshold for impacts to a receptor within an area meeting the APEZ criteria. Consequently, implementation of **Mitigation Measure M-AQ-3a, Construction Air Quality**, to off-site receptors would result in an impact that would be *less than significant with mitigation*.

Health risk impacts to on-site receptors would be mitigated to a less-than-significant level with implementation of **Mitigation Measure M-AQ-3b, Diesel Generator Specifications**, for on-site receptors. As indicated in **Table IV.C-7**, increased cancer risks at on-site receptor location with mitigation would be reduced to 5.7 in one million, which is below the seven in one million threshold for impacts to a receptor within an area meeting the APEZ criteria. Consequently, implementation of **Mitigation Measure M-AQ-3b, Diesel Generator Specifications**, for on-site receptors would result in an impact that would be *less than significant with mitigation*.

Additionally, although impacts would be reduced to less than significant, **Improvement Measure I-AQ-3, Additional Diesel Generator Locations**, is also identified to further reduce exposure of air pollutants to sensitive receptors. These alternate locations would further reduce potential exposure impacts to the on-site receptors at the proposed childcare facility. The proposed residential generator may also be installed at the locations specified in **Improvement Measure I-AQ-3, Additional Diesel Generator Locations**, with the same specifications in M-AQ-3b, and no further analysis would be required. Note that if the location of the proposed generator or any of the specifications listed in M-AQ-3b are not approved or are moved, a detailed analysis of operational emissions shall be conducted to ensure that no sensitive receptor (either on-site or off-site) is exposed to a total excess cancer risk of seven per one million persons exposed and PM_{2.5} levels above 0.2 µg/m³, taking into account all project emissions sources.

Furthermore, the proposed project would include development of 560 residential units and a childcare facility, both of which are considered a sensitive land use. For sensitive land use projects within the APEZ, such as the proposed project, Article 38 requires that the project sponsor submit an Enhanced Ventilation Proposal for approval by DPH that achieves protection from PM_{2.5} equivalent to that associated with a Minimum Efficiency Reporting Value 13 filtration. DBI will not issue a building permit without written notification from the Director of Public Health that the applicant has an approved Enhanced Ventilation Proposal. In compliance

with Article 38, the project sponsor has submitted an initial application to DPH.¹⁸² The regulations and procedures set forth by Article 38 would further reduce TAC emission exposure to proposed on-site sensitive receptors.

Mitigation Measures

Mitigation Measure M-AQ-3a – Construction Air Quality. The project sponsor or the project sponsor's Contractor shall comply with the following requirements:

A. *Engine Requirements.*

1. All off-road equipment greater than 25 horse power (hp) and operating for more than 20 total hours over the entire duration of construction activities shall have engines that meet or exceed either (1) U.S. Environmental Protection Agency (USEPA) or California Air Resources Board (ARB) Tier 4 or Tier 4 Interim off-road emission standards, or (2) Tier 2 standards with a Level 3 Verified Diesel Emissions Control Strategy (VDECS).
2. Where access to alternative sources of power is available, portable diesel engines shall be prohibited.
3. Diesel engines, whether for off-road or on-road equipment, shall not be left idling for more than two minutes, at any location, except as provided in exceptions to the applicable state regulations regarding idling for off-road and on-road equipment (e.g., traffic conditions, safe operating conditions). The Contractor shall post legible and visible signs in English, Spanish, and Chinese, in designated queuing areas and at the construction site to remind operators of the two-minute idling limit.
4. The Contractor shall instruct construction workers and equipment operators on the maintenance and tuning of construction equipment, and require that such workers and operators properly maintain and tune equipment in accordance with manufacturer specifications.

B. *Waivers.*

1. The Planning Department's Environmental Review Officer or designee (ERO) may waive the alternative source of power requirement of Subsection (A)(2) if an alternative source of power is limited or infeasible at the project site. If the ERO grants the waiver, the Contractor must submit documentation that the equipment used for on-site power generation meets the requirements of Subsection (A)(1). If seeking a waiver under this section, the contractor must provide documentation demonstrating that off-site receptors would not be exposed to an excess cancer risk of greater than 7 per one million population exposed as a result of toxic air contaminant emissions from construction and operation.
2. The ERO may waive the equipment requirements of Subsection (A)(1) if a particular piece of off-road equipment is not commercially available; the equipment would not produce desired emissions reduction due to expected operating modes; or, there is a compelling emergency need to use off-road equipment that is not fitted with a Tier 4 engine or Tier 2 engine with level 3 VDECS. If the ERO grants the waiver, the Contractor must use the next cleanest piece of off-road equipment, according to **Table M-AQ-3a**. If seeking a

¹⁸² Application for Article 38 Compliance Assessment, 1500 Mission Street Project, June 29, 2016. This document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014-000362ENV.

waiver under this section, the Contractor must provide documentation demonstrating that off-site receptors would not be exposed to an excess cancer risk of greater than 7 per one million population exposed as a result of toxic air contaminant emissions from construction and operation.

TABLE M-AQ-3A OFF-ROAD EQUIPMENT COMPLIANCE STEP-DOWN SCHEDULE

Compliance Alternative	Engine Emission Standard	Emissions Control
1	Tier 3	ARB Level 3 PM VDECS*
2	Tier 2	ARB Level 3 PM VDECS*
3	Tier 2	Alternative Fuel**

NOTES:

How to use the table: If the ERO determines that the equipment requirements cannot be met, then the project sponsor would need to meet Compliance Alternative 1. If the ERO determines that the Contractor cannot supply off-road equipment meeting Compliance Alternative 1, then the Contractor must meet Compliance Alternative 2. If the ERO determines that the Contractor cannot supply off-road equipment meeting Compliance Alternative 2, then the Contractor must meet Compliance Alternative 3.

* VDECS is a Verified Diesel Emissions Control Strategy.

** Alternative fuels are not a VDECS.

- C. *Construction Emissions Minimization Plan.* Before starting on-site construction activities, the Contractor shall submit a Construction Emissions Minimization Plan (Plan) to the ERO for review and approval. The Plan shall state, in reasonable detail, how the Contractor will meet the requirements of Section A.
 1. The Plan shall include estimates of the construction timeline by phase, with a description of each piece of off-road equipment required for every construction phase. The description may include, but is not limited to, equipment type, equipment manufacturer, equipment identification number, engine model year, engine certification (Tier rating), horsepower, engine serial number, and expected fuel usage and hours of operation. For VDECS installed, the description may include technology type, serial number, make, model, manufacturer, ARB verification number level, and installation date and hour meter reading on installation date. For off-road equipment using alternative fuels, the description shall also specify the type of alternative fuel being used.
 2. The project sponsor shall ensure that all applicable requirements of the Plan have been incorporated into the contract specifications. The Plan shall include a certification statement that the Contractor agrees to comply fully with the Plan.
 3. The Contractor shall make the Plan available to the public for review on-site during working hours. The Contractor shall post at the construction site a legible and visible sign summarizing the Plan. The sign shall also state that the public may ask to inspect the Plan for the project at any time during working hours and shall explain how to request to inspect the Plan. The Contractor shall post at least one copy of the sign in a visible location on each side of the construction site facing a public right-of-way.
- D. *Monitoring.* After start of Construction Activities, the Contractor shall submit quarterly reports to the ERO documenting compliance with the Plan. After completion of construction activities and prior to receiving a final certificate of occupancy, the project sponsor shall submit to the

ERO a final report summarizing construction activities, including the start and end dates and duration of each construction phase, and the specific information required in the Plan.

Mitigation Measure M-AQ-3b – Diesel Generator Specifications. The proposed residential generator exhaust stack shall be located in the north central portion of the second floor residential open space, as indicated in the Air Quality Technical Report, and meet the following specifications:

- Meet or exceed one of the following emission standards for particulate matter: (1) Tier 4 certified engine, or (2) Tier 2 or Tier 3 certified engine that is equipped with a California Air Resources Board (ARB) Level 3 Verified Diesel Emissions Control Strategy (VDECS). A non-verified diesel emission control strategy may be used if the filter has the same particulate matter reduction as the identical ARB verified model and if the Bay Area Air Quality Management District (BAAQMD) approves of its use; and
- Have a stack diameter between eight and 12 inches, a minimum flow rate of 8,858 standard cubic feet per minute, and a minimum stack elevation of 20 feet above grade.
- The project sponsor shall submit documentation of compliance with the BAAQMD New Source Review permitting process (Regulation 2, Rule 2, and Regulation 2, Rule 5) and the emission standard requirement of this mitigation measure to the Planning Department for review and approval prior to issuance of a building permit.

Improvement Measure I-AQ-3 – Additional Diesel Generator Locations. To further reduce exposure of air pollutants to sensitive uses, the following additional generator locations are provided:

- The generator may be placed in the northwest corner of the 5th floor residential mezzanine; or
- The generator may be placed in the northeast or southeast corner of the 11th floor pool deck.

The residential generator may be installed at these locations and meet the specifications in M-AQ-3b above, and no further analysis would be required.

Significance after Mitigation: Less than Significant. Implementation of **Mitigation Measures M-AQ-3a and M-AQ-3b** would reduce air quality impacts related to emissions of TACs to a less-than-significant level.

Impact AQ-4: The proposed project would not conflict with, or obstruct implementation of, the 2010 Clean Air Plan. (Less than Significant)

The most recently adopted air quality plan for the SFBAAB is the 2010 CAP.¹⁸³ While an updated CAP is currently being prepared, it is still not finalized and subject to change based on pending public comments. The CAP is a road map that demonstrates how the Bay Area will, in accordance with the requirements of the California Clean Air Act, implement all feasible measures to reduce ozone. It also provides a control strategy to reduce ozone, particulate matter (PM), air toxics, and GHGs. In determining consistency with the CAP, this analysis considers whether the proposed project would (1) support the primary goals of the CAP, (2) include applicable control measures from the CAP, and (3) avoid disrupting or hindering implementation of control measures identified in the CAP.

¹⁸³ BAAQMD, *Bay Area Clean Air Plan*, September 2010. Available at <http://www.baaqmd.gov/plans-and-climate/air-quality-plans/current-plans>, assessed on July 13, 2016.

The primary goals of the CAP are to (1) reduce emissions and decrease concentrations of harmful pollutants, (2) safeguard the public health by reducing exposure to air pollutants that pose the greatest health risk, and (3) reduce GHG emissions. To meet the primary goals, the CAP recommends specific control measures and actions. These control measures are grouped into various categories and include stationary- and area-source measures, mobile-source measures, transportation control measures, land-use measures, and energy and climate measures. The CAP recognizes that, to a great extent, community design dictates individual travel mode and that a key long-term control strategy to reduce emissions of criteria pollutants, air toxics, and GHGs from motor vehicles is to channel future Bay Area growth into communities where goods and services are located nearby and people have a range of viable transportation options. To this end, the CAP includes 55 control measures aimed at reducing air pollutants in the SFBAAB.

The measures most applicable to the proposed project are transportation control measures and energy and climate control measures. The proposed project's impact with respect to GHGs is discussed in Section 7, *Greenhouse Gas Emissions*, of the Initial Study prepared for this project, which demonstrates that the proposed project would comply with the applicable provisions of the City's Greenhouse Gas Reduction Strategy.

The compact development of the proposed project and availability of numerous transportation options would ensure that residents and employees could ride transit, bicycle, and walk to and from the project site instead of taking trips via private automobile. These features ensure that the proposed project would avoid substantial growth in automobile trips and vehicle miles traveled (see Section IV.B, *Transportation and Circulation*, which finds that the proposed project would not cause substantial additional VMT). Furthermore, the proposed project would be generally consistent with the *General Plan*. Control measures that are identified in the 2010 CAP are implemented by the *General Plan* and the *Planning Code*, for example, through the City's Transit-First policy, bicycle parking requirements, and transportation sustainability fee. Compliance with these requirements would ensure the proposed project includes relevant transportation control measures specified in the 2010 CAP. Therefore, the proposed project would include applicable control measures identified in the 2010 CAP to meet the 2010 CAP's primary goals.

Examples of a project that could cause the disruption or delay of CAP control measures are projects that would preclude the extension of a transit line or bike path, or projects that propose excessive parking beyond parking requirements. The proposed project would involve demolition of the building located at 1580 Mission Street and partial demolition of the building located at 1500 Mission Street on the project site and construct a 39-story, 396-foot-tall residential building at the corner of Mission Street and South Van Ness Avenue, and an 16-story, 240-foot-tall office building on 11th Street between Market and Mission Streets. The proposed project would be located within a dense, walkable urban area near a concentration of regional and local transit service and would provide parking as permitted under the *Planning Code*, with conditional use authorization in the case of the residential building. The proposed project would not preclude the extension of a transit line or a bike path or any other transit improvement, and thus would not disrupt or hinder implementation of control measures identified in the CAP.

For the reasons described above, the proposed project would not interfere with implementation of the CAP, and because the proposed project would be consistent with the applicable air quality plan that demonstrates how the region will improve ambient air quality and achieve the state and federal ambient air quality standards, the impact would be *less than significant*.

Mitigation: None required.

Impact AQ-5: The proposed project would not create objectionable odors that would affect a substantial number of people. (Less than Significant)

Typical objectionable odor sources of concern include wastewater treatment plants, sanitary landfills, transfer stations, composting facilities, petroleum refineries, asphalt batch plants, chemical manufacturing facilities, fiberglass manufacturing facilities, auto body shops, rendering plants, and coffee roasting facilities. Restaurants and other food and drinking places could produce some odors, but these types of uses already exist in the project vicinity and are not generally considered sources of objectionable odors. During construction, diesel exhaust from construction equipment would generate some odors. However, construction-related odors would be temporary and would not persist upon project completion. The proposed project includes residential, office, and retail/restaurant space, and would not create significant sources of new odors. Therefore, odor impacts would be *less than significant*.

Mitigation: None required.

Cumulative Impacts

The geographic context for changes in the air quality environment due to development of the proposed project is both regional and local. Ozone, PM₁₀, and PM_{2.5} are the primary pollutants of regional concern, meaning that the cumulative context for regional air quality would include the entire SFBAAB. The geographic context for TAC emissions are local [provide discussion regarding the 1,000 foot zone of influence from the site and that beyond this distance TACs return to background levels].

As described above in Impact AQ-4, the proposed project would not conflict with or obstruct implementation of the 2010 CAP, and thus, is not discussed further in the cumulative analysis. Finally, as described above in Impact AQ-5, the proposed project would not include uses that would include sources of objectionable odors. Cumulative development in the vicinity includes similar mixed-use developments, none of which would be considered a source of substantial odors.

Impact C-AQ-1: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not contribute considerably to cumulative increases in criteria air pollutant emissions. (Less than Significant)

As discussed above, regional air pollution is by its very nature largely a cumulative impact. Emissions from past, present, and future projects contribute to the region's adverse air quality on a cumulative basis. No single project by itself would be sufficient in size to result in regional nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulative adverse air quality impacts. ROG, NO_x, PM₁₀, and PM_{2.5} are the pollutants that BAAQMD has identified as of primary concern. The proposed project plus other concurrent activities in the SFBAAB would contribute to cumulative ROG, NO_x, PM₁₀, and PM_{2.5} emissions, pollutants for which the SFBAAB is in non-attainment. However, as described in the Approach to Analysis section above, the thresholds for regional criteria air pollutants are set at levels below which new sources are not anticipated to result in a considerable net increase in criteria air pollutants. As

discussed above in Impact AQ-1 and Impact AQ-2, neither construction nor operation of the proposed project would exceed any of the applicable significance thresholds for criteria pollutants. Consequently, the proposed project would not make a considerable contribution to a significant cumulative air quality impact.

Mitigation: None required.

Impact C-AQ-2: The proposed project could result in a considerable contribution to cumulative increases in short- and long-term exposures to toxic air contaminants. (Less than Significant with Mitigation)

As discussed above in Impact AQ-3, the project site is located in an area that already experiences poor air quality and is therefore identified as being within an APEZ. The proposed project would add construction-related DPM emissions and operational emissions from maintenance operations (routine testing) of standby diesel generators within an area already adversely affected by air quality, resulting in a considerable contribution to cumulative health risk impacts on nearby sensitive receptors. This would be a significant cumulative impact.

In addition, there are 22 cumulative projects within the 1,000-foot zone of influence of the project site. These projects would generally include construction of mixed-use residential, commercial, and office uses. The largest of these projects include 10 South Van Ness, which would result in 767 residential units and 20,400 gross square feet (gsf) of commercial uses; 1629 Market Street, which would construct 584 residential units, about 9,275 gsf of commercial uses, and 27,300 gsf of office uses; One Oak Street, which would result in 320 residential units and 12,970 gsf of commercial uses; 30 Otis, which would construct 354 residential units and 4,600 gsf of commercial uses; 1601 Mission Street, which would construct 220 residential units and about 7,300 gsf of commercial uses; and 1546–1564 Market Street, which would construct 219 residential units and 4,560 gsf of commercial uses. Other projects in the vicinity would be slightly smaller than those listed above. Construction of these cumulative projects could overlap with construction of the proposed project. Additionally, once operational, these project's traffic emissions and stationary source emissions (e.g., emissions from diesel backup generators) would combine with emissions from the proposed project.

As discussed in the Approach to Analysis Section above, for projects that are already located within the APEZ, such as the proposed project, a project that results in an increased cancer risk of sever per one million or greater or PM_{2.5} concentrations above 0.2 µg/m³ would be considered to result in a considerable contribution to already significant local health risks. As described in Impact AQ-3, with implementation of **Mitigation Measures M-AQ-3a, Construction Air Quality**, and **M-AQ-3b, Diesel Generator Specifications**, the proposed project would not result in an excess cancer risk or PM_{2.5} concentrations above these levels at any on-site or off-site sensitive receptors locations. Therefore, the proposed project's contribution to significant location health risks would be reduced to less than cumulatively considerable.

Additionally, citywide health risk modeling has been conducted for 2040 conditions and includes traffic emissions that reasonably account for cumulative projects. This modeling shows that background PM_{2.5} concentrations within 1,000 feet of the project site would range between 8.85 and 9.55 µg/m³, which is roughly within the same range of existing PM_{2.5} concentrations. However, excess cancer risk would decrease to between 47 and 95 excess cancer cases per one million population exposed. This 2040 modeling demonstrates that despite increases in vehicle trips, excess cancer risk is expected to decline, and this decline is primarily

due to increased vehicle emissions standards. Thus the analysis presented in Impact AQ-3, which includes project emissions plus background emissions, presents a worst-case cumulative HRA.

Significance after Mitigation: Less than Significant. Implementation of **Mitigation Measures M-AQ-3a and M-AQ-3b** would reduce air quality impacts related to emissions of TACs to a less-than-significant level.

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IV.D Wind

IV.D.1 Introduction

This section describes existing wind conditions in the vicinity of the project site, and evaluates the potential for the proposed project to alter wind in the project area in a manner that would affect public areas. The analysis in this section is based on a wind tunnel test conducted by BMT Fluid Mechanics (BMT).¹⁸⁴

IV.D.2 Environmental Setting

San Francisco's Existing Wind Environment

In San Francisco, average winds speeds are the highest in the summer and lowest in the winter. However, the strongest peak wind speeds occur in the winter. The highest average wind speeds occur in mid-afternoon and the lowest in the early morning. Based on over 40 years of recordkeeping, the highest mean hourly wind speeds (approximately 20 miles per hour [mph]) occur mid-afternoon in July, while the lowest mean hourly wind speeds (in the range of six to nine mph) occur throughout the day in November.

Meteorological data collected at the old San Francisco Federal Building at 50 United Nations Plaza over a six-year period show that westerly¹⁸⁵ through northwesterly winds are the most frequent and strongest winds during all seasons.¹⁸⁶ Of the 16 primary wind directions, five have the greatest frequency of occurrence: these are northwest, west-northwest, west, west-southwest, and southwest. Analysis of the Federal Building wind data shows that during the hours from 6:00 a.m. to 8:00 p.m., 70 percent of the winds blow from five adjacent directions of the 16 directions, as follows: northwest (10 percent of all winds), west-northwest (14 percent of all winds), west (35 percent of all winds), west-southwest (two percent of all winds), and southwest (nine percent of all winds). Over 90 percent of all measured winds with speeds over 13 mph blow from these five directions. The other 10 percent of winds over 13 mph are from storms and can come from any other direction.

Wind Effects on People

The comfort of pedestrians varies under different conditions of sun exposure, temperature, clothing, and wind speed.¹⁸⁷ Winds up to about four mph have no noticeable effect on pedestrian comfort. With speeds from four to eight mph, wind is felt on the face. Winds from eight mph to 13 mph will disturb hair, cause clothing to flap, and extend a light flag mounted on a pole. Winds from 13 to 19 mph will raise loose paper, dust, and dry soil, and will disarrange hair. For winds from 19 to 26 mph, the force of the wind will be felt on the body. With

¹⁸⁴ BMT Fluid Mechanics, *1500 Mission Street, Wind Microclimate Study*, November 4, 2016.

¹⁸⁵ Wind directions are reported as directions from which the winds blow.

¹⁸⁶ Arens, E. et al., "Developing the San Francisco Wind Ordinance and its Guidelines for Compliance," *Building and Environment*, Vol. 24, No. 4, pp. 297–303, 1989.

¹⁸⁷ Lawson, T.V., and A.D. Penwarden, "The Effects of Wind on People in the Vicinity of Buildings," *Proceedings of the Fourth International Conference on Wind Effects on Buildings and Structures, London, 1975*, Cambridge University Press, Cambridge, U.K., 605–622, 1976.

26 to 34 mph winds, umbrellas are used with difficulty, hair is blown straight, there is difficulty in walking steadily, and wind noise is unpleasant. Winds over 34 mph and gusts can blow people over.

Wind Effects from Buildings

Tall buildings and exposed structures can strongly affect the wind environment for pedestrians. A building that stands alone or is much taller than the surrounding buildings can intercept and redirect winds that might otherwise flow overhead and bring them down the vertical face of the building to ground level, where they create ground-level wind and turbulence. These redirected winds can be relatively strong and turbulent, and may in some instances be incompatible with the intended uses of nearby ground-level pedestrian spaces. Moreover, structure designs that present tall flat surfaces square to strong winds can create ground-level winds that can prove to be hazardous to pedestrians in the vicinity. Conversely, a building with a height that is similar to the heights of surrounding buildings typically would cause little or no additional ground-level wind acceleration and turbulence.

Thus, wind impacts are generally caused by large building masses extending substantially above their surroundings, and by buildings oriented so that a large wall catches a prevailing wind, particularly if such a wall includes little or no articulation. In general, new buildings less than approximately 80 feet in height are unlikely to result in substantial adverse effects on ground-level winds such that pedestrians would be uncomfortable or hazardous wind conditions would result. Such winds may occur under existing conditions, but shorter buildings typically do not cause substantial changes in ground-level winds.

Wind Conditions in the Project Vicinity

The project is located at Mission Street and South Van Ness Avenue, one block south of the intersection of Market Street and Van Ness/South Van Ness Avenues. The north-of-Market Street grid is oriented within nine degrees of the four cardinal directions (north, south, east, and west); however, the street grid south of Market Street, including Mission and 11th Streets adjacent to the project site, is oriented approximately northwest/southeast and southwest/northeast. This typically results in a less predictable pattern of wind variation at pedestrian level. South Van Ness Avenue, which forms the western project site boundary, runs generally north-south, parallel to the north-of-Market Street grid.

The area just north of the intersection of Market Street and Van Ness Avenue—north of and upwind from the project site—is one of the windiest areas in San Francisco. The general openness and lack of buildings taller than 80 feet in the upwind areas west of Van Ness Avenue, along with the width of Van Ness Avenue itself, allows the prevailing northwesterly, west-northwesterly, and westerly winds direct access to the this area, with relatively little disruption from intervening buildings. These approaching winds, and the combined presence of existing tall buildings, including 100 Van Ness Avenue (at Fell Street), Fox Plaza (at Hayes, Polk, and Market Streets), and 1455 Market Street (at 11th Street), and the NEMA apartment tower at 8 10th Street (at Market Street), result in strong, turbulent winds at and near ground levels within the triangular area roughly defined by Van Ness Avenue, Hayes Street, and Market Street, including at the intersection of 10th and Market Streets. The Fox Plaza building is a slab-shaped structure exposed to prevailing winds and oriented with its wide face across the prevailing wind direction. Fox Plaza and the other tall buildings intercept strong winds and channel them down from the tops of buildings down to street level. Both historical

and recent wind tunnel tests have shown that hazardous winds (winds exceeding 26 miles per hour more than one hour per year) occur at various locations along Polk Street north of Market Street, along the north side of Market Street east and west of Polk Street, and on both sides of the Market/10th Streets intersection on the south side of Market Street. The east side of Van Ness Avenue north of Market Street also experiences strong winds, as does Fell Street between Van Ness Avenue and Polk Street.

Recent wind tunnel testing for this project and other projects in the vicinity of the intersection of Market Street and Van Ness Avenue has revealed that the windy conditions on Van Ness Avenue north of Market Street also exist on South Van Ness Avenue between Market and Mission Streets. These conditions exist for the same reasons as noted above: little obstruction of prevailing winds by buildings to the west. Furthermore, the wide expanse of South Van Ness Avenue offers an unobstructed path for northwesterly to westerly winds to be redirected downward and channeled to the south at ground level.

IV.D.3 Regulatory Framework

Planning Code Section 148 outlines wind speed criteria for the Downtown (C-3) Use Districts where the project site is located.¹⁸⁸ Section 148 defines “equivalent wind speed” as “an hourly mean wind speed adjusted to incorporate the effect of gustiness or turbulence on pedestrians” and is used to determine comfort wind speeds. The pedestrian comfort wind speed criteria are seven mph for seating areas and 11 mph for areas of substantial pedestrian use.¹⁸⁹ A hazardous wind condition is when the wind speed exceeds 26 mph for a single hour of the year.¹⁹⁰

IV.D.4 Impacts and Mitigation Measures

Significance Thresholds

The proposed project would have a significant impact related to wind if it would alter wind in a manner that substantially affects public areas.

Approach to Analysis

The methodology and the criteria for analyzing potential project wind impacts in this EIR are derived from *Planning Code* Section 148. As noted, Section 148 establishes a wind hazard criterion, whereby project buildings

¹⁸⁸ Other sections of the *Planning Code* apply comparable standards in the Downtown Residential (DTR) Districts, the Folsom and Main Residential/Commercial Special Use District, the Van Ness Special Use District, and certain zoning districts in the South of Market neighborhood.

¹⁸⁹ The wind comfort criteria are defined in terms of *equivalent wind speed*, which is an average wind speed (mean velocity), adjusted to include the level of gustiness and turbulence. *Equivalent wind speed* is defined as the mean wind velocity, multiplied by the quantity (one plus three times the turbulence intensity) divided by 1.45. This calculation magnifies the reported wind speed when turbulence intensity is greater than 15 percent.

¹⁹⁰ The wind hazard criterion is derived from the wind condition that would generate a three-second gust of wind at 20 meters per second, a commonly used guideline for wind safety. This wind speed, on an hourly basis, is a 26 mph average for a full hour. Because the original Federal Building wind data were collected at one-minute averages, the 26 mph hourly average is converted to a one-minute average of 36 mph, which is used to determine compliance with the 26 mph one-hour hazard criterion in the *Planning Code*. (Arens, E. et al., “Developing the San Francisco Wind Ordinance and its Guidelines for Compliance,” *Building and Environment*, Vol. 24, No. 4, pp. 297–303, 1989.)

may not cause wind speeds that meet or exceed 26 mph, averaged for a full hour for any hour of the year. The 26 mph, one-hour wind hazard criterion is converted to a one-minute average of wind speed of 36 mph, and 36 mph is accordingly used as the hazard threshold in the reporting of test results. As also described above, Section 148 also establishes wind comfort criteria, whereby a project shall not cause ground-level wind currents to exceed, more than 10 percent of the time, 11 mph in areas of substantial pedestrian use, and seven mph in public seating areas. Project effects on wind comfort are presented in this EIR for informational purposes.

A wind tunnel test was conducted by BMT to characterize the pedestrian wind environment that currently exists and to determine future wind conditions on sidewalks and open spaces around the project site should the proposed project be constructed.¹⁹¹ A one-inch-to-25-foot scale (1:300) model of the project site and vicinity was constructed in order to simulate existing and existing-plus-project wind conditions. The wind model included surrounding buildings within a 1,500-foot radius of the center of the project site, including both existing and cumulative conditions. Due to the relatively windy conditions present under existing conditions, the wind testing included multiple iterations of design scenarios in an attempt to develop a design that would comply with Section 148 and the resulting project design is presented as the proposed project herein as described in Chapter II, *Project Description*.

The wind tunnel test measured wind speeds for the existing setting and the existing-plus-project scenarios, as well as a cumulative scenario, which includes the proposed project. For the cumulative test, project plans were used where available; however, for some cumulative projects, refined plans were not available and simplified massing models were used. Pedestrian-level wind speeds were measured at 50 locations for the existing condition and 52 locations for the project scenario and cumulative scenario at a five-foot (pedestrian) height above grade.¹⁹² Locations for wind speed sensors, or study test points, were selected to indicate how the general flow of winds would be directed around the project buildings. Consistent with Section 148, the locations of test points are primarily public sidewalks, which are assumed for the purpose of this analysis to be areas of substantial pedestrian use. Although pedestrian traffic on most sidewalks in the project vicinity is relatively light—except on Market Street and around the intersection of Market Street with Van Ness and South Van Ness Avenues (including the pedestrian entrances to buildings located there) and at local Muni bus stops—it is assumed that with development of the proposed project, sidewalks surrounding the project site would experience substantially more pedestrian traffic and would, indeed, become areas of substantial pedestrian use. There are no public seating areas in the project vicinity. Such facilities are typically associated with privately-owned publicly-accessible open spaces (POPOS) or other similar publicly-accessible spaces or street furniture (e.g., benches), none of which exist in the project vicinity; however, analysis of changes in wind-speeds to private areas is not required under CEQA or *Planning Code* Section 148.

In accordance with the protocol for wind tunnel testing under Section 148, the three scenarios (existing conditions, existing plus project, and cumulative) were tested for each of four prevailing wind directions: northwest, west-northwest, west, and west-southwest. As stated earlier, these winds are the most common for stronger winds (greater than 13 mph) in San Francisco, and are therefore most representative for evaluation of impacts from the proposed project.

¹⁹¹ BMT Fluid Mechanics, *1500 Mission Street, Wind Microclimate Study*, November 4, 2016.

¹⁹² Two locations were added and tested under project and cumulative conditions to account for the proposed project's on-site publicly-accessible pedestrian passageways, which are not publicly-accessible under existing conditions.

Impact Evaluation

Impact WI-1: The proposed project would not alter wind in a manner that substantially affects public areas in the vicinity of the project site. (Less than Significant)

Wind Hazard Analysis

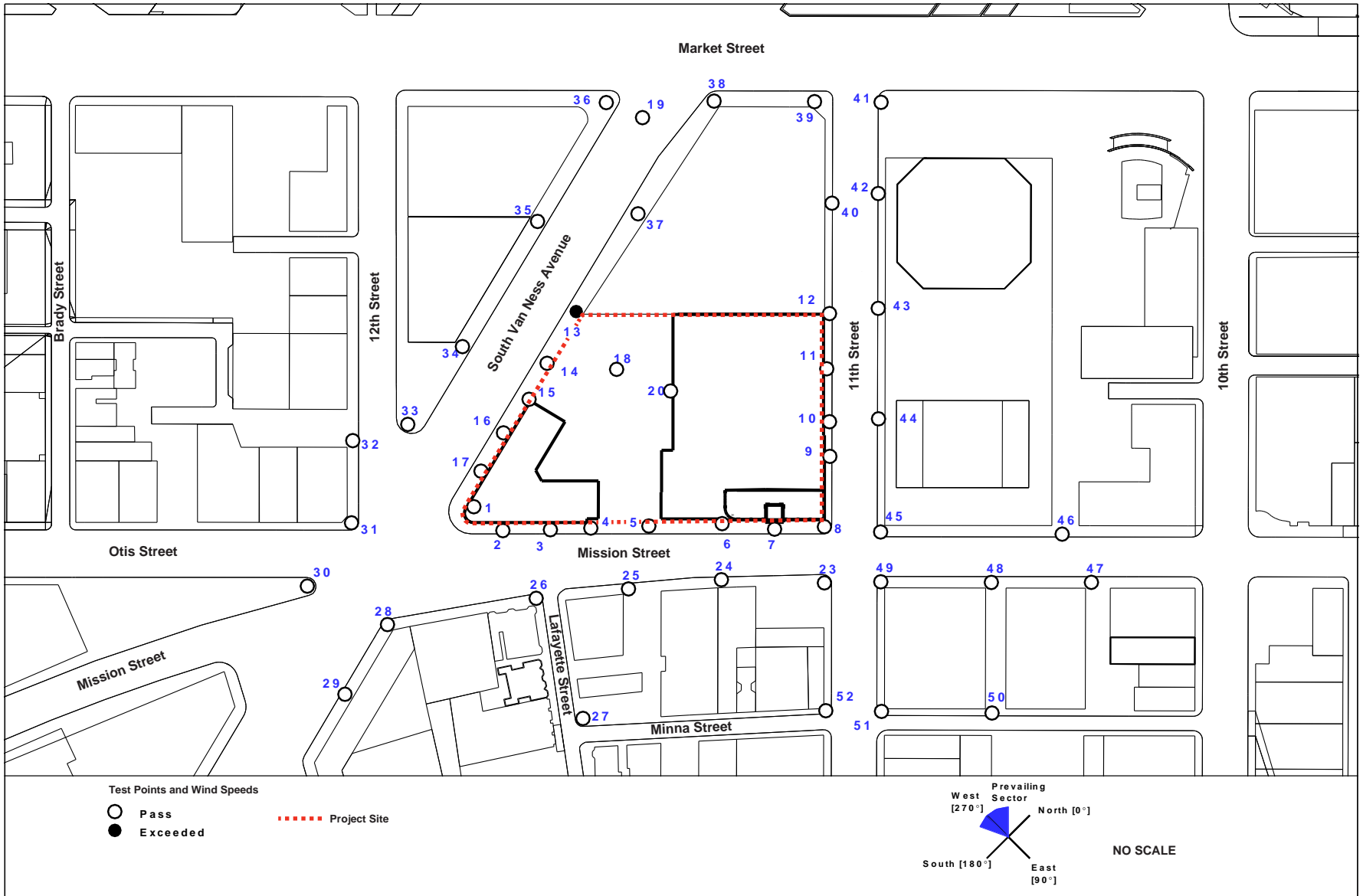
The proposed project would develop two towers: a 416-foot-tall (including parapet) residential and retail/restaurant building at the corner of Mission Street and South Van Ness Avenue, and a 257-foot-tall office and permit center building on 11th Street. Podium levels would extend from the towers along the South Van Ness Avenue, Mission Street, and 11th Street project frontages and through the project site. A mid-block pedestrian/service alley would extend north into the site from Mission Street and a pedestrian concourse would extend east into the site from South Van Ness Avenue. Additionally, the project incorporates physical features in to the design of the proposed project—the proposed canopy along the South Van Ness Avenue and Mission Street façades, the eight approximately eight-foot-tall by 10-foot-wide wind screens located at 40-foot intervals along the South Van Ness Avenue sidewalk, and the 53 new street trees along all project sidewalks are incorporated to reduce wind-speeds at the pedestrian level in the project vicinity. These features would require maintenance over the life of the project.^{193,194}

The proposed project's change in building height at the project site (i.e., demolition of two buildings approximately 30 feet-tall and construction of the two buildings mentioned above) would alter wind patterns in the vicinity of the project site. Under existing conditions, wind conditions comply with the hazard criterion at the 50 test points, with one exception, the southwestern corner of the building at One South Van Ness Avenue (location 13; **Figure IV.D-1, Wind Hazard Criterion—Existing Conditions**), where the hazard criterion is exceeded two hours per year (refer to **Table IV.D-1, Hazard Criterion Results**, below). At this test point, the wind speed exceeded one hour per year is 38 mph, versus the hazard threshold of 36 mph. The average wind speed exceeded one hour per year at all 50 test points is 20.7 mph.

Under the existing plus project conditions, among the 52 test points, the average wind speed would increase by approximately one mph to 21.7 mph. Under the existing plus project conditions, the existing hazard exceedance at the southwestern corner of the One South Van Ness Avenue building would be eliminated (point 13 – two hours per year) and one new exceedance of the hazard criterion would occur (point 21; **Figure IV.D-2, Wind Hazard Criterion—Project Conditions**). Test point 21 is located within the new mid-block alley proposed as part of the project running north from Mission Street through the project site and would exceed the hazard criteria, with a speed of 37 mph. This hazard exceedance would result from winds being channeled through the narrow gaps between the proposed project's new buildings. At this location, the winds would exceed the hazard criterion of 36 mph by less than one mph, for one hour per year.

¹⁹³ Regulatory provisions that require proper maintenance and may be applicable to these proposed physical features are Building Code Section 1604E (wind canopy), Public Works Code Sections 800 et seq. (street trees) and Public Works Code Section 723.2 for minor encroachment permit or Section 786 Street Encroachment Permit (wind screens).

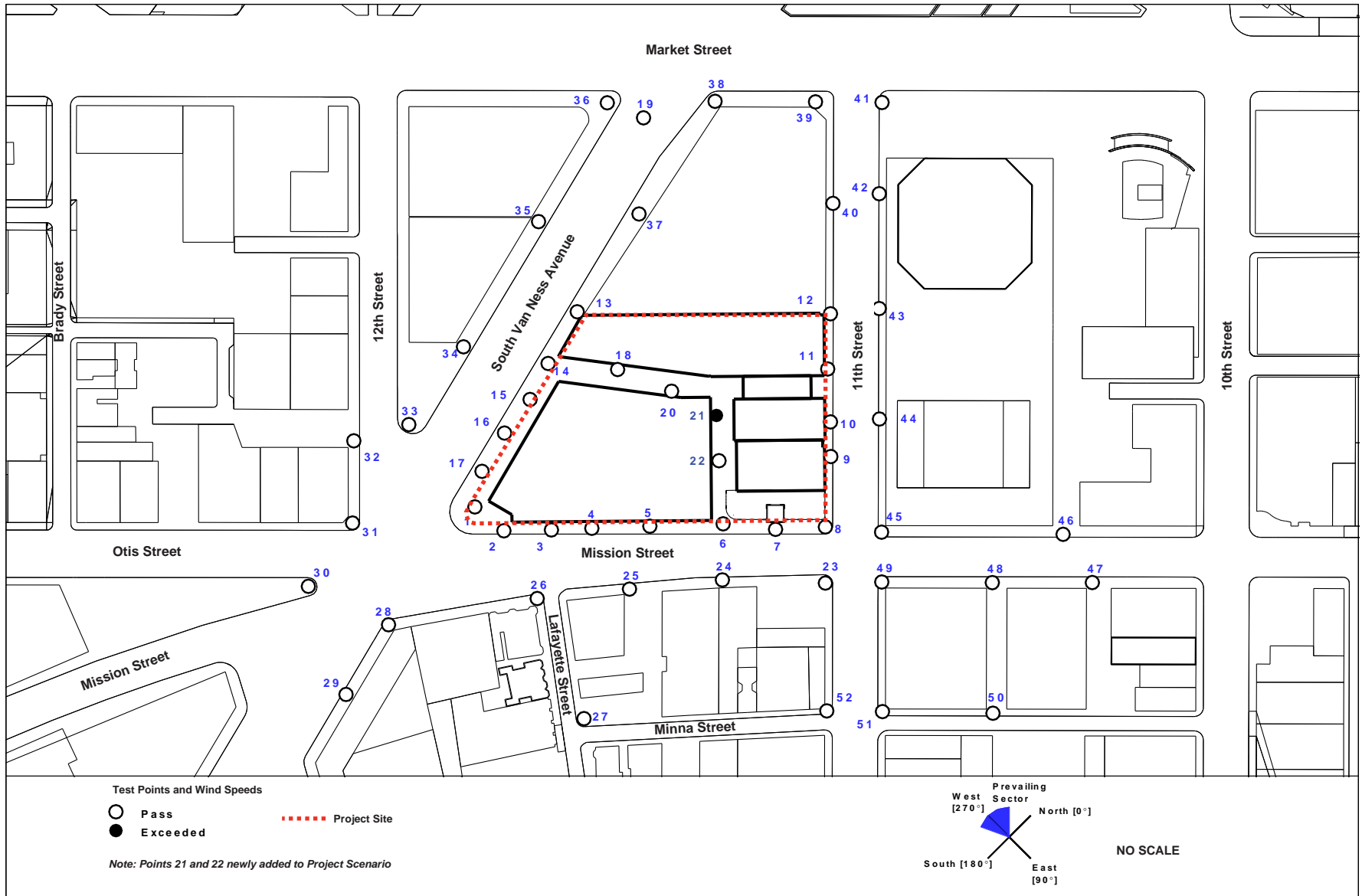
¹⁹⁴ San Francisco Public Works, Letter to Related Companies, October 21, 2016. See also, California State Transportation Agency, Letter to Related Companies, February 29, 2016.



SOURCE: BMT Fluid Mechanics

1500 Mission Street; Case No. 2014-000362ENV

Figure IV.D-1
Wind Hazard Criterion - Existing Conditions



SOURCE: BMT Fluid Mechanics

1500 Mission Street; Case No. 2014-000362ENV

Figure IV.D-2
Wind Hazard Criterion - Project Conditions

Overall, the proposed project would not substantially alter wind in a manner that substantially affect public areas in the vicinity of the project site because (1) the average of wind speeds exceeded one hour per year would be similar to existing conditions; (2) the proposed project would result in no net increase in the number of test locations that exceed the wind hazard criterion; and (3) the proposed project would result in a one-hour net reduction in the total number of hours that exceed the wind criterion. Therefore, the proposed project would result in *less-than-significant* wind impacts.

Note that if other agencies with approval authority over the proposed project do not approve the specifics of the physical features identified in the project description to avoid wind impacts, then the proposed project would have to be redesigned and retested in a wind tunnel to demonstrate compliance with *Planning Code* Section 148 and ensure that no significant wind impacts (wind hazards) would occur.

Although impacts would be less-than-significant, given the small margin (less than one mph) by which the one hazard criterion located within the new mid-block alley would be exceeded (point 21), it is possible that this exceedance of the hazard criterion could be eliminated through relatively minor design alterations, such as the installation of an awning above a portion of the mid-block alley and/or the pedestrian concourse. **Improvement Measure I-WI-1, Project Design Modifications to Improve On-Site Pedestrian Wind Conditions**, recommends that the project sponsor investigate and implement feasible design modifications to avoid a wind hazard exceedance and improve pedestrian wind conditions within publicly-accessible locations on the project site.¹⁹⁵ Implementation of this improvement measure would lessen the proposed project's already less-than-significant wind impact.

Improvement Measure I-WI-1 – Project Design Modifications to Improve On-Site Pedestrian Wind Conditions. The project sponsor should evaluate and implement feasible design modifications to avoid a wind hazard exceedance and improve pedestrian wind conditions within publicly-accessible locations on the project site. This measure should require that the project sponsor undertake wind analysis focused on the publicly-accessible, mid-block concourse that would extend east into the site from South Van Ness Avenue, between the residential/residential building and the office building, as well as the mid-block alley extending north into the site from Mission Street; together, these features would provide pedestrian connectivity midway through the site between South Van Ness Avenue and Mission Street. Design modifications to be evaluated may include, but should not be limited to, installation of awnings or canopies extending over all or a portion of the concourse and/or alley. The project sponsor should engage Planning Department staff in the review and adoption of potential design modifications to improve on-site pedestrian wind conditions.

Mitigation: None required.

Wind Comfort Analysis

As noted above, the project site is located in a relatively windy area and within a C-3 District and is subject to *Planning Code* Section 148. The wind comfort criteria, is presented here for information and is not considered a wind impact. The wind tunnel test results for wind comfort conditions at the 50 test point locations are summarized in **Table IV.D-2, Comfort Criterion Results**. Under existing conditions, wind speeds in the

¹⁹⁵ It is noted that, based on testing of the Cumulative scenario, below, this exceedance of the hazard criterion would be eliminated under Cumulative conditions.

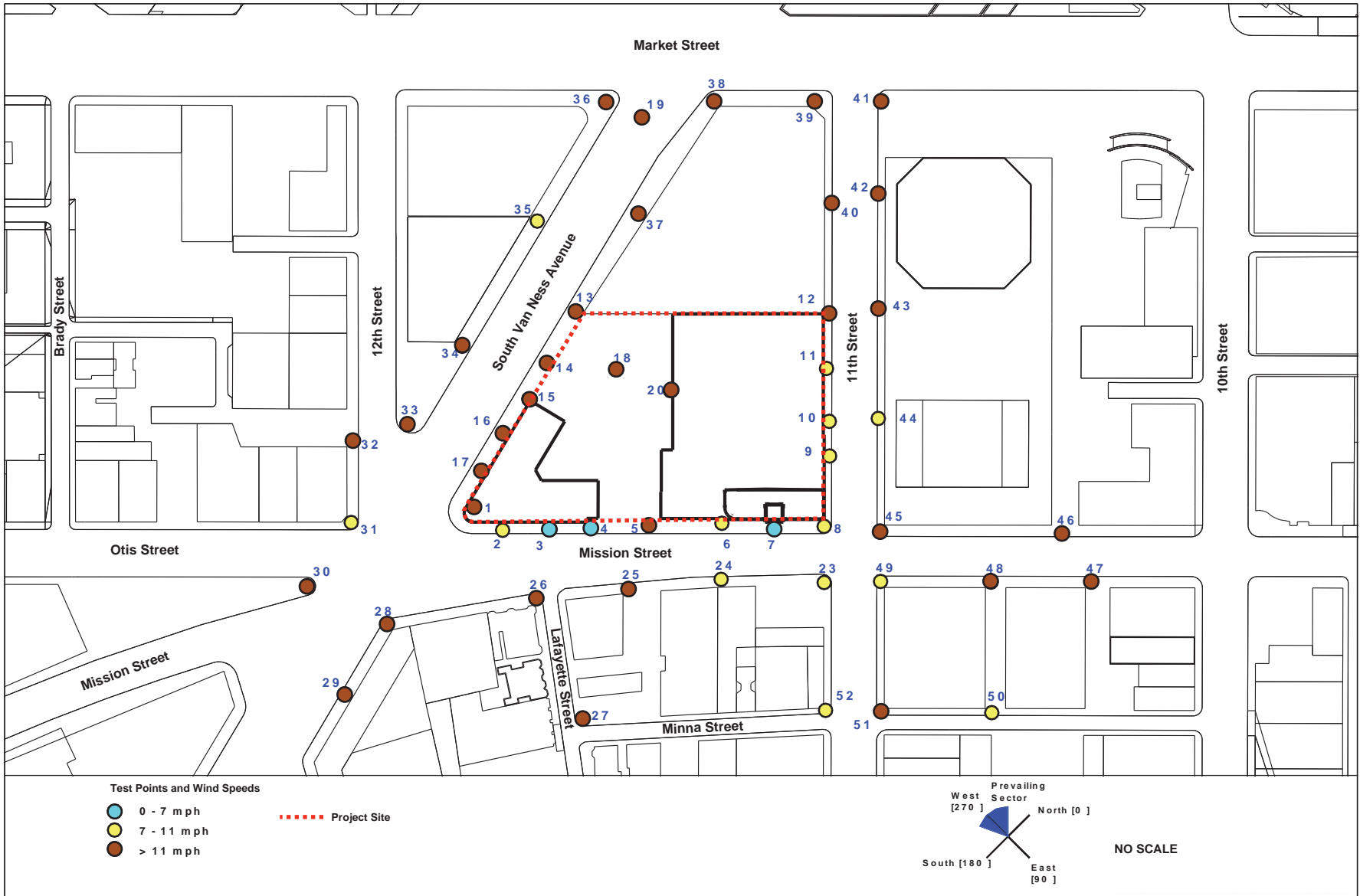
vicinity of the project site average 11.8 mph for all measurement locations. Winds at 33 of the 50 locations currently exceed the 11 mph pedestrian comfort criterion established by *Planning Code* Section 148 (see **Figure IV.D-3, Wind Comfort Criteria – Existing Conditions**).

Under the existing plus project conditions, average wind speeds would be similar to existing conditions. The average wind speeds would increase by 0.3 mph, to 12.1 mph, and the number of locations where the comfort criterion is exceeded would increase by three, to 36 of the 52 test locations (see **Figure IV.D-4, Wind Comfort Criteria – Project Conditions**). The 36 points of comfort exceedance would include 12 new exceedances, primarily along the project's Mission Street and 11th Street frontages. The comfort criterion exceedance would be eliminated at nine test points: two locations in what would become the pedestrian concourse within the site (locations 18 and 20); one on either side of Mission Street near Lafayette Street; one on the east side of South Van Ness Avenue north of the site; and four locations downwind of the project site, where the project would provide some shielding from existing prevailing winds. Compared to existing conditions, wind speeds would increase at 20 locations (primarily around the Mission/South Van Ness intersection and on 11th Street), decrease at 21 locations (primarily along both sides of South Van Ness Avenue, downwind of the site on Mission Street, and farther from the project site), and remain unchanged at the remaining nine locations also tested under existing conditions (refer to **Figure IV.D-3, Wind Comfort Criteria – Existing Conditions** and **Table IV.D-2, Comfort Criterion Results**).

Cumulative Impacts

Impact C-WI-1: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would alter wind in a manner that substantially affects public areas in the vicinity of the project site, but the proposed project's contribution to this impact would not be cumulatively considerable. (Less than Significant)

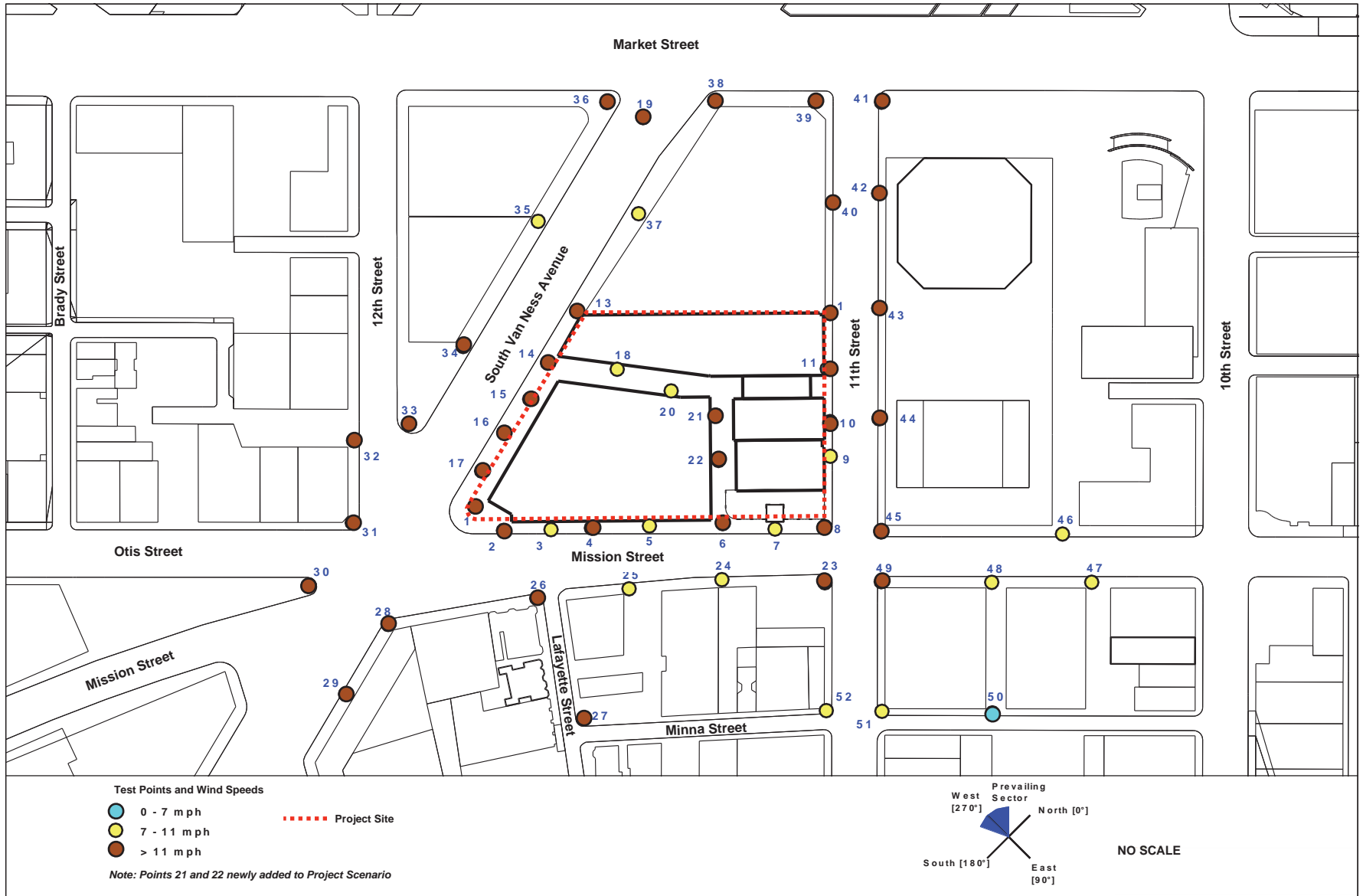
The geographic scope for cumulative wind impacts includes the area within an approximately two-block radius of the project site, from Hayes Street on the north and Valencia Street on the west to Howard Street on the south and Ninth Street on the east. Additional buildings to the west of the project site were considered in the cumulative analysis because these buildings would have a higher potential to affect the wind conditions in the project vicinity than those located to the east, given the predominant wind direction.



SOURCE: BMT Fluid Mechanics

1500 Mission Street; Case No. 2014-000362ENV

Figure IV.D-3
Wind Comfort Criteria - Existing Conditions



SOURCE: BMT Fluid Mechanics

1500 Mission Street; Case No. 2014-000362ENV

Figure IV.D-4
Wind Comfort Criteria - Project Conditions

Nearby cumulative projects that are either approved but unbuilt or that have applications on file with the Planning Department and that could meaningfully affect wind conditions in the project vicinity that were considered in the cumulative analysis include the following:

- 150 Van Ness Avenue (now under construction, but approved at the time of the wind test);
- 1564 Market Street (approved);
- 1699 Market Street (approved);
- 22 Franklin Street (approved);
- 1601 Mission Street (approved)
- One Oak Street (proposed);
- 1629 Market Street (proposed);
- 30 Otis Street (proposed);
- 30 Van Ness Avenue (proposed);¹⁹⁶ and
- 10 South Van Ness Avenue (proposed).¹⁹⁷

As noted in the Approach to Analysis, for cumulative projects either approved or on file with the Planning Department, project plans were used to develop models of these projects for use in wind-tunnel testing. For the potential 30 Van Ness Avenue and 10 South Van Ness Avenue projects, a simplified massing model was used for the wind-tunnel testing.

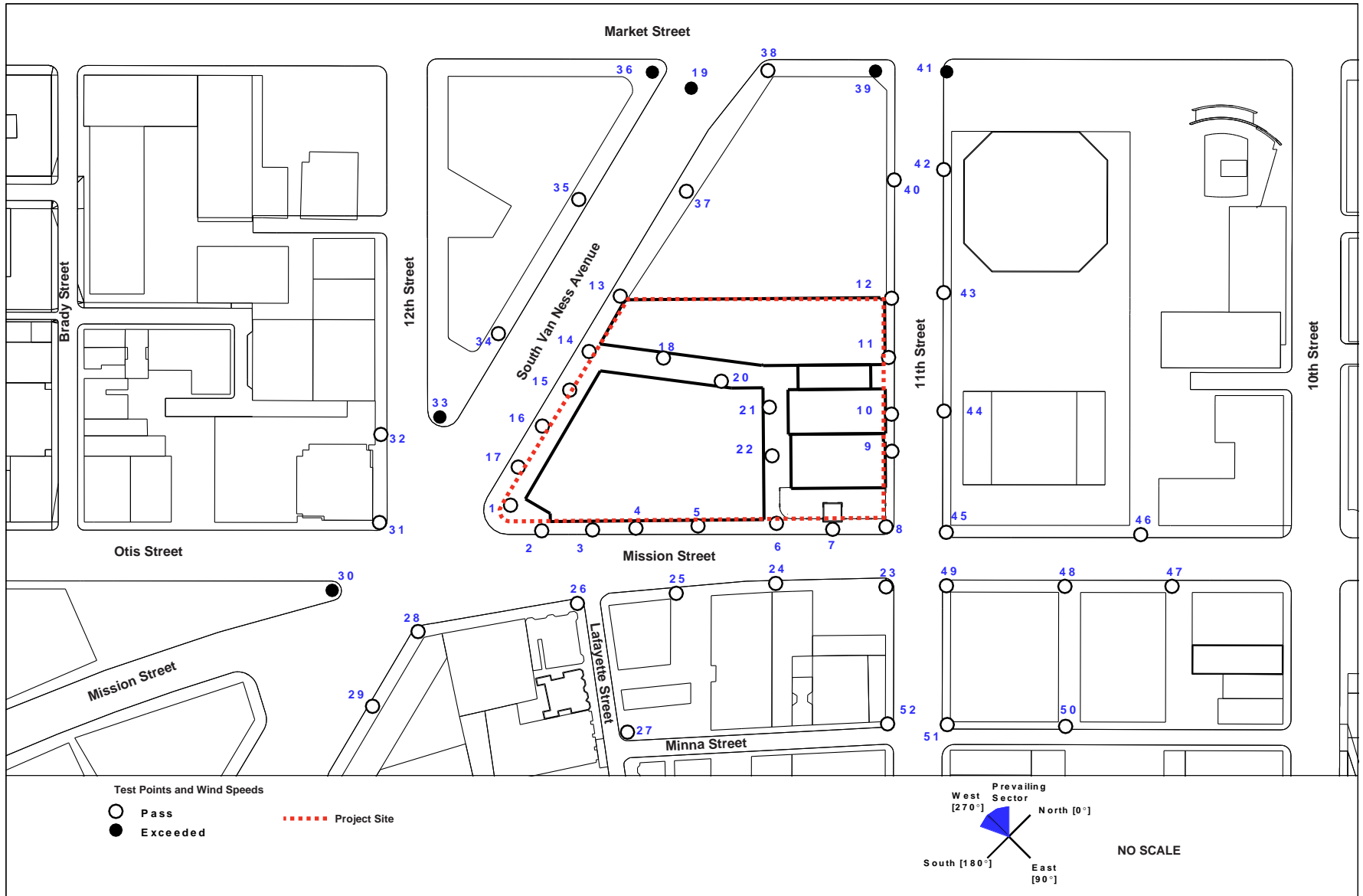
Wind Hazard Analysis

The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would alter wind in a manner that substantially affects public areas in the vicinity of the project site, resulting in a significant cumulative wind impact. The proposed project's contribution to this impact, however, would not be cumulatively considerable, as described below.

With the introduction of cumulative development, wind hazard conditions would increase from one hazard exceedance under existing conditions to six under cumulative conditions: two test point locations on Market Street, near 11th Street; two test point locations at the intersection of Market Street and South Van Ness Avenue, including the proposed Van Ness Bus Rapid Transit bus stop; and two test point locations on the west side of South Van Ness Avenue, across the street from and upwind of the project site (see **Figure IV.D-5, Wind Hazard Criterion—Cumulative Conditions**). One existing hazard exceedance location under existing conditions, at the southeast corner of the One South Van Ness Avenue building, would be eliminated under cumulative conditions. In addition, one hazard exceedance created under Existing plus Project conditions—location 21 within the mid-block pedestrian concourse—would be eliminated under Cumulative conditions. The total number of hazard exceedance hours would increase to 62 hours per year, compared to two hours under existing conditions and one hour under project conditions; 56 of the 62 hours of hazard exceedance

¹⁹⁶ The proposed 30 Van Ness project is considered a reasonably foreseeable because, while no development application is on file, the Planning Department issued a categorical exemption from CEQA for sale by the City and County of San Francisco of this site for the potential future development of a high rise residential tower. (Case No. 2015-008571ENV)

¹⁹⁷ An application is on file for the development of the site at 10 South Van Ness Avenue for a residential tower; however, the project plans have not completed Section 148 wind-tunnel analysis at the time of wind-tunnel modeling for the 1500 Mission Street project.



SOURCE: BMT Fluid Mechanics

1500 Mission Street; Case No. 2014-000362ENV

Figure IV.D-5
Wind Hazard Criterion - Cumulative Conditions

would occur at two locations on Market Street upwind from the project site—Locations 36 (eight hours) and 39 (48 hours). The other exceedances would occur at the intersection of Otis and Mission Streets and South Van Ness Avenue—Location 30 (three hours); at the intersection of 12th Street and South Van Ness Avenue—Location 33 (one hour); in the middle of South Van Ness Avenue at Market Street—Location 19 (one hour); and on the southeast corner of Market and 11th Streets—Location 41 (one hour). This is considered a significant cumulative wind impact.

However, the average speed exceeded one hour per year at all test points would decrease slightly from 20.7 mph under existing conditions and 21.7 mph under project conditions to 20.6 mph, and the one-hour exceeded speed would decrease at 26 of 50 test points, compared to existing conditions, and at 33 of 52 test points, compared to the project scenario. In addition, as noted earlier, the proposed project itself would decrease the duration of hazard exceedance from two hours per year to one hour per year.

The project site is downwind from all of the new hazard exceedances that would occur under cumulative conditions, and each of the six new cumulative hazard exceedance locations is closer to and downwind of one or more of the other projects included in the cumulative test scenario. As noted above, 56 of the 62 hours of hazard criterion exceedance would occur on Market Street, proximate to cumulative projects at 10 South Van Ness Avenue and 30 Van Ness Avenue. Therefore, one or more of these, or possibly other, cumulative projects is likely to have considerably more influence on each of the cumulative hazard exceedances than the proposed 1500 Mission Street project. This conclusion is based in part on additional wind tunnel testing that was conducted for the nearby project at One Oak Street, the results of which are briefly discussed below.¹⁹⁸

For the nearby project at One Oak Street, additional wind tunnel testing was conducted to explore the interactions between the different cumulative development projects in the vicinity of the Market Street and Van Ness/South Van Ness avenues intersection and to investigate what influence each of these projects may have on cumulative wind conditions. The additional wind tunnel testing used an approach known as statistical regression analysis in which one of the independent variables (e.g., one of the cumulative development projects) is changed while all of the other independent variables (e.g., all of the other cumulative development projects) remain constant in order to see how the value of a dependent variable (e.g. the number of hours of hazardous winds) changes.

Four different scenarios were tested using the following cumulative development projects: One Oak Street, 30 Van Ness Avenue, 10 South Van Ness Avenue, and 1500 Mission Street. In three of the test scenarios, a different cumulative development project was removed from the wind tunnel model while all of the other cumulative development projects were included. In the fourth test scenario, the projects at 30 Van Ness Avenue and 10 South Van Ness Avenue were both removed from the wind tunnel model while the One Oak Street and 1500 Mission Street projects were included. It should be noted that, similar to the wind testing conducted for the 1500 Mission Street project, this additional wind tunnel testing used conceptual massing envelopes for the projects at 30 Van Ness Avenue and 10 South Van Ness Avenue instead of detailed building designs, which have not yet been developed. Subsequent wind tunnel testing required for these two projects using detailed building designs would likely yield different test results.

The results of the additional wind tunnel testing provide general indications that the projects at 30 Van Ness Avenue and 10 South Van Ness Avenue would likely have larger influences on cumulative wind conditions,

¹⁹⁸ BMT Fluid Mechanics, *One Oak Street Project, Wind Microclimate Study*, Appendix G, November 7, 2016.

especially along Market Street at the intersection of Van Ness/South Van Ness avenues and at the intersection of 11th Street, than would the 1500 Mission Street project.

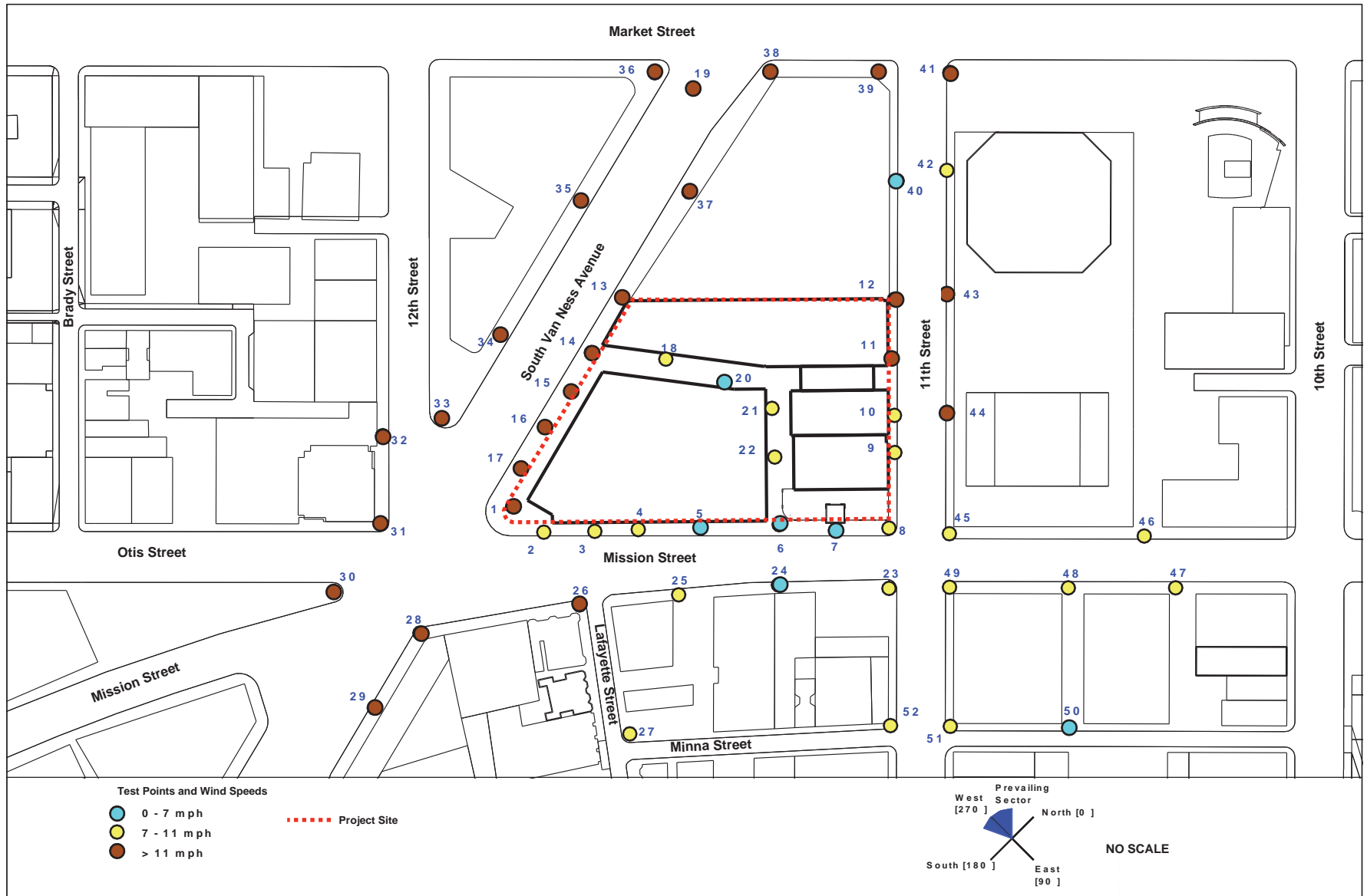
While cumulative wind conditions would deteriorate to the point that there would be a significant impact, the proposed project's contribution to this impact would not be cumulatively considerable. Therefore, the proposed project's cumulative wind impact would be *less than significant*.

It is noted that cumulative conditions could be altered by design changes in one or more of these, or other, cumulative projects that may be necessary for one or more projects to comply with *Planning Code* Section 148. To the extent that such design changes would improve project-specific pedestrian wind conditions, the changes could also improve cumulative conditions such that a significant cumulative impact may not occur.

Mitigation: None required.

Wind Comfort Analysis

Cumulative wind comfort conditions would improve in the vicinity of the project site, particularly along Mission Street. The average wind speed exceeded 10 percent of the time at all test points would decrease from 11.8 mph under existing conditions to 11.3 mph under cumulative conditions, and the number of locations that exceed the comfort criterion would decrease from 33 of 50 points under existing conditions to 25 of 52 points under cumulative conditions. The 25 points of comfort exceedance would include four new locations of exceedance as well as 12 locations where the comfort criterion exceedance would be eliminated, compared to existing conditions (see **Figure IV.D-6, Wind Comfort Criteria—Cumulative Conditions**). The new exceedance locations would include a point on 11th Street near the proposed office building lobby entrance (location 11) and a point across 11th Street (location 44), as well as two locations on the west side of South Van Ness Avenue, across from the project site, while the 12 locations where comfort exceedances would be eliminated would include two points in the project's mid-block concourse (locations 18 and 20), two locations on Minna Street (including at the corner of Minna and Lafayette Streets), two locations on 11th Street north of the project site, one location on each side of the project block of Mission Street, and four locations on both sides of Mission Street east of 11th Street. Compared to existing conditions, wind speeds would increase at 19 locations, decrease at 26 locations, and remain unchanged at the remaining five locations also tested under existing conditions (refer to **Table IV.D-2, Comfort Criterion Results**). In general, under cumulative conditions, wind speeds would increase, compared to existing conditions, on the west side of South Van Ness Avenue across from the project site; on both sides of South Van Ness Avenue north and south of the project site; and along Market Street. Wind speeds would decrease, compared to existing conditions, on both sides of Mission Street, along most of both sides of 11th Street, and on Minna Street.



SOURCE: BMT Fluid Mechanics

1500 Mission Street; Case No. 2014-000362ENV

Figure IV.D-6
Wind Comfort Criteria - Cumulative Conditions

TABLE IV.D-1 HAZARD CRITERION RESULTS

References		Existing Conditions		Existing + Project				Cumulative			
Location	Wind Hazard Criterion Speed (mph)	1 Hour/Year Wind Speed (mph)	Hours/Year Exceeding Hazard Threshold	1 Hour/Year Wind Speed (mph)	Change from Existing	Hours/Year Exceeding Hazard Threshold	Change from Existing	1 Hour/Year Wind Speed (mph)	Change from Existing	Hours/Year Exceeding Hazard Threshold	Change from Existing
1	36	30	0	34	4	0	0	34	4	0	0
2	36	13	0	29	16	0	0	17	4	0	0
3	36	9	0	20	11	0	0	14	5	0	0
4	36	9	0	21	12	0	0	13	4	0	0
5	36	18	0	11	-7	0	0	8	-10	0	0
6	36	9	0	22	13	0	0	13	4	0	0
7	36	10	0	12	2	0	0	9	-1	0	0
8	36	11	0	30	19	0	0	11	0	0	0
9	36	13	0	20	7	0	0	12	-1	0	0
10	36	10	0	22	12	0	0	19	9	0	0
11	36	22	0	34	12	0	0	24	2	0	0
12	36	30	0	36	6	0	0	23	-7	0	0
13	36	38	2	19	-19	0	-2	25	-13	0	-2
14	36	33	0	17	-16	0	0	20	-13	0	0
15	36	26	0	16	-10	0	0	29	3	0	0
16	36	30	0	15	-15	0	0	19	-11	0	0
17	36	29	0	27	-2	0	0	23	-6	0	0
18	36	18	0	18	0	0	0	13	-5	0	0
19	36	22	0	20	-2	0	0	37	15	1	1
20	36	25	0	20	-5	0	0	11	-14	0	0
21	36	-	0	36	-	1	1	18	-	0	-
22	36	-	0	17	-	0	0	17	-	0	-
23	36	14	0	28	14	0	0	13	-1	0	0

TABLE IV.D-1 HAZARD CRITERION RESULTS

References		Existing Conditions		Existing + Project				Cumulative			
Location	Wind Hazard Criterion Speed (mph)	1 Hour/Year Wind Speed (mph)	Hours/Year Exceeding Hazard Threshold	1 Hour/Year Wind Speed (mph)	Change from Existing	Hours/Year Exceeding Hazard Threshold	Change from Existing	1 Hour/Year Wind Speed (mph)	Change from Existing	Hours/Year Exceeding Hazard Threshold	Change from Existing
24	36	15	0	21	6	0	0	9	-6	0	0
25	36	19	0	18	-1	0	0	11	-8	0	0
26	36	20	0	35	15	0	0	31	11	0	0
27	36	18	0	17	-1	0	0	13	-5	0	0
28	36	19	0	36	17	0	0	27	8	0	0
29	36	18	0	19	1	0	0	22	4	0	0
30	36	16	0	16	0	0	0	39	23	3	3
31	36	18	0	31	13	0	0	20	2	0	0
32	36	21	0	20	-1	0	0	31	10	0	0
33	36	22	0	26	4	0	0	36	14	1	1
34	36	22	0	22	0	0	0	21	-1	0	0
35	36	22	0	19	-3	0	0	32	10	0	0
36	36	26	0	21	-5	0	0	43	17	8	8
37	36	20	0	13	-7	0	0	28	8	0	0
38	36	24	0	19	-5	0	0	33	9	0	0
39	36	29	0	28	-1	0	0	52	23	48	48
40	36	18	0	20	2	0	0	14	-4	0	0
41	36	26	0	22	-4	0	0	37	11	1	1
42	36	28	0	25	-3	0	0	14	-14	0	0
43	36	30	0	35	5	0	0	20	-10	0	0
44	36	13	0	22	9	0	0	16	3	0	0
45	36	23	0	19	-4	0	0	13	-10	0	0
46	36	26	0	12	-14	0	0	13	-13	0	0

TABLE IV.D-1 HAZARD CRITERION RESULTS

References		Existing Conditions		Existing + Project				Cumulative			
Location	Wind Hazard Criterion Speed (mph)	1 Hour/Year Wind Speed (mph)	Hours/Year Exceeding Hazard Threshold	1 Hour/Year Wind Speed (mph)	Change from Existing	Hours/Year Exceeding Hazard Threshold	Change from Existing	1 Hour/Year Wind Speed (mph)	Change from Existing	Hours/Year Exceeding Hazard Threshold	Change from Existing
47	36	22	0	13	-9	0	0	12	-10	0	0
48	36	28	0	13	-15	0	0	17	-11	0	0
49	36	17	0	18	1	0	0	11	-6	0	0
50	36	10	0	12	2	0	0	9	-1	0	0
51	36	30	0	15	-15	0	0	13	-17	0	0
52	36	17	0	19	2	0	0	13	-4	0	0
Average Wind Speed		20.7		21.7				20.6			
No. of Exceedances		1		1				6			
New Exceedances				1				6			
Exceedances Eliminated				1				1			
Total Hours Exceeded		2		1				62			
				-1				60			

TABLE IV.D-2 COMFORT CRITERION RESULTS

References		Existing Conditions			Existing + Project				Cumulative			
Location	Wind Comfort Criterion Speed (mph)	Wind Speed Exceeded 10% of Time (mph)	% of Time Wind Speed Exceeds Criterion	Exceedance of Comfort Criterion ^a	Wind Speed Exceeded 10% of Time (mph)	% of Time Wind Speed Exceeds Criterion	Change in Comfort Speed from Existing	Exceedance of Comfort Criterion ^b	Wind Speed Exceeded 10% of Time (mph)	% of Time Wind Speed Exceeds Criterion	Change in Comfort Speed from Existing	Exceedance of Comfort Criterion ^c
1	11	14	24%	X	16	33%	2	C	16	31%	2	C
2	11	9	3%		17	32%	8	N	9	3%	0	
3	11	7	0%		11	8%	4		7	1%	0	
4	11	6	0%		12	15%	6	N	9	2%	3	
5	11	11	10%	X	8	1%	-3	[E]	6	0%	-5	[E]
6	11	7	0%		13	18%	6	N	7	0%	0	
7	11	7	0%		7	1%	0		6	0%	-1	
8	11	9	3%		14	22%	5	N	7	1%	-2	
9	11	8	2%		11	9%	3		8	1%	0	
10	11	8	1%		12	15%	4	N	11	9%	3	
11	11	10	8%		14	24%	4	N	12	14%	2	N
12	11	12	14%	X	14	24%	2	C	12	13%	0	C
13	11	18	39%	X	13	19%	-5	C	15	26%	-3	C
14	11	16	33%	X	12	15%	-4	C	14	22%	-2	C
15	11	17	36%	X	11	12%	-6	C	12	15%	-5	C
16	11	16	29%	X	12	14%	-4	C	12	12%	-4	C
17	11	15	26%	X	15	30%	0	C	12	15%	-3	C
18	11	11	11%	X	10	7%	-1	[E]	9	3%	-2	[E]
19	11	13	21%	X	13	22%	0	C	20	48%	7	C
20	11	13	18%	X	9	4%	-4	[E]	6	0%	-7	[E]
21	11	-	-		16	31%	-	N	9	4%	-	
22	11	-	-		12	13%	-	N	8	1%	-	

TABLE IV.D-2 COMFORT CRITERION RESULTS

References		Existing Conditions			Existing + Project				Cumulative			
Location	Wind Comfort Criterion Speed (mph)	Wind Speed Exceeded 10% of Time (mph)	% of Time Wind Speed Exceeds Criterion	Exceedance of Comfort Criterion ^a	Wind Speed Exceeded 10% of Time (mph)	% of Time Wind Speed Exceeds Criterion	Change in Comfort Speed from Existing	Exceedance of Comfort Criterion ^b	Wind Speed Exceeded 10% of Time (mph)	% of Time Wind Speed Exceeds Criterion	Change in Comfort Speed from Existing	Exceedance of Comfort Criterion ^c
23	11	10	6%		14	24%	4	N	8	1%	-2	
24	11	10	6%		10	8%	0		6	0%	-4	
25	11	12	13%	X	11	9%	-1	[E]	8	1%	-4	[E]
26	11	11	11%	X	16	32%	5	C	15	26%	4	C
27	11	11	10%	X	12	12%	1	C	9	4%	-2	[E]
28	11	13	17%	X	18	39%	5	C	18	36%	5	C
29	11	12	13%	X	12	14%	0	C	15	26%	3	C
30	11	11	11%	X	11	11%	0	C	21	48%	10	C
31	11	10	7%		14	22%	4	N	11	12%	1	N
32	11	12	16%	X	11	11%	-1	C	14	23%	2	C
33	11	12	13%	X	13	19%	1	C	16	33%	4	C
34	11	12	16%	X	11	12%	-1	C	11	12%	-1	C
35	11	11	10%		10	6%	-1		15	29%	4	N
36	11	13	17%	X	11	11%	-2	C	20	47%	7	C
37	11	13	17%	X	10	6%	-3	[E]	16	33%	3	C
38	11	14	22%	X	14	23%	0	C	18	40%	4	C
39	11	17	34%	X	15	29%	-2	C	20	44%	3	C
40	11	11	12%	X	14	24%	3	C	6	1%	-5	[E]
41	11	14	23%	X	13	20%	-1	C	17	33%	3	C
42	11	12	16%	X	12	12%	0	C	10	7%	-2	[E]
43	11	13	17%	X	15	28%	2	C	12	16%	-1	C
44	11	9	3%		13	17%	4	N	11	10%	2	N

TABLE IV.D-2 COMFORT CRITERION RESULTS

References		Existing Conditions			Existing + Project				Cumulative			
Location	Wind Comfort Criterion Speed (mph)	Wind Speed Exceeded 10% of Time (mph)	% of Time Wind Speed Exceeds Criterion	Exceedance of Comfort Criterion ^a	Wind Speed Exceeded 10% of Time (mph)	% of Time Wind Speed Exceeds Criterion	Change in Comfort Speed from Existing	Exceedance of Comfort Criterion ^b	Wind Speed Exceeded 10% of Time (mph)	% of Time Wind Speed Exceeds Criterion	Change in Comfort Speed from Existing	Exceedance of Comfort Criterion ^c
45	11	12	14%	X	12	15%	0	C	8	1%	-4	[E]
46	11	14	20%	X	8	1%	-6	[E]	8	1%	-6	[E]
47	11	15	24%	X	9	4%	-6	[E]	9	3%	-6	[E]
48	11	16	29%	X	9	4%	-7	[E]	9	4%	-7	[E]
49	11	11	10%		11	11%	0	N	8	1%	-3	
50	11	7	0%		6	0%	-1		6	0%	-1	
51	11	14	21%	X	9	4%	-5	[E]	8	1%	-6	[E]
52	11	11	9%		10	7%	-1		9	2%	-2	
Average Wind Speed		11.8			12.1				11.3			
Number of Exceedances									36			
New Exceedances									12			
Exceedances Eliminated									9			
									25			
									4			
									12			

NOTES:

- a. X = Existing Comfort Criterion Exceedance.
- b. C = Continuation of Existing Comfort Criterion Exceedance; N = New Exceedance due to Project; [E] = Existing Comfort Criterion Exceedance Eliminated by Project.
- c. C = Continuation of Existing Comfort Criterion Exceedance; N = New Exceedance due to Cumulative Scenario; [E] = Existing Comfort Criterion Exceedance Eliminated by Cumulative Scenario.

IV.E Shadow

IV.E.1 Introduction

This section describes the existing shadow conditions at the project site and its vicinity, and evaluates the potential for the proposed project to result in adverse shadow impacts on the surrounding outdoor recreation facilities and other public open spaces. The analysis in this section is based in part on the shadow study prepared for the proposed project by PreVision Design.¹⁹⁹ Potential new shadow cast by the proposed project is discussed and its effects on the use of parks and other open spaces and public areas are evaluated. The impact discussion also considers whether the proposed project, in combination with other reasonably foreseeable development projects, would result in cumulative impacts related to shadow.

IV.E.2 Environmental Setting

Background

In an urban environment, shadow is a function of the height, size, and massing of buildings and other elements of the built environment, and the angle of the sun. The angle of the sun varies due to the time of day (rotation of the earth) and the change in seasons (elliptical orbit of the earth). The longest shadows are cast during the winter (when the sun is at the greatest distance below the celestial equator; that is, it reaches its southernmost point and its lowest height in the sky), and the shortest shadows are cast during the summer (when the sun is at the greatest distance above the celestial equator; that is, it reaches its northernmost point and its greatest height in the sky). At the time of the summer solstice (typically occurring on June 20 or 21), the sun is directly overhead at noon in the northern hemisphere, and the longest day and shortest night occur on this date. Conversely, the shortest day and longest night occur on the winter solstice (typically on December 21). The fall and spring equinoxes, which fall on or around September 20 and March 22, respectively, represent the half-way point between the shortening and lengthening phases at the solstices. Thus measuring shadow lengths during the summer and winter solstices captures the extremes of shadow patterns that occur throughout the year.

Shadow conditions are described with reference to the Theoretical Available Annual Sunlight, which is the amount of sunlight that would be available in a park or open space in the course of a year if there were no shadows from structures, trees, or other objects. Theoretical Available Annual Sunlight is calculated in square-foot-hours (also referred to as sfh),²⁰⁰ which is an expression of sunlight or shadow, by multiplying the area in square feet of the park/open space by 3,721.4 (the maximum number of hours of sunlight available on an annual basis in San Francisco during the hours covered by *Planning Code* Section 295, as discussed below under Regulatory Framework). Existing and new shadows cast by the proposed project are measured by the

¹⁹⁹ PreVision Design, *Shadow Analysis Report for the Proposed 1500 Mission Street Project Per San Francisco Planning Code Section 295 Standards*, November 8, 2016.

²⁰⁰ A square-foot-hour of sunlight is one hour of sunlight on one square foot of ground, while a shadow-foot-hour represents one hour of shade on one square foot of ground.

annual amount of shadow, expressed in square-foot-hours as a percent of Theoretical Available Annual Sunlight.

Existing Parks and Open Spaces

The proposed project includes structures that would be greater than 40 feet tall and could cause shadows on Patricia's Green, which is under jurisdiction of the San Francisco Recreation and Parks Department (SFRPD).²⁰¹ Although the Planning Department preliminary shadow fan analysis—which does not account for existing buildings—indicates that the proposed project could theoretically shade one other park, Page & Laguna Mini Park, detailed analysis indicates that this park is already shaded when proposed project shadow would reach the park.²⁰² Accordingly, the analysis in this EIR focuses entirely on Patricia's Green, which is the only park that the proposed project could result in net new shadow too, and which is described in the following subsection.

Patricia's Green

Description

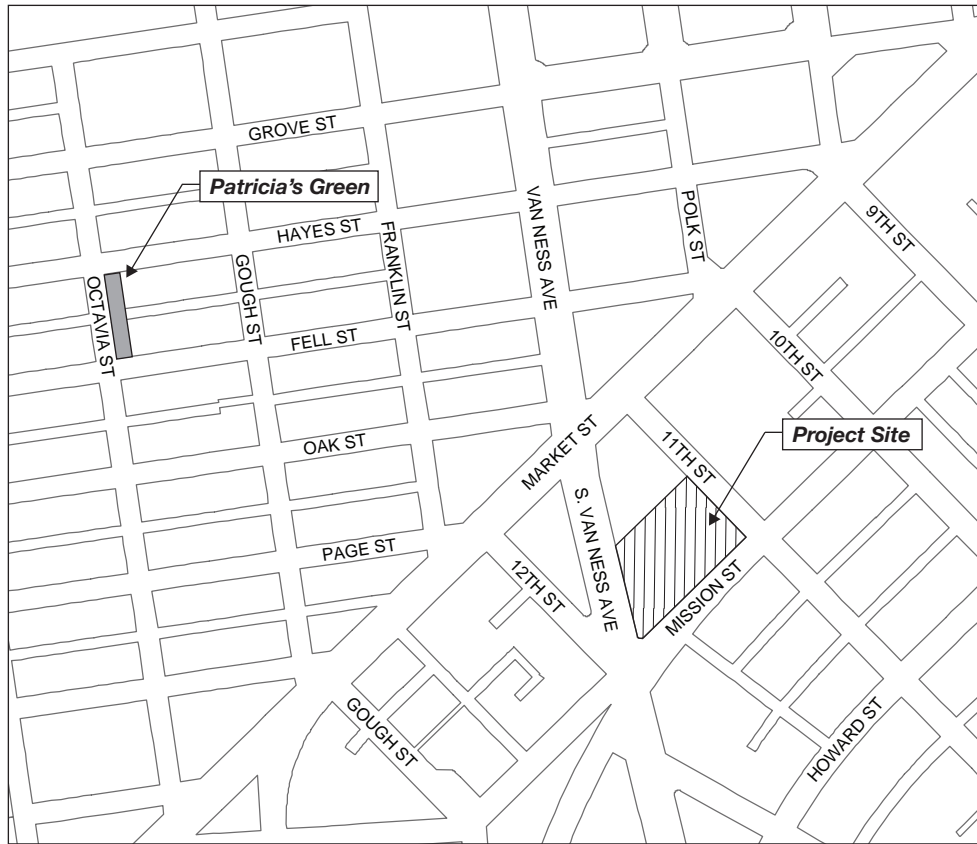
Patricia's Green is a public park under the jurisdiction of the SFRPD. The 0.41-acre (17,901-square-foot) park is located approximately 1,700 feet northwest of the project site (refer to **Figure IV.E-1, Patricia's Green**). The north/south-oriented park is located along a portion of the former Octavia Street right-of-way and adjacent parcels, and is bounded by Hayes Street to the north and Fell Street to the south. The northern portion of the park includes a picnic seating area around a mature tree. The central portion centers the park around a plaza area with concrete benches that is used for art installations. The plaza is flanked on either side by open lawn areas. The southern portion of the park contains a children's play area, which features a dome structure with ropes and bars for climbing and poured rubber safety paving. A service building is located on the southwest corner of the park. On the periphery of the park are concrete ledges and benches interspersed with approximately 24 trees and plantings.

Existing Park Uses

Observations of existing patterns of the use of Patricia's Green were conducted by PreVision Design during a total of six site visits on June 11–13, 2015, of 30 minutes each. These dates and observation periods included uses at various days of the week (Thursday through Saturday), throughout daylight hours and were used to record the number of users present in the park generally as well as within the specific area of new shading that would occur with the proposed project.

²⁰¹ San Francisco Planning Department, "1500 Mission Shadow Study: Shadow Fan for Residential Tower to 416 Feet," August 19, 2016.

²⁰² PreVision Design, *Shadow Analysis Report for the Proposed 1500 Mission Street Project Per San Francisco Planning Code Section 295 Standards*, November 8, 2015.



Location of Patricia's Green Relative to Project Site

- 1 Children's Play Area
- 2 Center Plaza/Art Area
- 3 Picnic Area
- 4 Planting/Benches
- 5 Lawn
- 6 Service Building



Aerial Photo of Patricia's Green

Within the six 30-minute observation periods, the observed usage varied from a low count of 80 users (along with 20 dogs) on a weekday morning, with approximately half of the users walking through, to a peak intensity of 183 users (plus 15 dogs) on a weekend afternoon with approximately one-third of the users walking through. The majority of users were walking and playing with dogs, sitting, eating, and socializing on the benches and picnic tables throughout the entire park. Observations determined that the intensity of the park was highest mid-day during the week due to people eating lunch, or while watching a special event, like a live music performance. The park was actively used at all times for dog walking, as a meeting place, the children's play area, or as thoroughfare between Hayes and Fell Streets and for Linden Street. The development to the east of Octavia Street was actively patronized by park users, which contains a coffee and ice cream shop as well as an outdoor beer garden located within non-fixed portable structures.

Existing Shadow

Patricia's Green currently has 12,129,314 annual square-foot-hours of shadow. Based on a Theoretical Available Annual Sunlight of 66,616,781 square-foot-hours, the park is currently shaded over 18.21 percent of the Theoretical Available Annual Sunlight. The park currently experiences higher levels of shading in the early mornings and late afternoons, but is otherwise predominantly unshaded from late morning through mid-afternoon year-round.

IV.E.3 Regulatory Framework

Planning Code Section 295

Section 295 of the *Planning Code*, the Sunlight Ordinance, was adopted through voter approval of Proposition K in November 1994 to protect certain public open spaces from shadowing by new structures. Section 295 effectively limits shadow on city parks, requiring that specific findings be made before buildings greater than 40 feet in height can be approved that would shade property under the jurisdiction of or designated to be acquired by the Recreation and Park Commission, during the period from one hour after sunrise to one hour before sunset. Section 295(b) states that the Planning Commission, following a public hearing, "shall disapprove" any project governed by Section 295 that would have an "adverse effect" due to shading of a park subject to this section, "unless it is determined that the impact would be insignificant." The Planning Commission's decision under Section 295 cannot be made "until the general manager of the Recreation and Park Department in consultation with the Recreation and Park Commission has had an opportunity to review and comment to the City Planning Commission upon the proposed project."

In 1989, the two Commissions adopted shadow criteria for 14 downtown parks, including quantitative maximum shadow coverage ("Absolute Cumulative Limit") for each open space and qualitative criteria for assessing new shadow. In establishing the quantitative Absolute Cumulative Limits for the 14 downtown parks, the Commissions generally relied upon the following guidelines: for smaller parks (of less than two acres) on which more than 20 percent of the potential "Prop. K" sunlight was in shadow under then-existing conditions, no additional shadow was to be allowed. (This standard was applied to 11 of the 14 downtown parks, including two larger parks—Washington Square and Joe DiMaggio Playground—that were precluded from sustaining Section 295 shadow by surrounding height limits of 40 feet.) For larger parks (of two acres or more) with between 20 percent and 40 percent existing shadow, the Absolute Cumulative Limit

was to set at 0.1 percent; that is, an additional 0.1 percent new shadow, measured in shadow-foot-hours, would be allowed beyond existing conditions. The increment allowed as the Absolute Cumulative Limit—0.1 percent, in the case of this subset of parks—is measured as a percentage of Theoretical Available Annual Sunlight.²⁰³ (This standard was applied to two parks—Union Square and Justin Herman Plaza.) For larger parks shadowed less than 20 percent of the time, an additional 1.0 percent new shadow was to be allowed.²⁰⁴ (This standard was applied to one park, Civic Center Plaza.) No guideline was provided for parks of less than two acres that have less than 20 percent existing shadow.²⁰⁵ None of the 14 parks for which an Absolute Cumulative Limit was established in 1989 would be newly shaded by the proposed project.

The qualitative criteria adopted by the commissions for evaluation of a project's shadow impact include the time of day and time of year when shadow would be cast, the size, duration, and location within the park of the new shadow, and the public good served by the building casting the shadow.

Planning Code Sections 146 and 147

Planning Code Section 146(a), applicable to certain streets in the C-3 zoning districts, requires that buildings and additions fit within an envelope defined by a plane sloping away from the street at a prescribed angle above a prescribed height “in order to maintain direct sunlight on public sidewalks in certain downtown areas during critical periods of use.” In the project vicinity, Section 146(a) applies to the south side of Market Street between Second and 10th Streets and between South Van Ness Avenue and 12th Street. Thus, this subsection is not applicable to the project site because the project site does not front the south side of Market Street between Second and 10th Streets or between South Van Ness Avenue and 12th Street. Section 146(c) states that, on other streets in the C-3 districts, “New buildings and additions to existing buildings shall be shaped, if it can be done without creating an unattractive design and without unduly restricting the development potential of the site in question, so as to reduce substantial shadow impacts on public sidewalks.” A determination of compliance with Section 146(c) is made as part of the Section 309 permit review process. Section 146(c) is applicable to the proposed project.

Planning Code Section 147, applicable to the C-3 and certain other use districts, requires that new development and additions to existing structures where the height exceeds 50 feet must be shaped to “reduce substantial shadow impacts on public plazas and other publicly-accessible spaces other than those protected under Section 295 ... consistent with the dictates of good design and without unduly restricting the development potential of the site in question.” The following factors must be taken into account in determining compliance with this criterion: the amount of area shadowed, the duration of the shadow, and the importance of sunlight to the type of open space being shadowed. A determination of compliance with Section 147 is made as part of

²⁰³ As noted in the setting, Theoretical Available Annual Sunlight is computed by multiplying the area of the park by 3,721.4. Thus, this quantity is not affected by shadow cast by existing buildings, but instead represents the amount of sunlight that would be available with no buildings in place. Theoretical Available Annual Sunlight calculations for each downtown park were used by the Planning and Recreation and Park Commissions in establishing the allowable Absolute Cumulative Limit for downtown parks in 1989.

²⁰⁴ The guidelines for new shadow were presented in a memorandum to the Planning and Recreation and Parks Commissions, from their staffs, dated February 3, 1989, and referred to in Joint Resolution 11595 of the two commissions, adopted February 7, 1989.

²⁰⁵ None of the 14 downtown parks for which Absolute Cumulative Limits were established met these criteria.

the Section 309 permit review process in the C-3 districts and as part of the Section 307 permit review process elsewhere. Section 147 is applicable to the proposed project.

IV.E.4 Impacts and Mitigation Measures

Significance Thresholds

The applicable threshold used to determine whether the proposed project would result in a significant shadow impact is whether implementing the proposed project would create new shadow in a manner that substantially affects outdoor recreation facilities or other public areas.

Approach to Analysis

As a preliminary study, the Planning Department prepared a “shadow fan” diagram to determine whether any public open spaces could be affected by the proposed project’s shadows. The shadow fan diagram plots the maximum potential reach of project shadow over the course of a year, from one hour after sunrise until one hour before sunset on each day of the year. The locations of nearby parks and open space facilities are also identified.

The shadow fan diagram, which does not take into account shadows cast by existing buildings, indicated that Patricia’s Green and the Page & Laguna Mini Park are the only public open spaces that could be affected by the proposed project. Other parks are too distant from the project site or oriented too far north or south for project shadow to reach them.

After preparation of the shadow fan diagram and the provision of additional guidance by the Planning Department, the shadow consultant, PreVision Design, conducted a shadow analysis for the proposed project, using a Geo-located 3D computer model of the proposed project, the parks, and the surrounding urban environment to simulate and calculate both existing amounts of shading and levels of new shading (if any) that would occur with the proposed project in accordance with Section 295 hours that include one hour after sunrise through one hour before sunset.

The analysis was conducted based on a “solar year” to provide a sample of representative sun angles throughout the entire calendar year. The solar year is defined as June 21 through December 20. The sun angles during the “other” side of the calendar year, (December 21 through June 21), mirror the solar year sun angles. Since the angles are mirrored, an analysis of the “other” time period is not conducted and, instead, a multiplier is used to extrapolate the solar year results into full year results. To calculate levels of shading throughout the solar year, snapshot analyses were performed at 15-minute intervals between Section 295 cutoff times every seven days throughout the solar year, in accordance with the established Section 295 protocol.

The difference between the current levels of shading and the levels of shading that would be present with the addition of the proposed project yield the total increase of project generated shadow, measured in annual square-foot-hours of shadow. This increase is taken as a percentage of the Theoretical Available Annual Sunlight for the park, to determine whether the new shadows created by the proposed project would fall within or outside potentially permissible limits of increased shading for the park.

Existing shadow patterns and shadow patterns associated with the proposed project for the summer solstice, spring/fall equinoxes,²⁰⁶ and winter solstice are shown in **Figure IV.E-2 through Figure IV.E-10** for the morning, noon, and afternoon hours. These diagrams provide representative snapshots of shadow patterns at the times of the day and seasons selected for the analysis. The technical memorandum prepared for the proposed project also shows hour-by-hour diagrams for these dates as well as an evaluation of the days of the year with the maximum amount of shadows, February 8 and November 1 as shown in **Figure IV.E-11 through Figure IV.E-13**.

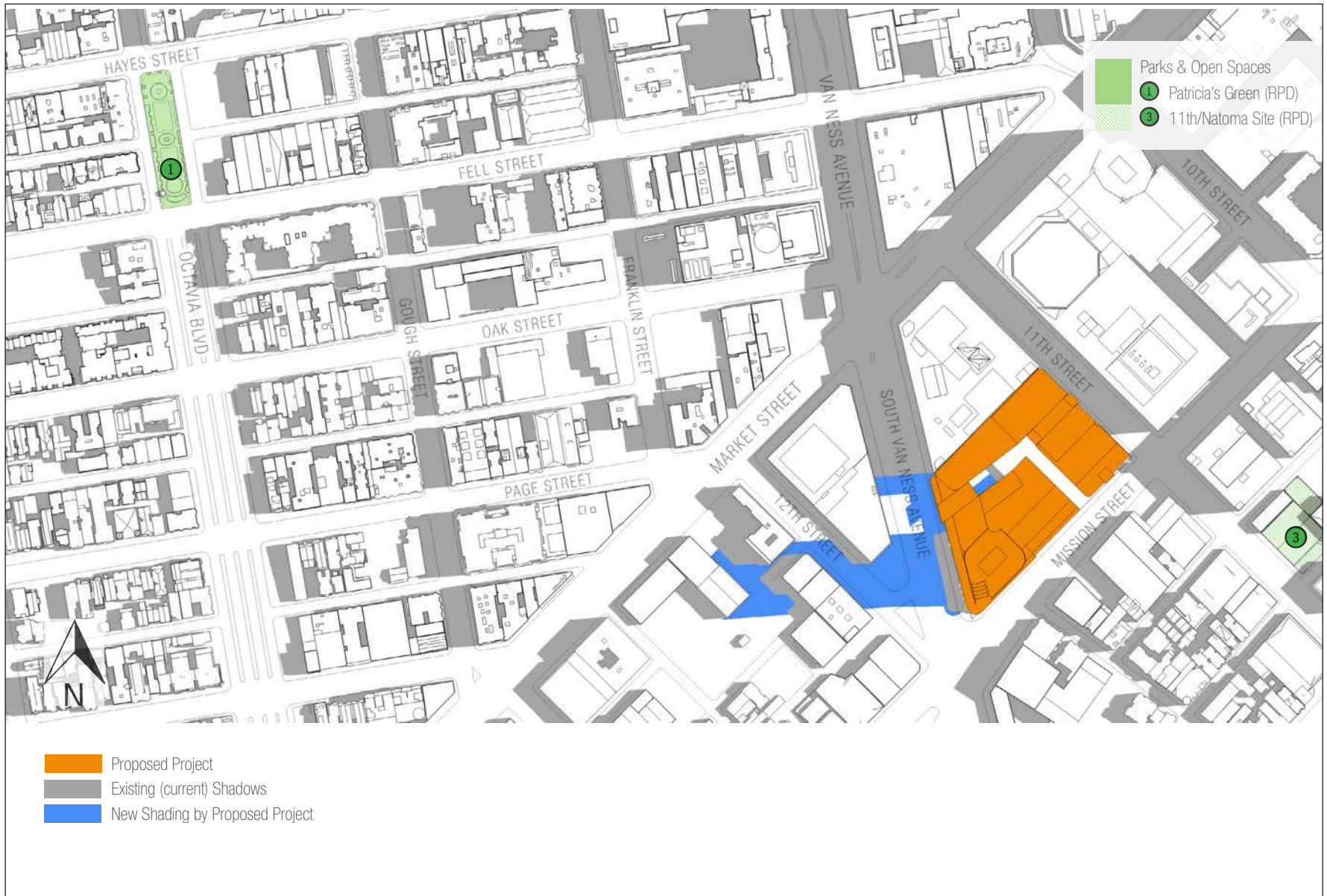
As noted above, while the Planning Department shadow fan indicates that the proposed project's shadow could theoretically reach Page & Laguna Mini Park, detailed analysis indicates that the portion of the park that could be shaded by the proposed project is already shaded by existing buildings when project shadow would reach this park. Therefore, the proposed project would add no net new shadow to the Page & Laguna Mini Park. Page & Laguna Mini Park are not shown in the figures or discussed in the analysis.

Approach to Cumulative Analysis

The cumulative analysis was largely based on the findings included as part of the shadow study conducted by the shadow consultant, PreVision Design, using a Geo-located 3D computer model of the proposed project, the parks, and the surrounding future projects in the vicinity of the proposed project that either have applications on file with the Planning Department or are considered by the Planning Department to be "reasonably foreseeable" and would also potentially shade the parks or open spaces affected by the proposed project. These projects were included in this report in order to determine the cumulative shadow impact on Patricia's Green—that is, the shadow impact that would result from these projects combined with the proposed project. For cumulative projects either approved or on file with the Planning Department, project plans were used to develop digital models of these projects for use in the shadow analysis. Simplified massing models, rather than refined design plans, were used for the following reasonably foreseeable projects: 455 Fell Street, 300 Octavia Street, 350 Octavia Street, 1629 Market Street, 10 South Van Ness Avenue, One Oak Street, 30 Otis Street, 915 Minna Street, and 949 Natoma Street. In addition, simplified massing models for three development projects for which no application has yet been filed and no refined plans have been submitted to the Planning Department were also included as foreseeable projects in the cumulative analysis: Central Freeway Parcel K, Central Freeway Parcel L, and 30 Van Ness Avenue.

The SFRPD is in the process of acquiring a new park property on the east side of 11th Street between Minna and Natoma Streets (Block 3510/Lots 035, 037, 039, 055, 056). The new park acquisition was not identified prior to publication of the Notice of Preparation for this proposed project and the site is not currently programmed as a park; as a result, this site is not considered to be a public open space under existing conditions. However, for informational purposes, this future SFRPD facility (timing of construction and programming of this future SFRPD facility is currently unknown), is included in the cumulative analysis as a potential proposed project. Also included in the analysis for informational purposes is a proposed privately-owned publicly-accessible open space (POPOS), Brady Open Space, which would be developed as part of a project undergoing environmental review at 1629 Market Street (Case No. 2015-005848ENV).

²⁰⁶ Only one set of figures is presented for the spring and fall equinoxes together because the sun's path across the sky is generally symmetrical throughout the year and thus shadows on the two equinoxes are essentially the same. As a result, shadows from the winter solstice in December through the summer solstice in June generally mirror shadows from June through December.

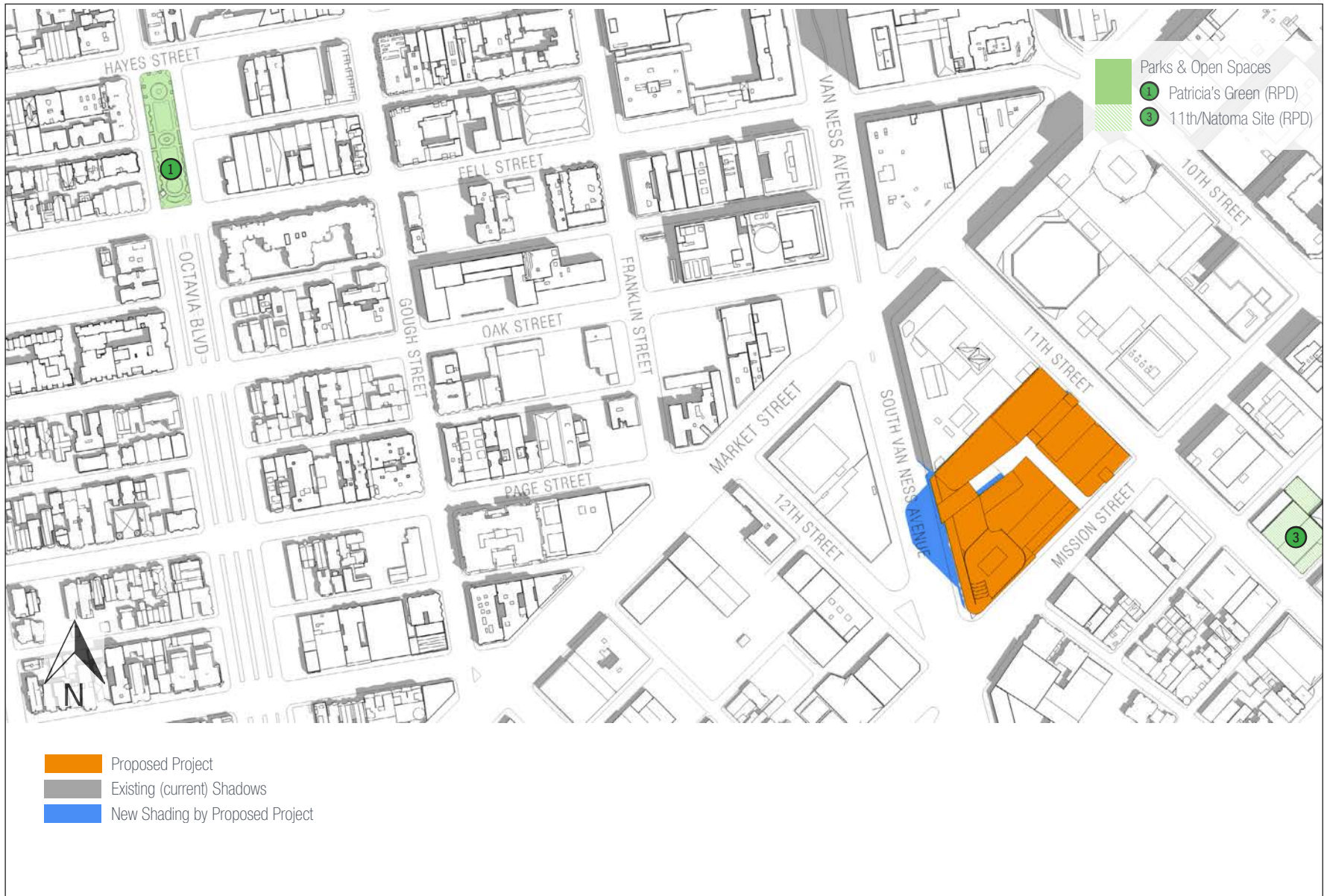


SOURCE: Prevision Design, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure IV.E-2

June 21 9:00 AM (Summer Solstice)

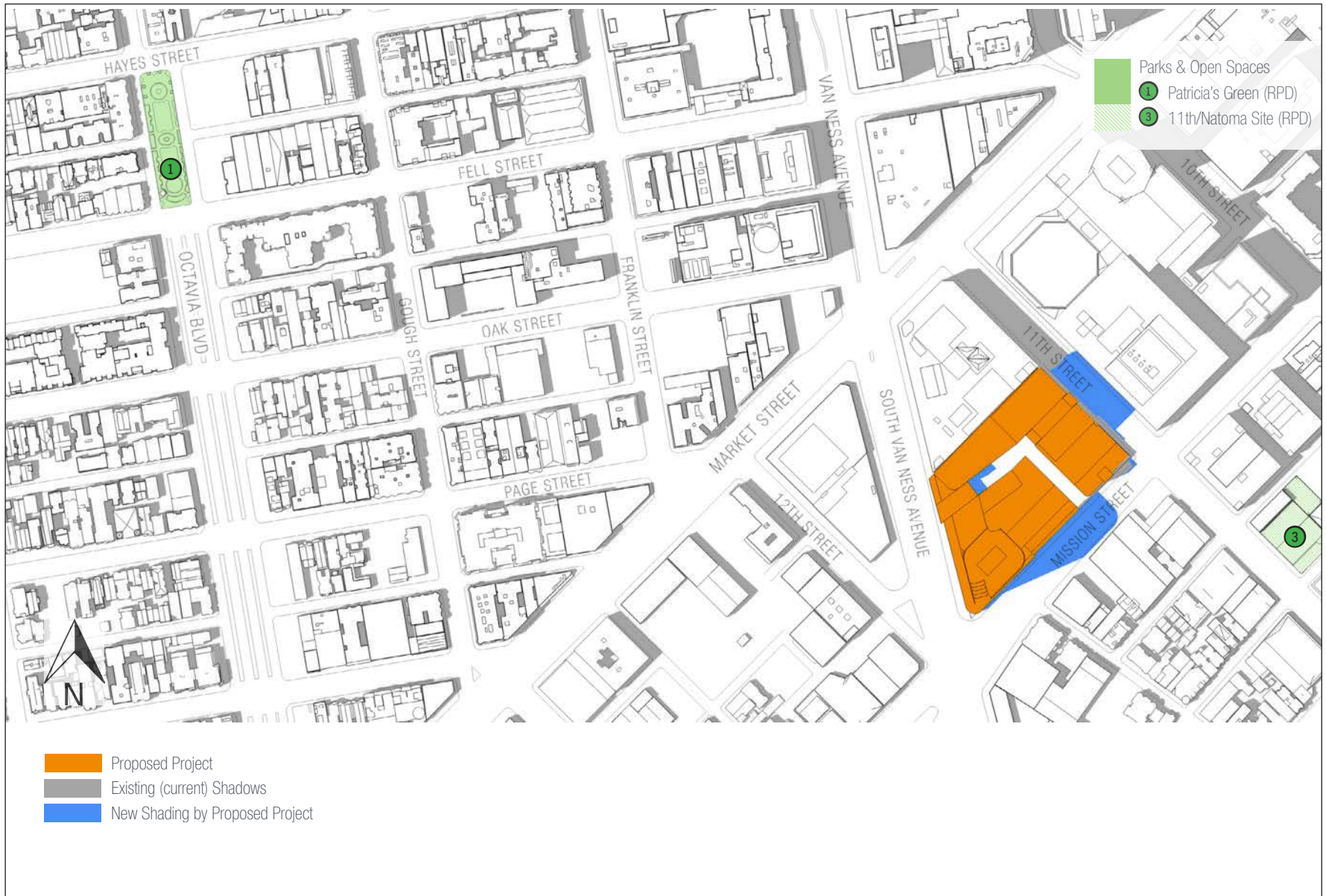


SOURCE: Prevision Design, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure IV.E-3

June 21 Noon (Summer Solstice)

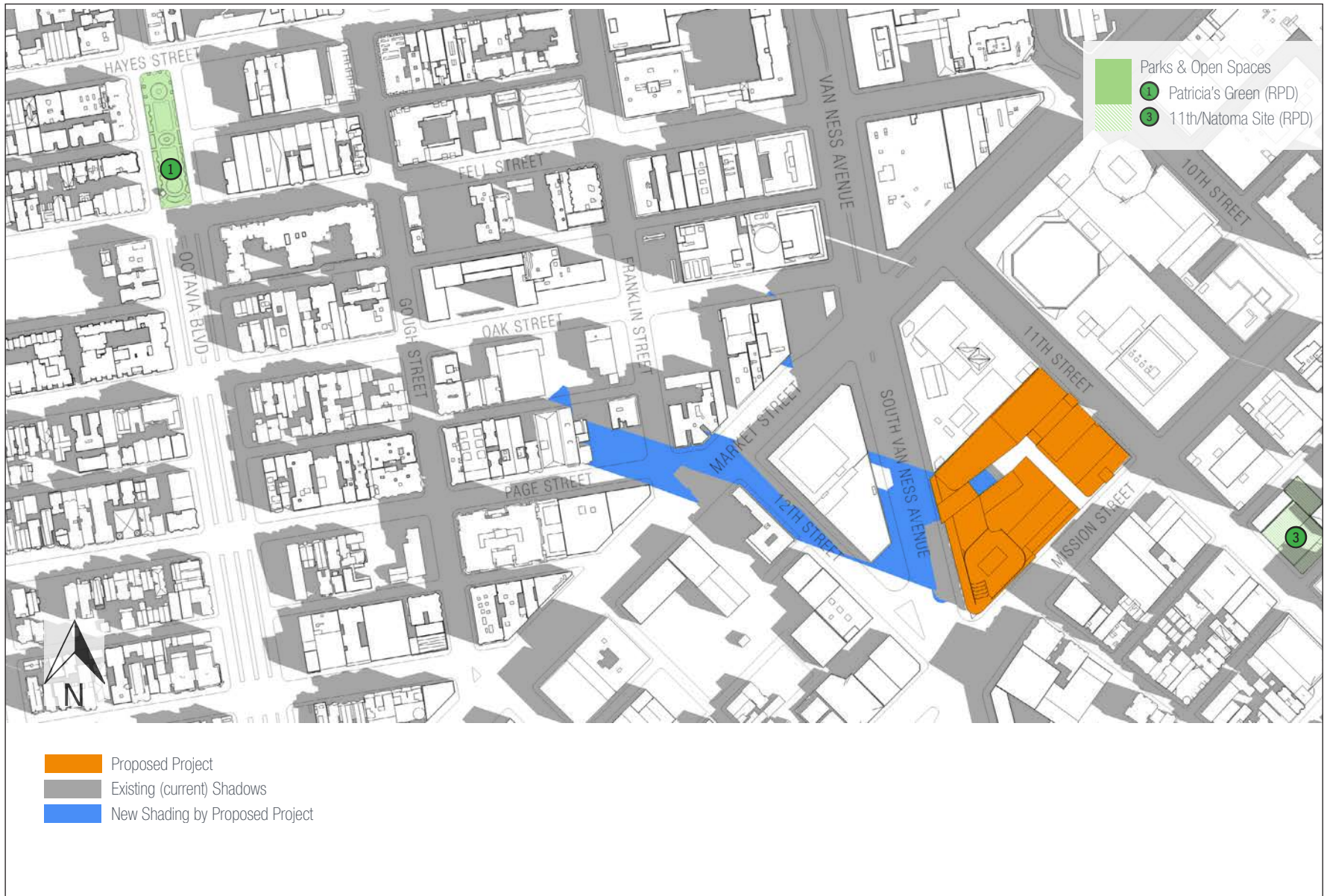


SOURCE: Prevision Design, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure IV.E-4

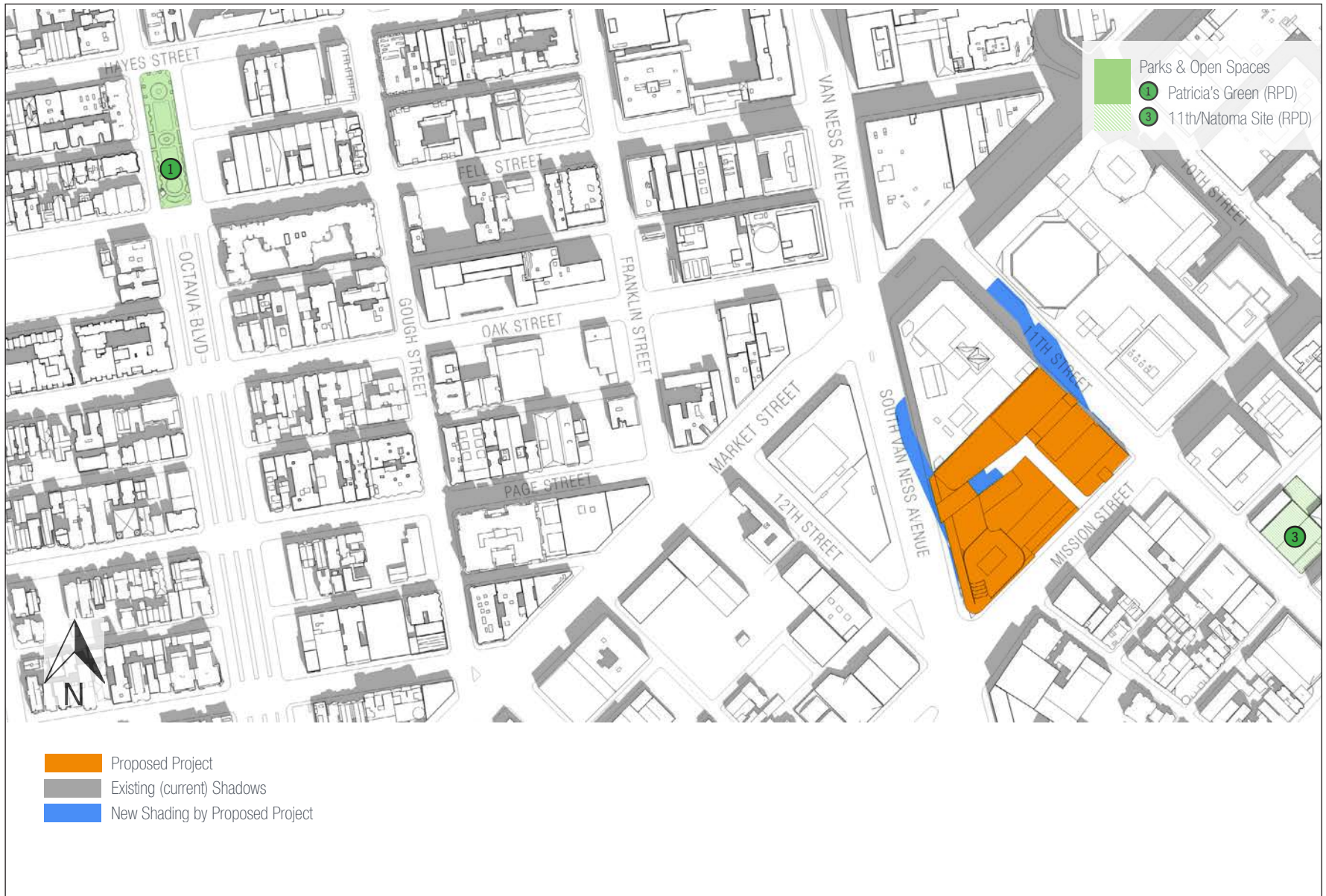
June 21 3:00 PM (Summer Solstice)



SOURCE: Prevision Design, 2016

1500 Mission Street; Case No. 2014-000362ENV

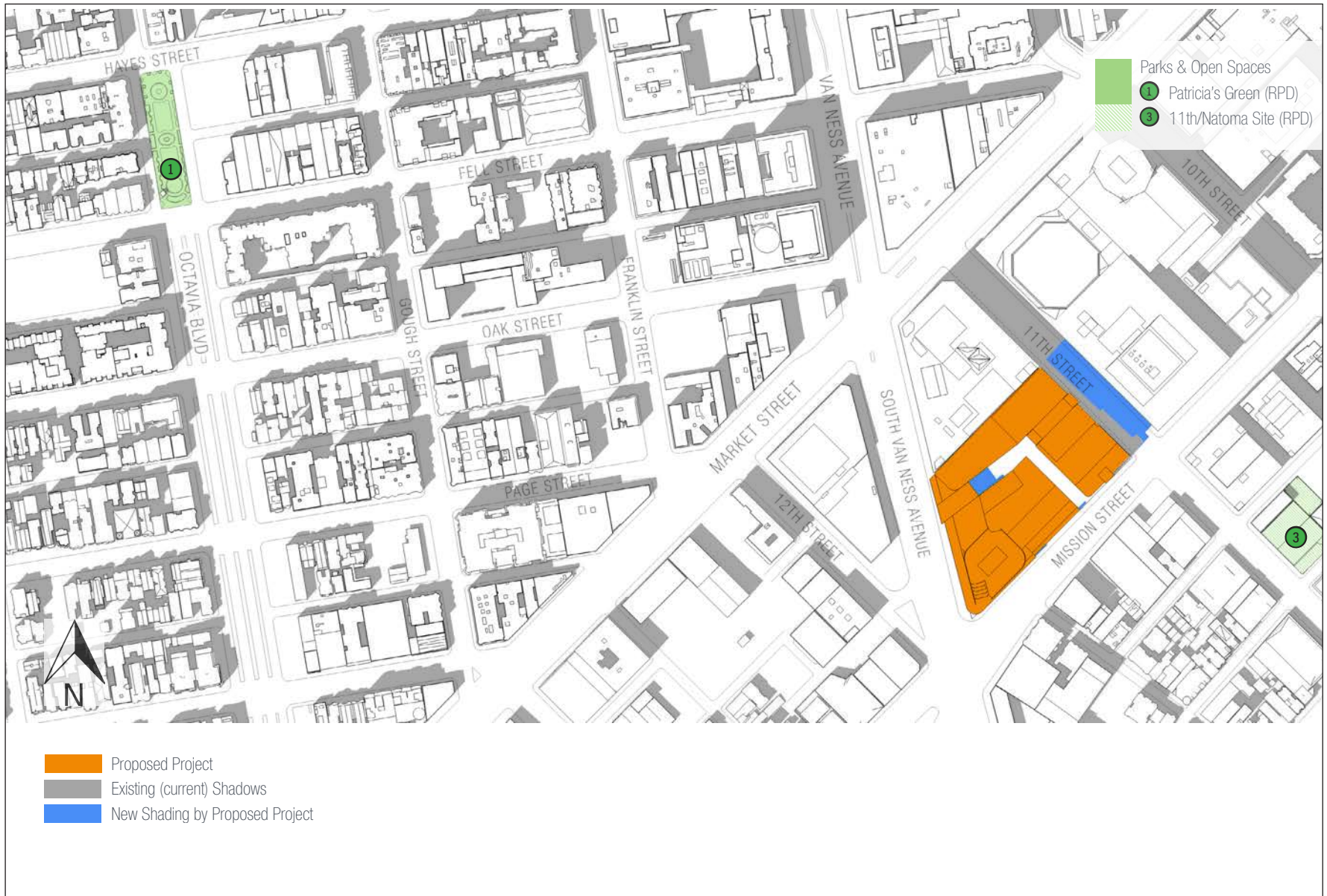
Figure IV.E-5
September 20 9:00 AM (Fall Equinox)



SOURCE: Prevision Design, 2016

1500 Mission Street; Case No. 2014-000362ENV

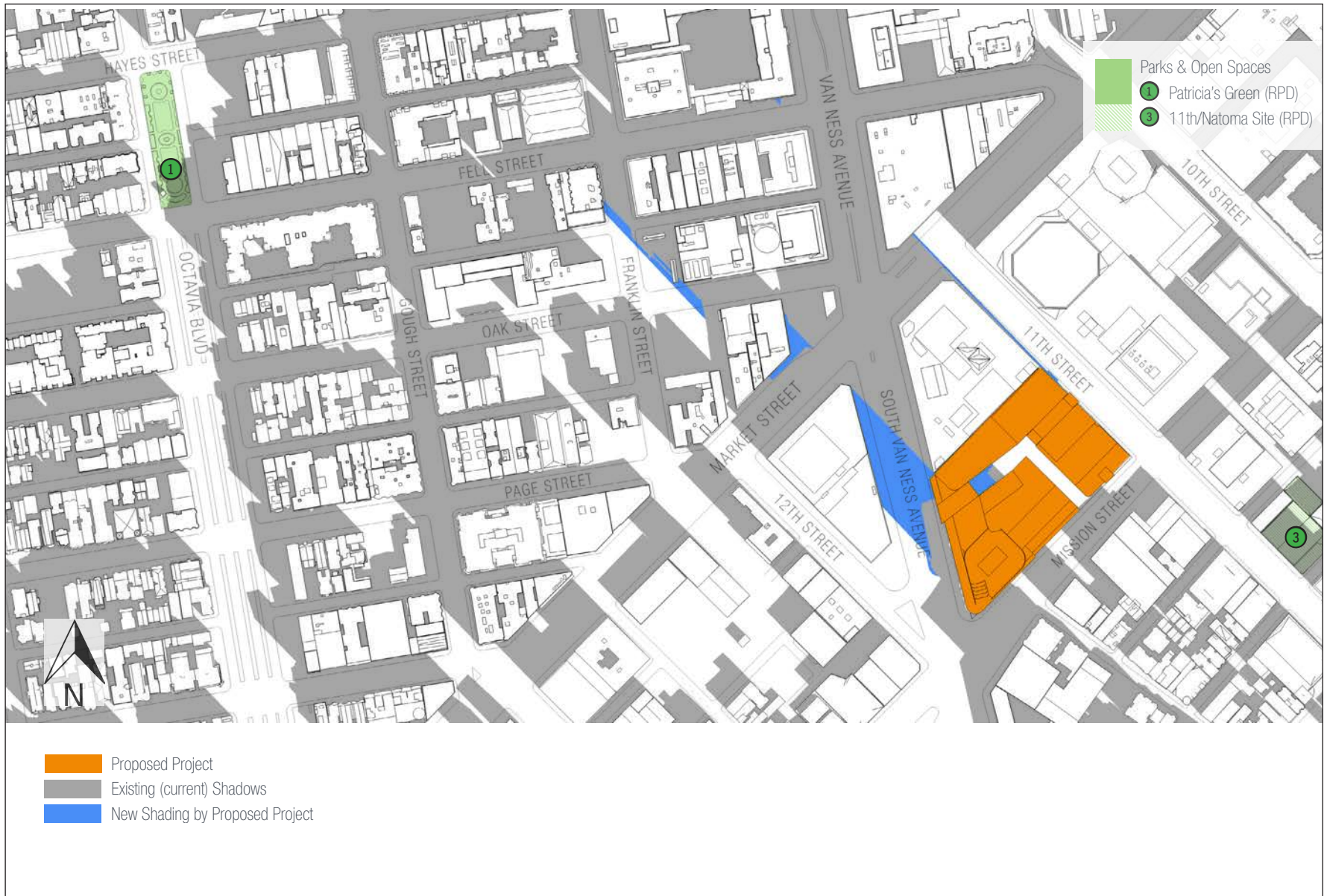
Figure IV.E-6
September 20 Noon (Fall Equinox)



SOURCE: Prevision Design, 2016

1500 Mission Street; Case No. 2014-000362ENV

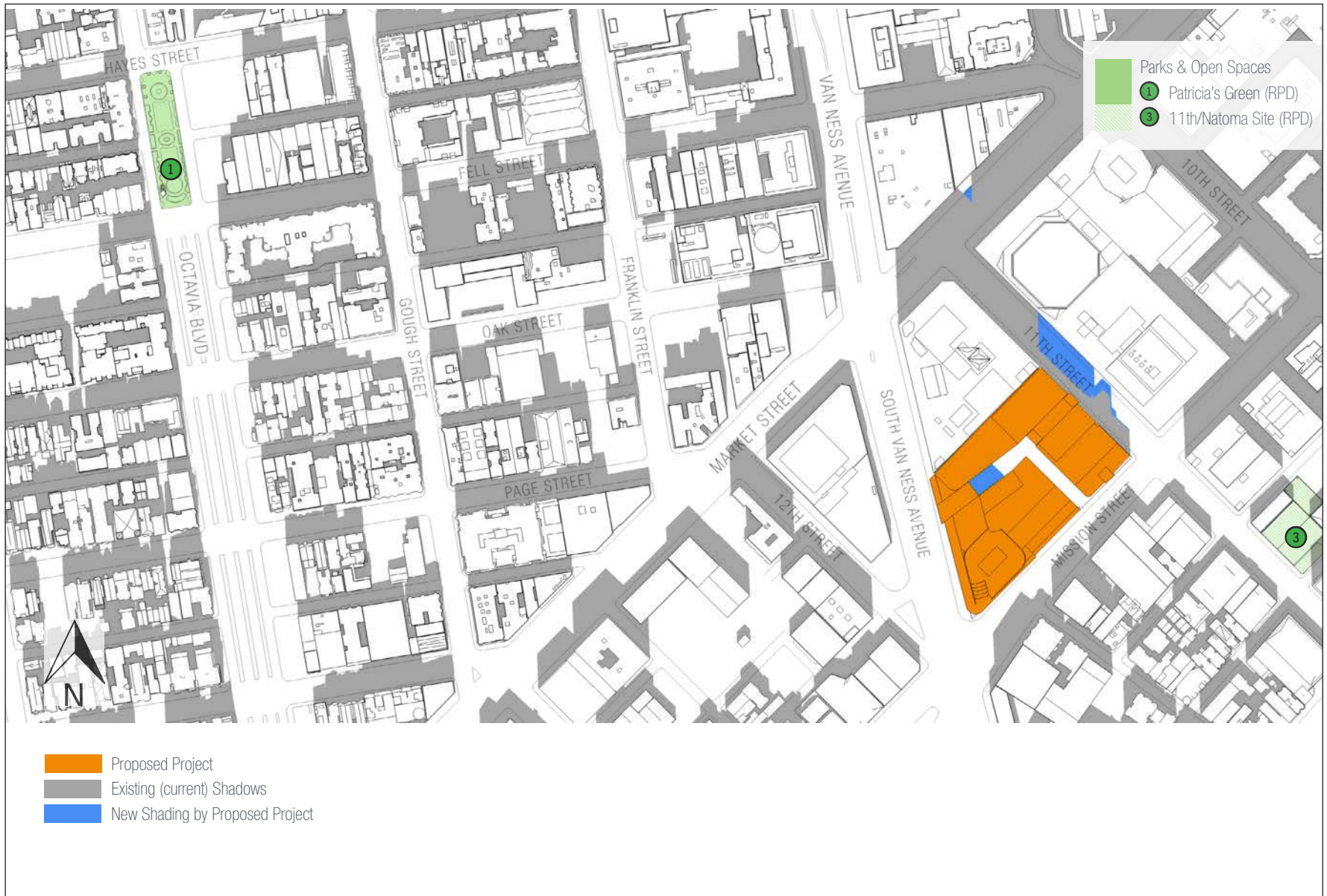
Figure IV.E-7
September 20 3:00 PM (Fall Equinox)



SOURCE: Prevision Design, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure IV.E-8
December 20 9:00 AM (Winter Solstice)



SOURCE: Prevision Design, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure IV.E-9
December 20 Noon (Winter Solstice)



SOURCE: Prevision Design, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure IV.E-10
December 20 3:00 PM (Winter Solstice)



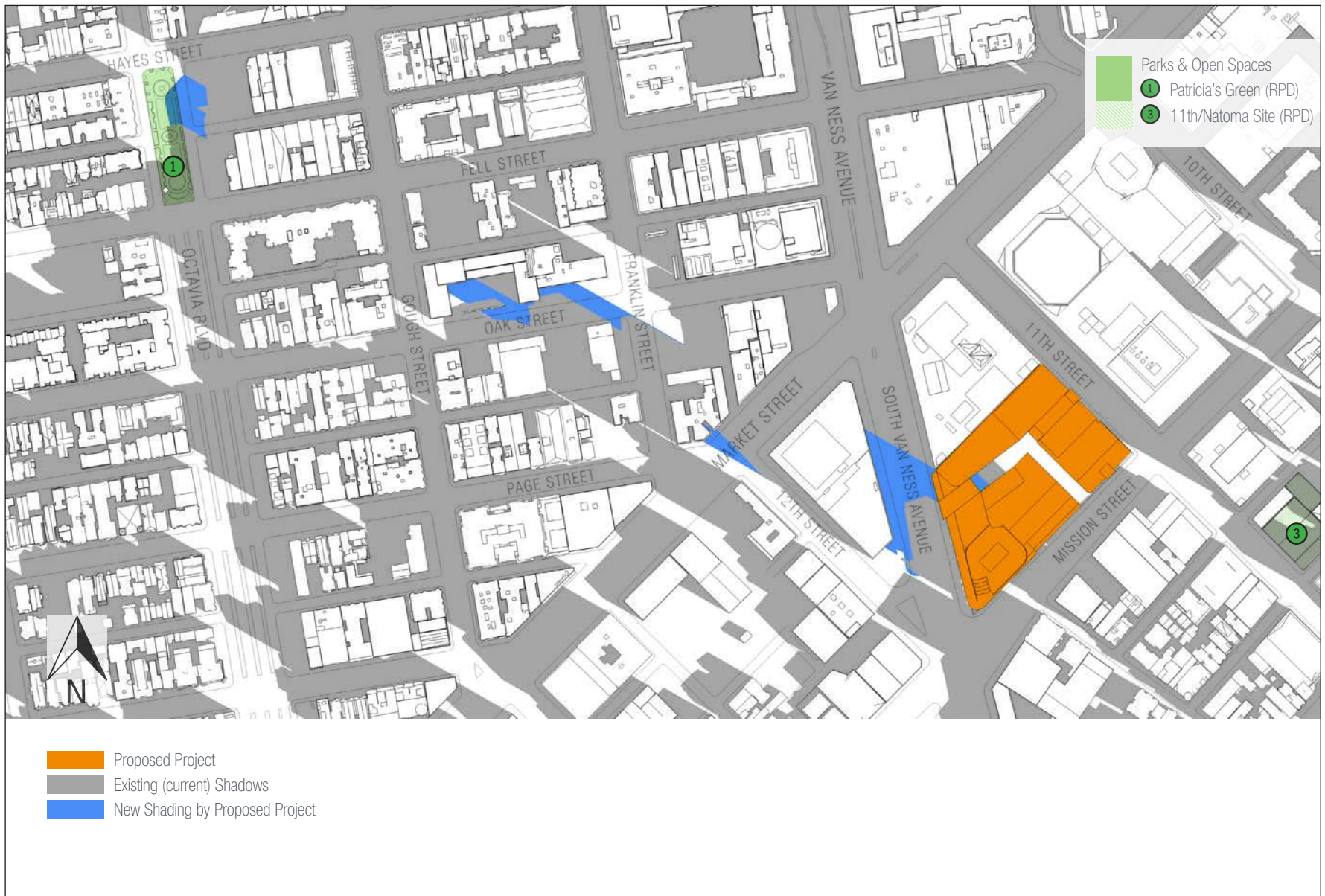
SOURCE: Prevision Design, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure IV.E-11

February 8 and November 1 7:36 AM

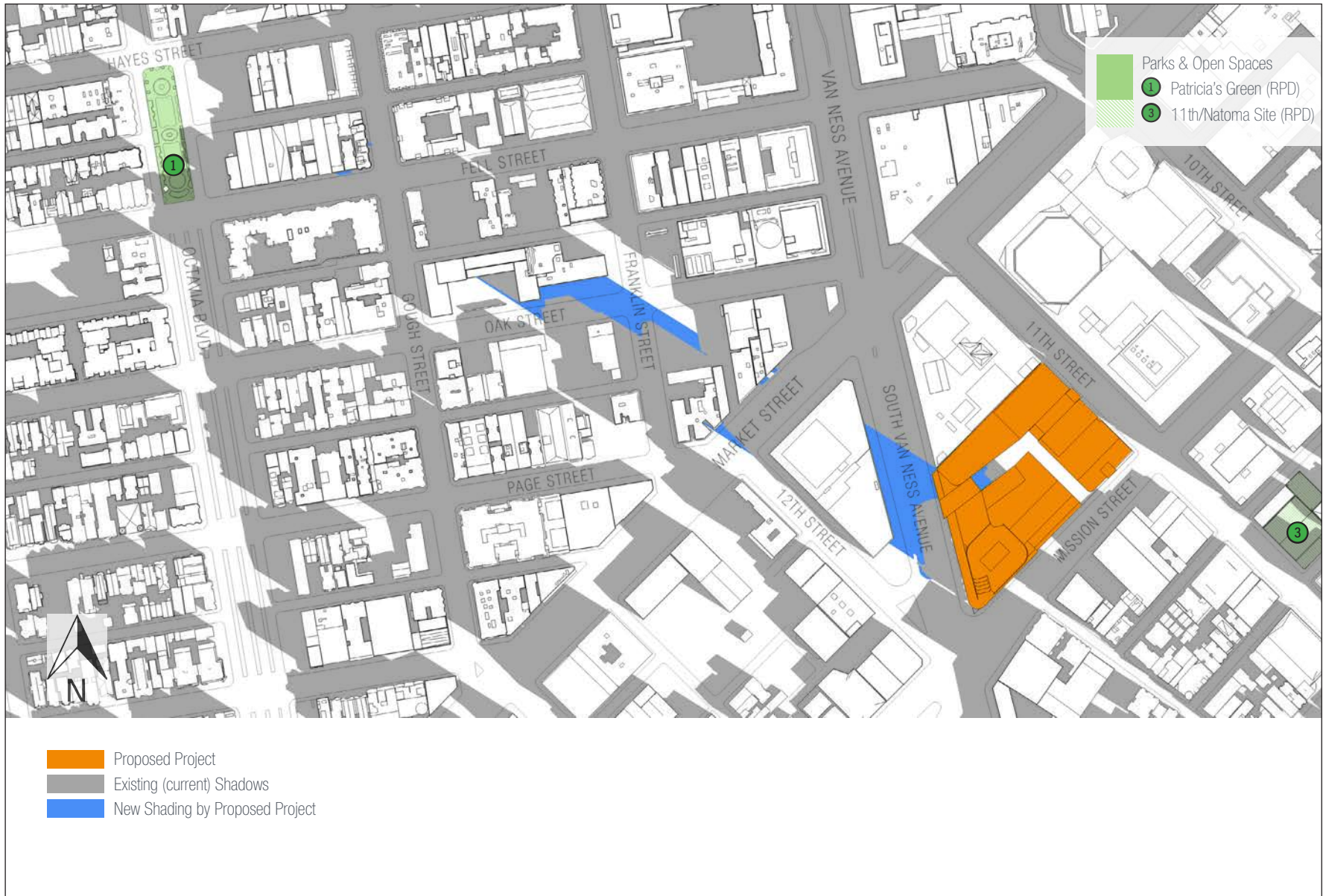
(Date of Maximum Project Shadow on Patricia's Green)



SOURCE: Prevision Design, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure IV.E-11
 February 8 and November 17 7:45 AM
 (Date of Maximum Project Shadow on Patricia's Green)



SOURCE: Prevision Design, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure IV.E-13
 February 8 and November 1 8:00 AM
 (Date of Maximum Project Shadow on Patricia's Green)

Impact Evaluation

Impact SH-1: The proposed project would not create new shadow in a manner that would have an adverse effect on the use of any park or open space under the jurisdiction of the San Francisco Recreation and Park Department. (Less than Significant)

The following discussion describes the potential shadow that would be created by the proposed project on Patricia's Green, which is a public park under the jurisdiction of the SFRPD.

Patricia's Green

According to the quantitative findings of the shadow analysis, the proposed project would result in new shadows falling on the Patricia's Green by adding approximately 22,098 net new annual square-foot-hours of shadow. This increase represents approximately 0.03 percent above current levels resulting in an annual increase in total shading from 18.21 percent to 18.24 percent.

The new shadows on Patricia's Green from the proposed project would occur primarily in the early morning hours (approximately between 7:30 a.m. and 8:30 a.m.) from January 27 through March 1 and again from October 13 through November 15. New shadows would fall primarily across the northern half of the park, which is the area containing a grassy area, eight fixed benches, six picnic tables with fixed seating, and a pedestrian plaza.

The days of maximum shading on the park due to the proposed project would occur on February 8 and November 1, when the proposed project would shade a portion of the northern half of the park containing a grassy area, seven of eight fixed benches, six picnic tables with fixed seating, and a pedestrian plaza (**Figure IV.E-12, February 8 and November 1 7:45 AM (Date of Maximum Project Shadow on Patricia's Green)**). New shadows would be present for approximately 23 minutes between the times of 7:36 a.m. and 8:00 a.m. The duration of proposed project-generated new shadow would vary throughout the year, with new shadow being present for between 14 and 23 minutes per day over slightly more than two months of the year and ranging up to 7,099 square feet of new shadow.

According to field observations made by PreVision Design, the new shading could affect existing patterns of park use. The portions of Patricia's Green considered most sensitive to the addition of any new shadow would be those elements that are fixed in location, conducive to more stationary activities (users remain rather than pass through) and are observed to be well used by the public. Based on the use observations performed, the children's play area, the park's fixed benches, and the tables and seating areas would likely qualify as the most sensitive areas per the criteria established above. The children's play area would receive no additional new shadow from the proposed project; however, some of the park's fixed benches as well as the tables would receive some new shadow at some times throughout the year. Park uses on a weekday morning represented the low count observed with 80 users (along with 20 dogs) with approximately half of the users walking through the park. In comparison, peak observed use of the park, on a weekday afternoon, included more than 180 people (along with 15 dogs), with about one-third of the users walking through the park.

The largest amount of new shadow would occur at 7:36 a.m. on February 8 and November 1 covering 7,099 square feet of Patricia's Green, which is equal to 39.7 percent of the total park area. However, new shadow coverage would fall to approximately 10.9 percent of Patricia's Green by 7:45 a.m. (nine minutes

later), and new shadow would be gone from the Patricia's Green prior to 8:00 a.m. (approximately 23 minutes later). In general, the time of maximum shadow coincides with the times of fewest users of the park relative to other times of day, and the shadows caused by the proposed project would not substantially affect park users who wished to avoid shadow altogether. Moreover, the project shadow would move quickly off the park, given the early hour and the distance of the park (approximately 1,700 feet) from the project site.

Therefore, considering the percentage increase in shadow from the proposed project would be relatively small (0.03 percent) and would occur during the early morning when the park has the fewest users, the proposed project would have a *less-than-significant* impact on Patricia's Green.

For the reasons discussed above, the proposed project would not create new shadow in a manner that would have an adverse effect on the use of any park or open space under the jurisdiction of, or designated for acquisition by, the SFRPD. This impact would be *less than significant*.

Mitigation: None required.

Impact SH-2: The proposed project would not create new shadow in a manner that would substantially affect the use of other existing publicly-accessible open space or outdoor recreation facilities or other public areas. (Less than Significant)

No publicly-accessible open spaces or outdoor recreation facilities, either under the jurisdiction of public agencies other than the SFRPD or privately-owned, would be within reach of the proposed project's shadow.

The proposed project would shade portions of streets and sidewalks in the project vicinity at various times of the day throughout the year, with frequent shadows experienced on the sidewalks of South Van Ness Avenue, Mission Street, and 11th Street adjacent to the proposed project. Shadows on streets and sidewalks would be transitory in nature, would not exceed levels commonly expected in urban areas, and would be considered a less-than-significant effect under CEQA. As a result, the proposed project would not create new shadow in a manner that substantially affects any publicly-accessible open space, outdoor recreation facility, or other public area. This impact would be *less than significant*.

The shadow analysis also found the proposed project would shade portions of nearby private property, including roof top decks and patios, at times within the project vicinity. Although occupants of nearby property may regard the increase in shadow as undesirable, the limited increase in shading of private properties as a result of the proposed project would not be considered a significant impact under CEQA.

Mitigation: None required.

Cumulative Impacts

Impact C-SH-1: The proposed project, in combination with past, present, or reasonably foreseeable future projects, would create new shadow in a manner that would substantially affect the use of any park or open space under the jurisdiction of the Recreation and Park Department, or other existing publicly-accessible open space, outdoor recreation facilities, or other public areas; however, the proposed project's contribution to this impact would not be cumulatively considerable. (Less than Significant)

Patricia's Green

Nearby cumulative projects with applications on file with the Planning Department that could also potentially shade Patricia's Green and that are therefore considered in this analysis include the following:

- 455 Fell Street (Central Freeway Parcel O);
- 300 Octavia (Central Freeway Parcel M);
- 350 Octavia Street (Central Freeway Parcel N);
- 10 South Van Ness Avenue;
- One Oak Street;
- 30 Otis Street;
- 915 Minna Street; and
- 949 Natoma Street.

Also included as part of the cumulative analysis were projects that are considered reasonably foreseeable development projects, but for which no application has yet been filed and no refined plans have been submitted to the Planning Department. These foreseeable projects include:

- Central Freeway Parcel K (directly east of Patricia's Green);
- Central Freeway Parcel L (directly east of Patricia's Green); and
- 30 Van Ness Avenue.

The two Central Freeway parcels (K and L) are considered reasonably foreseeable development sites because development of these parcels was anticipated as part of the Market & Octavia Plan EIR (Case No. 2003.0347E), which assumed that all 22 parcels formerly occupied by the now-demolished Central Freeway would be developed. To date, development on 10 of the former freeway parcels has been completed and projects on another three have been approved but not yet built—at 455 Fell Street (Central Freeway Parcel O) and 300–350 Octavia Street (Parcels M and N). Another nine freeway parcels remain undeveloped. The 30 Van Ness Avenue project is considered reasonably foreseeable because, while no development application is on file, the Planning Department issued a categorical exemption from CEQA for sale by the City and County of San Francisco of this site and building as surplus property (Case No. 2015-008571ENV).

As noted in the approach to analysis, project plans were used for cumulative projects either approved or on file with the Planning Department to develop digital models of these projects for use in the shadow analysis. For the potential 30 Van Ness Avenue project, a simplified massing model was prepared by the Planning Department. For the two Central Freeway Parcels (K and L), block massing models at the 55-foot height limit were used.

Cumulative shading from the proposed project combined with the other projects in the vicinity would result in an increase of 10,946,926 square-foot-hours, or 16.43 percent of Theoretical Available Annual Sunlight on Patricia's Green. This cumulative shadow, when combined with existing shadow load on the park (18.21 percent), would total 23,076,239 square-foot-hours of shadow on the park, which would represent a cumulative annual shading total of 34.64 percent of Theoretical Available Annual Sunlight on Patricia's Green. The additional shading largely comes from the two foreseeable projects, Central Freeway Parcel K and Parcel L, due to their location immediately adjacent to Patricia's Green. Although the height limit where these projects could be built is only 55 feet,²⁰⁷ the location of these parcels directly east of Patricia's Green means that they would cast shadow on the park year-round (**Figure IV.E-14 through Figure IV.E-29**). Parcel K and Parcel L would contribute substantial shade in the morning hours; however, even with development of these two sites and all other cumulative development assumed, Patricia's Green still would receive sunlight in the midday hours when the park usage is typically highest. Cumulative shading would affect Patricia's Green year-round, typically until about 11:00 a.m. (**Figure IV.E-14 through Figure IV.E-29**).

Given the relatively large increase in shadow on Patricia's Green from cumulative development (the 16.43 percentage point increase represents an increase of 90 percent, or a near doubling, compared to the existing shadow load of 18.21 percent), the cumulative increase in shadow on Patricia's Green could adversely affect the use of Patricia's Green and would therefore represent a significant adverse change, compared to existing conditions. Thus, the proposed project, in combination with other past, present, and reasonably foreseeable future projects, would result in a significant cumulative shadow impact.

Most of the new cumulative shadow on Patricia's Green would be cast by buildings built on the Central Freeway Parcels, where the Central Freeway formerly stood. As noted above, the Central Freeway Parcels' proposed residential development was approved at a conceptual level as part of the Market & Octavia Area Plan. Patricia's Green was also approved at a conceptual level as part of the Market & Octavia Area Plan.²⁰⁸ The Market & Octavia Plan EIR found that development on the former Freeway Parcels would shade Hayes (now Patricia's) Green in the morning year-round, as described above.²⁰⁹ Therefore, while cumulative development would add a substantial amount of net new shadow to Patricia's Green, compared to existing conditions, this impact was qualitatively disclosed in the Market & Octavia Plan EIR.

²⁰⁷ Parcels K and L are within a 50-X Height and Bulk District, with a nominal height limit of 50 feet. However, *Planning Code* Section 263.20 permits an additional 5 feet of height in NCT districts, such as the Hayes-Gough NCT District where Parcels K and L are located, to "encourage generous ground floor ceiling heights for commercial and other active uses."

²⁰⁸ The park was originally identified as Hayes Green and was renamed in 2006 in honor of the late neighborhood advocate Patricia Walkup.

²⁰⁹ Market & Octavia Plan EIR (Case No. 2003.0347E), p. 4-135. Available at http://default.sfplanning.org/MEA/2003.0347E_Market_Octavia_Neighborhood_Plan_TOC_Ch.4.pdf.



SOURCE: Prevision Design, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure IV.E-14
Cumulative Shadow - June 21 9:00 AM (Summer Solstice)



SOURCE: Prevision Design, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure IV.E-15
Cumulative Shadow - June 21 Noon (Summer Solstice)



SOURCE: Prevision Design, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure IV.E-16
 Cumulative Shadow - June 21 3:00 PM (Summer Solstice)



SOURCE: Prevision Design, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure IV.E-17
 Cumulative Shadow - June 21 6:00 PM (Summer Solstice)



SOURCE: Prevision Design, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure IV.E-18
Cumulative Shadow - June 21 7:00 PM (Summer Solstice)



SOURCE: Prevision Design, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure IV.E-19
Cumulative Shadow - September 20 9:00 AM (Fall Equinox)



SOURCE: Prevision Design, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure IV.E-20
Cumulative Shadow - September 20 Noon (Fall Equinox)



SOURCE: Prevision Design, 2016

1500 Mission Street; Case No. 2014-000362ENV

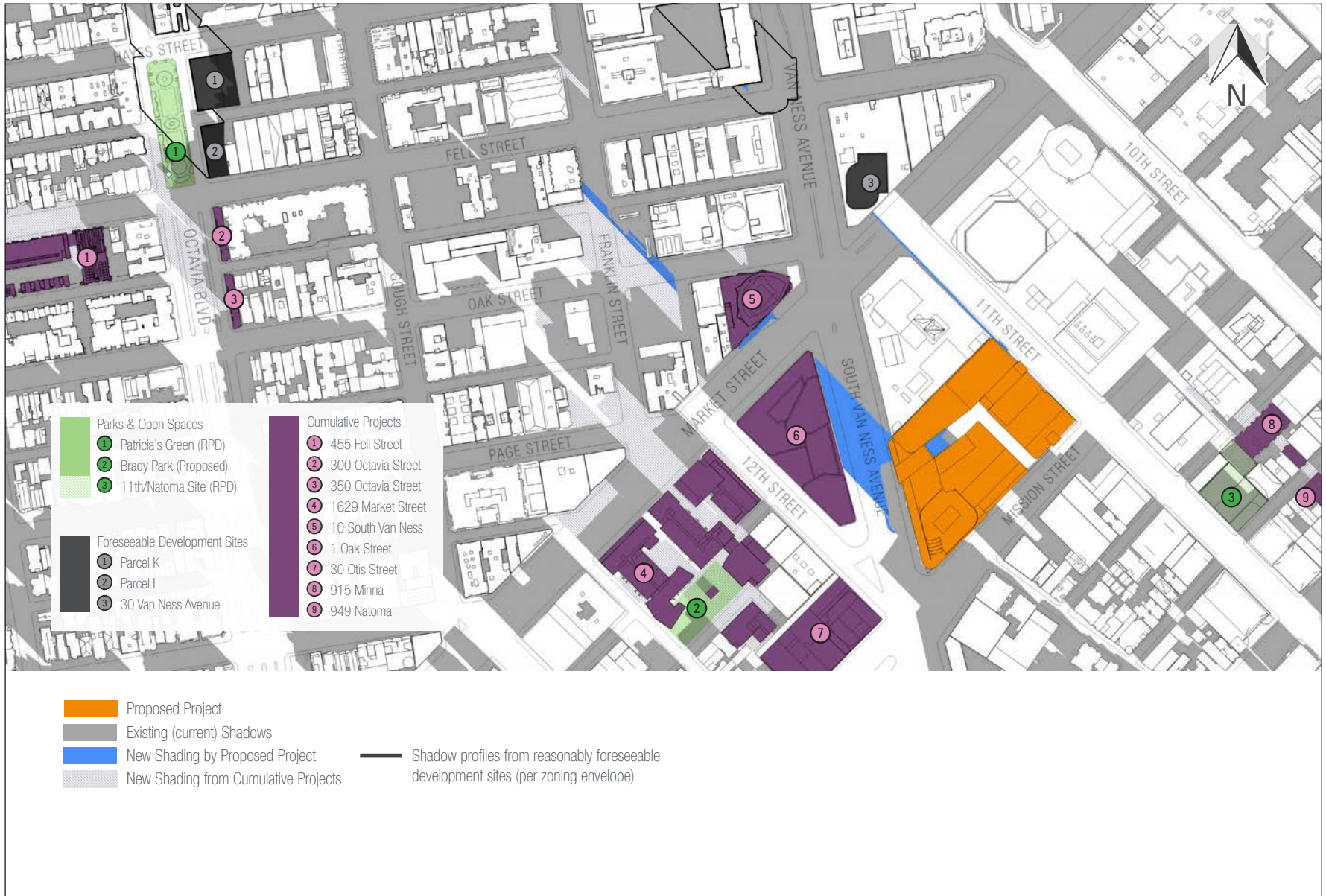
Figure IV.E-21
Cumulative Shadow - September 20 3:00 PM (Fall Equinox)



SOURCE: Prevision Design, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure IV.E-22
 Cumulative Shadow - September 20 6:00 PM (Fall Equinox)



SOURCE: Prevision Design, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure IV.E-23
Cumulative Shadow - December 20 9:00 AM (Winter Solstice)



SOURCE: Prevision Design, 2016

1500 Mission Street; Case No. 2014-000362ENV

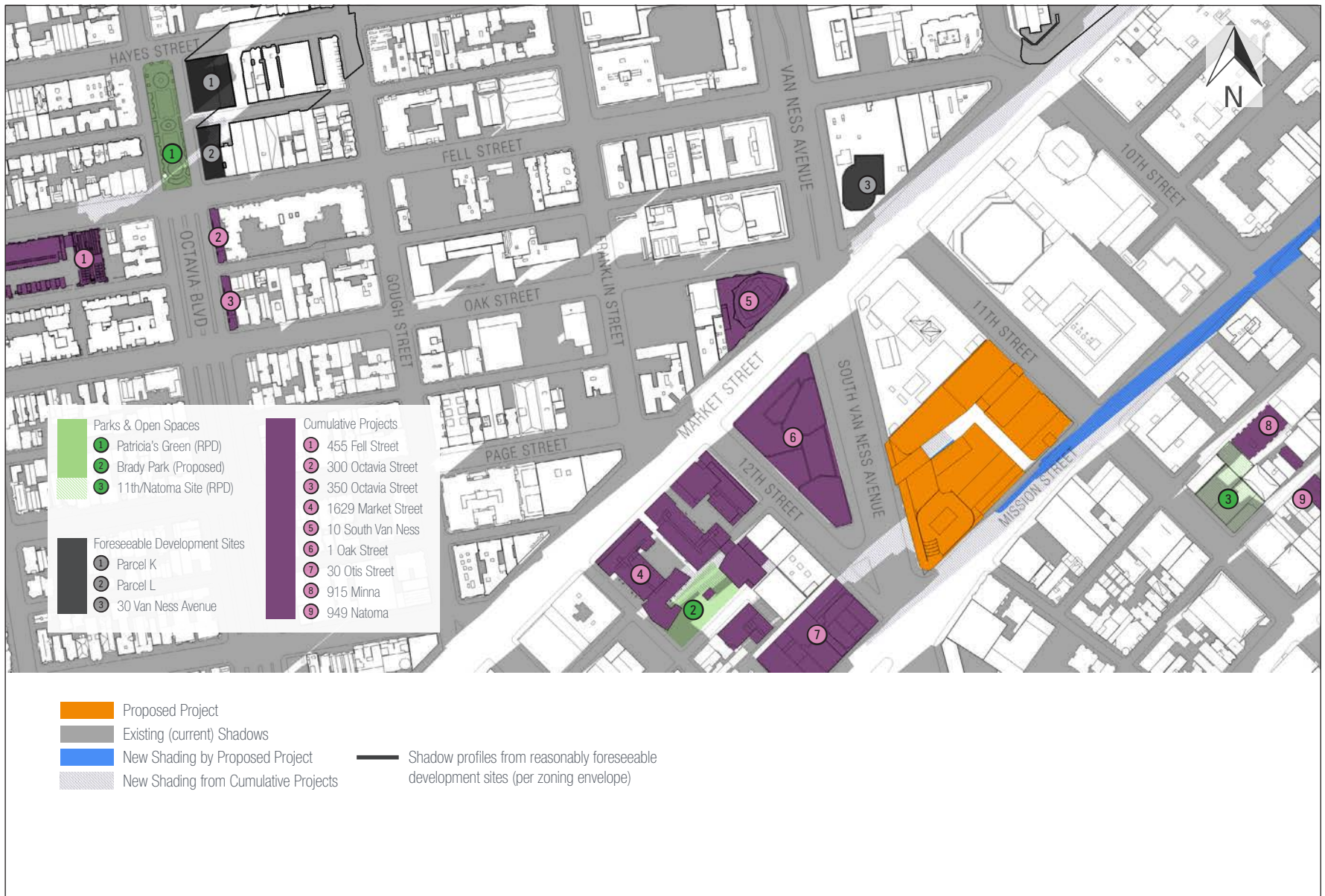
Figure IV.E-24
Cumulative Shadow - December 20 Noon (Winter Solstice)



SOURCE: Prevision Design, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure IV.E-25
Cumulative Shadow - December 20 3:00 PM (Winter Solstice)



SOURCE: Prevision Design, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure IV.E-26
Cumulative Shadow - December 20 3:54 PM (Winter Solstice)



SOURCE: Prevision Design, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure IV.E-27
 Cumulative Shadow - February 8 and November 1 7:36 AM
 (Dates of Maximum Project Shadow on Patricia's Green)



SOURCE: Prevision Design, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure IV.E-28
 Cumulative Shadow - February 8 and November 1 7:45 AM
 (Dates of Maximum Project Shadow on Patricia's Green)



SOURCE: Prevision Design, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure IV.E-29
 Cumulative Shadow - February 8 and November 1 8:00 AM
 (Dates of Maximum Project Shadow on Patricia's Green)

As can be seen in **Figure IV.E-14 through Figure IV.E-29**, shadow from the proposed project would largely fall within the shadow profiles of one or more of the cumulative projects. Of the total net new 16.43 percent of Theoretical Available Annual Sunlight on Patricia's Green under cumulative conditions with the proposed 1500 Mission Street project, cumulative development other than the proposed project would add 16.40 percent new shadow to Patricia's Green, compared to conditions with the project alone, or 99.8 percent of the total cumulative increment of 16.43 percent. Of the 10,946,926 square-foot-hours of shadow from the cumulative projects, the proposed project would contribute 22,098 square-foot-hours or approximately two-tenths of one percent of the net new shadow under cumulative conditions.

Therefore, if the cumulative projects were to be built at the height and massing currently assumed, nearly all of the project shadow on Patricia's Green would be masked by shadow from these other development projects. Although the proposed project could be built first, and thus could cast a small amount of shadow on Patricia's Green prior to development of the cumulative projects, the proposed project's contribution to cumulative shading would not be considerable, and the project's net new shadow would not adversely affect the use of Patricia's Green.

Given the foregoing, the proposed project would not make a considerable contribution to the cumulative shadow increase on Patricia's Green, and the project's cumulative shadow impact would be *less than significant*.

Sidewalks

Sidewalks in the project vicinity are already shadowed in the morning and afternoon by densely developed, multi-story buildings. Although implementation of the proposed project and nearby cumulative development projects would add net new shadow to the streets and sidewalks in the project vicinity, these shadows would be transitory in nature, would not substantially affect the use of the streets and sidewalks, and would not increase shadows above levels that are common and generally expected in a densely developed urban environment. The proposed project would not combine with past, present, and reasonably foreseeable future projects in the project vicinity to create a significant cumulative shadow impact on streets and sidewalks in the project vicinity.

Mitigation: None required.

IV.E.5 Discussion of Future Parks and Public Open Spaces

As noted above, SFRPD is in the process of acquiring a new park property on the east side of 11th Street between Minna and Natoma Streets. In addition, a POPOS—Brady Open Space—is proposed west of the project site as part of a project undergoing environmental review at 1629 Market Street. Because these parks do not yet exist, net new shadow as a result of the proposed project on these parks could not result in a significant adverse impact under CEQA. Therefore, the discussion below is presented for informational purposes only.

11th Street Park

SFRPD is in the process of acquiring a new park property on the east side of 11th Street between Minna and Natoma Streets (Block 3510/Lots 035, 037, 039, 055, 056). Notice of the potential new park acquisition occurred after the Notice of Preparation for the proposed project was published. Due to the timing, this future park was not included in the shadow analysis. However, shadow that would be cast by the proposed project and nearby cumulative development projects on this future park is disclosed herein for informational purposes; this future park is shown in the shadow graphics, and the shadow is characterized below.

Other nearby cumulative projects with applications on file with the Planning Department that could also potentially shade the planned new City park on 11th Street and that are therefore considered in this analysis include the following:

- 10 South Van Ness Avenue
- 30 Otis Street
- 915 Minna Street
- 949 Natoma Street.

Cumulative shadow effects are depicted in **Figure IV.E-14 through Figure IV.E-29**.

The future park site at 11th Street between Minna and Natoma Streets is primarily shaded by existing structures, and shadow from the proposed project would reach the park during limited times of the day and year, in the very late afternoon and early evening from March through September. The maximum effect of project shadow on the future park would occur when the proposed project's residential tower, which is due west of the park site, is directly between the sun and the new park; this would occur around 6:00 p.m. in late August and early September and in early April. Similarly, project shadow at 6:09 p.m. (the last Section 295 minute) on the spring and fall equinoxes would be akin to project shadow in late August/early September and early April. In general, project shadow would last no longer than 20 to 30 minutes late in the day on any day when the project would add shadow to the future park.

From October through February, the afternoon sun would not ever be sufficiently north of the project site for project shadow to be oriented towards the new park. Also, the location of the park, east-southeast of the project site, would preclude any project shadow from reaching the park in the morning. The timing of development of this new park is not certain, and its design, layout, programming and construction schedule are unknown. Assuming that the proposed project is constructed before this potential future park, which is a reasonable assumption given the uncertainty about timing of the park, project shadow would not interfere with any preexisting recreational activity or preexisting public expectation of sunlight on the new park. To the extent that the project would create shadow on the future park, the limited duration of project shadow would be not anticipated to substantially interfere with the public's use or enjoyment of the new park.

The cumulative project at 10 South Van Ness Avenue (two 400-foot-tall towers), which like the proposed project, is located west-northwest of the planned new 11th Street park, would add a small amount of shadow to the new park in the very late afternoon and early evening in late spring and early summer. This project would add less shadow to the future park than would the proposed project, owing to its greater distance from the park.

The cumulative project at 30 Otis Street (250 feet), which is west-southwest of the planned new park and considerably shorter than the 1500 Mission Street project, would add a very small amount of shadow to the southwestern corner of the new park around 6:00 p.m. on the spring and fall equinoxes.

The much shorter projects at 915 Minna Street and 949 Natoma Street, each 45 feet in height, would add shadow to the planned new park in the morning (before noon for 915 Minna Street, which is adjacent to the park, and before 9:00 a.m. for 949 Natoma Street) in the spring and summer.

Together, the cumulative projects and the proposed project would add new shadow to the planned new park on 11th Street. However, the overall additional shadow would not be substantial, compared to existing conditions, and the park would retain substantial sunlight throughout much of the day year-round, primarily because areas to the south have relatively lower height limits. Moreover, the timing of development of this new park is not certain, and its design, layout, programming and construction schedule are unknown, and thus it is not possible to evaluate shadow effects in detail. As stated above, shadow from any project built before the park is developed would not affect any pre-existing activities at the new park.

Brady Open Space

As described previously, the Brady Open Space, a POPOS, would be developed as part of a proposed development project at 1629 Market Street. As currently envisioned, the Brady Open Space would contain hardscape in the center and around the perimeters, raised planters that would double as seating areas interspersed with walkways, and a multi-use area surrounded by landscaping. In general, the Brady Open Space is anticipated to be used largely for passive recreation (e.g., seating, walking, and picnicking); due to its relatively limited size (0.4 acre), the park is not proposed to include active recreational areas (e.g., sports fields).

In addition to the proposed project, nearby cumulative projects with applications on file with the Planning Department that could also potentially shade the proposed Brady Open Space at 1629 Market Street and are therefore considered in this analysis include the following:

- 1629 Market Street
- 30 Otis Street
- 10 South Van Ness Avenue

At all times when the 1500 Mission Street project would cast shadow on the Brady Open Space, the park would also be shaded by the 1629 Market Street project itself. Shadow from the proposed 1500 Mission Street project would not reach the Brady Open Space, except during the early morning hours between April and August, when the sun rises to the north. Project shadow would reach the Brady Open Space for up to about three hours per day, beginning as early as 6:46 a.m. (the first Section 295 minute on the summer solstice (June 21), and leaving the Brady Open Space no later than about 9:45 a.m.; however, by about 8:30 a.m., the proposed project would cast no new shadow beyond that already cast by the 1629 Market Street project. During other times of the year, the overall duration of project shadow would be less because the sun is not as far north in the sky early in the morning. The 1500 Mission Street project would cast net new shadow beyond that cast by the 1629 Market Street project only on the western portion of the Brady Open Space.

As with the future 11th Street park discussed above, assuming that the proposed 1500 Mission Street project is constructed before the Brady Open Space, which is a reasonable assumption given that this project is farther along in the entitlement process than the 1629 Market Street project, shadow from the 1500 Mission Street project would not interfere with any preexisting recreational activity or preexisting public expectation of sunlight on the Brady Open Space. To the extent that the proposed project would create shadow on the Brady Open Space, the limited duration of project shadow would be not anticipated to substantially interfere with the public's use or enjoyment of the Brady Open Space.

The Brady Open Space would primarily be shaded by the 1629 Market Street project that would develop this new POPOS. Because the Brady Open Space would not exist but for the 1629 Market Street project, usage patterns at the park would develop with the buildings of that project in place, and the 1629 Market Street project could not adversely affect any preexisting use of the Brady Open Space. The cumulative project at 30 Otis Street, which is southeast of the Brady Open Space, would add shadow to the park in the morning hours, year-round, except around the winter solstice, when shadow from 30 Otis Street would fall too far east to reach the Brady Open Space. Moreover, much of the shadow from 30 Otis Street would reach the Brady Open Space in the early morning, when the 1629 Market Street project would already shade the park. The cumulative project at 10 South Van Ness Avenue, which is east-northeast of the Brady Open Space, would only add shadow to the Brady Open Space in the very early morning (before 8:30 a.m.) around the summer solstice; at other times of the year, shadow from 10 South Van Ness Avenue would fall too far east to reach the Brady Open Space. Despite the shadow on the Brady Open Space, the park would experience substantial sunshine during the lunchtime and mid-day periods. The final design and programming, if any, of the Brady Open Space, are subject to revision as the 1629 Market Street project proceeds through City review.

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CHAPTER V

Other CEQA Considerations

The California Environmental Quality Act (CEQA) Guidelines Section 15126 requires that all aspects of a project must be considered when evaluating its impact on the environment, including planning, acquisition, development, and operation. As part of this analysis, the Environmental Impact Report (EIR) must also identify (1) significant environmental effects of the proposed project; (2) significant environmental effects that cannot be avoided if the proposed project is implemented; (3) significant irreversible environmental changes that would result from implementation of the proposed project; (4) growth-inducing impacts of the proposed project; (5) mitigation measures proposed to minimize the significant effects; and (6) alternatives to the proposed project.

V.A Growth Inducement

The CEQA Guidelines require that an EIR evaluate the growth-inducing impacts of a proposed action (Section 15126.2(d)). A growth-inducing impact is defined in the CEQA Guidelines Section 15126.2(d) as:

[T]he ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth ... It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

A project can have direct and/or indirect growth-inducement potential. Direct growth inducement would result if a project involved construction of new housing that would result in new residents moving to the area. A project can have indirect growth-inducement potential if it would establish substantial new permanent employment opportunities (e.g., commercial, industrial or governmental enterprises) or if it would involve a substantial construction effort with substantial short-term employment opportunities and indirectly stimulate the need for additional housing and services to support the new employment demand. Similarly, under CEQA, a project would indirectly induce growth if it would remove an obstacle to additional growth and development, such as removing a constraint on a required public service. Increases in population could tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. The CEQA Guidelines also require analysis of the characteristics of projects that may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively.

The project site is in the Market-Octavia/Upper Market Priority Development Area identified in *Plan Bay Area*, which calls for an increasing percentage of Bay Area growth to occur as infill development in areas with good transit access and where services necessary to daily living are provided in proximity to housing and jobs.²¹⁰ With its abundant transit service and mixed-use neighborhoods, San Francisco is expected to accommodate an

²¹⁰ ABAG, *Plan Bay Area*, Priority Development Area Showcase. Available online at <http://gis.abag.ca.gov/website/PDAShowcase/>, accessed May 20, 2016.

increasing share of future regional growth. As stated under Topic 2, *Population and Housing*, Impact PH-1, in the Initial Study (Appendix A), in general, a project would be considered growth-inducing if its implementation would result in substantial population increases and/or new development that might not occur if the project were not approved and implemented. The addition of the new 560 residential units would increase the residential population on the site by approximately 1,394 persons.²¹¹ The 2010 U.S. Census indicates that the population in the project vicinity, including all census tracts located within 0.25 mile of the project site (Census Tracts 162, 168.02, 176.01, 177, 178.02, and 201) is approximately 30,225. Thus, the proposed project would increase the population in the vicinity of the project site by approximately 4.6 percent, and the overall population of San Francisco by less than 0.17 percent.²¹² The population of San Francisco is projected to increase by approximately 280,490 persons for a total of 1,085,725 persons by 2040.²¹³ The residential population introduced as a result of the proposed project would constitute approximately 0.50 percent of this population increase; therefore, this population increase would be accommodated within the planned growth for San Francisco. The proposed project also would not indirectly induce substantial population growth in the project area because it would be located on an infill site in an urbanized area and would not involve any extensions of roads or other infrastructure that could enable additional development in currently undeveloped areas.

Based on the square footage of the proposed retail/restaurant, office, and childcare facility uses on the project site, operation of the proposed project would introduce approximately 1,752 employees to the project site.²¹⁴ Of the 1,752 employees that would be introduced by the proposed project, approximately 1,643 would be City employees (including the 13 childcare facility employees), the majority of whom are anticipated to already work in three existing City office buildings in the project vicinity and would simply be relocated to the new office and permit center component on the project site, and 109 of these employees would work in businesses occupying the new retail/restaurant space. It can be anticipated that most of the employees would live in San Francisco or nearby communities, and that the proposed project would not generate substantial demand for new housing for the potential retail/restaurant, office, and childcare facility employees. In addition, the 560 units proposed for the project could potentially accommodate some of the new employment-related housing demand generated by the proposed project.

In summary, the increase in the residential and employment population on the project site would not result in a substantial increase to the population within the project vicinity or the city. Furthermore, the proposed project would not result in the extension of infrastructure into undeveloped areas; the extension of infrastructure systems beyond what is needed to serve project-specific demand; construction of a residential

²¹¹ The project site is located in Census Tract 177. The population calculation is based on Census 2010 data, which estimates 2.49 persons per household in Census Tract 177.

²¹² This calculation is based on the estimated Census 2010 population of 805,235 persons in the City and County of San Francisco.

²¹³ ABAG, *Plan Bay Area*, adopted July 18, 2013, p. 40. Available online at http://files.mtc.ca.gov/pdf/Plan_Bay_Area_FINAL/Plan_Bay_Area.pdf, accessed May 20, 2016.

²¹⁴ The estimated number of employees is based on the San Francisco Planning Department's *Transportation Impact Analysis Guidelines for Environmental Review* (October 2002) and assumes an average of one employee per 350 square feet for retail and restaurant uses (109 total employees), and one employee per 276 square feet of office use (1,630 employees). The childcare facility employee generation rate is based on the staff-child ratio of one staff member per six children recommended by the National Association for the Education of Young Children, which would yield 13 staff members. Therefore, the total number of employees for all uses introduced on the project site would be 1,752 employees. Available online at <http://childcareaware.org/child-care-providers/management-plan/staffing>, accessed June 15, 2016.

project in an area that is undeveloped or sparsely developed; or removal of obstacles to population growth (such as provision of major new public services to an area where those services are not currently available).

V.B Significant Environmental Effects of the Proposed Project

Table S-1, *Summary of Impacts, Mitigation Measures, and Improvement Measures of the Proposed Project*, which is contained in the *Summary*, and Sections IV.A through IV.E of this EIR provide a comprehensive identification of the proposed project's environmental effects, including the level of significance both before and after mitigation.

V.C Significant and Unavoidable Environmental Impacts

CEQA Guidelines Section 15126.2(b) requires that an EIR describe any significant impacts that cannot be avoided, even with the implementation of feasible mitigation measures. Development of the proposed project would result in the following significant and unavoidable project-related and cumulative impacts, as further discussed in Section IV.A, *Cultural Resources* and Section IV.B, *Transportation and Circulation* of this EIR:

- The demolition of a majority of the 1500 Mission Street building would cause a substantial adverse change in the significance of a historical resource, as defined in CEQA Guidelines Section 15064.5(b) and, therefore, would result in a significant and unavoidable impact to a historical resource. Four mitigation measures (**Mitigation Measures M-CR-2a, M-CR-2b, M-CR-2c, and M-CR-2d**) were identified to address the impact; however, these mitigation measures would not reduce the impact to the historic resource to a less-than-significant level.
- The proposed project would contribute to cumulative construction-related transportation impacts and, therefore, would result in a significant and unavoidable cumulative impact to transportation and circulation. One mitigation measure (**Mitigation Measure M-C-TR-8**) was identified to address this impact; however, this mitigation measure would not reduce the cumulative impact to transportation and circulation to a less-than-significant level.

V.D Significant Irreversible Environmental Changes That Would Result If the Proposed Project Is Implemented

Pursuant to CEQA Guidelines Section 15126.2(c), an EIR must consider any significant irreversible environmental changes that would be caused by the proposed project should it be implemented. Section 15126.2(c) states:

Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to ensure that such current consumption is justified.

Such significant irreversible environmental changes may include current or future uses of non-renewable resources, growth-inducing impacts that commit future uses of nonrenewable resources, and growth-inducing

impacts that commit future generations to similar uses. According to the CEQA Guidelines, irretrievable commitments of resources should be evaluated to assure that such current consumption is justified. In general, such irreversible commitments include the uses of resources such as energy and materials used to construct a proposed project, as well as the energy and natural resources (including water) that would be required to sustain a project and its inhabitants or occupants over the usable life of the project. Resources that would be permanently and continually consumed by implementation of the proposed project include energy, water, and fossil fuels; however, the amount and rate of consumption of these resources would not result in the unnecessary, inefficient, or wasteful use of resources, as further described below.

V.D.1 Commitment to Similar Uses

The project site is located within a densely populated area of San Francisco and is within the city's South of Market Area (SoMa) neighborhood. The approximate 2.5-acre site is occupied by commercial uses and a parking lot. The project site is surrounded by existing commercial, residential, and institutional uses. The proposed project would redevelop a site that has been developed with urban uses for decades and is planned for urban uses in the future. The project site is located within the boundaries of the Market & Octavia Area Plan, and the Van Ness and Market Downtown Residential Special Use District (SUD), adopted in 2008.

Numerous policies in the Market & Octavia Area Plan support this vision. This SUD encourages the development of a transit-oriented, high-density, mixed-use residential neighborhood around the intersections of Market Street and Van Ness Avenue and Mission Street and Van Ness Avenue, with towers ranging from 250 to 400 feet and reduced parking.

Therefore, while the proposed project would result in an increase in the density of development at the project site through the introduction of new residential dwelling units, office space, retail/restaurant space, and open space, the area that has planned for this type of development and, therefore, would be compatible with the future uses around the site and within this area of the city.

V.D.2 Commitment of Nonrenewable Resources

Energy

The project site is currently a developed, commercial, urban site that would be redeveloped as a new residential, office, retail/restaurant, and open space project. As such, no irreversible changes, such as those that might result from construction of a large-scale mining project or a hydroelectric dam project that specifically alters nonrenewable resources, would result from development of the proposed project.

Construction of the proposed project would require the use of energy, including energy produced from non-renewable resources, and energy would be consumed during the operational period of the proposed project.

New buildings in California are required to conform to energy conservation standards specified in Title 24 of the *California Code of Regulations* (CCR), which are among the most stringent in the United States. The standards establish energy budgets for different types of residential and nonresidential buildings with which all new buildings must comply. In addition, to ensure that all buildings are healthy, sustainable places to live, work, and learn, the *San Francisco Green Building Code* requirements seek to reduce energy and water use,

divert waste from landfills, encourage alternate modes of transportation, and support the health and comfort of building occupants in San Francisco. Adopted in 2008, the city's green building requirements apply to newly-constructed residential and commercial buildings and major renovations to existing buildings. The green building requirements were updated in 2010 to combine the mandatory elements of the 2010 *California Green Building Standards Code* with stricter local requirements and updated again in 2013 to incorporate changes to California's Green Building Standards and Energy Efficiency Standards (Title 24 Part 6, 2013). New construction in San Francisco must meet all applicable California codes, provide on-site facilities for recycling and composting, and meet city green building requirements tied to the LEED and GreenPoint Rated green building rating systems, all of which would ensure that natural resources are conserved or recycled to the maximum extent feasible and that greenhouse gas (GHG) emissions resulting from the project would be minimized. Even with implementation of conservation measures, the consumption of natural resources, including electricity and natural gas, would generally increase with implementation of the project. However, the project would not involve the wasteful, inefficient, or unnecessary consumption of energy resources.

As discussed under Topic 7, *Greenhouse Gas Emissions*, of the Initial Study (refer to Appendix A), the proposed project would not generate GHG emissions that would have a significant impact on the environment, nor would the proposed project conflict with plans, policies, or regulations adopted for the purpose of reducing such emissions because the proposed project would be required to implement the regulations contained in the City's Greenhouse Gas Reduction Strategy. Additionally, the proposed project would not require the construction of major new lines to deliver energy or natural gas as these services are already provided in the area.

The State Department of Conservation designates the site as "Urban and Built-Up Land," and the site is located in an urbanized area of San Francisco. Therefore, no existing agricultural lands would be converted to non-agricultural uses. In addition, the project site does not contain known mineral resources and does not serve as a mining reserve; thus, development of the proposed project would not result in the loss of access to mining reserves.

Water

As further described in the Initial Study under Topic 10, *Utilities and Service Systems*, Impact UT-2, while the proposed project would incrementally increase the demand for water in San Francisco, the estimated increase in demand would be accommodated within available water supplies. Although the proposed project could be served by existing mains and no new or larger mains would be required, more than 22,000 feet of new water mains will be installed along Van Ness Avenue as part of the Van Ness Avenue Improvement Project, which would serve the project site.

While potable water use would increase, the proposed project would be designed to incorporate water-conserving measures, such as low-flush toilets and urinals, as required by the *San Francisco Green Building Ordinance*. In addition, various water-conservation measures are being implemented by the San Francisco Public Utilities Commission (SFPUC). The SFPUC's demand management programs range from financial incentives for plumbing devices to improvements in the distribution efficiency of the system. The conservation programs implemented by the SFPUC are based on the California Urban Water Conservation Council's list of fourteen Best Management Practices (BMP) identified by signatories of the Memorandum of Understanding Regarding Urban Water Conservation in California, executed in 1991.

The project site is not located within a designated recycled water use area, as defined in the Recycled Water Ordinance 390-91 and 393-94; however, pursuant to the Non-potable Water Ordinance (Ordinance 109-15, approved July 2, 2015), if the proposed project's site permit is issued after November 1, 2016, it will be required to install a recycled water system and to use non-potable water (Rainwater, Graywater, Foundation Drainage, and/or treated Blackwater) for toilet and urinal flushing.

The SFPUC is also increasing its water-conservation programs in an effort to achieve new water savings by 2018. This program is based on the 2004 San Francisco Retail Water Demands and Conservation Potential Report (Demand Report) that identified potential water savings and implementation costs associated with a number of water conservation measures. These new conservation programs include high-efficiency toilet replacement in low-income communities and water-efficient irrigation systems in municipal parks. With this expanded conservation program, the SFPUC anticipates reducing gross per household consumption (which includes both residents and non-residents) from 91.5 gallons per day (gpd) to 87.4 gpd by 2018, which would result in a conservation supply potential of approximately 4.0 mgd annually.

During construction activities, water may be used for soil compaction and dust control activities. As discussed in Section IV.C, *Air Quality*, of this EIR under Impact AQ-1, Article 21, Sections 1100 et seq. of the *San Francisco Public Works Code* restricts the use of potable water for soil compaction and dust control activities undertaken in conjunction with any construction or demolition project occurring within the boundaries of San Francisco, unless permission is obtained from the SFPUC. Non-potable water must be used for soil compaction and dust control activities during project construction and demolition. Further, the SFPUC operates a recycled water truck-fill station at the Southeast Water Pollution Control Plant that provides recycled water for these activities at no charge.

While the consumption of water would increase as the result of construction and operation of the proposed project, the proposed project would voluntarily and/or by directive be subject to water-conservation measures that would serve to reduce water use. The proposed project would not involve the wasteful, inefficient, or unnecessary use of water resources.

Fossil Fuels

Construction and operational activities related to the proposed project would also result in the irretrievable commitment of fossil fuels for automobiles and construction equipment.

The use of fuels resulting from project-related travel to and from the project site would be higher than under existing conditions, and construction of the proposed project would result in an increase in consumption of fossil fuels associated with construction equipment and construction-worker vehicle use. Construction activities would be limited to 24 months.

From an operational perspective, the consumption of fossil fuels would not be wasteful because the project proposes to minimize transportation-related fuel use by implementing a number of bicycle and pedestrian improvements and constructing the project in proximity to mass transit and neighborhood-serving uses, which would reduce the total number of vehicle trips to and from the site, as well as overall trip lengths. In fact, **Table IV.B-1, Daily VMT per Capita—Existing Conditions**, in Section IV.B, *Transportation and Circulation*, shows that for residential development, the regional average daily VMT per capita is 17.2, and for

office and retail development, the regional average daily work-related VMT per employee is 19.1 and 14.9, respectively. For the project, the VMT per capita is far less, at 3.1, with the average daily work-related VMT per employee for office and retail development at 7.7 and 9.0, respectively. By 2040, those numbers would be further reduced to a regional average daily VMT per capita of 2.7; an average daily VMT per employee for office development of 6.9; and an average daily VMT per employee for retail development of 8.9. This demonstrates the significant reduction in VMT resulting from a mixed-use project located near transit and neighborhood-serving uses.

The CEQA Guidelines also require a discussion of the potential for irreversible environmental damage caused by the risk of upset associated with the use, transport, or storage of hazardous materials during construction or operational activities. Development of the proposed project with residential and commercial land uses would not involve the routine use, transport, storage, or disposal of hazardous wastes other than small amounts of construction chemicals and household cleaners by residents of the site and during construction activities. Under Topic 15, *Hazards and Hazardous Materials*, Impact HZ-1, the Initial Study states that construction activities would require the use of limited quantities of hazardous materials such as fuels, oils, solvents, paints, and other common construction materials. The City would require the project sponsor and its contractor to implement BMPs as part of their grading permit requirements that would include hazardous materials management measures, which would reduce short-term construction-related transport, use and disposal of hazardous materials. Once constructed, the project would likely result in use of common types of hazardous materials typically associated with retail/restaurant, office, and residential uses, such as cleaning products and disinfectants. These products are labeled to inform users of their potential risks and to instruct them in appropriate handling procedures. Most of these materials are consumed through use, resulting in relatively little waste. Businesses are required by law to ensure employee safety by identifying hazardous materials in the workplace, providing safety information to workers who handle hazardous materials, and adequately training workers. Moreover, the City offices in the proposed project's office building would be required to purchase products listed by SF Approved (sfapproved.org), which is administrated by the San Francisco Department of the Environment, and which identifies products and services that are required and recommended for use by City departments in connection with the City's Environmentally Preferable Purchasing Ordinance (Chapter 2 of the *San Francisco Environment Code*). For these reasons, hazardous materials used during project operation would not pose any substantial public health or safety hazards resulting from routine use, transport, or disposal of hazardous materials.

V.E Areas of Known Controversy and Issues to Be Resolved

Publication of the NOP initiated a 30-day public comment period that began on May 13, 2015, and ended on June 15, 2015. A public scoping meeting was held on June 2, 2015. During the review and comment period, a total of four letters, emails, and comment cards were submitted to the Planning Department by interested parties in addition to oral comments provided at the scoping meeting. The comment letters, emails, and comment cards received in response to the NOP and a transcript of comments made at the June 2, 2015, public scoping meeting are included in Appendix B. The Planning Department has considered the comments made by the public in preparation of the Draft EIR for the proposed project. Comments on the NOP that relate to environmental issues are summarized below and are addressed in the Initial Study or in this EIR, as noted.

Comments generally related to several categories and issue topics, and the discussion below is organized into comments that relate to: Land Use and Planning; Cultural Resources; Transportation and Circulation; Noise; Air Quality; Greenhouse Gas Emissions; Wind and Shadow; Hazards and Hazardous Materials; and Other Scoping Issues.

An additional area of controversy may emerge regarding the provisions of CEQA Section 21099 as they relate to the proposed project and this EIR. Section 21099(d) directs that the aesthetic and parking impacts of mixed-use residential or employment center use infill projects located in transit priority areas are not considered impacts on the environment under CEQA. The proposed project meets the definition of a mixed-use residential and employment center use infill project in a transit priority area. Accordingly, this EIR does not contain a separate discussion of the topic of aesthetics. The EIR nonetheless provides visual simulations for informational purposes as part of Chapter II, *Project Description*.

In addition, CEQA Section 21099(b)(1) requires that the State Office of Planning and Research (OPR) develop revisions to the CEQA Guidelines establishing criteria for determining the significance of transportation impacts of projects that promote the “reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses.” CEQA Section 21099(b)(2) states that upon certification of the revised CEQA Guidelines for determining transportation impacts pursuant to Section 21099(b)(1), automobile delay, as described solely by level of service (LOS) or similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment under CEQA.

In January 2016, OPR published for public review and comment a *Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA*²¹⁵ (proposed transportation impact guidelines) recommending that transportation impacts for projects be measured using a vehicle miles traveled (VMT) metric. VMT measures the amount and distance that a project might cause people to drive, accounting for the number of passengers within a vehicle.

OPR’s proposed transportation impact guidelines provides substantial evidence that VMT is an appropriate standard to use in analyzing transportation impacts to protect environmental quality and a better indicator of greenhouse gas, air quality, and energy impacts than automobile delay. Acknowledging this, San Francisco Planning Commission Resolution 19579, adopted on March 3, 2016:

- Found that automobile delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion, shall no longer be considered a significant impact on the environment pursuant to CEQA, because it does not measure environmental impacts and therefore it does not protect environmental quality.
- Directed the Environmental Review Officer to remove automobile delay as a factor in determining significant impacts pursuant to CEQA for all guidelines, criteria, and list of exemptions, and to update the Transportation Impact Analysis Guidelines for Environmental Review and Categorical Exemptions from CEQA to reflect this change.
- Directed the Environmental Planning Division and Environmental Review Officer to replace automobile delay with VMT criteria which promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses; and consistent with proposed and forthcoming changes to the CEQA Guidelines by OPR.

²¹⁵ This document is available online at https://www.opr.ca.gov/s_sb743.php.

Planning Commission Resolution 19579 became effective immediately for all projects that have not received a CEQA determination and all projects that have previously received CEQA determinations, but require additional environmental analysis.

Accordingly, this EIR does not contain a discussion of automobile delay impacts. Instead, a VMT and induced automobile travel impact analysis is provided in Section IV.B, *Transportation and Circulation*. Nonetheless, automobile delay may be considered by decision-makers, independent of the environmental review process, as part of their decision to approve, modify, or disapprove the proposed project.

(See Section IV.B, *Transportation and Circulation*, in this EIR for further discussion of CEQA Section 21099.)

V.E.1 Land Use and Planning

Comments were submitted regarding the height of the proposed project buildings and compatibility with surrounding land uses. This issue is addressed under Topic 1, *Land Use and Land Use Planning*, in the Initial Study (Appendix A).

V.E.2 Cultural Resources

One comment requested further study of the historic building that is currently located on the site and would be mostly demolished with a portion of the building (the 1500 Mission Street building) retained. The comment requested that additional research be conducted to determine the building's potential eligibility as a historic resource under CEQA, discussed likely mitigation, and requested that a preservation alternative be analyzed in the EIR. These comments are addressed in Section IV.A, *Cultural Resources*, and Chapter VI, *Alternatives*, in this EIR.

V.E.3 Transportation and Circulation

One comment requested that a traffic study be completed, and comments were submitted requesting that the effects of the proposed project on nearby neighborhoods be analyzed, with respect to the provision of parking for project uses. Two comments requested that the EIR evaluate strategies for minimizing the amount of vehicular traffic and the feasibility of adopting an alternative where parking is reduced or eliminated entirely. A comment was submitted clarifying who was responsible for implementing all necessary mitigation measures, and requesting that a discussion of all transportation impact fees be included. The comment also requested that several specific items be included in the Transportation Impact Study.

The proposed project's potential transportation-related impacts are discussed in Section IV.B, *Transportation and Circulation*, of this EIR. The Transportation Impact Study is available for review as part of Case File No. 2014-000362ENV. The project's consistency with the City's parking requirements is discussed in Section C, *Compatibility with Existing Zoning and Plans*, of the Initial Study (Appendix A). Alternatives to the project are discussed in Chapter VI, *Alternatives*, of this EIR.

V.E.4 Noise

A comment was submitted concerning the effects of traffic-generated noise by the proposed project. The proposed project's potential noise impacts are discussed in under Topic 5, *Noise*, of the Initial Study (Appendix A).

V.E.5 Air Quality

Comments were submitted concerning the effects of traffic generated by the proposed project and project construction on air quality. The proposed project's potential air quality impacts are discussed in Section IV.C, *Air Quality*, of this EIR.

V.E.6 Greenhouse Gas Emissions

Comments were submitted concerning the potential for the proposed project to generate greenhouse gas emissions. This issue is addressed under Topic 7, *Greenhouse Gas Emissions*, of the Initial Study (Appendix A).

V.E.7 Wind and Shadow

Comments were submitted requesting that the EIR discuss the impacts of the proposed project on surrounding areas, including private open spaces, from changes to wind patterns and the creation of new shadows. Analyses of these potential effects are provided in Section IV.D, *Wind*, and Section IV.E, *Shadow*, respectively, of this EIR. While CEQA does not require analyses of these effects with respect to private areas, Section IV.E, *Shadow*, of this EIR provides an analysis of the net new shadow that would be created by the proposed project on public (under the jurisdiction of the San Francisco Recreation and Parks Department) and private parks throughout the year, and demonstrates the impacts of those shadows on nearby land uses.

V.E.8 Hazards and Hazardous Materials

A comment was submitted expressing concern over the potential for hazardous materials to be encountered during project site excavation and construction. This issue is addressed in under Topic 15, *Hazards and Hazardous Materials*, in the Initial Study (Appendix A).

V.E.9 Other Scoping Issues

One commenter expressed concern over the noticing process and requested that the City post signs at the site. Noticing for the project has been, and will be, completed as required by CEQA and the City, and noticing signs will be posted on the project site as part of the Draft EIR noticing process. All noticing materials are available for review as part of Case File No. 2014-000362ENV.

CHAPTER VI

Alternatives

VI.A Introduction

The following discussion evaluates alternatives to the proposed project and examines the potential environmental impacts associated with each alternative. Through comparison of these alternatives to the proposed project, the relative environmental advantages and disadvantages of each may be analyzed and weighed. California Environmental Quality Act (CEQA) Guidelines Section 15126.6(a) states that an Environmental Impact Report (EIR) must describe and evaluate a reasonable range of alternatives to the proposed project that would feasibly attain most of the proposed project's basic objectives, and would avoid or substantially lessen any identified significant adverse environmental impacts of the proposed project.

The range of alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those potentially feasible alternatives necessary to foster informed public participation and an informed and reasoned choice by the decision-making body (CEQA Guidelines Section 15126.6(f)). Therefore, not every conceivable alternative must be addressed, nor do infeasible alternatives need to be considered. CEQA generally defines "feasible" to mean the ability to be accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, technological, and legal factors. The following factors may also be taken into consideration when assessing the feasibility of alternatives: site suitability; economic viability; availability of infrastructure; *General Plan* consistency; other plans or regulatory limitations; jurisdictional boundaries; and the ability of the proponent to attain site control (CEQA Guidelines Section 15126.6(f)(1)). An EIR need not consider an alternative whose impact cannot be reasonably ascertained and whose implementation is remote and speculative. Furthermore, an EIR need not consider every conceivable alternative, but must consider a reasonable range of alternatives that will foster informed decision-making and public participation.

CEQA also requires that a No Project Alternative be evaluated (CEQA Guidelines Section 15126.6(e)). The analysis of the No Project Alternative is based on the assumption that the proposed project would not be approved. In addition, an environmentally superior alternative must be identified among the alternatives considered. The environmentally superior alternative is generally defined as the alternative that would result in the least adverse environmental impacts to the project site and affected environment. If the No Project Alternative is found to be the environmentally superior alternative, the EIR must identify an environmentally superior alternative among the other alternatives (CEQA Guidelines Section 15126.6(e)(2)).

CEQA Guidelines Section 15126.6(c) also requires an EIR to identify and briefly discuss any alternatives that were considered by the Lead Agency but were rejected as infeasible during the scoping process. In identifying alternatives, primary consideration was given to alternatives that would reduce significant impacts while still meeting most of the basic proposed project objectives. Those alternatives that would have impacts identical to

or more severe than the proposed project, or that would not meet most of the proposed project objectives, were rejected from further consideration.

The EIR must evaluate the comparative merits of the alternatives and include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. In identifying alternatives, the consideration of alternatives should focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant impacts of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly (CEQA Guidelines Section 15126.6(b)). This chapter identifies alternatives to the proposed project and discusses environmental impacts associated with each alternative.

City decision-makers could adopt an alternative instead of approving the proposed project if that alternative would substantially reduce or eliminate significant environmental impacts identified for the proposed project, the alternative is determined feasible, and the alternative would achieve most of the proposed project objectives. The determination of feasibility would be made by City decision-makers based on substantial evidence in the record, which must include, but would not be limited to, information presented in the Draft EIR and comments received on it.

VI.A.1 Significant Project Impacts and Alternative Analysis

The EIR alternatives analysis discusses alternatives aimed at reducing significant and unavoidable impacts identified in Chapter IV, *Environmental Setting, Impacts, and Mitigation Measures*, of this EIR. It also provides a discussion of those impacts identified as less than significant after mitigation, and addresses those topics analyzed in the Initial Study.

This EIR identifies significant and unavoidable impacts on cultural resources and cumulative transportation-impacts. With regard to cultural resources, Impact CR-2 identifies a significant and unavoidable impact after mitigation, in that the proposed project would demolish the majority of the historic 1500 Mission Street building, and thereby result in a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5(b). This EIR also identifies a significant and unavoidable impact after mitigation on cumulative construction related transportation, Impact C-TR-8.

In addition to evaluating significant and unavoidable impacts, this analysis also evaluates the alternatives to determine whether they would reduce the severity of or avoid other proposed project impacts identified as having impacts of less-than-significance with mitigation. These consist of impacts related to cultural resources, transportation and circulation, air quality, noise, geology and soils, and hazards and hazardous materials (refer to Impact CR-4, Impact CR-5, Impact CR-6, Impact TR-3, Impact TR-4, Impact TR-5, Impact TR-6, Impact C-TR-5, Impact AQ-3, and Impact C-AQ-3) in this EIR and Impact NO-2, Impact GE-6, and Impact HZ-2 in the Initial Study.

VI.A.2 Discussion of Alternatives

Subsection VI.B, Alternatives Considered but Rejected from Further Analysis, discusses specific alternatives that were considered by the Lead Agency but rejected from further evaluation. Subsection VI.D, Alternatives Analysis, presents the approach and methodology of the project alternatives analysis as well as a detailed

evaluation of the selected alternatives, and Subsection VI.E, Environmentally Superior Alternative, identifies the environmentally superior alternative.

In accordance with the CEQA Guidelines, an alternatives analysis must address alternatives that meet the following three criteria: (1) the alternative would attain *most* of a project's basic objectives; (2) the alternative would *avoid or substantially lessen* one or more of the significant environmental impacts of the proposed project; and (3) the alternative must be *potentially feasible*.

Alternatives considered but rejected from further analysis in this chapter include an Off-site Alternative, a Code Compliant Alternative, and a Phased Construction Alternative. Alternatives considered and analyzed in this chapter include a No Project Alternative; a Partial Preservation Alternative; a Full Preservation Alternative; and an All Residential Alternative. In addition to the No Project Alternative, both preservation alternatives would include less parking than the proposed project, although any of the alternatives could ultimately be approved with less parking without substantially affecting the results of the analysis. These alternatives are discussed in greater detail under Subsection VI.B and Subsection VI.C, below. Consistent with state CEQA Guidelines Section 15126.6(d), impacts of the alternatives are discussed in less detail than those of the proposed project.

VI.B Alternatives Considered but Rejected from Further Analysis

As discussed in Subsection V.E, Areas of Known Controversy and Issues to Be Resolved, comments submitted during the NOP scoping period suggested modifications that should be considered as alternatives to the proposed project. These include an alternative that would retain more of the historic 1500 Mission Street building. This suggested alternative has been captured in the Partial Preservation and Full Preservation Alternatives. In addition, comments suggested evaluating a reduction in parking for the proposed project, which has been captured in the Full Preservation Alternative.

The following alternatives were considered as part of this alternatives analysis, but ultimately rejected from detailed analysis.

VI.B.1 Off-Site Alternative

An alternative that would consider an alternate location was rejected because the project sponsor does not have control of another site that would be of sufficient size to develop a mixed-use project that would be necessary to achieve the project objectives. The City Office component of the project, including the permit center would require approximately 40,000 square feet of contiguous space located on a single floor. The City-owned assets at 30 Van Ness Avenue and One South Van Ness Avenue have floor plates with the bulk to accommodate this program; however, there is no vacancy in both buildings and there is currently no place to relocate the tenants of those buildings to another City-owned building given that the overall vacancy rate of City-owned buildings is less than 0.5 percent.²¹⁶ Furthermore, the central core of both 30 Van Ness Avenue and

²¹⁶ Joshua Keene, San Francisco Department of Real Estate, e-mail to Eryn Brennan, Environmental Science Associates, August 10, 2016.

One South Van Ness Avenue building bifurcate the floor layout, thereby hindering the ability to seamlessly connect the various components of the permit center. For these reasons, an Off-Site Alternative was considered but rejected from further consideration.

VI.B.2 Code Compliant Alternative

An alternative that would consider project development of the site compliant with the site's existing Height and Bulk districts, which are 120/320-R-2, 85/250-R-2, and 85-X, was rejected because existing zoning would not meet most of the basic project objectives, nor would it address several other City policy objectives, nor would it comply with the *Planning Code*. For instance, the existing One South Van Ness Avenue building is approximately 130 feet in height. Pursuant to *Planning Code* Section 270(f), no building taller than 110 feet may be constructed closer than 115 feet from an existing building taller than 120 feet. Accordingly, compliance with Section 270(f) would preclude development of towers in the 120/320-R-2 Height and Bulk District adjacent to the existing building at One South Van Ness Avenue.²¹⁷ If this restriction were not in place, the existing height limits would potentially allow for two 320-foot-tall towers within the relatively narrow band of land adjacent to the One South Van Ness Avenue building, where the height limit is 320 feet, and possibly a third 250-foot-tall tower at the corner of Mission Street and South Van Ness Avenue. However, preliminary wind-tunnel testing conducted for the proposed project determined that filling in the street wall adjacent to One South Van Ness Avenue—currently a surface parking lot—is likely to result in hazardous winds along South Van Ness Avenue. To avoid these conditions, the proposed project's design would include a street wall on the office building wing adjacent to the One South Van Ness Avenue building that would be angled away from the street above the second floor, and the wing of the residential building would extend north from the tower is limited to four stories. Additionally, a Code compliant alternative would retain the R-2 Bulk District limits set forth in *Planning Code* Section 270(f), which were approved in anticipation of slender residential towers on the site, rather than a City office building. For buildings between 301 and 350 feet in height, the maximum average floor area is limited to 9,000 square feet above the podium level. Such small tower floor plates would not achieve the City's objective of large floor plate office floors to accommodate the functional needs of the City departments that would occupy the City office building(s). For these reasons, a Code Compliant Alternative was considered but rejected.

VI.B.3 Phased Construction Alternative

An alternative that would stagger the construction of this project as well as the construction of cumulative projects within the cumulative environment (0.25 mile) was rejected as such a requirement would be infeasible. Restricting timing of development projects in the site vicinity could put those projects and the 1500 Mission Street project itself on prolonged hold. This delay could affect the project sponsor from meeting most of the basic project objectives. In addition, the San Francisco Planning Department does not have jurisdiction

²¹⁷ Unlike elsewhere in the C-3 (Downtown) Use Districts, Section 270(f) permits no bulk exceptions in the Van Ness and Market Downtown Residential Special Use District. Given that this height and bulk district extends for less than 115 feet from One South Van Ness, it currently does not permit development greater than 120 feet tall. At the time the tower separation requirement was enacted, by Ordinance 72-08 in 2008, the building at One South Van Ness was apparently believed to be 120 feet in height, which would have permitted development at a height greater than 120 feet in the 120/320-R-2 Height and Bulk District immediately south of One South Van Ness; otherwise, the 120/320-R-2 Height and Bulk District would have had no purpose. The project requires an amendment to the *Planning Code* because of the same conflict.

to impose this restriction on cumulative infrastructure projects that have already been approved (e.g., Van Ness Bus Rapid Transit) or may be approved in the future (e.g., other infrastructure projects that may be approved by the San Francisco Municipal Transportation Agency) that contribute to this impact. Furthermore, these cumulative infrastructure projects may be deemed economically and socially necessary for various policy reasons (e.g., Transit-First, Vision Zero) by city decision-makers to proceed. Given the above constraints, this alternative would not foster informed decision making and public participation. Therefore, a Phased Construction Alternative, which would regulate the timing of construction projects in order to minimize construction-related impacts but may not ultimately reduce impacts to a less-than-significant level, was considered but rejected from further analysis.

VI.C Selected CEQA Alternatives

This section describes the project-specific alternatives that were selected and analyzed in detail. The first alternative, the No Project Alternative, is required under the CEQA Guidelines. Three additional alternatives were developed following identification of significant impacts associated with the proposed project, as well as through input provided by the public and other agencies during the EIR scoping process. As set forth above under Subsection VI.A.1, Significant Project Impacts and Alternative Analysis, the significant and unavoidable impacts (SU) and less-than-significant impacts with mitigation (LTSM) that these alternatives address are impacts related to cultural resources, transportation and circulation, and air quality, as follows: Impact CR-2 (SU), Impact CR-4 (LTSM), Impact CR-5 (LTSM), Impact CR-6 (LTSM), Impact TR-3 (LTSM), Impact TR-4 (LTSM), Impact TR-5 (LTSM), Impact TR-6 (LTSM), Impact C-TR-5 (LTSM), Impact C-TR-8 (SU), Impact AQ-3 (LTSM), and Impact C-AQ-3 (LTSM).

The alternatives selected for detailed analysis in this EIR are as follows:

- Alternative A: No Project Alternative;
- Alternative B: Partial Preservation Alternative;
- Alternative C: Full Preservation Alternative; and
- Alternative D: All Residential Alternative.

Table VI-1, Comparison of Proposed Project and Alternatives, provides a comparison of the alternative features, which are also presented in **Figure VI-1, Bird's-Eye Northwest View, Mission Street in Foreground**. In addition, **Table VI-2, Comparison of the Significant Environmental Impacts of Project to Impacts of Alternatives**, presents a comparative summary of the impacts associated with the alternatives.

TABLE VI-1 COMPARISON OF PROPOSED PROJECT AND ALTERNATIVES

Project Feature ^a	Proposed Project	Alternative A: No Project Alternative	Alternative B: Partial Preservation Alternative	Alternative C: Full Preservation Alternative	Alternative D: All Residential Alternative
Residential/ Retail					
Residential/Retail Height (Tower 1)	39 stories (396 feet tall/ 416-foot parapet)	1-2 stories	39 stories (396 feet tall/ 416-foot parapet)	39 stories (396 feet tall/ 416-foot parapet)	39 stories (Tower 1; 396-foot roof/ 416-foot parapet) 30 stories (Tower 2; 300-foot roof/ 320-foot parapet)
Residential	626,200 sf	—	511,500 sf	511,500 sf	1,038,400 sf
Residential (units)	560 units	—	468 units	468 units	976 units
Retail/ Restaurant	38,000 sf	86,000 sf	35,900 sf	35,900 sf	51,100 sf
Vehicle Parking	300 spaces	110 spaces	252 spaces	117 spaces	501 spaces
Office and Permit Center					
Office Height (Tower 2)	16 stories (227 feet tall/ 257-foot parapet)	—	16 stories (227 feet tall/ 257-foot parapet)	16 stories (227 feet tall/ 257-foot parapet)	—
Office/Permit Center	449,800 sf	—	455,600 sf	452,400 sf	—
Child Care	4,400 sf	—	4,400 sf	—	—
Vehicle Parking	Up to 120 spaces	—	80 spaces	25 spaces	—
Combined Project					
Total Project	1,344,500 sf	86,000 sf	1,007,400 sf	999,800 sf	1,089,500 sf
Total Vehicle Parking (#)	up to 420 spaces	90 spaces	332 spaces	142 spaces	501 spaces

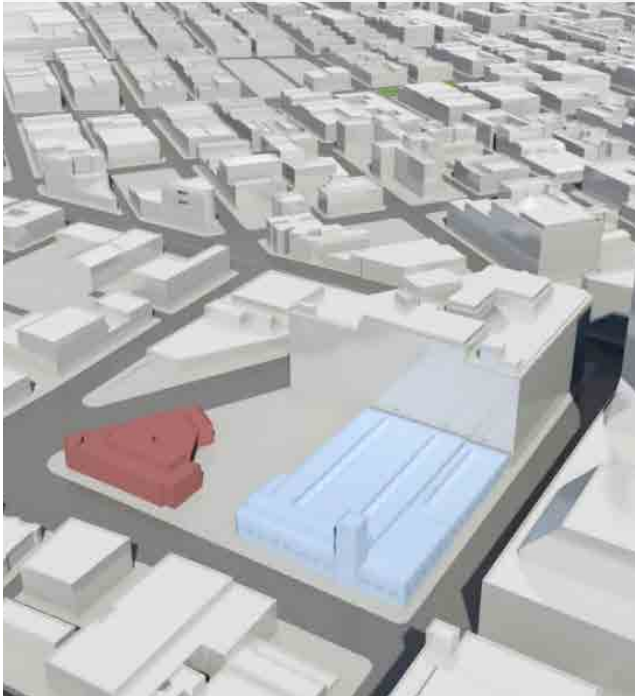
SOURCE: SOM, 2016.

NOTES:

sf = square feet

a. Only includes active land uses; does not include basement square footage as this value is anticipated to remain to the same as the proposed project.

Alternative A: No Project Alternative



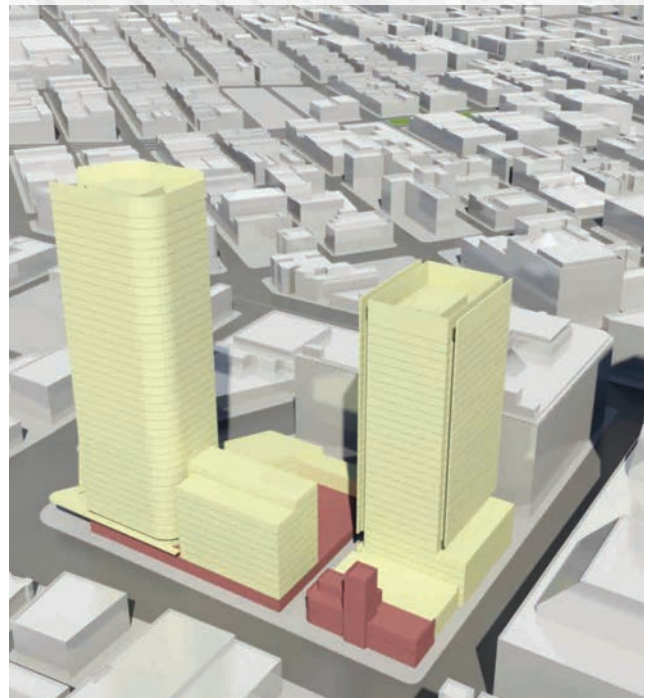
Alternative B: Partial Preservation Alternative



Alternative C: Full Preservation Alternative



Alternative D: All Residential Alternative



VI.D Alternatives Analysis

VI.D.1 Alternative A: No Project Alternative

Description

Under the CEQA-required No Project Alternative, the site would foreseeably remain in its existing condition. The buildings on the project site would not be altered, and the proposed 1,334,480 combined square feet of residential, office, retail, open space, and supporting uses would not be constructed. While Goodwill Industries would no longer use the site, the site could be occupied with similar uses of office, retail and warehouse uses. The two-story, 29,000-square-foot building located at 1580 Mission Street would remain as retail uses on the ground level with offices above; and the approximately 57,000-square-foot, largely single-story building at 1500 Mission Street would continue to be used as a warehouse. Building heights on the site would not be increased and public parking would also remain unaltered.

This alternative would not preclude development of another project on the project site should such a proposal be put forth by the project sponsor or another entity. However, it would be speculative to set forth such an alternative project at this time.

Ability to Meet Project Objectives

Under the No Project Alternative the physical environment of the project site would remain unchanged. Therefore, the No Project alternative would therefore fail to meet the project sponsor's objectives for the project.

City's Objectives

In particular, this alternative would fail to meet the City's objectives of consolidating several City Departments within a new, seismically-sound, Class-A, LEED Gold City office building of approximately 460,000 square feet located in immediate proximity to mass transit and existing City offices and services in the Civic Center Area (City Objectives 1 through 7 within Chapter II, *Project Description*).

Goodwill SF Urban Development, LLC's Objectives

This alternative would also fail to meet Goodwill SF Urban Development, LLC's, to redevelop an underutilized site in the downtown area creating a mixed-use project that provides a substantial number of new residential dwelling units and affordable housing (Goodwill SF Urban Development, LLC's Objectives 1 through 7 in Chapter II, *Project Description*).

Impacts

Cultural Resources

The No Project Alternative would result in the continuation of the existing uses on the project site. Under this continued use, the existing historic 1500 Mission Street building would remain intact and unaltered. This alternative would thus result in no impacts to historic resources. The absence of grading and excavation activities under this alternative would similarly result in no impact to potential archeological resources or human remains. The No Project Alternative would not result in a contribution to cumulative cultural resources impacts.

Transportation and Circulation

Under this alternative, with existing uses retained, transportation and circulation conditions would remain as they are under the existing setting. The No Project Alternative would not generate increased trips to and from the project site. Therefore, this alternative would result in no impact to transportation or circulation. The No Project Alternative would not result in an impact as a result of the contribution to cumulative transportation impacts.

Air Quality

As described earlier, the No Project Alternative would result in continued use of the project site with similar uses as currently experienced with Goodwill Industries. The operations of the warehouse, office, retail facilities, as well as the vehicle parking lot (including 110 parking spaces) would continue as they currently operate. This existing use of the project site would not generate additional fugitive dust or net increases in criteria air pollutants. Similarly, these uses would not generate net increases in TAC emissions, including diesel particulate matter. Therefore, the No Project Alternative would result in no impact to air quality. Because the overall project site would remain in its current composition, the No Project Alternative would not have the potential to result in a net increase in air pollutant emissions and cumulative air quality impacts would be less than significant without a need for mitigation.

Wind

Under the No Project Alternative, the project site would remain in its current condition and building heights would not change. The two-story building at 1580 Mission Street and the single-story warehouse building at 1500 Mission Street would continue with the 97-foot-tall clock tower remaining as the tallest structure on-site. While cumulative wind impacts due to future buildout of the project area would occur, the No Project Alternative would not contribute to the wind impact, as it would result in no change from existing conditions. Therefore, no wind impact would occur. Similarly, because the overall project site would remain in its current composition, it would not contribute to cumulative wind impacts.

Shadow

With no modifications to building heights as described above, the shadows generated by the project site would remain as they currently exist. The No Project Alternative would not generate a shadow that would

reach nearby parks or open spaces. Therefore, no impact would occur. Similarly, because the overall project site would remain in its current composition, it would not contribute to cumulative shadow impacts.

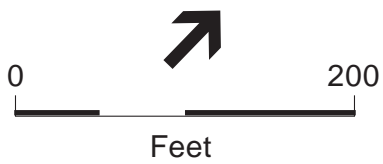
Issues Analyzed in the Initial Study

Other issues related to the intensity of development (population and housing, operational noise, greenhouse gas emissions, recreation, utilities and service systems, public services, energy resources) would result in no impact under this alternative, given the lack of development at the site and the assumption that any subsequent reuse of the existing facilities would be at a comparable intensity as the recent use. Similarly, with no construction, there would be no construction noise from construction. Impacts related to the footprint and location of development (land use, geology and soils, hydrology and water quality, hazards/hazardous materials [except those related to exposure to hazardous building materials], mineral resources, and agricultural/forest resources) would be similar to or result in no impact as the proposed project, given that future activity would occur at the same location as under the proposed project, although there would be no excavation required. Similarly, there would be no potential exposure of construction workers and the public to hazardous building materials as no construction activities would occur.

VI.D.2 Alternative B: Partial Preservation Alternative

Description

The Alternative B: Partial Preservation Alternative would develop a similar program to that of the proposed project, but would retain the entirety of both the Mission Street and 11th Street facades of the 1500 Mission Street building as part of the office and permit center component of the development. The Partial Preservation Alternative would provide 468 dwelling units, 35,900 square feet of retail/restaurant space, and 455,600 square feet of office space along with childcare, as further discussed below. Access to the two below-grade parking garages (one for the office and permit center component and one for the residential and retail/restaurant component) would be provided via two ramps accessible from 11th Street. A vehicular access driveway to the office and permit center below-grade parking garage would be provided on 11th Street at the northeast corner of the project site. A second vehicular access driveway to the below-grade residential/retail parking garage, which would alter up to two of bays of the retained 11th Street facade, would be constructed four bays to the south. In addition, a new pedestrian entrance would be provided between the two driveways. This alternative would include identical wind-reducing physical features as those described under the proposed project along South Van Ness Avenue and Mission Street (see Chapter II, *Project Description*). The approximately 41,200-square-foot permit center would be housed within the ground floor of the existing 1500 Mission Street building, refer to **Figure VI-2a, Alternative B: Partial Preservation Alternative Ground Floor**. However, this alternative would result in substantial alteration of the 1500 Mission Street building's interior as a result of multiple vertical additions to the structure. Most or all of the industrial skylights and exposed steel truss work/framing would be removed or altered, as would the unfinished concrete floor and open, full-height interior space within the warehouse. Some portion of the warehouse's interior features along the perimeter of the building may be retained. The Partial Preservation Alternative would maintain most of the exterior character-defining features of the existing 1500 Mission Street building, including the following:



SOURCE: SOM, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure VI-2a
Alternative B: Partial Preservation Alternative Ground Floor

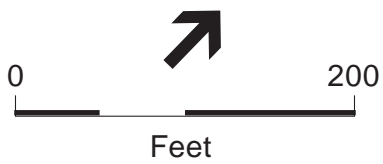
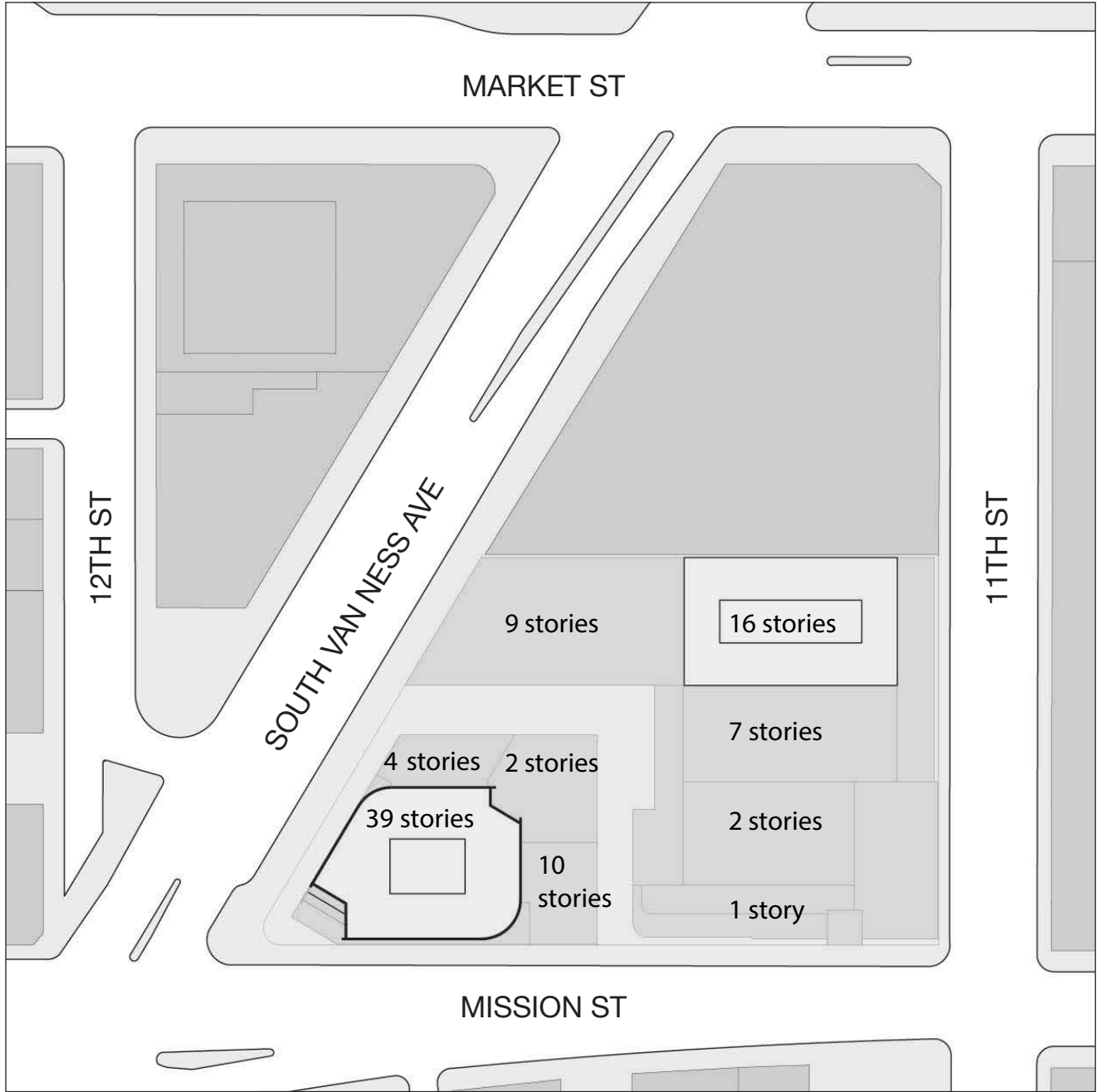
- Horizontal emphasis along Mission Street (juxtaposed with tower projection) and 11th Street facades;
- Rounded corners and curved surfaces;
- Speed lines (bands of horizontal piping);
- Flat roof with coping at the roofline;
- Smooth concrete wall surface;
- Wraparound window at the corner;
- General absence of historically derived ornamentation;
- Asymmetrical Mission Street façade;
- Recessed entry vestibule on Mission Street;
- Multi-pane, industrial steel sash windows, throughout;
- Clock faces at tower; and
- Paired steel doors and tall transom at main entrance with decorative detailing.

Residential and Retail/Restaurant Component

The Partial Preservation Alternative would provide a residential and retail/restaurant component on a reduced footprint, as compared to the proposed project. The residential tower would remain at the same location as under the proposed project, at the corner of Mission Street and South Van Ness Avenue, but the 10-story podium would not extend as far to the east of the 39-story tower as under the proposed project. This alternative would include 468 residential units—92 units less than the proposed project’s 560 residential units (16 percent)—and would provide 35,900 square feet of retail/restaurant space (approximately 9,700 square feet of which would be restaurant), or approximately 2,100 square feet (six percent) less than with the project due to the reduction in size of the east podium. Access to a below-grade parking garage would be provided via a ramp accessible from 11th Street located four bays south of the ramp for the office and permit center component, discussed below, that would alter up to two of bays of the retained 11th Street facade.

Office and Permit Center Component

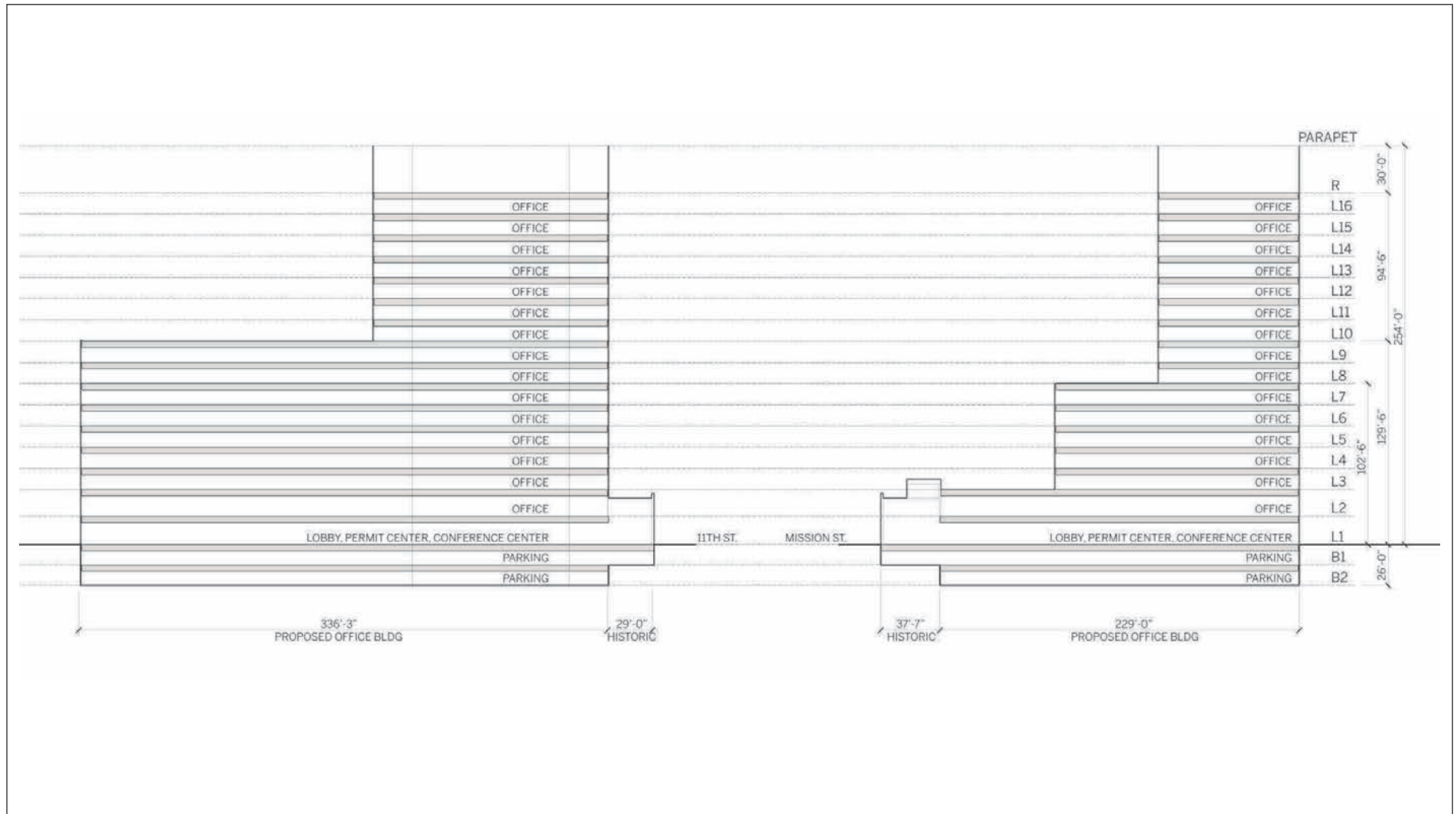
Under this alternative, a new second story would be added directly behind the clock tower of the 1500 Mission Street building, and would be set back by approximately 38 feet from the Mission Street façade (refer to **Figure VI-2b, Alternative B: Partial Preservation Alternative Roof**, and **Figure VI-2c, Alternative B: Partial Preservation Alternative Sections**). The east side of this new second story would be set back from the 11th Street elevation by approximately 29 feet and would extend to within one structural bay of the west elevation (refer to **Figure VI-2d, Alternative B: Partial Preservation Alternative Elevations**). Similar to the existing penthouse, the new second story would extend east to the existing clock tower. The office tower at the northeast corner of the building, would step up to seven stories behind the two-story addition at a distance of approximately 111 feet from the Mission Street façade (about 90 feet from the rear elevation of the clock tower). The building would then rise up to 16 stories at the rear of the building (for a total height of 227 feet, and 257 feet to parapet), beginning about 180 feet back from the Mission Street façade. The tower would be set back approximately one structural bay from the east elevation of the existing building. The Mission Street and



SOURCE: SOM, 2016

1500 Mission Street; Case No. 2014-000362ENV

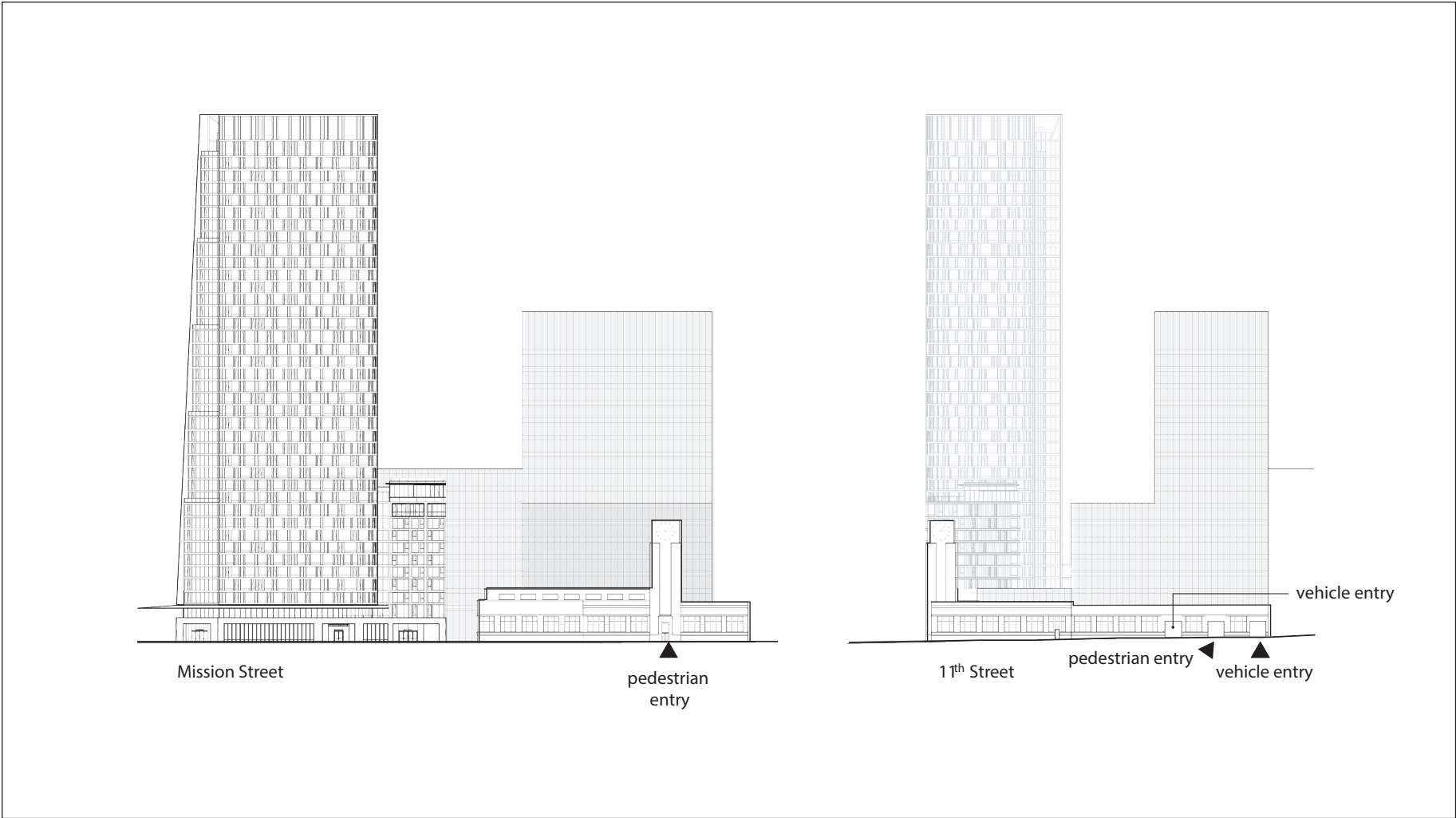
Figure VI-2b
Alternative B: Partial Preservation Alternative Roof



SOURCE: SOM, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure VI-2c
Alternative B: Partial Preservation Alternative Sections



11th Street facades of the existing building would be retained, while the interior would be demolished where additions are proposed. The office and permit center component would be located on a larger footprint than under the proposed project. A pedestrian entryway would be provided on 11th Street. Access to a below-grade parking garage would be provided via a ramp accessible from 11th Street located at the northeast corner of the building. This alternative would also provide the approximately 4,400 square feet of childcare facility, as with the proposed project, in addition to approximately 455,600 square feet of office space, including the permit center within the portion of the retained 1500 Mission Street building, constituting approximately 5,800 square feet (one percent) more than with the proposed project.

Open Space

As with the proposed project, the Partial Preservation Alternative would provide a mid-block alley from Mission Street to a mid-block pedestrian concourse. Open spaces would be located on the roofs of the lower podium levels, adjacent to the towers (refer to **Figure VI-2a, Alternative B: Partial Preservation Alternative Ground Floor**).

Parking, Loading, and Bicycle Facilities

As with the proposed project, a vehicular access driveway to the office and permit center below-grade parking garage would be provided on 11th Street at the northeast corner of the project site. A second vehicular access driveway to the below-grade residential/retail parking garage, which would alter up to two of bays of the retained 11th Street facade, would be constructed four bays south of the office and permit center garage entrance. In addition, a new pedestrian entrance would be provided between the two driveways (refer to **Figure VI-2a, Alternative B: Partial Preservation Alternative Ground Floor**, and **Figure VI-2d, Alternative B: Partial Preservation Alternative Elevations**). This alternative would provide 498 Class 1 and 72 Class 2 bicycle parking spaces. It also would provide 80 vehicle parking spaces for offices and 252 vehicle parking spaces for residential use for a total of 332 parking spaces. As with the proposed project, this alternative would provide three residential loading spaces and five office loading spaces. Residential/retail building off-street loading spaces would be accessed from the mid-block alley, as under the proposed project. Due to the reduced number of vehicle parking spaces provided under this alternative as compared with the proposed project by 15 to 20 percent (332 spaces compared with 420 spaces), the scale of the basement parking structure would be reduced. However, due to the project site, soil excavation would be required as with the proposed project (i.e., to a similar depth and volume) beneath the new construction elements of this alternative. As such, while the size of the parking may be incrementally reduced, the parking structure would still reach depths described under the proposed project on a reduced footprint.

Ability to Meet Project Objectives

As noted above, the Partial Preservation Alternative would provide a similar amount of office space, 6 percent less retail/restaurant space, and 16 percent fewer residential units than the proposed project. Therefore, the Partial Preservation Alternative would meet or partially meet most of the City's and the project sponsor's objectives, but to a lesser extent than the proposed project.

City's Objectives

This alternative would meet the City's following objectives: consolidation of several City Departments within a new, seismically-sound, Class-A, LEED Gold City office building to accommodate several City departments located in immediate proximity to mass transit; allow for potential future physical connections to the existing City offices at One South Van Ness Avenue; provide large floor plates for a one-stop permit center and shared conference and meeting facilities; provide a publicly-accessible mid-block concourse; and provide on-site child care (Objectives 1, 2, 3, 5, 6, and 7). However, this alternative would provide fewer parking spaces on-site than compared to the proposed project (Objective 4). Therefore, this alternative meets all the City's basic objectives, though to a lesser extent than the proposed project.

Goodwill SF Urban Development, LLC's Objectives

The Partial Preservation Alternative would partially meet many of Goodwill SF Urban Development, LLC's objectives for the retail/residential component including: redeveloping a large underutilized site with a range of residential unit types (including affordable units) and neighborhood serving retail and personal service uses consistent with the Market & Octavia Area Plan; providing for a new City office building; developing on-site retail/restaurant space; and retaining portions of the 1500 Mission Street building (Objectives 1, 3, 4, 5, and 6). However, by reducing the size of the residential and retail/restaurant component, this alternative would provide 16 percent fewer residential units (including 20 fewer affordable housing units, assuming 20 percent of the residential units would be affordable housing units, as with the proposed project) and six percent less retail/restaurant space than the proposed project (Objective 2). Therefore, this alternative meets all the project sponsor's basic objectives, though to a lesser extent than the proposed project.

Impacts

Cultural Resources

Historical Resources

The Partial Preservation Alternative would maintain most of the exterior character-defining features of the existing historical resource, but the proposed two-, seven-, and 16-story additions would alter a majority of the warehouse's interior space. As described above, most of the skylights and truss work and framing would be removed, and the open, full height interior space would be eliminated. As a result, the proposed new construction would mean substantial alteration or loss of features that characterize the former industrial use of the Streamline Modern industrial building. Further, while the original form and massing of the historic resource would remain evident from the exterior, the new construction, due to its size, height, and minimal setbacks, would physically overwhelm the building and adversely impact the resource. While this alternative would retain most of the exterior character-defining features of the 1500 Mission Street building, the substantial alteration of the interior character-defining features and development of the new 16-story tower with the seven-story podium within 30 feet of the 11th Street façade would materially impair the historical resource. Thus, while it would have lesser impacts than would the proposed project, the Partial Preservation Alternative would result in a significant and unavoidable impact on historical resources, as would the proposed project. As with the proposed project, **Mitigation Measures M-CR-2a, Documentation; M-CR-2b,**

Historic Preservation Plan and Protective Measures; M-CR-2c, Video Recordation of the Historic Resource; and **M-CR-2d, Historic Resource Interpretation**, would apply to the Partial Preservation Alternative; however, these mitigation measures would not reduce the impact to a less-than-significant level. As with the proposed project, the Partial Preservation Alternative would not result in a cumulative impact; therefore the cumulative impact would be less than significant.

Archeological Resources

Impacts on archeological resources would be significant, similar to those of the proposed project, given that excavation would be required. **Mitigation Measures M-CR-3, Archeology Resources (Testing); M-CR-4, Inadvertent Discovery of Human Remains;** and **M-CR-5, Tribal Cultural Resources Interpretive Program**, would be applicable to the Partial Preservation Alternative and, as with the proposed project, would reduce potential impacts to a less-than-significant level.

Transportation and Circulation

VMT

The project site is located within an area of the City where the existing VMT is more than 15 percent below the regional VMT thresholds, and, therefore, the proposed residential, retail/restaurant, office, and childcare uses under this alternative would not generate a substantial increase in VMT. The proposed residential, retail/restaurant, office, and childcare uses are land use types known not to increase VMT per capita. In addition, the Partial Preservation Alternative's features that would alter the transportation network would be the same as the proposed project, and would fit within the general types of projects that would not substantially induce automobile travel. Thus, impacts related to VMT and induced automobile travel would be less than significant under this alternative, as would be the case with the proposed project.

Traffic

The Partial Preservation Alternative, as with the proposed project, would not change any adjacent travel lanes or include any features that would cause a traffic hazard. The Partial Preservation Alternative would result in six percent fewer daily vehicle trips and seven percent fewer p.m. peak-hour vehicle trips than the proposed project. The Partial Preservation Alternative would include fewer vehicle parking spaces and generate fewer vehicle trips than the proposed project, and as with the proposed project, garage driveway operations would not affect 11th Street transit or traffic operations, or result in a traffic hazard. As with the proposed project, this alternative would increase the potential for conflicts between vehicles accessing the project site and transit, bicyclists, and pedestrians, although the increased potential would be less than the proposed project due to fewer trips by all modes generated by this alternative. While traffic impacts under this alternative would be less than significant, **Improvement Measure I-TR-2a, Monitoring and Abatement of Queues**, and **I-TR-2b, Transportation Demand Management (TDM) Program**, identified for the proposed project, would also be applicable to this alternative to further reduce its less-than-significant traffic impacts.

Transit

The Partial Preservation Alternative would result in five percent fewer p.m. peak-hour transit trips than would the proposed project. As with the proposed project, the impact of this alternative on local and regional transit capacity utilization would be less than significant. As with the proposed project, access to the on-site loading spaces for the residential building would be via Mission Street, and unrestricted truck access into the on-site loading spaces would have the potential to delay westbound Muni bus routes on Mission Street, and result in a significant impact on Muni transit operations. **Mitigation Measure M-TR-3, Avoidance of Conflicts Associated with On-Site Loading Operations**, would manage loading access and activities for the residential building, and would mitigate impacts on Muni operations to less than significant.

Pedestrians and Bicycles

In terms of pedestrian and bicycle operations, the Partial Preservation Alternative would result in less travel by these modes, compared to the proposed project, and would implement the same transportation-related changes, including widened sidewalks. While the addition of pedestrian trips under this alternative would incrementally increase pedestrian volumes on adjacent streets, the additional trips would not substantially affect pedestrian flows, as would be the case for the proposed project, though to a lesser extent. Although this alternative would result in an increase in the number of bicycles in the vicinity of the project site, it would result in fewer vehicle trips than the proposed project.

As with the proposed project, access to the on-site loading spaces for the residential building would be via Mission Street and a mid-block alley, and unrestricted truck access into the on-site loading spaces would have the potential for conflicts and safety hazards between trucks, pedestrians, and bicyclists on Mission Street. Thus, this alternative would result in a significant impact on pedestrians and bicyclists. **Mitigation Measure M-TR-3, Avoidance of Conflicts Associated with On-Site Loading Operations**, would manage loading access and activities for the residential building, and would reduce impacts on pedestrians and bicyclists to less than significant.

Loading

The Partial Preservation Alternative would provide three truck loading spaces with access from Mission Street for the residential and retail/restaurant uses, the same as the proposed project. Five truck loading spaces would be provided within the office building garage with access from South Van Ness Avenue for the Partial Preservation Alternative, rather than from 11th Street as for the proposed project. This alternative would generate less demand for loading spaces than the proposed project, and the loading demand would be accommodated on-site. As with the proposed project, vehicle access to the residential and retail on-site loading spaces could conflict with pedestrians, bicycles, buses, and other vehicles on Mission Street, as well as with pedestrians within the mid-block alley, which would be considered a significant loading impact. As with the proposed project, **Mitigation Measure M-TR-3, Avoidance of Conflicts Associated with On-Site Loading**, would mitigate loading impacts to less than significant.

Emergency Access

Under the Partial Preservation Alternative, emergency vehicle access to block containing the project site would remain unchanged from existing conditions, and adjacent travel lanes would not be changed, as would

be the case with the proposed project. The impacts on emergency access in the area would be less than significant, as would be the case with the proposed project.

Construction Impacts

Construction activities associated with the Partial Preservation Alternative would be to the same as those described for the proposed project, though somewhat less intensive due to the smaller project size. While the construction-related transportation impacts under this alternative would be less than significant, **Improvement Measure I-TR-8, Construction Management Plan and Public Updates**, identified for the proposed project, would also be applicable to this alternative to further reduce its less-than-significant construction-related transportation effects.

Cumulative Impacts

Under 2040 cumulative conditions, as with the proposed project, the Partial Preservation Alternative, in combination with past, present and reasonably foreseeable development in San Francisco, would not result in cumulative VMT, traffic, pedestrian, loading, and emergency vehicle access impacts. In addition, the alternative would not contribute considerably to cumulative transit impacts, although its contribution to cumulative transit impacts would be less than for the proposed project. As with the proposed project, the Partial Preservation Alternative would contribute considerably to cumulative bicycle impacts. However, as with the proposed project, implementation of **Mitigation Measure M-TR-3, Avoidance of Conflicts Associated with On-Site Loading**, would reduce the cumulative bicycle impacts to a less-than-significant level. As with the proposed project, the Partial Preservation Alternative would contribute considerably to cumulative construction-related transportation impacts, although to a lesser extent due to the smaller project size. As with the proposed project, with implementation of **Mitigation Measure M-C-TR-8, Construction Coordination**, the cumulative construction-related transportation impacts would remain significant and unavoidable with mitigation.

Air Quality

Development under the Partial Preservation Alternative would result in an incrementally reduced buildout scale of the project site due the partial preservation of the 1500 Mission Street building and, therefore, would have a reduced residential component. As with the proposed project, the Partial Preservation Alternative would also include maintenance operation of two backup diesel generators. The location of the generators for project alternatives is not currently available. However, based on the building scheme, the two towers proposed for this alternative would be of the same approximate height (identical number of stories) as the proposed project. The exhaust port of the generator for the residential tower would be located in a one-story structure to the north of the residential tower under the proposed project. Under the Partial Preservation Alternative, the adjacent structure to the north would be two stories in height. This indicates that the exhaust port for the residential generator under the Partial Preservation Alternative would be at a similar, or likely higher, elevation than that for the proposed project.

Construction Criteria Air Pollutant Impacts

Although scaled back slightly from the proposed project in terms of the floor area, the overall intensity of construction on the project site would generally be similar to that of the proposed project. Consequently average daily emissions of criteria air pollutant emissions would be expected to be similar or less than the proposed project and, like the proposed project, would also have a less than significant impact with regard to construction-related emissions of criteria pollutants.

Operational Criteria Air Pollutant Impacts

As noted above, this alternative would generate six percent fewer daily vehicle trips than the proposed project. This alternative would have 18 percent fewer residential units, six percent less retail/restaurant space, and one percent more office space; total floor area would be about 10 percent less than with the proposed project. Thus, operational criteria pollutant emissions from both vehicular traffic and building operations (burning of natural gas) would be reduced compared to the proposed project's criteria pollutant emissions, and impacts to air quality would be less substantial than those of the proposed project. Therefore, as with the proposed project, operational criteria pollutant emissions would be less than significant.

Health Risk Impacts

As with the proposed project, due to the proximity to existing sensitive receptors and the inclusion of a backup diesel generators and a childcare facility, buildout of the Partial Preservation Alternative would generate TACs, including diesel particulate matter from construction and operations, exposing sensitive receptors to substantial air pollutant concentrations. The overall intensity of construction on the project site would generally be similar to that of the proposed project and would therefore have a similar significant impact to off-site receptors from construction activities. Based on the likely location of the exhaust ports under the Partial Preservation Alternative, discussed above, unmitigated health risk to on-site receptors would also likely be significant. Therefore, it is reasonable to assume that health risk impacts of the Partial Preservation Alternative would be significant. Similar to the proposed project, **Mitigation Measures M-AQ-3a, Construction Air Quality**, and **M-AQ-3b, Diesel Generator Specifications**, would reduce construction and operational emissions of TACs to a less-than-significant level. Article 38 requires that the project sponsor submit an Enhanced Ventilation Proposal for approval by DPH that achieves protection from PM_{2.5} (inclusive of DPM). This requirement would also reduce risk exposure to future occupants of the Partial Preservation Alternative.

As with the proposed project, neither construction nor operation of the Partial Preservation Alternative would exceed the project-level thresholds for criteria air pollutants and thus would not make a considerable contribution to cumulative criteria air pollutant impacts. The Partial Preservation Alternative would not result in a considerable contribution cumulative health risks with implementation of **Mitigation Measures M-AQ-3a** and **M-AQ-3b**.

Clean Air Plan (CAP)

The compact development of the Partial Preservation Alternative and availability of numerous transportation options would ensure that residents and employees could ride transit, bicycle, and walk to and from the project site instead of taking trips via private automobile. Furthermore, the Partial Preservation Alternative

would be generally consistent with the *General Plan*, and control measures identified in the 2010 CAP that are implemented by the *General Plan* and the *Planning Code*. Compliance with these requirements would ensure that the Partial Preservation Alternative includes relevant transportation control measures specified in the 2010 CAP. Therefore, the Partial Preservation Alternative would include applicable control measures identified in the 2010 CAP to meet the 2010 CAP's primary goals.

Odors

Typical odor sources of concern include wastewater treatment plants, sanitary landfills, transfer stations, composting facilities, petroleum refineries, asphalt batch plants, chemical manufacturing facilities, fiberglass manufacturing facilities, auto body shops, rendering plants, and coffee roasting facilities. Restaurants and other food and drinking places could produce some odors, but these types of uses already exist in the project vicinity and are not generally considered sources of objectionable odors. The Partial Preservation Alternative includes residential, office, and retail/restaurant space, and would not create significant sources of new odors. Therefore, odor impacts would be less than significant.

Wind

Under the Partial Preservation Alternative, the project site would be developed with up to the same heights as analyzed under the proposed project. With the preservation of a greater portion of the 1500 Mission Street building, the 11-story residential podium on the southern portion of the site would have a reduced footprint along Mission Street, while the office tower would include a setback at the eighth floor on its southern flank and a somewhat greater floorplate extending west towards South Van Ness Avenue. These changes in massing would be anticipated to result in some changes in localized wind speeds at certain test points, when compared to conditions with the proposed project. The Partial Preservation Alternative would include the same wind-reducing physical features (a canopy plus street trees and wind screens) as the proposed project that would be required to reduce this alternative's wind impacts. In addition, Section 148 of the *Planning Code* would require alternative-specific wind-tunnel testing of this alternative to ensure that the alternative design would not result in significant wind impacts, either individually or cumulatively. As with the proposed project, under cumulative conditions, wind speeds would increase compared to existing conditions. While cumulative wind conditions would deteriorate to the point that there would be a significant impact, with the wind-reducing physical features as described under the proposed project, the Partial Preservation Alternative's contribution to this impact would not be cumulatively considerable.

Shadow

Because shadow impacts of the proposed project are largely driven by the 416-foot-tall residential tower, and because this tower would have the same height and massing under the Partial Preservation Alternative as under the proposed project, shadow impacts of this alternative on Patricia's Green would be the same as with the proposed project; and these impacts would be less than significant. As with the proposed project, the Partial Preservation Alternative would cast net new shadow on streets and sidewalks in the project vicinity, but the net new shadow would be transitory in nature, would not exceed levels commonly expected in urban areas, and would be considered a less-than-significant effect under CEQA. As addressed in Section IV.E, *Shadow*, while the cumulative buildout of the environment would result in an increase of shading of Patricia's

Green by 16.44 percent over the current setting, the Partial Preservation Alternative, as with the proposed project, would not contribute considerably to this impact.

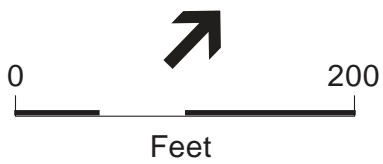
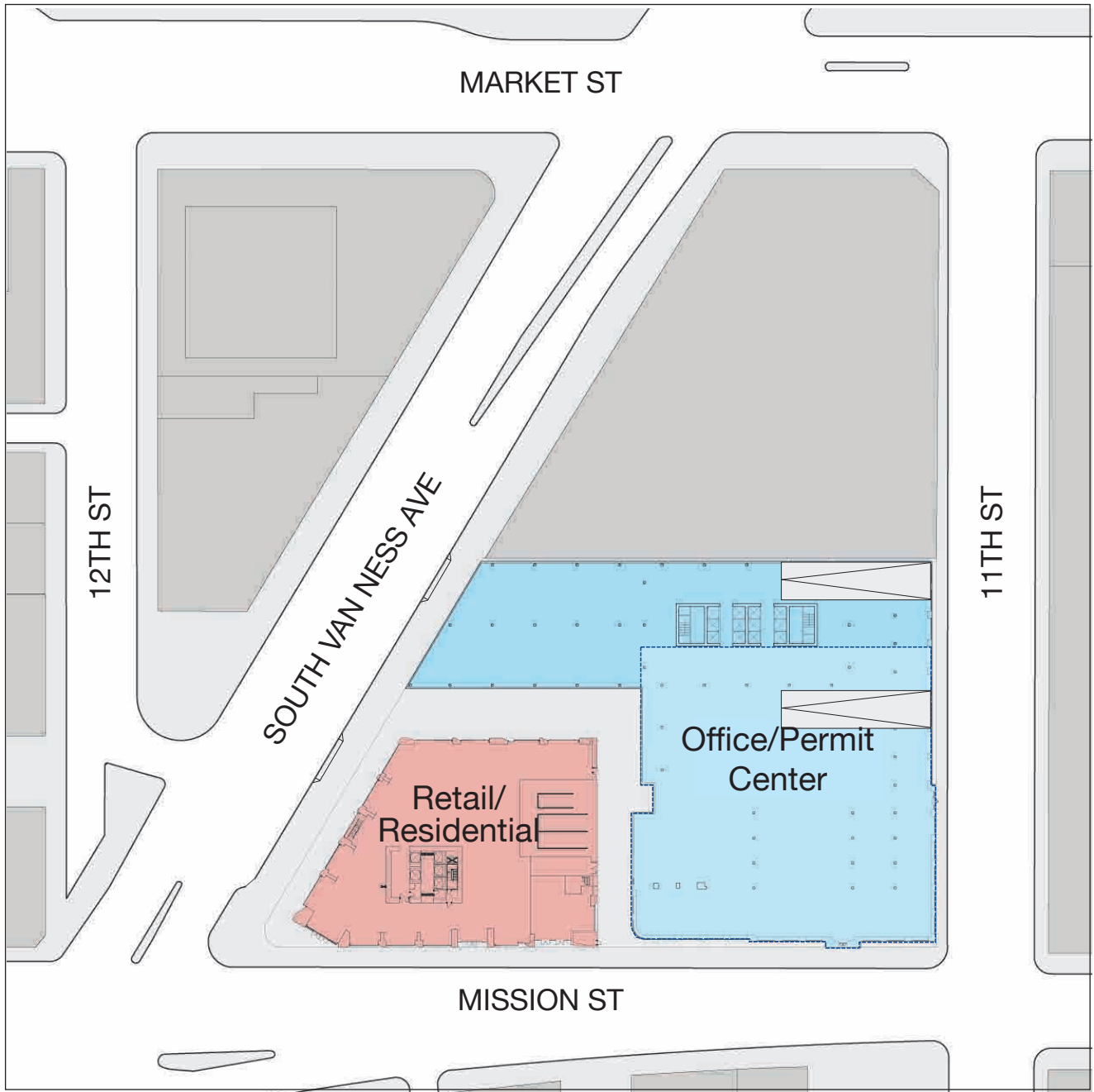
Issues Analyzed in the Initial Study

Other issues related to the intensity of development (population and housing, operational noise, greenhouse gas emissions, recreation, utilities and service systems, public services, energy resources) would be incrementally reduced with this alternative, compared to those under the proposed project, given the overall decrease in the development program; as with the proposed project, these impacts would be less than significant. Construction noise would be significant but reduced to a less-than-significant level with implementation of **Mitigation Measure M-NO-2, Construction-Related Noise Reduction**, as with the proposed project. Impacts related to the footprint and location of development (land use, geology and soils, hydrology and water quality, hazards/hazardous materials [except those related to exposure to hazardous building materials], mineral resources, and agricultural/forest resources) would be similar to or the same as impacts of the proposed project, given that comparably sized structures would be developed at the same location as under the proposed project, with a comparable degree of excavation required. Potential exposure of construction workers and the public to hazardous building materials would be significant but reduced to a less-than-significant level with implementation of **Mitigation Measure M-HZ-2, Hazardous Building Materials Abatement**, as with the proposed project. In addition, ground-disturbing activities could expose and cause impacts on unknown paleontological resources, which would be a potentially significant impact. With implementation of **Mitigation Measure M-GE-6, Inadvertent Discovery of Paleontological Resources**, adverse effects on paleontological resources by recovering fossils and associated contextual data prior to and during ground-disturbing activities would be reduced to a less-than-significant level, as with the proposed project.

VI.D.3 Alternative C: Full Preservation Alternative

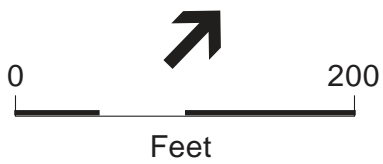
Description

The Full Preservation Alternative would be similar to the Partial Preservation Alternative by providing features to reduce impacts on historic structures, with the following additional features: the office tower would be set back approximately 59 feet from the principal 11th Street façade of the 1500 Mission Street building, more than twice the setback of the Partial Preservation Alternative. The Full Preservation Alternative would provide an even further setback from Mission Street to the office building tower, as no second floor would be added behind the existing clock tower. Thus, in addition to preserving the exterior features of the existing building, this alternative would retain a substantial portion of the industrial warehouse section of the building, including wire glass skylights, exposed steel truss work/structural framing, unfinished concrete floor, and the full-height interior space. Most of these features would remain intact as part of the 41,200-square-foot permit center that would be housed within the ground floor of the office building, (refer to **Figure VI-3a, Alternative C: Full Preservation Alternative Ground Floor**; **Figure VI-3b, Alternative C: Full Preservation Alternative Roof**; **Figure VI-3c, Alternative C: Full Preservation Alternative Sections**; and **Figure VI-3d, Alternative C: Full Preservation Alternative Elevations**). As with the Partial Preservation



SOURCE: SOM, 2016 1500 Mission Street; Case No. 2014-000362ENV

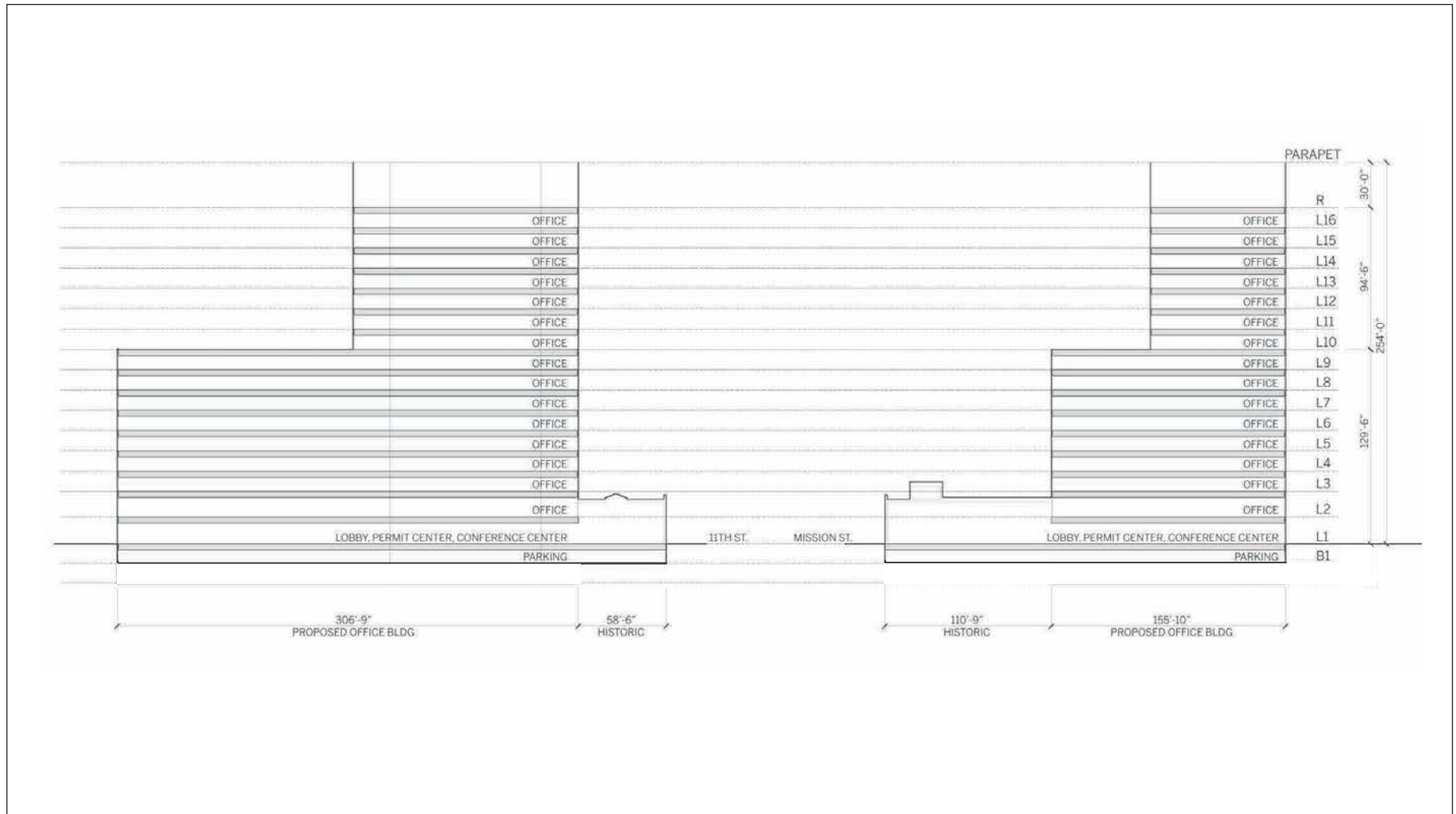
Figure VI-3a
Alternative C: Full Preservation Alternative Ground Floor



SOURCE: SOM, 2016

1500 Mission Street; Case No. 2014-000362ENV

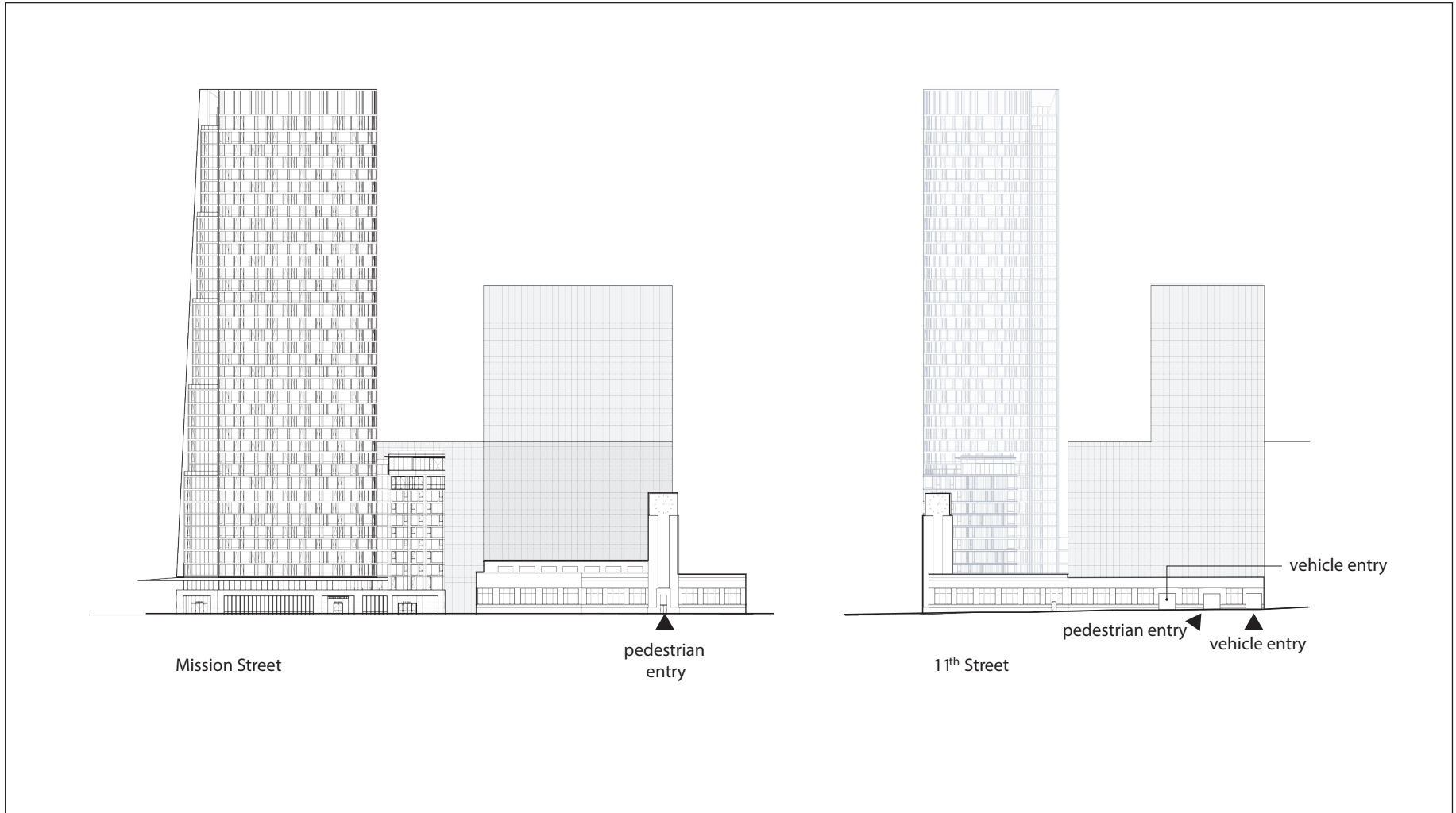
Figure VI-3b
Alternative C: Full Preservation Alternative Roof



SOURCE: SOM, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure VI-3c
Alternative C: Full Preservation Alternative Sections



SOURCE: SOM, 2016

Figure VI-3d
Alternative C: Full Preservation Alternative Elevations

Alternative, this alternative would include identical wind-reducing physical features as those described in under the proposed project along South Van Ness Avenue and Mission Street (see Chapter II, *Project Description*). The Full Preservation Alternative would provide 468 dwelling units, approximately 35,900 square feet of retail/restaurant space, and approximately 452,400 square feet of office space, with no childcare facility.

The Full Preservation Alternative would retain the Mission Street and 11th Street facades of the existing 1500 Mission Street building in their entirety; a new office tower would be constructed at the rear northwest corner of the existing building. A vehicular access driveway to the office and permit center below-grade parking garage would be provided on 11th Street at the northeast corner of the project site. A second vehicular access driveway to the below-grade residential/retail parking garage, which would alter up to two of bays of the retained 11th Street facade, would be constructed four bays to the south. In addition, a new pedestrian entrance would be provided between the two driveways. A significant portion of the industrial warehouse section of the building with wire glass skylights, exposed steel truss work/structural framing, unfinished concrete floor, and full-height interior space would remain intact. All of the character-defining features on these two elevations, and for the majority of the building, would be retained, including the following:

- Overall form and massing (front two-story office section, rear one-story warehouse section, vertical clock tower projection);
- Horizontal emphasis along Mission Street (juxtaposed with tower projection) and 11th Street facades;
- Rounded corners and curved surfaces;
- Speed lines (bands of horizontal piping);
- Flat roof with coping at the roofline;
- Smooth concrete wall surface;
- Wraparound window at the corner;
- General absence of historically derived ornamentation;
- Asymmetrical Mission Street façade;
- Recessed entry vestibule on Mission Street;
- Multi-pane, industrial steel sash windows, throughout;
- Clock faces at tower; and
- Paired steel doors and tall transom at main entrance with decorative detailing.

Residential and Retail/Restaurant Component

The Full Preservation Alternative would provide a residential and retail component on a reduced footprint, compared to the proposed project (the same as with the Partial Preservation Alternative). Like the Partial Preservation Alternative, the Full Preservation Alternative would include 468 residential units—92 units fewer than the proposed project’s 560 residential units (16 percent)—and would provide 35,900 square feet of retail/restaurant space, approximately 9,600 square feet of which would be restaurant space, and 511,500 square feet of residential space. Like the Partial Preservation Alternative, there would be approximately 2,100 square feet (six percent) less retail/restaurant space than with the project.

Office and Permit Center Component

Under this alternative, new construction would be set back approximately 59 feet from the 11th Street elevation, or just over twice the setback in the Partial Preservation Alternative. As with the Partial Preservation Alternative, the setback of the new tower would be approximately 111 feet from the Mission Street elevation (about 90 feet from the rear elevation of the clock tower); however under the Full Preservation Alternative there would be no additions introduced within these setbacks. The office tower, at the northeast corner of the building, would step up to nine stories (compared to seven stories with the Partial Preservation Alternative), and then up to 16 stories at the rear of the building, beginning about 180 feet back from the Mission Street façade. The Mission Street and 11th Street façades of the existing 1500 Mission Street building would not be modified, and the office and permit center component would be located on a larger footprint than under the proposed project, with parking access to the office and residential garages provided from 11th Street. This alternative would provide approximately 452,500 square feet of office space, 2,600 square feet (one percent) more than with the proposed project, including the permit center within the retained 1500 Mission Street building. Due to the layout of the project site, this alternative would be unable to provide the required open space needed for the childcare facility. Therefore, no childcare facility would be included in the Full Preservation Alternative.

Open Space

As with the proposed project, the Full Preservation Alternative would provide a mid-block alley from Mission Street to a mid-block concourse. Open spaces would be located on the roofs of the lower podium levels, adjacent to the towers (refer to **Figure VI-3a, Alternative C: Full Preservation Alternative Ground Floor**).

Parking, Loading, and Bicycle Facilities

As with the proposed project, a vehicular access driveway to the office and permit center below-grade parking garage would be provided on 11th Street at the northeast corner of the project site. A second vehicular access driveway to the below-grade residential/retail parking garage, which would alter up to two of bays of the retained 11th Street facade, would be constructed four bays south of the office and permit center garage entrance. In addition, a new pedestrian entrance provided between the two driveways (refer to **Figure VI-3a, Alternative C: Full Preservation Alternative Ground Floor** and **Figure VI-3d, Alternative C: Full Preservation Alternative Elevations**). In addition, this alternative would provide 498 Class 1 and 76 Class 2 bicycle parking spaces. The Full Preservation Alternative would have only one level of below-grade parking beneath both the office and permit center component and the residential retail/restaurant component. As a result, this alternative would provide approximately 25 vehicle parking spaces for offices and 117 vehicle parking spaces for residential use; the latter would represent a ratio of 0.25 spaces per dwelling unit, which is the maximum principally permitted (without Conditional Use authorization) in the existing Van Ness & Market Downtown Residential Special Use District. As with the proposed project, this alternative would provide three residential loading spaces and five office loading spaces. Residential/retail building off-street loading spaces would be accessed from the mid-block alley, as under the proposed project. Due to the retention of the one-story basement under the 1500 Mission Street building, the scale of the one-story new construction basement parking structure would be reduced and vehicle parking spaces under this alternative would be approximately 66 percent less than the proposed project (142 spaces compared with up to 420 spaces). As

such, this alternative also would likely require less excavation for the below-grade parking garage than the proposed project.

Ability to Meet Project Objectives

City's Objectives

As noted above, the Full Preservation Alternative would provide slightly more office space, 6 percent less retail/restaurant space, and 16 percent fewer residential units than would the proposed project. The Full Preservation Alternative would not include a childcare facility within the office and permit center component. Therefore, the Full Preservation Alternative would meet or partially meet most of the project sponsor's and the City's objectives, though to a lesser degree than the proposed project. In particular, this alternative would meet the City's following objectives: consolidation of several City Departments within a new, seismically-sound, Class-A, LEED Gold City office building large enough to accommodate several City departments, located in immediate proximity to mass transit and services in the Civic Center Area; allow for potential physical connections to the existing City offices at One South Van Ness Avenue; provide large floor plates, including a one-stop permit center and shared conference and meeting facilities; and provide a publicly-accessible mid-block concourse (Objectives 1, 2, 3, 5, and 6). However, this alternative would provide fewer parking spaces on-site compared to the proposed project, and would not provide for on-site child care (Objectives 4 and 7).

Goodwill SF Urban Development, LLC's Objectives

This alternative would at least partially meet many of Goodwill SF Urban Development, LLC's objectives for the retail/residential component including: redeveloping a large underutilized site with a range of residential unit types (including affordable units) and neighborhood serving retail and personal service uses consistent with the Market & Octavia Area Plan; providing for a new City office building; developing on-site retail space; and retaining portions of the 1500 Mission Street building (Objectives 1, 3, 4, 5, and 6). However, by reducing the size of the residential and retail/restaurant component, this alternative would provide 16 percent fewer residential units (including 20 fewer affordable housing units, assuming 20 percent of the residential units would be affordable housing units, as with the proposed project) and six percent less retail/restaurant space than would the proposed project (Objective 2). Therefore, this alternative meets all of the project sponsor's basic objectives, though to a lesser level than the proposed project.

Impacts

Cultural Resources

Historical Resources

The Full Preservation Alternative would maintain the majority of the character-defining features and spaces of the existing historical resource by setting back the development of the primary office tower well beyond the facades. However, interior alterations would be required within the historic warehouse space in the area of the new podium and tower, and portions of the existing skylights in that area would be removed for the new

office tower construction. Under the Full Preservation Alternative, the two vehicle entrances and pedestrian entrance off 11th Street through the bays, as shown in **Figure VI-3d, Alternative C: Full Preservation Alternative Elevations**, would not significantly alter the historic resource. Most of the essential features and spaces that characterize the historic building and that justify its eligibility for inclusion in the California Register would remain intact. As such, the Full Preservation Alternative would not cause a material impairment to the existing historic 1500 Mission Street building, and thus would result in a less-than-significant impact on the historic resource. As with the proposed project, the Full Preservation Alternative would not result in a cumulative impact; therefore the cumulative impact would be less than significant.

Archeological Resources

The amount of excavation for the Full Preservation Alternative would be less than that required for the proposed project; therefore, potential significant impacts to archeological resources could be reduced. However, the required excavation could still potentially result in significant impacts to archeological resources; therefore, mitigation measures would be required to reduce impacts to less than significant. **Mitigation Measures M-CR-3, Archeology Resources (Testing), M-CR-4, Inadvertent Discovery of Human Remains, and Mitigation Measure M-CR-5, Tribal Cultural Resources Interpretive Program**, would be applicable to the Full Preservation Alternative and, as with the proposed project, would reduce potential impacts to a less-than-significant level.

Transportation and Circulation

VMT

The project site is located within an area of the City where the existing VMT is more than 15 percent below the regional VMT thresholds, and, therefore, the proposed residential, retail/restaurant, office, and childcare uses under this alternative would not generate a substantial increase in VMT. The proposed residential, retail/restaurant, office, and childcare uses are land use types known not to increase VMT per capita. In addition, the Full Preservation Alternative's features that would alter the transportation network would be similar to the proposed project, and would fit within the general types of projects that would not substantially induce automobile travel. Thus, as with the proposed project, impacts related to VMT and induced automobile travel would be less than significant under this alternative.

Traffic

The Full Preservation Alternative, as with the proposed project, would not change any adjacent travel lanes or include any features that would cause a traffic hazard. The Full Preservation Alternative would result in seven percent fewer daily vehicle trips and nine percent fewer p.m. peak-hour vehicle trips than the proposed project. The Full Preservation Alternative would include fewer vehicle parking spaces and generate fewer vehicle trips than the proposed project, and as with the proposed project, garage driveway operations would not affect 11th Street transit or traffic operations, or result in a traffic hazard. As with the proposed project, this alternative would increase the potential for conflicts between vehicles assessing the project site and transit, bicyclists, and pedestrians, although the increased potential would be less than the proposed project due to fewer trips by all modes generated by this alternative. While traffic impacts under this alternative would be less than significant, **Improvement Measure I-TR-2a, Monitoring and Abatement of Queues, and I-TR-2b,**

Transportation Demand Management (TDM) Program, identified for the proposed project, would also be applicable to this alternative to further reduce its less-than-significant traffic impacts.

Transit

The Full Preservation Alternative would result in seven percent fewer p.m. peak-hour transit trips than would the proposed project. As with the proposed project, the impact of this alternative on local and regional transit capacity utilization would be less than significant. As with the proposed project, access to the on-site loading spaces for the residential building would be via Mission Street and a mid-block alley, and unrestricted truck access into the on-site loading spaces would have the potential to delay westbound Muni bus routes on Mission Street, and result in a significant impact on Muni transit operations. **Mitigation Measure M-TR-3, Avoidance of Conflicts Associated with On-Site Loading Operations**, would manage loading access and activities for the residential building, and would reduce impacts on Muni operations to less than significant.

Pedestrians and Bicycles

In terms of pedestrian and bicycle operations, the Full Preservation Alternative would result in less travel by these modes, compared to the proposed project, and would implement the same proposed street network changes, including widened sidewalks, that would augment City-planned pedestrian- and bicycle-related improvements. While the addition of pedestrian trips under this alternative would incrementally increase pedestrian volumes on adjacent streets, the additional trips would not substantially affect pedestrian flows, as would be the case for the proposed project. Although this alternative would result in an increase in the number of bicycles in the vicinity of the project site, it would result in fewer vehicle trips than the proposed project.

As with the proposed project, access to the on-site loading spaces for the residential building would be via Mission Street and a mid-block alley, and unrestricted truck access into the on-site loading spaces would have the potential for conflicts and safety hazards between trucks, pedestrians and bicyclists on Mission Street. Thus, this alternative would result in a significant impact on pedestrians and bicyclists. **Mitigation Measure M-TR-3, Avoidance of Conflicts Associated with On-Site Loading Operations**, would manage loading access and activities for the residential building, and would mitigate impacts on pedestrians and bicyclists to less than significant.

Loading

As with the proposed project, the Full Preservation Alternative would provide three truck loading spaces with access from Mission Street for the residential and retail/restaurant uses. Five truck loading spaces would be provided within the office building garage with from 11th Street as for the proposed project. This alternative would generate somewhat less demand for loading spaces than the proposed project, and the loading demand would be accommodated on-site. As with the proposed project, vehicle access to the residential and retail on-site loading spaces could conflict with pedestrians, bicycles, buses, and other vehicles on Mission Street, as well as with pedestrians within the mid-block alley, which would be considered a significant loading impact. As with the proposed project, **Mitigation Measure M-TR-3, Avoidance of Conflicts Associated with On-Site Loading**, would mitigate impacts to less than significant.

Emergency Access

Under the Full Preservation Alternative, emergency vehicle access to block containing the project site would remain unchanged from existing conditions, and adjacent travel lanes would not be changed, as would be the case with the proposed project. The impacts on emergency access in the area would be less than significant, as would be the case with the proposed project.

Construction Impacts

Construction activities associated with the Full Preservation Alternative would be similar to those described for the proposed project, though somewhat less intensive due to the smaller project size. While the construction-related transportation impacts under this alternative would be less than significant, **Improvement Measure I-TR-8, Construction Management Plan and Public Updates**, identified for the proposed project, would also be applicable to this alternative to further reduce its less-than-significant construction-related transportation effects.

Cumulative Impacts

Under 2040 cumulative conditions, as with the proposed project, the Full Preservation Alternative, in combination with past, present and reasonably foreseeable development in San Francisco, would not result in cumulative VMT, traffic, pedestrian, loading, and emergency vehicle access impacts. This alternative would not contribute considerably to cumulative transit impacts, although its contribution would be less than for the proposed project. As with the proposed project, the Full Preservation Alternative would contribute considerably to cumulative bicycle impacts. However, as with the proposed project, implementation of **Mitigation Measure M-TR-3, Avoidance of Conflicts Associated with On-Site Loading**, would reduce the cumulative bicycle impacts to a less-than-significant level. Similar to the proposed project, the Full Preservation Alternative would contribute considerably to cumulative construction-related transportation impacts, although to a lesser extent due to the smaller project size. As with the proposed project, with implementation of **Mitigation Measure M-C-TR-8, Construction Coordination**, the cumulative construction-related transportation impacts would remain significant and unavoidable with mitigation.

Air Quality

Development under the Full Preservation Project Alternative would result in an incrementally reduced buildout scale, including reduced excavation of the project site, due to the full preservation of the 1500 Mission Street building, and, therefore, a reduced residential component.

As with the proposed project, the Full Preservation Alternative would also include maintenance operation of two backup diesel generators. The location of the generators for this project alternative is not currently available. However, based on the building scheme, the two towers proposed for this alternative would be of the same approximate height (identical number of stories) as the proposed project. The exhaust port of the generator for the residential tower would be located in a one-story structure to the north of the residential tower under the proposed project. Under the Full Preservation Alternative, the adjacent structure to the north would be two stories in height. This indicates that the exhaust port for the residential generator under the Partial Preservation Alternative would be at a similar, or likely higher, elevation than that for the proposed

project. There would be no childcare facility associated with the Full Preservation Alternative and only residential receptors would be located on-site. Under the Full Preservation Alternative, the childcare facility under the proposed project would be occupied by office space and would not be considered a sensitive receptor.

Construction Criteria Air Pollutant Impacts

Although scaled back slightly from the proposed project in terms of the floor area and excavation, the overall intensity of construction on the project site would be slightly reduced from that of the proposed project. Consequently, average daily emissions of criteria air pollutants would be expected to be slightly less than the proposed project; therefore, like the proposed project, this alternative would also have a less than significant impact with regard to construction-related emissions of criteria pollutants.

Operational Criteria Air Pollutant Impacts

As noted above, this alternative would generate seven percent fewer daily vehicle trips than would the proposed project. This alternative would have 18 percent fewer residential units, six percent less retail/restaurant space, and one percent more office space; total floor area would be about 11 percent less than with the proposed project. Thus, criteria pollutant emissions from both vehicular traffic and building operations (burning of natural gas) would be reduced compared to the proposed project's criteria pollutant emissions, and impacts to air quality would be less substantial than those of the proposed project. Therefore, as with the proposed project, operational criteria pollutant emissions would be less than significant.

Health Risk Impacts

As with the proposed project, due to the proximity to existing sensitive receptors and the inclusion of backup diesel generators, buildout of the Full Preservation Alternative would generate TACs, including diesel particulate matter from construction and operations, exposing sensitive receptors to substantial air pollutant concentrations. The overall intensity of construction on the project site would generally be similar to that of the proposed project and would therefore have similar significant impact to off-site receptors from construction activities.

Although this alternative would not include a childcare facility, future residential occupants would be sensitive receptors that could be impacted by the generator emissions and vehicle emissions. Based on the likely location of the exhaust ports under the Partial Preservation Alternative, discussed above, it is reasonable to assume that risks from generator emissions would be the same or less than those of the proposed project, as it is likely that exhaust ports would be at a higher elevation. Unmitigated increased cancer risks to the maximally impacted residential receptor for the proposed project are estimated in the Air Quality Technical Report to be 6.3 in one million, which is below the 7 in one million threshold for health risk in an area, and thereby meets the Air Pollutant Exposure Zone criteria.²¹⁸ Consequently, the Full Preservation Alternative would not result in a significant impact to on-site sensitive receptors and **Mitigation Measure M-AQ-3b, Construction Air Quality**, would not be required. Article 38 also requires that the project sponsor submit an Enhanced Ventilation Proposal for approval by DPH that achieves protection from PM_{2.5} (inclusive of DPM). This requirement would reduce risk exposure to future occupants of the Full Preservation Alternative.

²¹⁸ Ramboll Environ, *Air Quality Technical Memorandum, 1500 Mission Street Project*, November 8, 2016.

As with the proposed project, due to the proximity of off-site sensitive receptors, construction of the Full Preservation Alternative would generate TACs, including diesel particulate matter, exposing sensitive receptors to substantial air pollutant concentration. **Mitigation Measure M-AQ-3a, Construction Air Quality**, would reduce construction emissions of TACs to a less-than-significant level.

Under the Full Preservation Alternative, the overall project would be comparable to that with the proposed project, and thus cumulative effects would be comparable as well. Therefore, cumulative construction and operational emissions would be less than significant. As with the proposed project, cumulative construction TAC emissions would be less than significant with implementation of **Mitigation Measure M-AQ-3a, Construction Air Quality**. Cumulative operational emissions of TACs would be less than significant and would not require any mitigation.

Clean Air Plan

The compact development of the Full Preservation Alternative and availability of numerous transportation options would ensure that residents and employees could ride transit, bicycle, and walk to and from the project site instead of taking trips via private automobile. Furthermore, the Full Preservation Alternative would be generally consistent with the *General Plan*, and control measures that are identified in the 2010 CAP are implemented by the *General Plan* and the *Planning Code*. Compliance with these requirements would ensure the Full Preservation Alternative includes relevant transportation control measures specified in the 2010 CAP. Therefore, the Full Preservation Alternative would include applicable control measures identified in the 2010 CAP to the meet the 2010 CAP's primary goals.

Odors

Typical odor sources of concern include wastewater treatment plants, sanitary landfills, transfer stations, composting facilities, petroleum refineries, asphalt batch plants, chemical manufacturing facilities, fiberglass manufacturing facilities, auto body shops, rendering plants, and coffee roasting facilities. Restaurants and other food and drinking places could produce some odors, but these types of uses already exist in the project vicinity and are not generally considered sources of objectionable odors. The Full Preservation Alternative includes residential, office, and retail/restaurant space, and would not create significant sources of new odors. Therefore, odor impacts would be less than significant.

Wind

Under the Full Preservation Alternative, the project site would be developed with up to the same heights as analyzed under the proposed project. With the retention of a greater portion of the 1500 Mission Street building, the 11-story residential podium on the southern portion of the site would have a reduced footprint along Mission Street, while the office tower would include a setback at the eighth floor on its southern flank and a somewhat greater floorplate extending west towards South Van Ness Avenue. These changes in massing would be anticipated to result in some changes in localized wind speeds at certain test points, when compared to conditions with the proposed project. The Full Preservation Alternative would include the same wind-reducing physical features (a canopy plus street trees and wind screens) as the proposed project that would be required to reduce this alternative's wind impacts. In addition, Section 148 of the *Planning Code* would require alternative-specific wind-tunnel testing of this alternative to ensure that the alternative design

would not result in significant wind impacts. As with the proposed project, under cumulative conditions, wind speeds would increase compared to existing conditions. While cumulative wind conditions would deteriorate to the point that there would be a significant impact, with the wind-reducing physical features as described under the proposed project, the Full Preservation Alternative's contribution to this impact would not be cumulatively considerable.

Shadow

Because shadow impacts of the proposed project are largely driven by the 416-foot-tall residential tower, and because this tower would have the same height and massing under the Full Preservation Alternative as under the proposed project, shadow impacts of this alternative on Patricia's Green would be the same as with the proposed project; therefore, these impacts would be less than significant. As with the proposed project, the Full Preservation Alternative would cast net new shadow on streets and sidewalks in the project vicinity, but the net new shadow would be transitory in nature, would not exceed levels commonly expected in urban areas, and would be considered a less-than-significant impact under CEQA. As addressed in Section IV.E, *Shadow*, while the cumulative buildout of the environment would result in an increase of shading of Patricia's Green by 16.44 percent over the current setting, the Full Preservation Alternative, like the proposed project, would not contribute significantly to this impact.

Issues Analyzed in the Initial Study

Other issues related to the intensity of development (population and housing, operational noise, greenhouse gas emissions, recreation, utilities and service systems, public services, energy resources) would be incrementally reduced with this alternative, compared to those under the proposed project, given the overall decrease in the development program; as with the proposed project, these impacts would be less than significant. Construction noise would be significant but reduced to a less-than-significant level with implementation of **Mitigation Measure M-NO-2, Construction-Related Noise Reduction**, as with the proposed project. Impacts related to the footprint and location of development (land use, geology and soils, hydrology and water quality, hazards/hazardous materials (except those related to exposure to hazardous building materials), mineral resources, and agricultural/forest resources) would be very similar to or the same as impacts of the proposed project, given that comparably sized structures would be developed at the same location as under the proposed project, with a comparable degree of excavation required. Potential exposure of construction workers and the public to hazardous building materials would be significant but reduced to a less-than-significant level with implementation of **Mitigation Measure M-HZ-2, Hazardous Building Materials Abatement**, as with the proposed project. In addition, ground-disturbing activities could expose and cause impacts on unknown paleontological resources, which would be a potentially significant impact. With implementation of **Mitigation Measure M-GE-6, Inadvertent Discovery of Paleontological Resources**, adverse effects on paleontological resources by recovering fossils and associated contextual data prior to and during ground-disturbing activities would be reduced to a less-than-significant level, as with the proposed project.

VI.D.4 Alternative D: All Residential Alternative

Description

This alternative is evaluated as a potential development concept for the project site in the event that the City and County of San Francisco elects not to proceed with an agreement to purchase the office building currently proposed as part of the project and its underlying parcel, and that the project sponsor is unable to secure allocation to develop non-City office space under *Planning Code* Section 321. The All Residential Alternative would provide residential and retail/restaurant uses in the two proposed towers. At complete buildout, Tower 1, located along South Van Ness and Mission Street would be 39 stories, consistent with the proposed project tower at this location, and Tower 2, located on 11th Street between Market and Mission Streets would be 30 stories, or 14 stories taller than the proposed project. Tower 1 would provide 570 residential units in approximately 642,900 square feet, and approximately 38,400 square feet of retail/restaurant space, as well as 298 below-grade parking spaces. Tower 2 would provide 406 residential units in approximately 395,500 square feet, along with 12,700 square feet of retail/restaurant space, and 203 below-grade vehicle parking spaces (refer to **Figure VI-4a, Alternative D: All Residential Alternative Ground Floor**; **Figure VI-4b, Alternative D: All Residential Alternative Roof**; and **Figure VI-4c, Alternative D: All Residential Alternative Elevations**). The same portions of the 1500 Mission Street building would be retained in this alternative as under the proposed project. This alternative would also include identical wind-reducing physical features as those described under the proposed project along South Van Ness Avenue and Mission Street (see Chapter II, *Project Description*).

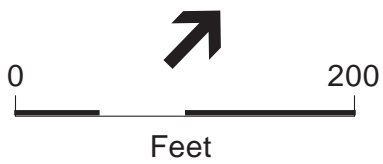
Residential and Retail/Restaurant Component

The All Residential Alternative would provide additional housing and retail/restaurant space as compared to the proposed project. Under this alternative, Tower 1 would provide 570 units, 10 more than the proposed project, and Tower 2 would be entirely devoted to residential housing, providing 406 units within the additional square footage. In addition, nearly 38,400 square feet of retail/restaurant uses would be provided in Tower 1, with an additional 12,700 square feet of similar uses provided in Tower 2.

Apart from modified building heights, this alternative would use the same buildout scope and design of the proposed project, and would provide approximately 416 more residential units for a total of 976 units, 20 percent of which would be affordable units.

Office and Permit Center Component

Under the All Residential Alternative, the project would provide no office or permit center space. In addition, as with the Full Preservation Alternative, this alternative also would not provide a childcare facility.



SOURCE: SOM, 2016

1500 Mission Street; Case No. 2014-000362ENV

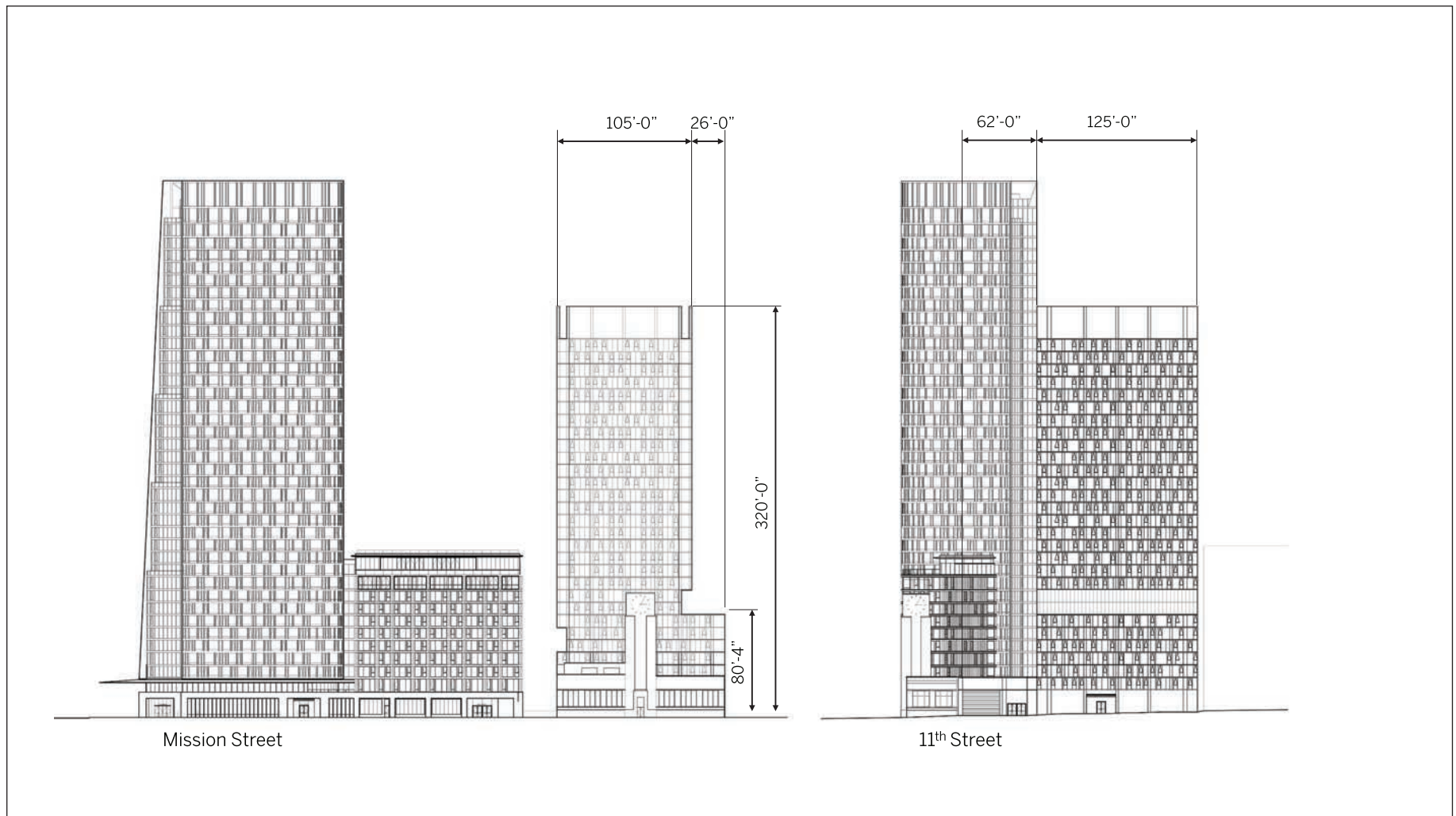
Figure VI-4a
Alternative D: All Residential Alternative Ground Floor



SOURCE: SOM, 2016

1500 Mission Street; Case No. 2014-000362ENV

Figure VI-4b
Alternative D: All Residential Alternative Roof



Parking, Loading, and Bicycle Facilities

The All Residential Alternative would provide 501 parking spaces, an increase of 81 spaces when compared with the up to 420 spaces provided under the proposed project.²¹⁹ Parking would be provided for residents with 298 spaces below Tower 1 and 203 spaces below Tower 2. With these changes, parking and access would vary. Vehicle access would be provided with an entrance between the existing One South Van Ness building and Tower 2 at the northernmost portion of the site along 11th Street, thereby providing access to the below ground parking structure beneath Tower 1. Access to the parking below Tower 2 would be provided by an entrance at approximately the same location as the proposed project along 11th Street. In addition, this alternative would provide 327 Class 1 and 79 Class 2 bicycle parking spaces. Loading would consist of eight spaces to provide for residential services, three ground-level spaces with access from Mission Street, as in the proposed project, and five below grade spaces with access via the Tower 2 vehicular ramp. Due to the 19 percent increase in the number of vehicle parking spaces under this alternative (501 spaces compared with the up to 420 spaces) the scale of the basement parking structure would increase, requiring potentially a larger or deeper footprint.

Open Space

The All Residential Alternative would provide public pedestrian access in the form of a mid-block alley from Mission Street to a pedestrian concourse, as with the proposed project. However, unlike the proposed project, the pedestrian concourse would span the entirety of project site from South Van Ness Avenue to 11th Street. This alternative would provide open space and landscaping similar to that provided under the proposed project, with open spaces located on the roofs of the lower podium levels, adjacent to the towers, (refer to **Figure VI-4a, Alternative D: All Residential Alternative Ground Floor**, and **Figure VI-4b, Alternative D: All Residential Alternative Roof**).

Ability to Meet Project Objectives

City's Objectives

By eliminating the office component of the proposed project, the All Residential Alternative would fail to meet all of the City's objectives (Objectives 1 through 7).

Goodwill SF Urban Development, LLC's Objectives

By expanding the residential component from nearly 626,200 square feet (560 units) to nearly 1,038,500 square feet (976 units), and increasing the square footage of retail/restaurant space, the total residential and retail/restaurant component would exceed the number of units identified in the project sponsor's objectives (Objective 1, 2, 4, 5, and 7). Similarly, by retaining portions of the 1500 Mission Street building, the alternative would further support project objectives (Objective 6). Therefore, the All Residential Alternative would meet some project sponsor's objectives, namely those of Goodwill SF Urban Development, LLC.

²¹⁹ Note: the amount of parking proposed for this alternative would likely need to be reduced to if the proposed TDM Program is adopted, as currently drafted.

Impacts

Cultural

Historical Resources

The All Residential Alternative would develop a residential tower adjacent to the retained portion of the historic 1500 Mission Street building and clock tower. This development would require the same demolition and modifications to the historic 1500 Mission Street building as under the proposed project, and would generate the same significant impacts on historic resources, thereby requiring the same extent of mitigation as under the proposed project. As with the proposed project, implementation of **Mitigation Measures M-CR-2a, Documentation, M-CR-2b, Historic Preservation Plan and Protective Measures, M-CR-2c, Video Recordation of the Historic Resource, and M-CR-2d, Historic Resource Interpretation**, would be required to reduce historic impacts but would not reduce the historic resource impact to less than significant and the impact would be significant and unavoidable. In addition, this alternative would require extensive grading, which could impact cultural and archeological resources as under the proposed project. Impacts to historic and cultural resources, including to the character-defining features of the 1500 Mission Street building, would be anticipated to be the same as those that would occur under the proposed project. As with the proposed project, the All Residential Alternative would not result in a cumulative impact; therefore the cumulative impact would be less than significant.

Archeological Resources

Under the All Residential Alternative, the proposed parking would increase by approximately 19 percent; therefore, the overall intensity of excavation and grading for this alternative could be potentially greater than that of the proposed project. Due to the required excavation, impacts on archeological resources would be analogous to those of the proposed project, given that excavation would be required. **Mitigation Measures M-CR-3, Archeology Resources (Testing), M-CR-4, Inadvertent Discovery of Human Remains, and M-CR-5 – Tribal Cultural Resources Interpretive Program**, would be applicable to the All Residential Alternative and, as with the proposed project, would reduce potential impacts to a less-than-significant level.

Transportation and Circulation

VMT

The project site is located within an area of the City where the existing VMT is more than 15 percent below the regional VMT thresholds and, therefore, the proposed residential and retail/restaurant uses under this alternative would not generate a substantial increase in VMT. The proposed residential and retail/restaurant uses are land use types known not to increase VMT per capita. In addition, the All Residential Alternative's features that would alter the transportation network would be the same as the proposed project, and would fit within the general types of projects that would not substantially induce automobile travel. Thus, impacts related to VMT and induced automobile travel would be less than significant under this alternative, as would be the case with the proposed project.

Traffic

The All Residential Alternative, as with the proposed project, would not change any adjacent travel lanes or include any features that would cause a traffic hazard. The All Residential Alternative would result in 23 percent fewer daily vehicle trips and 14 percent fewer p.m. peak-hour vehicle trips than would the proposed project. The temporal distribution and directionality of project trips throughout the day would change, since this alternative would include more dwelling units than the proposed project and no office space. As with the proposed project, this alternative would increase the potential for conflicts between vehicles accessing the project site and transit, bicyclists, and pedestrians, although the increased potential would be less than the proposed project due to fewer person and vehicle trips generated by this alternative. While traffic impacts under this alternative would be less than significant, **Improvement Measure I-TR-2a, Monitoring and Abatement of Queues**, and **I-TR-2b, Transportation Demand Management (TDM) Program**, identified for the proposed project, would also be applicable to this alternative to further reduce its less-than-significant traffic impacts.

Transit

The All Residential Alternative would result in 33 percent fewer p.m. peak-hour transit trips than would the proposed project. As with the proposed project, the impact of this alternative on local regional transit capacity utilization, and operations on the adjacent and nearby bus routes, would be less than significant. As with the proposed project, vehicle access to the ground floor on-site loading spaces via Mission Street and the mid-block alley would have the potential to delay westbound Muni bus routes on Mission Street, and result in a significant impact on Muni transit operations. As with the proposed project, **Mitigation Measure M-TR-3, Avoidance of Conflicts Associated with On-Site Loading**, would reduce transit impacts to less than significant.

Pedestrians and Bicycles

In terms of pedestrian and bicycle operations, the All Residential Alternative would result in more travel by these modes, compared to the proposed project, and would implement the same transportation-related changes, including widened sidewalks. While the addition of pedestrian trips under this alternative would incrementally increase pedestrian volumes on adjacent streets, the additional trips would not substantially affect pedestrian flows, as would be the case for the proposed project. Although this alternative would result in an increase in the number of bicycles in the vicinity of the project site, it would result in fewer vehicle trips than the proposed project.

As with the proposed project, access to the ground floor on-site loading spaces via Mission Street and the mid-block alley would have the potential for conflicts between trucks, pedestrians, and bicyclists on Mission Street, as well as with pedestrians within the mid-block alley. Thus, this alternative would result in a significant impact on pedestrians and bicyclists. As with the proposed project, **Mitigation Measure M-TR-3, Avoidance of Conflicts Associated with On-Site Loading**, would mitigate pedestrian and bicycle impacts to less than significant.

Loading

The All Residential Alternative would provide three ground level truck loading spaces with access from Mission Street for the residential and retail/restaurant uses, the same as for the proposed project. Five additional truck loading spaces would be provided in the basement of Tower 2 with access from 11th Street, and it is anticipated that the project sponsor would request that curb space on South Van Ness Avenue and 11th Street be designated for commercial and passenger loading. The All Residential Alternative would generate about half as much demand for loading spaces as would the proposed project, and the loading demand would be accommodated on-site and within the proposed on-street commercial loading spaces. Loading would be more heavily focused on residential move-in/move-out and deliveries than with the proposed project, and, similar to the proposed project, loading/unloading activities for larger trucks (e.g., larger moving trucks) would need to occur on South Van Ness Avenue or 11th Street. As with the proposed project, vehicle access to the ground floor on-site loading spaces via Mission Street and the mid-block alley could conflict with pedestrians, bicycles, buses, and other vehicles on Mission Street, as well as with pedestrians within the mid-block alley, which would be considered a significant loading impact. As with the proposed project, **Mitigation Measure M-TR-3, Avoidance of Conflicts Associated with On-Site Loading**, would mitigate impacts to less than significant.

Emergency Access

Under the All Residential Alternative, emergency vehicle access to the block containing the project site would remain unchanged from existing conditions, and adjacent travel lanes would not be changed, as would be the case with the proposed project. The impacts on emergency access in the area would be less than significant, as would be the case with the proposed project.

Construction Impacts

Construction activities associated with the All Residential Alternative would be similar to those described for the proposed project, though somewhat less intensive due to the smaller project size. While the construction-related transportation impacts under this alternative would be less than significant, **Improvement Measure I-TR-8, Construction Management Plan and Public Updates**, identified for the proposed project, would also be applicable to this alternative to further reduce its less-than-significant construction-related transportation effects.

Cumulative Impacts

Under 2040 cumulative conditions, as with the proposed project, the All Residential Alternative, in combination with past, present and reasonably foreseeable development in San Francisco, would not result in cumulative VMT, traffic, pedestrian, loading, and emergency vehicle access impacts, and would not contribute considerably to cumulative transit impacts. As with the proposed project, the All Residential Alternative would contribute considerably to cumulative bicycle impacts. However, as with the proposed project, implementation of **Mitigation Measure M-TR-3, Avoidance of Conflicts Associated with On-Site Loading**, would reduce the cumulative bicycle impacts to a less-than-significant level. Similar to the proposed project, the All Residential Alternative would contribute considerably to cumulative construction-related transportation impacts. As with the proposed project, with implementation of **Mitigation Measure C-M-TR-8**,

Construction Coordination, the cumulative construction-related transportation impacts would remain significant and unavoidable with mitigation.

Air Quality

While the number of residential units would increase by 75 percent compared to the proposed project under the All Residential Alternative, the overall floor area would be 19 percent less than that with the proposed project.

As with the proposed project, the All Residential Alternative would also include maintenance operation of two backup diesel generators. The location of the generators is not currently available. Tower 2 for this alternative would be almost twice as high at the officer tower in the proposed project. Consequently, the location of generator exhaust and the location of receptors would likely be different from the proposed project. There would be no childcare facility associated with the All Residential Alternative, and the only sensitive receptors on-site would be the residential receptors.

Construction Criteria Air Pollutant Impacts

Although scaled back slightly from the proposed project in terms of the floor area, the overall intensity of construction on the project site would generally be similar to that of the proposed project. Consequently, average daily emissions of criteria air pollutant emissions would be expected to be similar or less than the proposed project and, like the proposed project, would also have a less-than-significant impact with regard to construction-related emissions of criteria pollutants.

Operational Criteria Air Pollutants Impacts

This alternative would generate about 23 percent fewer daily vehicle trips. Therefore, traffic-generated emissions of criteria air pollutants would be less than those of the proposed project and emissions from building operations would also be less than with the proposed project. Thus, criteria pollutant emissions from both vehicular traffic and building operations (burning of natural gas) would be reduced compared to the proposed project's criteria pollutant emissions, and impacts to air quality would be less substantial than those of the proposed project. Therefore, as with the proposed project, operational criteria pollutant emissions would be less than significant.

Health Risk Impacts

As with the proposed project, due to proximity to existing sensitive receptors and the inclusion of backup diesel generators, buildout of the All Residential Alternative would generate TACs, including diesel particulate matter from construction and operations, exposing sensitive receptors to substantial air pollutant concentrations. The overall intensity of construction on the project site would generally be similar to that of the proposed project, and would therefore have similar significant impacts to off-site receptors from construction activities.

Although this alternative would not include a childcare facility, future residential occupants would be sensitive receptors that could be impacted by the generator emissions and vehicle emissions of the proposed project. The location of generator exhaust and the location of receptors would likely be different from the

proposed project. Additionally, the All Residential Alternative would locate sensitive receptors in new locations that may experience an increased risk exposure from proposed generator emissions than those calculated for the proposed project. Consequently, the potential exists for the All Residential Alternative to result in a significant impact with respect to on-site receptors. Therefore, it is reasonable to assume that **Mitigation Measures M-AQ-3a, Construction Air Quality, and M-AQ-3b, Diesel Generator Specifications**, would be required to reduce construction and operational emissions of TACs. The degree to whether these mitigation measures alone would be sufficient to reduce emissions to a less-than-significant level is not known. Article 38 requires that the project sponsor submit an Enhanced Ventilation Proposal for approval by DPH that achieves protection from PM_{2.5} (inclusive of DPM). This requirement would reduce risk exposure to future occupants of the All Residential Alternative.

Clean Air Plan

The compact development of the All Residential Alternative and availability of numerous transportation options would ensure that residents and employees could ride transit, bicycle, and walk to and from the project site instead of taking trips via private automobile. Furthermore, the All Residential Alternative would be generally consistent with the *General Plan* and, applicable control measures identified in the 2010 CAP that are implemented by the *General Plan* and the *Planning Code*. Compliance with these requirements would ensure the All Residential Alternative includes relevant transportation control measures specified in the 2010 CAP. Therefore, the All Residential Alternative would include applicable control measures identified in the 2010 CAP to the meet the 2010 CAP's primary goals.

Odors

Typical odor sources of concern include wastewater treatment plants, sanitary landfills, transfer stations, composting facilities, petroleum refineries, asphalt batch plants, chemical manufacturing facilities, fiberglass manufacturing facilities, auto body shops, rendering plants, and coffee roasting facilities. Restaurants and other food and drinking places could produce some odors, but these types of uses already exist in the project vicinity and are not generally considered sources of objectionable odors. The All Residential Alternative includes residential and retail/restaurant space, and would not create significant sources of new odors. Therefore, odor impacts would be less than significant.

Wind

Under the All Residential Alternative, the project site would be developed with a 39-story tower and a 30-story tower. This buildout would occur over the same footprint as under the proposed project. The All Residential Alternative would include the same wind-reducing design features (a canopy plus street trees and wind screens) as the proposed project that would be required to reduce this alternative's wind impacts. However, the increase in building height of the second tower on Mission and 11th Streets, compared to the 11th Street tower with the proposed project, could change some pedestrian-level wind conditions compared to those of the proposed project. In general, existing wind conditions are somewhat calmer on 11th Street than on South Van Ness Avenue. Section 148 of the *Planning Code* would require alternative-specific wind-tunnel testing of this alternative to ensure that the alternative design would not result in significant wind impacts, either individually or cumulatively. As with the proposed project, under cumulative conditions, wind speeds would increase, compared to existing conditions. While cumulative wind conditions would deteriorate to the

point that there would be a significant impact, with the wind-reducing physical features as described under the proposed project and/or other features specific to this alternative, the All Residential Alternative's contribution to this impact would not be cumulatively considerable.

Shadow

The All Residential Alternative's increased building height (from 16 to 30 stories for Tower 2) would result in greater shadow impacts to streets and sidewalks in the project vicinity. However, based on the Planning Department's shadow fan analysis for this alternative, the additional height of Tower 2 in the All Residential Alternative would not add new shadow to Patricia's Green or any other Recreation and Park Department property subject to *Planning Code* Section 295.²²⁰ Therefore, shadow effects on Patricia's Green, as a result of development of Tower 1, would be the same as with the proposed project, and would be less than significant. As with the proposed project, the All Residential Alternative would cast net new shadow on streets and sidewalks in the project vicinity, but the net new shadow would be transitory in nature, would not exceed levels commonly expected in urban areas, and would be considered a less-than-significant effect under CEQA. As addressed in Section IV.E, *Shadow*, while the cumulative buildout of the environment would result in an increase of shading of Patricia's Green by 16.44 percent over the current setting, the All Residential Alternative, as with the proposed project, would not contribute considerably to this impact.

Issues Analyzed in the Initial Study

Other issues related to the intensity of development (population and housing, operational noise, greenhouse gas emissions, recreation, utilities and service systems, public services, energy resources) could increase with this alternative, compared to those under the proposed project, given the overall increase in the residential development program; however, as with the proposed project, these impacts would likely be less than significant. Construction noise would be significant but reduced to a less-than-significant level with implementation of **Mitigation Measure M-NO-2, Construction-Related Noise Reduction**, as with the proposed project. Impacts related to the footprint and location of development (land use, geology and soils, hydrology and water quality, hazards/hazardous materials [except those related to exposure to hazardous building materials], mineral resources, and agricultural/forest resources) could increase given that the amount of excavation would potentially increase as a result of the increase in the amount of parking spaces provided for the alternative. Potential exposure of construction workers and the public to hazardous building materials would be significant but reduced to a less-than-significant level with implementation of **Mitigation Measure M-HZ-2, Hazardous Building Materials Abatement**, as with the proposed project. In addition, ground-disturbing activities could expose and cause impacts on unknown paleontological resources, which would be a potentially significant impact. With implementation of **Mitigation Measure M-GE-6, Inadvertent Discovery of Paleontological Resources**, adverse effects on paleontological resources by recovering fossils and associated contextual data prior to and during ground-disturbing activities would be reduced to a less-than-significant level, as with the proposed project.

²²⁰ San Francisco Planning Department, "1500 Mission Street Shadow Fan (All Residential Alternative)," October 6, 2016.

VI.E Environmentally Superior Alternative

The CEQA Guidelines require the identification of an environmentally superior alternative (Section 15126.6(e)). The environmentally superior alternative is the alternative that best avoids or lessens any significant impacts of the proposed project, even if the alternative would impede to some degree the attainment of the project objectives. A comparison of the development program and impacts identified for the proposed project and the project alternatives is provided below in **Table VI-2, Comparison of the Significant Environmental Impacts of Project to Impacts of Alternatives**. If it is determined that the “no project” alternative would be the environmentally superior alternative, then the EIR shall also identify an environmentally superior alternative among the other project alternatives (Section 15126.6(3)).

The proposed project would result in significant unavoidable impacts related to the cultural resources, in that the proposed project would demolish most of the historic 1500 Mission Street building, thereby resulting in a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5(b); and on cumulative transportation conditions due to potentially overlapping construction schedules of the proposed project and other nearby projects. The No Project Alternative would be the environmentally superior alternative because the significant impacts associated with implementation of the proposed project would not occur. The No Project Alternative, which would involve no new development on the project site, would also eliminate the less-than-significant impacts associated with the proposed project’s larger and taller buildings on the site (e.g., impacts related to wind and shadow), along with less-than-significant impacts related to additional human activity on the site and on the local transportation network (e.g., recreation and transit, pedestrian, bicycle, and loading impacts). Mitigation measures to reduce impacts related to cultural resources, air quality, and wind would also not be required.

Because CEQA requires selection of the “environmentally superior alternative other than the no project alternative” from among the proposed project and the other alternatives evaluated, the Full Preservation Alternative is identified as the environmentally superior alternative because it would meet most of the project sponsor and City’s basic objectives, while avoiding the cultural resource impact to the 1500 Mission Street building that would occur under the proposed project. This impact reduction would be achieved because this alternative would have fewer residential units and commercial space at the site compared to the proposed project, and, therefore, would retain more of the historic building’s character-defining features. The Full Preservation Alternative would also require less excavation than the proposed project, as such average daily emissions of criteria air pollutants would be slightly less than the proposed project. However, the Full Preservation Alternative would not avoid the project’s significant unavoidable transportation impact related to cumulative construction, nor would it markedly change significant but mitigable effects related to archeological resources, including tribal cultural resources and human remains, or to off-street loading, pedestrian, bicycle, and loading impacts, construction air quality, construction noise, hazards and hazardous materials or geology.

TABLE VI-2 COMPARISON OF THE SIGNIFICANT ENVIRONMENTAL IMPACTS OF PROJECT TO IMPACTS OF ALTERNATIVES

Impacts	Proposed Project	Alternative A: No Project Alternative	Alternative B: Partial Preservation Alternative	Alternative C: Full Preservation Alternative	Alternative D: All Residential Alternative
Description	The proposed project would demolish the 1580 Mission Street building to construct a 39-story residential and retail/restaurant development providing 560 units, and demolish a majority of the 1500 Mission Street building to construct a 16-story office building containing approximately 454,200 sf of office space and an approximately 4,400 sf childcare facility. Up to 280 below-grade parking spaces would be included with the proposed project.	The existing one-story warehouse and clock tower would remain, as would the two-story retail office building, all managed by Goodwill Industries. No additional development would occur.	This alternative would demolish the 1580 Mission Street building to construct a 39-story residential and retail/restaurant development providing 458 units, and partially demolish the 1500 Mission Street building to construct a 16-story office building containing approximately 455,600 sf of office space and an approximately 4,400 sf childcare facility. Up to 252 below-grade parking spaces would be included with this alternative.	This alternative would demolish the 1580 Mission Street building to construct a 39-story residential and retail/restaurant development providing 458 units, and partially demolish the 1500 Mission Street building to construct a 16-story office building containing approximately 452,400 sf of office space. Up to 117 below-grade parking spaces would be included with this alternative.	This alternative would demolish the 1580 Mission Street building and partially demolish the 1500 Mission Street building to construct two residential towers (a 39- and 30-story tower) with retail/restaurant use that would provide 976 units. Up to 501 below-grade parking spaces would be included with this alternative.
Ability to Meet Project Sponsor's Objectives	All.	None.	Most.	Most.	Some.
Cultural Resources					
Historical Resources	Impact CR-1: The proposed project would not cause a substantial adverse change in the significance of a historical resource due to the demolition of the 1580 Mission Street building, which is not considered a historical resource, as defined in CEQA Guidelines Section 15064.5(b). (NI)	No impact. (NI)	Same as the proposed project. (NI)	Same as the proposed project. (NI)	Same as the proposed project. (NI)
Historical Resources	Impact CR-2: The proposed project would demolish most of the historic 1500 Mission Street building, which would cause a substantial adverse change in the significance of a historical resource, as defined in CEQA Guidelines Section 15064.5(b). (SUM)	No impact. (NI)	Similar to but less than proposed project. (SUM)	Substantially less than the proposed project. (LTS)	Similar to the proposed project. (SUM)

TABLE VI-2 COMPARISON OF THE SIGNIFICANT ENVIRONMENTAL IMPACTS OF PROJECT TO IMPACTS OF ALTERNATIVES

Impacts	Proposed Project	Alternative A: No Project Alternative	Alternative B: Partial Preservation Alternative	Alternative C: Full Preservation Alternative	Alternative D: All Residential Alternative
Historical Resources	Impact CR-3: The proposed project would not cause a substantial adverse change in the significance of an adjacent historical resource. (LTS)	No impact. (NI)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)
Archeological Resources	Impact CR-4: The proposed project could cause a substantial adverse change in the significance of an archeological resource pursuant to Section 15064.5(f). (SM)	No impact. (NI)	Similar to the proposed project. (SM)	Similar to the proposed project. (SM)	Similar to but worse than the proposed project. (SM)
Cultural Resources	Impact CR-5: The proposed project could result in a substantial adverse change in the significance of a tribal cultural resource. (SM)	No impact. (NI)	Similar to the proposed project. (SM)	Similar to the proposed project. (SM)	Similar to but worse than the proposed project. (SM)
Archeological Resources	Impact CR-6: The proposed project could disturb human remains, including those interred outside of formal cemeteries. (SM)	No impact. (NI)	Similar to the proposed project. (SM)	Similar to the proposed project. (SM)	Similar to or worse than the proposed project. (SM)
Cumulative Cultural Resources	Impact C-CR-1: The proposed project, in combination with past, present, and reasonably foreseeable projects in the area, would not result in a significant cumulative impact on historic architectural resources. (LTS)	No impact. (NI)	Similar to but less than the proposed project. (LTS)	Similar to but less than the proposed project. (LTS)	Similar to the proposed project. (LTS)
Cumulative Cultural Resources	Impact C-CR-2: The proposed project, in combination with past, present, and reasonably foreseeable projects in the area, would not result in significant cumulative impacts on archeological resources, tribal cultural resources, or human remains. (LTS)	No impact. (NI)	Similar to but less than the proposed project. (LTS)	Similar to but less than the proposed project. (LTS)	Similar to the proposed project. (LTS)

TABLE VI-2 COMPARISON OF THE SIGNIFICANT ENVIRONMENTAL IMPACTS OF PROJECT TO IMPACTS OF ALTERNATIVES

Impacts	Proposed Project	Alternative A: No Project Alternative	Alternative B: Partial Preservation Alternative	Alternative C: Full Preservation Alternative	Alternative D: All Residential Alternative
Transportation and Circulation					
VMT	Impact TR-1: The proposed project would not cause substantial additional VMT nor substantially induce automobile travel. (LTS)	No impact. (NI)	Fewer person and vehicle trips than the proposed project. Similar VMT per capita. (LTS)	Fewer person and vehicle trips than the proposed project. Similar VMT per capita. (LTS)	Fewer person and vehicle trips than the proposed project. Similar VMT per capita. (LTS)
Traffic Hazards	Impact TR-2: The proposed project would not cause major traffic hazards. (LTS)	No impact. (NI)	Fewer trips and traffic hazards than the proposed project. (LTS)	Fewer trips and traffic hazards than the proposed project. (LTS)	Fewer trips and traffic hazards than the proposed project. (LTS)
Transit Demand and Service	Impact TR-3: The proposed project would not result in a substantial increase in transit demand that could not be accommodated by adjacent local and regional transit capacity, but could cause a substantial increase in delays or operating costs such that significant adverse impacts to local or regional transit service could occur. (SM)	No impact. (NI)	Fewer transit trips than the proposed project. Similar operational conclusions. (SM)	Fewer transit trips than the proposed project. Similar operational conclusions. (SM)	Fewer transit trips than the proposed project. Similar operational conclusions. (SM)
Pedestrian Accessibility	Impact TR-4: The proposed project would not result in substantial overcrowding on public sidewalks, but could create potential hazardous conditions for pedestrians, and otherwise interfere with pedestrian accessibility to the site and adjoining areas. (SM)	No impact. (NI)	Fewer pedestrian trips than the proposed project. Similar accessibility and hazards conclusions. (SM)	Fewer pedestrian trips than the proposed project. Similar accessibility and hazards conclusions. (SM)	Fewer pedestrian trips than the proposed project. Similar accessibility and hazards conclusions. (SM)
Bicyclist Accessibility	Impact TR-5: The proposed project could result in potentially hazardous conditions for bicyclists, or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas. (SM)	No impact. (NI)	Fewer bicycle trips than the proposed project. Similar accessibility and hazards conclusions. (SM)	Fewer bicycle trips than the proposed project. Similar accessibility and hazards conclusions. (SM)	Fewer bicycle trips than the proposed project. Similar accessibility and hazards conclusions. (SM)

TABLE VI-2 COMPARISON OF THE SIGNIFICANT ENVIRONMENTAL IMPACTS OF PROJECT TO IMPACTS OF ALTERNATIVES

Impacts	Proposed Project	Alternative A: No Project Alternative	Alternative B: Partial Preservation Alternative	Alternative C: Full Preservation Alternative	Alternative D: All Residential Alternative
Loading Facilities	Impact TR-6: The proposed project would not result in a loading demand that could not be accommodated within the proposed on-site loading facilities, or within convenient on-street loading zones, but could create potentially hazardous conditions or significant delays for traffic, transit, bicyclists, or pedestrians. (SM)	No impact. (NI)	Fewer loading trips than the proposed project. Similar loading configuration and conflicts conclusions. (SM)	Fewer loading trips than the proposed project. Similar loading configuration and conflicts conclusions. (SM)	Fewer loading trips than the proposed project, but more residential move-in/move-out trips. Similar loading configuration and conflict conclusions. (SM)
Emergency Access	Impact TR-7: The proposed project would not result in significant impacts on emergency vehicle access. (LTS)	No impact. (NI)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)
Construction Related Hazards	Impact TR-8: The proposed project construction activities would not result in substantial interference with pedestrian, bicycle, or vehicle circulation and accessibility to adjoining areas, and would not result in potentially hazardous conditions. (LTS)	No impact. (NI)	Fewer construction trips than the proposed project. Similar construction hazards conclusions to the proposed project. (LTS)	Fewer construction trips than the proposed project. Similar construction hazards conclusions to the proposed project. (LTS)	Fewer construction trips than the proposed project. Similar construction hazards conclusions to the proposed project. (LTS)
Cumulative VMT Impacts	Impact C-TR-1: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not contribute to regional VMT in excess of expected levels. (LTS)	No impact. (NI)	Fewer person and vehicle trips than the proposed project. Similar VMT per capita. (LTS)	Fewer person and vehicle trips than the proposed project. Similar VMT per capita. (LTS)	Fewer person and vehicle trips than the proposed project. Similar VMT per capita. (LTS)
Traffic Hazards	Impact C-TR-2: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not cause major traffic hazards. (LTS)	No impact. (NI)	Fewer trips and traffic hazards than the proposed project. (LTS)	Fewer trips and traffic hazards than the proposed project. (LTS)	Fewer trips and traffic hazards than the proposed project. (LTS)

TABLE VI-2 COMPARISON OF THE SIGNIFICANT ENVIRONMENTAL IMPACTS OF PROJECT TO IMPACTS OF ALTERNATIVES

Impacts	Proposed Project	Alternative A: No Project Alternative	Alternative B: Partial Preservation Alternative	Alternative C: Full Preservation Alternative	Alternative D: All Residential Alternative
Cumulative Transit Demand and Service	Impact C-TR-3: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant transit impacts. (LTS)	No impact. (NI)	Fewer transit trips than the proposed project. (LTS)	Fewer transit trips than the proposed project. (LTS)	Fewer transit trips than the proposed project. (LTS)
Cumulative Pedestrian Accessibility	Impact C-TR-4: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant pedestrian impacts. (LTS)	No impact. (NI)	Fewer pedestrian trips than the proposed project. Similar accessibility and hazards conclusions. (LTS)	Fewer pedestrian trips than the proposed project. Similar accessibility and hazards conclusions. (LTS)	Fewer pedestrian trips than the proposed project. Similar accessibility and hazards conclusions. (LTS)
Cumulative Bicyclist Accessibility	Impact C-TR-5: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not result in cumulative bicycle impacts. (SM)	No impact. (NI)	Fewer bicycle trips than the proposed project. Similar accessibility and hazards conclusions. (SM)	Fewer bicycle trips than the proposed project. Similar accessibility and hazards conclusions. (SM)	Fewer bicycle trips than the proposed project. Similar accessibility and hazards conclusions. (SM)
Cumulative Loading Facilities	Impact C-TR-6: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant impacts on loading. (LTS)	No impact. (NI)	Fewer loading trips than the proposed project. Similar loading configuration and conflicts conclusions. (LTS)	Fewer loading trips than the proposed project. Similar loading configuration and conflicts conclusions. (LTS)	Fewer loading trips than the proposed project, but more residential move-in/move-out trips. Similar loading configuration and conflicts conclusions. (LTS)
Cumulative Emergency Access	Impact C-TR-7: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant impacts on emergency vehicle access. (LTS)	No impact. (NI)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)

TABLE VI-2 COMPARISON OF THE SIGNIFICANT ENVIRONMENTAL IMPACTS OF PROJECT TO IMPACTS OF ALTERNATIVES

Impacts	Proposed Project	Alternative A: No Project Alternative	Alternative B: Partial Preservation Alternative	Alternative C: Full Preservation Alternative	Alternative D: All Residential Alternative
Cumulative Construction Related Hazards	Impact C-TR-8: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would contribute considerably to significant cumulative construction-related transportation impacts. (SUM)	No impact. (NI)	Fewer construction trips than the proposed project. Similar construction hazards conclusions to the proposed project. Similar contributions to significant cumulative impacts in combination with reasonably foreseeable projects in the vicinity. (SUM)	Fewer construction trips than the proposed project. Similar construction hazards conclusions to the proposed project. Similar contributions to significant cumulative impacts in combination with reasonably foreseeable projects in the vicinity. (SUM)	Fewer construction trips than the proposed project. Similar construction hazards conclusions to the proposed project. Similar contributions to significant cumulative impacts in combination with reasonably foreseeable projects in the vicinity. (SUM)
Air Quality					
Construction Air Quality	Impact AQ-1: The proposed project’s construction activities would generate fugitive dust and criteria air pollutants but would not violate an air quality standard, contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants. (LTS)	No impact. (NI)	Similar to but less than proposed project. (LTS)	Similar to but less than proposed project. (LTS)	Similar to the proposed project. (LTS)
Operational Air Quality	Impact AQ-2: During project operations, the proposed project would result in emissions of criteria air pollutants, but not at levels that would violate an air quality standard, contribute to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants. (LTS)	No impact. (NI)	Similar to but less than proposed project. (LTS)	Similar to but less than proposed project. (LTS)	Similar to the proposed project. (LTS)
Exposure to Sensitive Receptors	Impact AQ-3: The proposed project would generate toxic air contaminants, including diesel particulate matter, exposing sensitive receptors to substantial air pollutant concentrations. (SM)	No impact. (NI)	Similar to but less than proposed project. (SM)	Similar to but less than proposed project. (SM)	Similar to the proposed project. (SM)

TABLE VI-2 COMPARISON OF THE SIGNIFICANT ENVIRONMENTAL IMPACTS OF PROJECT TO IMPACTS OF ALTERNATIVES

Impacts	Proposed Project	Alternative A: No Project Alternative	Alternative B: Partial Preservation Alternative	Alternative C: Full Preservation Alternative	Alternative D: All Residential Alternative
Clean Air Plan Consistency	Impact AQ-4: The proposed project would not conflict with, or obstruct implementation of, the <i>2010 Clean Air Plan</i> . (LTS)	No impact. (NI)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)
Odors	Impact AQ-5: The proposed project would not create objectionable odors that would affect a substantial number of people. (LTS)	No impact. (NI)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)
Cumulative Air Quality	Impact C-AQ-1: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not contribute considerably to cumulative increases in criteria air pollutant emissions. (LTS)	No impact. (NI)	Similar to but less than proposed project. (LTS)	Similar to but less than proposed project. (LTS)	Similar to the proposed project. (LTS)
Cumulative Toxic Air Contaminants	Impact C-AQ-2: The proposed project could result in a considerable contribution to cumulative increases in short- and long-term exposures to Toxic Air Contaminants. (SM)	No impact. (NI)	Similar to but less than proposed project. (SM)	Similar to but less than proposed project. (SM)	Similar to the proposed project. (SM)
Wind					
Alter Wind	Impact WI-1: The proposed project would not alter wind in a manner that substantially affects public areas in the vicinity of the project site. (LTS)	No impact. (NI)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)
Cumulative Wind	Impact C-WI-1: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would alter wind in a manner that substantially affects public areas in the vicinity of the project site, but the proposed project's contribution to this impact would not be cumulatively considerable. (LTS)	No impact. (NI)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)

TABLE VI-2 COMPARISON OF THE SIGNIFICANT ENVIRONMENTAL IMPACTS OF PROJECT TO IMPACTS OF ALTERNATIVES

Impacts	Proposed Project	Alternative A: No Project Alternative	Alternative B: Partial Preservation Alternative	Alternative C: Full Preservation Alternative	Alternative D: All Residential Alternative
Shadow					
Shadow on Designated Park or Open Space	Impact SH-1: The proposed project would not create new shadow in a manner that would have an adverse effect on the use of any park or open space under the jurisdiction of the Recreation and Park Department. (LTS)	No impact. (NI)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)
Shadow on Public Open Space	Impact SH-2: The proposed project would not create new shadow in a manner that would substantially affect the use of other existing publicly-accessible open space or outdoor recreation facilities or other public areas. (LTS)	No impact. (NI)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)
Cumulative Shadow	Impact C-SH-1: The proposed project, in combination with past, present, or reasonably foreseeable future projects, would create new shadow in a manner that would substantially affect the use of any park or open space under the jurisdiction of the Recreation and Park Department, or other existing publicly-accessible open space, outdoor recreation facilities, or other public areas; however, the proposed project’s contribution to this impact would not be cumulatively considerable. (LTS)	No impact. (NI)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)	Similar to the proposed project. (LTS)

IMPACT CODES:

NI No impact

LTS Less than significant or negligible impact; no mitigation required

SM Significant but mitigable

SU Significant and unavoidable adverse impact, no feasible mitigation

SUM Significant and unavoidable adverse impact, after mitigation

CHAPTER VII

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Appendices

- A. Initial Study (IS)
- B. Notice of Preparation (NOP) for Case No. 2014-000362ENV and Written Responses and Public Comments on the NOP

